

Spending for Development

Making the Most of Indonesia's New Opportunities



Indonesia Public Expenditure Review 2007



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Spending for Development:
Making the Most of Indonesia's New Opportunities

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TEMP KATOLIK
PATE NONINGAN



Foreword

This is a time of great opportunity for Indonesia. Ten years have now passed since 1997 when the first ripples of the coming economic crisis were felt in the country. Not only has Indonesia bounced back from the crisis and returned to middle-income status, but in the intervening years the country has experienced a major transformation in the way that public finances are administered. After a series of bold policy decisions by the current government to re-allocate resources – in addition to the country's lowering debt burden and improved revenue collection – Indonesia now has substantial fiscal resources to spend. This fiscal space, together with the shift towards decentralization since 2001, means that an increasing share of these additional resources will be spent not by the central government, but by district and provincial governments.

This Public Expenditure Review (PER) 2007 examines and explains the constraints facing the government in public resource management, especially in allocative and operational efficiency. This PER was first launched in Jakarta in February 2007. This new version includes additional budget data for national and sub-national expenditures, which have helped to validate the initial findings and projections. The PER offers recommendations for improvements in six critical areas: fiscal space, education, health, infrastructure, public financial management and decentralization. Notwithstanding the tremendous progress that Indonesia has made in both reforming its public finances and increasing transparency this PER also highlights that the reform agenda is far from complete. While Indonesia now has significant resources at its disposal, it is struggling to use these resources effectively. Equity and efficiency of spending remain major issues: for instance, finding an optimal allocation of resources that reflects development priorities, including pro-poor spending, and achieving an annual spending pattern that is no longer strongly skewed towards the end of the financial year.

The PER is also the result of a new model of close collaboration between the Government of Indonesia and the World Bank, and signifies a maturing of the close working relationship between the two. The PER is a product of the Initiative for Public Expenditure Analysis (IPEA), which is a consortium of key government ministries, including the Ministry of Finance, the National Development Planning Agency (Bappenas), the Coordinating Ministry for the Economy, Indonesian universities, the World Bank and other important stakeholders in Indonesia. The Dutch Government provided substantial financial support.

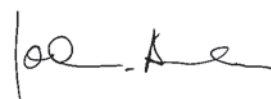
It is our hope that this report will make a useful contribution towards the ways in which the Government of Indonesia and its partners, including the World Bank, design and implement policies and programs. In so doing, we hope to continue to maximize the unique opportunities now available to Indonesia through better allocating and utilizing its financial resources, with the ultimate aim of achieving the country's ambitious development goals.



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Glossary of Terms

ABT	Additional Expenditure (Anggaran Belanja Tambahan)
ADB	Asian Development Bank
Amdal	Environmental Impact Assessment (Analisa Mengenai Dampak Lingkungan)
APBN	State Budget (Anggaran Pendapatan Belanja Negara)
APBN-P	Revised State Budget (Perubahan Anggaran Pendapatan Belanja Negara)
Askes	Indonesia Health Insurance (Asuransi Kesehatan Indonesia)
BA	Basic Allocation
Bappeda	Development Planning Agency at Sub-National Level (Badan Perencanaan Pembangunan Daerah)
Bappenas	National Development Planning Agency (Badan Perencanaan Pembangunan Nasional)
Bawasda	Provincial Internal Audit Agency (Badan Penawas Daerah)
BI	Central Bank (Bank Indonesia)
<i>Bidan</i>	Midwife
BKM	Scholarship for poor student (Bantuan Khusus Murid)
BKN	National Civil Service Agency (Badan Kepegawaian Negara)
BOS	Operational Aid to School Program (Bantuan Operasional Sekolah)
BPK	State Audit Agency (Badan Pemeriksa Keuangan)
BPKP	State Development Audit. Agency (Badan Pengawasan Keuangan dan Pembangunan)
BPM	Community Development Agency
BPN	National Land Agency (Badan Pertanahan Nasional)
BPS	Central Bureau of Statistics (Badan Pusat Statistik)
<i>Bupati</i>	District Head
<i>Camat</i>	Sub-District Head
Capex	Capital Expenditure
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CGI	Consultative Group for Indonesia
CIDA	Canadian International Development Agency
COO	Chief Operating Officer
CPAR	Country Procurement Assessment Report
CPI	Consumer Price Index
CPIA	Country Policy and Institutional Assessment
CPOB	Context of Proper Medicine Production
CY	Calendar Year
DAK	Special Allocation Fund (Dana Alokasi Khusus)
DAU	General Allocation Grant (Dana Alokasi Umum)
DBD	Dengue Hemorrhagic Fever (Demam Berdarah)
<i>Desa</i>	Village
DFID	UK Department for International Development
DGDM	Directorate General for Public Debt Management
DHWS	Directorate for Housing, Water and Sanitation
Dinas	Provincial Sub-Project Management
Dinas Bina Marga	Regional Road Offices
DIP	(Daftar Isian Proyek)
DIPA	Issuance of spending authority (Daftar Isian Proyek Anggaran)
Dispenda	Local Revenue Offices (Dinas Pendapatan Daerah)
Disnakertrans	Regional Office of Manpower and Transmigration Department (Dinas Tenaga Kerja dan Transmigrasi)
DPPHLN	Directorate of External State Loans and Funds (Direktorat Pengelolaan Pinjaman dan Hibah Luar Negeri)
DPR	Parliament/House of Representatives (Dewan Perwakilan Rakyat)

DPSUN	Directorate State Securities Management (Direktorat Pengelolaan Surat Utang Negara)
EFA	Education for All
EN	Expenditure Needs
FAO	Food and Agriculture Organization
FC	Fiscal Capacity
FG	Fiscal Gap
FY	Fiscal Year
GDP	Gross Domestic Product
GDS	Governance and Decentralization Survey
GeRAK	People's Movement for Anti-Corruption
Gol	Government of Indonesia
RGDP	Gross Regional Domestic Product
HDI	Human Development Index
HIC	Humanitarian Information Center
IDHS	Indonesia Demographic and Health Survey
IG	Inspector General
ILO	International Labor Organization
IMF	International Monetary fund
IMR	Infant Mortality Rate
Inpres	Presidential Instruction (Instruksi Presiden)
IOM	International Organization for Migration
IPP	Independent Power Producer
IRD	International Relief and Development
Jamsostek	Workforce and Social Insurance (Jaminan Sosial dan Tenaga Kerja)
JPKM	Community Health Insurance Scheme (Jaminan Pemeliharaan Kesehatan Masyarakat)
<i>Kabupaten</i>	District
Kanwil	Regional Office of Ministry (Kantor Wilayah)
KAR	Regional Accounting Office (Kantor Akuntansi Regional)
Kasipa	Local Budget Verification and Implementing Office (Kantor Verifikasi dan Pelaksanaan Anggaran)
<i>Kecamatan</i>	Sub-District
<i>Kelurahan</i>	Village
Keppres	Presidential Decree (Keputusan Presiden)
Kerap	An elected local committee that handles and monitors reconstruction funds under the Urban Poverty Project
<i>Kota</i>	Urban District
KPK	Anti-Corruption Commission (Komite Pemberantasan Korupsi)
KKPPI	National Committee on Policy for Accelerating Infrastructure (Komite Kebijakan Percepatan Pengadaan Infrastruktur)
KPPN	State Treasury Offices (Kantor Pelayanan Perbendaharaan Negara)
KPPOD	Regional Autonomy Watch (Komite Pemantauan Pelaksanaan Otonomi Daerah)
LAN	National Institute of Administration (Lembaga Administrasi Nasional)
LPEM FEUI	Institute of Economic and Social Research – Economic Faculty University of Indonesia (Lembaga Penelitian Ekonomi dan Masyarakat– Fakultas Ekonomi Universitas Indonesia)
LKPP	Preliminary Unaudited Central Government Financial Report (Laporan Keuangan Pemerintah Pusat)
Makuda	Financial Administration Manual
MDG	Millennium Development Goal
MDTF	Multi-Donor Trust Fund (for Aceh and North Sumatra), commonly referred to as Multi-Donor Fund
Menpan	Ministry for State Apparatus Reforms (Kementerian Pendayagunaan Aparatur Negara)
MMR	Maternal Mortality rate
MoC	Ministry of Communication (Departemen Perhubungan)
MoE	Ministry of Environment (Kementerian Lingkungan Hidup)
MoF	Ministry of Finance (Kementerian Keuangan)
MoHA	Ministry of Home Affairs (Kementerian Dalam Negeri)

MoNE	Ministry of National Education (Departemen Pendidikan Nasional)
MoRA	Ministry of Religious Affairs (Departemen Agama)
MPR	People Consultative Assembly (Majelis Permusyawaratan Rakyat)
MPW	Ministry of Public Works (Departemen Pekerjaan Umum)
MTEF	Medium-term Expenditure Framework
NGO	Non-Governmental Organization
NID	National Immunization Days
NPPO	National Procurement Policy Office
OHDA	People living with HIV/AIDS (Orang Hidup Dengan HIV/AIDS)
OECD	Organization for Economic Co-operation and Development
OSR	Own-Source Revenue (Pendapatan Asli Daerah, or PAD)
PC	Per capita
PDAM	Local Water Supply Utility (Perusahaan Daerah Air Minum)
PEFA	Public Expenditure and Financial Accountability
Perda	Local Regulation (Peraturan Daerah)
Perpu	Regulation in Lieu of Law (Peraturan Pemerintah Pengganti Undang Undang)
Pertamina	The National Petroleum Supplier (Perusahaan Pertambangan Minyak Nasional)
<i>Pesantren</i>	Islamic Boarding School
PGRI	National Teacher Association (Persatuan Guru Republik Indonesia)
PHC	Public Health Center
PHO	Public Health Office
PISA	Program for International Student Association
PKPS-BBM	Compensation Program to Reduce Fuel Subsidy (Program Kompensasi Pengganti Subsidi BBM)
PLN	National Electricity Company (Perusahaan Listrik Negara)
PMU	Program Management Unit
PNBP	Non-Tax Revenue (Pendapatan Negara Bukan Pajak)
Podes	Village Potential Statistics (Potensi Desa)
Posko	Coordination Post (Pos Koordinasi)
PP	Government Regulation (Peraturan Pemerintah)
PTT	Temporary civil service (Pegawai Tidak Tetap)
Puskesmas	Health Center at Sub-District Level (Pusat Kesehatan Masyarakat)
Pustu	Community Health Sub-center (Puskesmas Pembantu)
RAPBN	Draft budget presented to the parliament (Rancangan Anggaran Pendapatan Belanja Negara)
RDA	Regional Development Account
RDI	Investment Fund Account (Rekening Dana Investasi)
Renja KL	Annual Work Plans (Rencana Kerja Kementerian/Lembaga)
Renstra KL	Ministry and Agency Medium Term Strategic Plan (Rencana Strategis Kementerian/Lembaga)
Repanas	Rencana Pembangunan Nasional (Five Year National Plan)
RKA-KL	Ministry Work Plan and Budget (Rencana Kerja dan Anggaran Kementerian/Lembaga)
RKP	Government Work Plan (Rencana Kerja Pemerintah)
Rp	Indonesian Rupiah
RPJM	Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah)
SAI	State Audit Institutions
Sakernas	Labor Force Survey (Survei Tenaga Kerja Nasional)
SBI	One Month Bank Indonesia Promissory Note (Sertifikat Bank Indonesia)
SDA	Shared National Resource Revenue
SDO	Subsidy for Autonomous Regions (Subsidi Daerah Otonom)
SIKD	Regional Financial Information System (Sistem Informasi Keuangan Daerah)
SLA	Subsidiary Loan Agreements
SMERU	Independent institution for research and public policy studies
SOE	State-Owned Enterprise
SPADA	Support for Poor and Disadvantaged Areas Project

STR	Student-Teacher Ratio
STX	Shared Tax Revenue
Susenas	National Socio-Economic Survey (Survei Sosial Ekonomi Nasional)
TB	Tuberculosis
TBA	Traditional Birth Attendant
TIMMS	Third International Mathematics and Science Study
TSA	Treasury Single Account
UCI	Universal Child Immunization
Unicef	United Nations Children's Fund
UNDP	United Nations Development Program
Unesco	United Nations Educational, Scientific and Cultural Organization
WDI	World Development Indicators
WEI	World Education Indicator
WFP	World Food Program
WHO	World Health Organization
WHR	World Health Report
YoY	Year-on-Year



Executive Summary

Indonesia Public Expenditure Review 2007

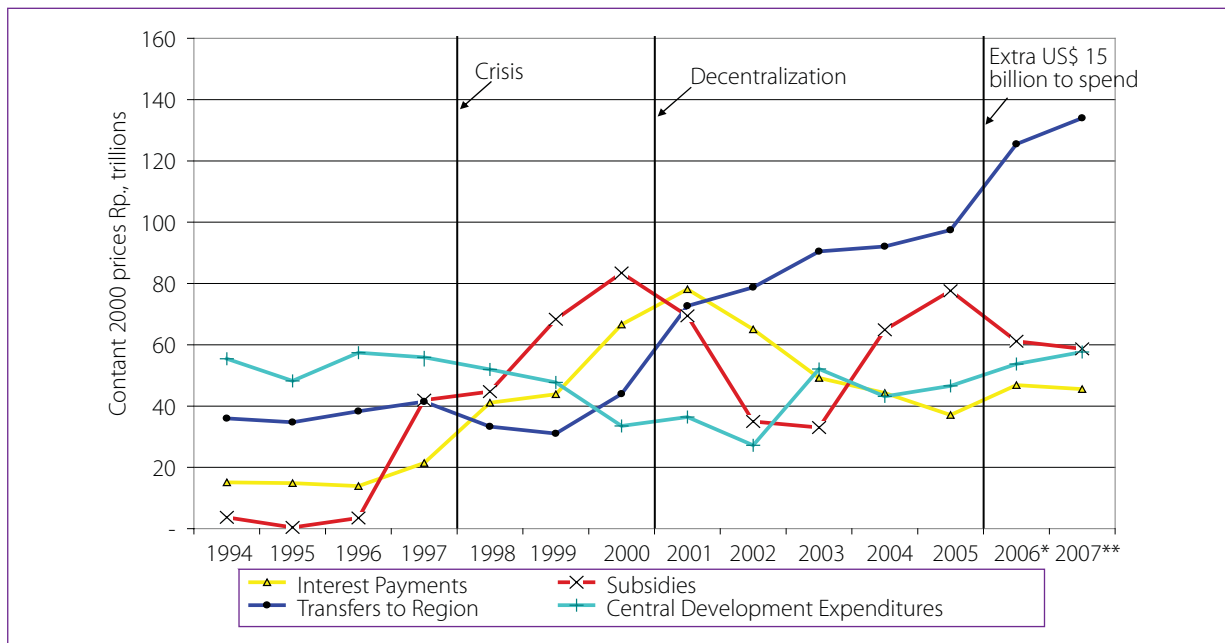
A Unique Opportunity

Indonesia's post-crisis period is over: the country now has sufficient financial resources to address its development needs. Prudent macroeconomic policies, particularly extremely low budget deficits, were instrumental in this recovery. Now is the time to build on the achievements of the past few years and to spend Indonesia's financial resources effectively and efficiently to improve the quality of education, expand healthcare, and close critical infrastructure gaps in order to reduce poverty and build a competitive economy.

Over the past 10 years, there has been a remarkable transformation in the way public resources are managed and allocated. Three defining moments stand out:

- i. **1997-98 – The economic crisis.** The economy contracted and public spending fell. Debt and subsidies increased while development spending declined.
- ii. **2001 – ‘Big bang’ decentralization.** One-third of central government expenditure was transferred to the regions.
- iii. **2006 – An extra US\$15 billion to spend.** The reduction in fuel subsidies in 2005 opened up space for additional spending, debt levels dropped to 41 percent of GDP, aggregate expenditure increased by 20 percent and transfers to sub-national governments grew by 32 percent.

Figure 1 Defining years in Indonesia's public expenditure allocation



Source: World Bank staff estimates.

Note: *2006 preliminary results, 2007** budget (APBN).

Indonesia can expect to have significant additional fiscal resources, or a “fiscal space”—almost of the magnitude of the revenue windfall seen during the oil-boom of the mid-1970s. Since the reduction in fuel subsidies in 2005, Indonesia has freed up US\$10 billion to spend on development programs. An additional US\$5 billion is available due to a combination of increasing revenues and declining debt service. Similar amounts will be available in 2007 and beyond. Indonesia's fiscal position could be further improved by removing subsidies that still place a heavy burden on its budget. Despite the reduction in fuel subsidies, total subsidies still account for US\$12 billion of the budget (15 percent of total expenditures in 2006).

Fiscal space will remain significant even if global oil prices drop sharply. The combination of increasing revenues and reduced subsidies will ensure large additional fiscal resources in the future. International oil prices and the country's fiscal space have been effectively de-linked because of the sharp decline in oil production of almost 40 percent since

1996. Indonesia now consumes roughly the same amount of oil as it produces, so changes in international oil prices are relatively unimportant in terms of the budget.

About half of these additional resources will be spent by district and provincial governments. In terms of spending, Indonesia is already one of the most decentralized countries in the world. The current transfer system will guarantee that this remains the case for years to come. The 2006 increase in transfers to sub-national governments is as great as during the “big bang” decentralization of 2001. Indonesia’s provinces and districts now spend a record 37 percent of total public funds (Box 1). This represents a level of fiscal decentralization higher than the OECD average and higher than any other East Asian country except China.

Box 1 Public finance in Indonesia – key facts

- Provincial and district governments now manage 37 percent of total public expenditures and carry out more than 50 percent of public investment
- Total government debt fell to 41 percent of GDP by the end of 2006.
- Spending on subsidies and administration accounts for a third of total expenditures. Subsidies still consume roughly 15 percent of the budget and remain at the 2004 level.
- Public investment has recovered and returned to the pre-crisis level of 7 percent; sub-national governments now manage half of Indonesia’s public investment.
- Spending on education is now 17.2 percent of total spending, the highest share of any sector and comparable to that of many other low and middle-income countries. Education spending reached 3.8 percent of GDP in 2006, up from 2.4 percent in 2001.
- Total public health spending is still below 1 percent of GDP, despite steep increases since 2002.
- Public infrastructure investment has still not recovered from its post-crisis low and remains only 3.4 percent of GDP.

Why this Report?

Analyzing public expenditures can be a powerful tool. Indeed, such analysis and monitoring of public spending should be a natural and routine process. Many governments around the world, often with support from the World Bank, conduct such Public Expenditure Reviews (PERs) every couple of years. Indonesia and the World Bank conducted the last national PER in 2003 and in the interim several further in-depth analyses of sectoral and regional expenditures have been undertaken.¹

This report tries to establish the facts about Indonesia’s public expenditures, presenting trends over time and analyzing the composition across sectors and levels of government. The report presents comprehensive information on key sectors, including sub-national governments and state-owned enterprises in key infrastructure sectors. Based on these facts, the report asks: Who benefits from these substantial amounts of public resources? Where are the gaps? Which regions are well-endowed? Which regions are lagging behind? In addition to these questions, this report also tries to respond to key concerns that are in the minds of many ordinary Indonesians and friends of Indonesia, such as:

- Can Indonesia afford to spend more?
- Is the current level of education and health spending sufficient?
- How to revitalize infrastructure investment, and which sectors are the priorities?
- Why is it so difficult to disburse funds through the government budget system?
- How unequal is Indonesia and how should fiscal transfers be structured to equalize disparities?

Fighting corruption is one of the government’s most important priorities and curbing corruption involving public funds remains one key area. Corruption both distorts spending decisions and budget execution at the

¹ For instance: Decentralizing Indonesia (2003); Papua Public Expenditure Analysis – Regional Finance and Service Delivery in Indonesia’s Most Remote Region (2005), Spending for Reconstruction and Development – Aceh Public Expenditure Analysis (2006), Investing in Indonesia’s education (2007).

same time. While this report argues that Indonesia should increase its public investment, the degree of corruption will determine if these investments will produce lasting results for the people of Indonesia. With the massive shift of resources to lower levels of government, fighting corruption at the sub-national level is now as critical as tackling it at the central level.

This report focuses on the technical dimensions of corruption: the budget process, and procurement and audit systems. These fiduciary systems typically determine the degree of corruption in public expenditures and the quality of spending. Based on the analysis of the fiduciary environment at the central and sub-national levels, the report highlights areas where corruption risks are highest, particularly in the public financial management system.

This report addresses seven critical expenditure areas. The first two chapters (Chapter 1 on fiscal space and Chapter 2 on cross-sectoral allocations) discuss how much money is available to the government and how it is allocated across sectors and levels of government. The following three chapters on education, health, and infrastructure analyze how resources are currently allocated within these critical sectors and how effectively they are used. The final two chapters (Chapter 6 on public financial management and Chapter 7 on decentralization) highlight institutional and cross-cutting issues in effective public expenditure management.

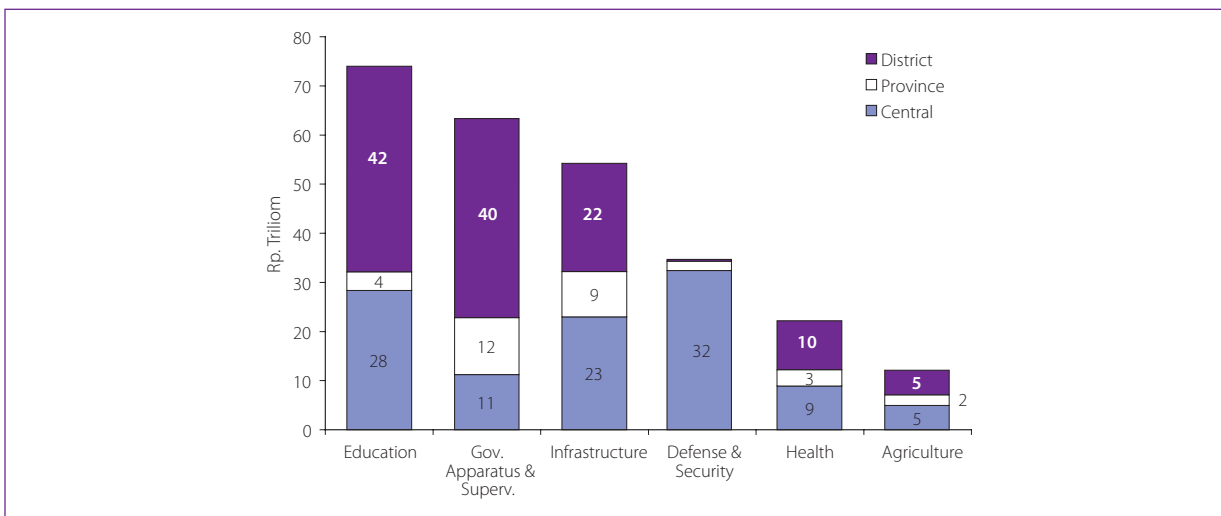
Trends in Sectoral Spending and Public Investment

While the poverty headcount dropped significantly after 1999—even considering the reversal in 2005—service delivery indicators show a mixed picture. Some indicators have improved, such as the primary school enrollment rate, but many others have only improved slightly since 1999 and some not at all. Indonesia still ranks poorly in areas such as maternal mortality, infant and under-five child nutrition and junior secondary enrollments, particularly among its poorest citizens. In addition, Indonesia faces new challenges such as increasing rates of cardiovascular disease and epidemics such as HIV/AIDS and avian influenza.

The government has a unique opportunity to upgrade Indonesia's public services. During the oil windfall in the mid-1970s, the government focused on supplying basic needs, particularly primary education and health. These efforts contributed to dramatic improvements in these sectors although some remote areas, particularly in eastern Indonesia, are still lagging behind. Today, the main challenge is to move into the next generation of reforms, with a focus on the quality of public services and targeted infrastructure provision. In order to keep Indonesia's economy competitive in the long run, secondary and tertiary education, an upgraded health system and better infrastructure services are equally important.

However, the current spending mix is less than optimal in addressing Indonesia's development challenges. While very good progress has been made over the past two years in reallocating spending (from inefficient subsidies) towards pro-poor programs, Indonesia is still under-spending in key sectors, such as infrastructure and health. Impressive gains have been made in allocating additional funds to education, which is now the sector with the largest public spending (in 2005, education spending accounted for 13.9 percent of total national expenditures). Spending on core government administration (excluding salaries for teachers, doctors and nurses) constitutes the second-largest sectoral spending item representing as much as 11.9 percent of the total (Figure 2). This is high compared with the level of spending on government administration observed in other similar countries, which range from 5 to 10 percent. Meanwhile, the level of spending on the infrastructure and health sectors (10.2 percent and 4.2 percent of total expenditures, respectively) is rather low by most international standards. In 2005, the government also spent 22.6 percent of its budget on mainly pro-rich subsidies (reported under the Trade, National Business Development, Finance and Cooperative Sector). This means that taken together, spending on core government administration and subsidies accounts for as much as 35 percent of total government spending.

Figure 2 Sectoral spending in Indonesia: education and government apparatus dominate

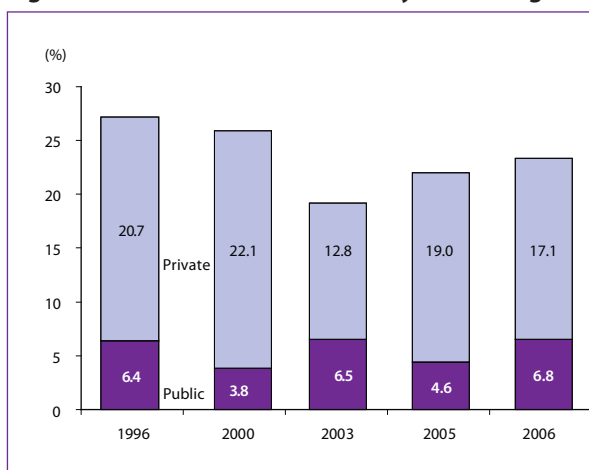


Source: World Bank staff estimates, 2005.

After the economic crisis, the Indonesian government failed to invest sufficiently in its economy and the public investment rate became one of the lowest among middle-income countries. Total investment, both public and private, declined from 27 percent of GDP in 1996 to less than 20 percent in 1999. But public development spending—a proxy for public investment—declined even more sharply, from 6.5 percent of GDP in 1996 to around 4 percent in 2000.

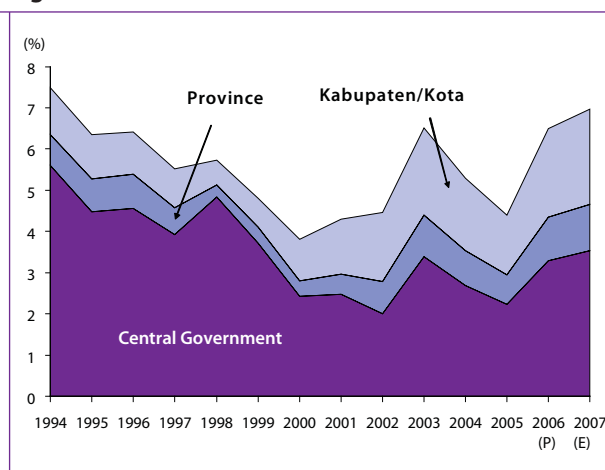
Public investment is starting to recover from its post-crisis contraction and this constitutes an opportunity to address the weaknesses in service delivery. After 2002, public investment started to recover and by 2003 had reached pre-crisis levels. In 2004 and 2005, it dropped again when the fuel subsidy ballooned. Following the reallocation of fuel subsidies in 2005, public investment returned to its pre-crisis level of 6.0 percent of GDP. However, the public investment rate in Indonesia is still one of the lowest among middle-income countries. With its bold reallocation of resources, Indonesia is now at a point where investment can and must rise above pre-crisis levels in order to compensate for the low investment levels from 1999 to 2002 (Figure 3 and 4). (As noted and seen in Figure 3, private investment still lags behind pre-crisis levels.)

Figure 3 Public investment is slowly recovering



Source: BPS, MoF, World Bank staff estimates.
Note: Figures are the percent of GDP.

Figure 4 Public investment roller-coaster



Source: BPS, MoF, World Bank staff estimates.
Note: Figures are the percent of GDP.

The composition of public investment has changed substantially since decentralization. When Indonesia decentralized, sub-national governments increased their share of resources. Sub-national governments now manage half of total public investment (Figure 4). At the same time, the sectoral composition of expenditures changed as well. The overall shares of education and administrative expenditures have increased substantially, while infrastructure has declined, particularly since 2003.

Education

Indonesia has achieved very high primary enrollment rates. Hence, getting children into primary school is no longer the main development challenge, although additional efforts will be needed to target the remaining 8 percent of children still not enrolled. The government is rightly addressing the investment gaps in primary education but, going forward, more emphasis should be put on improving the quality of education throughout the system and increasing enrollment rates for junior secondary education.

Indonesia is now allocating 17.2 percent of total public expenditures to education. This level is almost on a par with other developing countries, even with OECD countries. However, some of the countries in the immediate region (Malaysia, Thailand and the Philippines) spend more—up to 28 percent of their budgets. In addition, there remains a backlog of urgently needed investment in school buildings and other assets that have deteriorated badly over the years.

There is a structural inconsistency in the central-local spending composition. Local governments spend the bulk of total government expenditures (70 percent), but these funds are almost entirely devoted to teacher salaries, which are still set by the center. In contrast, the center is the largest spender on education investments, although local governments are in charge of running, building and rehabilitating schools. The center's dominance in education investments may be in conflict with the stated objective of decentralizing most education functions to sub-national governments.

If the constitutional 20 percent education mandate is defined as omitting teachers' salaries, then this will prove unrealistic and problematic. It will be close to impossible to reach the requirement that 20 percent of all public expenditure be allocated to education if teachers' salaries are excluded. Sub-national governments will need to increase their education spending by another 17 percentage points to 45 percent in order to reach the 20 percent benchmark within this definition. The central government will also need to double existing spending levels and allocate the increment to non-salary expenditures. However, increasing resources at the central level to 20 percent goes against the logic of decentralization; inevitably, a large share of additional central spending goes to decentralized functions. The current definition of the rule, which classifies salary top-ups as non-current expenditures, also amounts to a further fragmentation of teacher salaries.

Teachers are very unevenly distributed across Indonesia. Indonesia has enough teachers to achieve a student-teacher ratio of 20:1 but many teachers work part-time and are concentrated in the better-off areas of the country. As a result, about 55 percent of schools have an oversupply of teachers, while 34 percent are understaffed. Most urban and a large share of rural schools have too many teachers, while 66 percent of remote schools have serious shortages. The government's new policy of providing additional financial incentives for teachers working in *remote* schools is a first step in the right direction, but this will only improve the quality of services if strong, ideally community-based, monitoring systems are in place.

The current salary structure does not provide strong incentives for teachers to teach in secondary schools and in remote regions. The new teacher certification program addresses some of these problems by upgrading teachers' qualifications and providing financial incentives for regional redistribution. But the teacher salary payroll will become unsustainable unless measures are actively pursued to combat absenteeism and these measures are used as an entry point to modernize the sector. The financial implications of the increased allowance pay proposed in Teacher Law No. 14/2005 can only be mitigated if the number of teachers on the payroll (full and part-time) is also reduced.

Health

Indonesia is still lagging behind its neighbors on major health outcome indicators such as infant and under-five mortality, and maternal mortality rates. There are three major reasons that explain this: poor quality of basic healthcare, low utilization rates of secondary healthcare by the lowest poverty quintiles, and low levels of preventative care.

- **Poor quality of basic healthcare.** Local health clinics (Puskesmas) lack adequate infrastructure, such as clean water and regular access to electricity, as well as sufficient stocks of basic medicines. Spending efficiency could be improved by re-allocating funds to primary public healthcare services for the poor and focusing on interventions that improve the quality of basic services.
- **Low utilization of secondary healthcare by the poor.** The poor have low utilization rates for secondary (hospital) healthcare. Consequently, there is significant potential for investing in demand-side approaches that would increase access to emergency in-patient care for the poor. Pro-poor financing for hospital care could be implemented through targeted vouchers (health cards) that allow free care for the poor on a fee-for-service basis.
- **Low levels of preventative care.** Indonesia's disappointing health indicators can also be improved by strengthening preventive care, and intensifying programs and national campaigns that tackle communicable diseases, particularly in remote and less developed areas of Indonesia.

Although expenditures on health have increased substantially since 2000, aggregate spending is still below 1 percent of GDP. Despite the low aggregate spending on health, Indonesia can still achieve major improvements within the current spending envelope if resources are distributed more evenly across income groups and districts. Government policies in the sector have not been properly reflected in the budgetary allocation, with more resources going to services predominantly used by richer income quintiles (secondary care). Therefore, it is important to better allocate the existing resources before substantially increasing health spending. For instance, all subsidies to secondary care facilities should be channeled into primary care. There may also be particular merit in subsidizing ambulatory care, especially in remote regions. The current PKPS-BBM program shows promise in improving the poor's access to primary and secondary in-patient care.

There are significant regional discrepancies in per capita public health spending, translating into inequalities in service provision across districts. Public health spending at the district level (combining sub-national, central government deconcentrated allocations) tends to benefit richer districts. This inequality is predominantly driven by the regressive impact of deconcentrated spending.

While Indonesia has adequate numbers of midwives, it has too few doctors, pharmacists and nurses. Indonesia has sufficient midwives who are well distributed across the country. However, most of them serve small clienteles and have little opportunity to upgrade their skills. For all other medical practitioners, the challenge is the opposite. For example, there is a severe shortage of doctors in health clinics (Puskesmas), particularly in remote areas. Absenteeism is also high at 40 percent because most public doctors also manage their own private practices.

Infrastructure

Indonesia has fallen behind most other countries in the region with some of the lowest rates of access to water, energy and sanitation services in the region. Only 40 percent of Indonesians have access to piped water and one third of Indonesians (over 70 million) do not have access to electricity. These rates have not significantly improved in recent years.

Indonesia is investing too little in infrastructure. Public infrastructure investment fell dramatically after the crisis, to about 1 percent of GDP in 2000. Currently, total public infrastructure investment—public, state-owned enterprises and private sector combined—stands at 3.4 percent of GDP, which is still significantly below pre-crisis levels of around 5 to 6 percent of GDP.

Four reasons account for this performance:

- **Capital intensity.** Infrastructure sectors tend to have a higher share of capital spending than social sectors (particularly education). After the economic crisis, Indonesia, similar to most other post-crisis countries, cut its capital budget, which disproportionately hurt infrastructure investments.
- **Private sector caution.** The vacuum left by the sharp fall in public infrastructure investment was never filled by private infrastructure investment. This remains an issue today: not only is increased public investment in infrastructure sorely needed, but so is progress in encouraging private investment through improvements in the investment climate, together with a clearer framework for joint projects involving both the public and private sectors.
- **Decentralization.** Local governments spend mainly on social sectors and their own administrations. The center continues to spend substantial amounts on local functions, particularly in health and education and, as a result, allocates fewer resources for large-scale infrastructure projects. In addition, public enterprises that have been transferred to local governments, particularly local water-supply utilities (PDAMs), have become insolvent.
- **Budget process.** Most capital budgets tend to be spent in the second half of the fiscal year, which provides too little time to complete large investment projects. The current budget process provides too many uncertainties and interruptions for rolling out complex multi-year infrastructure projects.

Scaling up infrastructure investment will require at least 2 percent of GDP, or US\$6 billion per year. However, while this would amount to a return to pre-crisis investment levels, it would still not make up for the 'lost decade' in infrastructure investments since then. The government's growth and poverty reduction strategy made infrastructure one of its priorities, but recent policy changes have not yet been translated into practice and the public sector will be hard pressed to fill the financing gap. A significant share of the future increases in investment will need to come from the private sector.

Public Financial Management

Indonesia has made progress in reforming its public finances and increasing transparency but the reform agenda remains large. In almost all key areas of public financial management (PFM)—budget formulation, budget execution, procurement and audit—Indonesia has a sound legal framework already in place. Future challenges include, first, the appropriate implementation of laws and regulations in areas as diverse as moving to performance-based budgeting, establishing a Medium-Term Expenditure Framework, initiating electronic procurement processes and strengthening the external audit body. Second, the current budgetary system lacks flexibility, which slows down implementation.

Advancing the PFM reform agenda is critical to ensure that new fiscal resources are allocated and then spent efficiently. The greatest implementation problems lie in disbursing public investment budgets. They are typically disbursed slowly and consequently a disproportionately large share of the funds is spent near the end of the fiscal year. There is also consistent under-spending on capital expenditure compared with the initial budget—this despite the fact that aggregate budgets are often revised upwards substantially during mid-year. In addition to issues of implementation there is also the issue of corruption in public spending. Significant additional financial resources are now flowing to sub-national governments, so tackling corruption at the sub-national level becomes that much more urgent.

The Indonesian budget system is inflexible. Indonesia's budget documents are excessively detailed, require considerable time to prepare and deliberate upon, and add to the complications of implementation. Parliament's discussions and hearings focus on details, not on the links between policy and broad budget allocations, and consume a disproportionate amount of time. In 2006, although the central government approved the budget authorization documents at the beginning of year, disbursement remained slow due to implementation bottlenecks. Because of the large amount of detail, budgets for individual projects often need to undergo lengthy revision processes.

The legal and regulatory framework for public procurement has been improved, but the capacity to implement procurement in a timely and transparent manner has not kept pace. The National Procurement Policy Office within Bappenas is preparing nationwide standard procurement procedures, including standardized bidding documents, but the capacity to enforce them across all levels of government is limited. Pilot initiatives to implement e-procurement are underway, but a scaling-up strategy to leverage e-procurement to enhance market transparency across the entire government procurement system is not yet in place. The introduction of basic-level training and the certification of procurement practitioners are important initiatives but most public officials lack adequate career stream or remuneration incentives to take up procurement responsibilities. All of these initiatives are of the utmost importance if Indonesian citizens are to receive the full benefit of the re-allocation of resources from the center. Failing this, collusive practices will not only continue but increase in their relative and adverse impact.

The state audit law has strengthened the role of the external audit institution, the State Audit Agency (BPK) and there is now an opportunity to establish greater budget flexibility while ensuring high fiduciary standards. The BPK is now clearly in charge of the external audit of all government institutions, while the State Development Audit Agency (BPKP), together with the Inspector General of each ministry, coordinates the internal audits of the central government, and the Bawasda offices manage the internal audits in the regions. But while it is now critical to implement the State Audit Law, staffing and resources at the BPK and the BPKP are not commensurate with their redefined respective roles. The BPK, despite its expanded mandate, has less than half the number of certified auditors of the BPKP, which now has a more limited role. Furthermore, without rigorous enforcement of the BPK's audit findings, which to date has been conspicuous only by its absence, the increased capacity and performance of the BPK are unlikely to be translated into improved fiduciary standards.

Fiscal Decentralization and Regional Inequality

Indonesia is one of the most diverse countries in the world, with living standards that range from developed country standards to entrenched poverty. Population density also varies greatly: Java is one of the most densely populated islands in the world, while Papua is one of the least densely populated. Poverty rates range from less than three percent in some cities (Denpasar, Bali; Bekasi, West Java) to more than 50 percent in West Papua and Papua (Manokwari and Puncak Jaya, respectively).

When Indonesia decentralized in 2001, the government allocated a large amount of resources to poorer regions in an effort to balance the country's disparities. Although intergovernmental fiscal transfers could be even more equalizing, the poorest and most remote parts of Indonesia have received very substantial transfers since 2001. The General Allocation Fund (Dana Alokasi Umum, or DAU) is the most important tool of the transfer system, financing about 70 percent of all sub-national expenditures (provinces and districts) and more than 80 percent of district expenditures.

In 2006, total government transfers increased nominally by 47 percent mainly to the benefit of the poorest regions of Indonesia, which experienced a disproportionate increase in their revenues. The DAU even increased by 64 percent, with important implications for the structure of the transfer system and its equalization impact. Remote provinces with high levels of poverty, including Aceh, Papua and Maluku have seen their allocations increase by more than 100 percent, compared with 2005 levels. Transfers will continue to dominate sub-national finances, particularly in local governments, because the base for own-source revenues is low while transfers have been covering more than 80 percent of sub-national revenues and are even increasing further. The DAU itself is likely to become even more dominant because revenues from oil and gas are expected to decline due to lower oil and gas production, at least for the next few years.

Today, Indonesia's main development challenge is not to transfer significant additional resources to poor areas, but to make sure that existing resources are spent effectively. Many local governments have difficulty spending these additional resources. Their unspent reserves have been rising rapidly and reached a record 3.1 percent of GDP by November 2006. Most regions have enough financial resources to make a difference to the lives of their citizens. Even poor regions with comparatively low fiscal resources (particularly in NTB, NTT) have seen their DAU

transfers increase by an average of 75 percent in 2006. Despite these large surpluses, resources are often channeled to the wrong places. For instance, while local government funds remain unspent, many PDAMs have become insolvent and are unable to provide water services.

An Agenda for Implementation

This is a moment of great opportunity. With a stable macroeconomic environment and sufficient fiscal resources, the Indonesian government can further reduce poverty and improve the quality of and access to basic services. Allocating and managing resources are now at least as important as mobilizing them. Spending money well is a particular skill—one that has been partially lost in the aftermath of the crisis, when the government focused rightly on stabilizing the macroeconomy and restraining spending.

The reform agenda remains large. Many of the needed reforms will entail difficult and lengthy processes. The government has already started implementing an ambitious agenda. What matters most is to stay the course and to demonstrate consistent progress in difficult and lengthy reforms. There are six critical expenditure areas: fiscal space, education, health, infrastructure, public financial management and decentralization. The key steps towards achieving better management, allocation and impact of public spending for improved service delivery and reduced poverty are outlined below.²

1. Enlarge fiscal space and maintain macroeconomic stability by reducing and reallocating subsidies and reducing aggregate debt. Fuel and electricity subsidies are still a significant portion of the budget and largely benefit better-off citizens (Box 2). Middle-income countries such as Indonesia are still vulnerable to shocks and debt levels above 30 percent are considered unsafe.

- Despite the drastic reduction in fuel subsidies in 2005, total subsidies remain high at close to US\$10 billion. A reduction of these subsidies would free up significant additional resources. The lower the international oil price, the easier it becomes to liberalize fuel prices. However, if the price adjustment were to be significant, it would once again be critical to design compensatory programs to ensure that subsidy reduction did not have an overall negative welfare impact on the poor.
- Further improve debt management within the recently established new debt unit, advance the implementation of the Treasury Single Account and proactively manage contingent liabilities. Debt levels exploded during the crisis not because of excessive borrowing but because of contingent liabilities in the banking sector.

2. Maximize the benefits of increased education spending by investing more in junior secondary education, redefining the 20 percent spending target and reallocating teachers to under-served schools. Transition rates from primary school to junior secondary school are low; the 20 percent spending rule, using its current definition, places unrealistic demands on the education budget; and teachers are not equally distributed among schools.

- Promote higher transition rates to and retention rates in junior secondary schools by providing targeted transfers to poor students to ensure that they can afford to attend school, as well as engaging in targeted construction of new schools in under-served areas.
- Adjust the definition of the 20 percent spending target to include teacher salaries and combine regional and central spending. Without these adjustments, education spending will have to rise so much that it will crowd out spending for other basic services such as health and water services.
- Reallocate teachers to under-served schools. While there is no shortage of teachers in the aggregate, remote areas and specific schools are under-served. Offering more attractive financial incentives to teachers to serve in remote schools, as well as allocating teachers to schools based on the number of students (not the number of classes) will promote a more equal and efficient distribution of teachers throughout the country.

² See Annex A in the main report for a full compilation of the report's recommendations.

3. Address inequalities in access to health services by better targeting under-served regions. Improve the quality of healthcare by regulating private service providers and increasing the service area for and training of midwives. The initial priority should not be to raise overall health spending, but first to spend existing funds more efficiently and effectively.

- To address inequities in health provision, the Special Allocation Fund (Dana Alokasi Khusus, or DAK) could be utilized to increase the supply of health services to under-served regions, while demand-side interventions such as vouchers could be used to increase demand from poor clients. The most immediate challenge lies in channeling existing spending to where it would most benefit the poor—in primary care and in rural and/or under-served areas.
- To harness the potential of the private sector, better regulation of private service providers is necessary. Almost 40 percent of the poor satisfy their healthcare needs through private providers, but there is no comprehensive information on the types and quality of services they provide. A systematic effort to regulate, license and accredit private providers would enhance the quality of care available to the poor.
- Midwives currently operate in relatively small service areas and therefore deliver relatively few children each year. It would be more efficient to expand midwives' service areas and improve the quality of their training, with a stronger focus on practical delivery skills.

4. Invest in infrastructure by expanding the supply of electricity and reducing subsidies that benefit better-off clients, providing fiscal incentives to encourage sub-national governments to better maintain roads and creating a framework for PDAMs to function better. Currently, electricity subsidies account for 28 percent of all subsidy costs and largely benefit better-off Indonesians. Local roads are often poorly maintained and the vast majority of Indonesians do not benefit from high-quality water services.

- Reduce subsidies for all electricity voltages above 450VA. Higher voltage levels are used disproportionately by the better-off, so the subsidy savings would be pro-poor.
- Local governments have few incentives to properly maintain roads although in the long run maintenance is much cheaper than reconstruction. The central government could offer direct incentives to local governments based on the year-on-year quality of road maintenance that they undertake.
- Current impediments to long-term borrowing by PDAMs could be removed and incentives provided to local governments that improve PDAM services. Under the current system, most PDAMs cannot borrow in credit markets. A process of debt restructuring should be undertaken to give the most credit-worthy PDAMs incentives to raise tariffs and lower costs, thereby improving their ability to borrow money commercially. In addition, the central government could create a pool of funds to be used to reward those local governments that make the most progress in improving the financial position and operational performance of their PDAMs.

5. Make the flow of public expenditures more predictable and transparent by creating performance-based budgeting systems, linking budgets to planning processes and strengthening procurement and auditing functions. While there are formal links among policy objectives, budgeting, disbursement and auditing, the process often does not work effectively in practice.

- Performance-based budgets assess results according to outputs achieved and not financial inputs. Currently, input controls are the predominant method of assessing the quality of public spending, but a shift to greater ex post control, including audits of expenditures, as well as assessments of outputs produced, would result in more effective spending efforts.
- Linking budgets more effectively to planning processes is a priority. While the five-year plan (Repanas) outlines medium-term objectives, budgeting cycles operate on an annual basis. Implementation of the Medium-Term Expenditure Framework (MTEF) would allow multi-year budgeting and the carry-over of funds, and enable policy-makers to budget medium-term resources with greater levels of certainty.
- Strengthen procurement and auditing systems by focusing on efficiency. While procurement rules have recently been tightened, this has resulted in slower procurement of goods and services. Improved training of procurement professionals is required to address these bottlenecks. In addition, efficiency gains could

be obtained by combining the three main internal audit bodies into one unified organization, as well as employing more and better-trained staff at the BPK. Likewise, significant efficiency gains would come with the lowers levels of corruption that would result from the tightening of these systems.

6. Help local governments to better spend their resources by removing full coverage of the civil service wage bill from the DAU, reducing spending on administration and building capacity. Local governments now have significant authority over planning and budgets, but they do not yet have clear incentives to use these funds to maximize economic development and service delivery outputs for local citizens.

- Current transfer rules create incentives for local governments to increase the size of their civil service and create disincentives for them to allocate local expenditures more strategically to achieve their objectives. Elimination of the DAU's automatic coverage of all civil service wages would create incentives for local governments to allocate their budgets more efficiently.
- Significant savings could also be achieved by reducing spending on core administrative services, the largest spending item of sub-national governments. Disproportionate spending on administrative services has crowded out capital investments and spending on front-line service providers, both of which would generate more output for each rupiah spent.
- With far larger resources now flowing to the regions, more effective local government administrations are required. Therefore, it becomes crucial to invest in capacity-building with the aim of improving project development and implementation skills. This is especially crucial if local governments are to effectively manage the additional funds needed to tackle low investment in public infrastructure.

A small number of high-impact reforms could produce rapid results. The reform agenda above is indeed a challenging one and is broken down into a summary matrix of 62 specific recommendations in the main report. However, there are specifically seven reforms that will achieve a high impact and could be implemented within a 12- to 18-month timeframe. These reforms either address service delivery, Indonesia's fiscal position or its budget processes (Box 2).

Box 2 Seven high-impact quick wins

Impact on service delivery and personnel management

- *Remove complete coverage of civil service salaries from the DAU.* DAU payments currently cover 100 percent of local civil servant salaries, penalizing local reformist governments that want to reform their civil service and reallocate funds to priority sectors.
- *Adjust the definition of the "20 percent mandate" to include teacher salaries and combine central and regional government spending.* This would allow focusing on aggregate spending and performance of the sector. Such aggregate definition would further reduce distortions in the teacher salary structure and decentralization framework.
- *Allocate teachers to schools based on the number of students, not on the number of classes,* with a weighting for smaller schools. This would result in a more rational allocation of teachers within and among school districts and would result in a more even distribution of teachers to students.

Fiscal impact

- *Reduce inefficient and pro-rich fuel subsidies (US\$5 billion).* Despite fuel price increases in 2005, the fuel subsidy remains one of the largest spending items in the budget.
- *Reallocate inefficient and pro-rich electricity subsidies (US\$3 billion).* Subsidies could be reallocated from consumption (all but 450VA) towards connection to encourage expansion of the electricity network.

Impact on budget processes

- *Establish a Medium-Term Expenditure Framework and allow for authorization of multi-year budget appropriations.* This would be particularly useful for larger infrastructure projects in order to increase predictability and efficiency of medium-term fiscal priorities.
- *Further strengthen both the capacity and regional presence of the BPK. Redefine the role of the BPKP and consolidate the functions of the various internal audit agencies.*



CHAPTER 1 **Fiscal Space and Management**

Indonesia Public Expenditure Review 2007

Key Findings

- Public investment as a share of GDP has returned to pre-crisis levels with sub-national governments emerging as key drivers of investment. The increase in public investment has been supported by an expansion of the 'fiscal space', especially at sub-national level. However, much of this added fiscal space remains unutilized. At the central level unutilized fiscal space is estimated at 1-1.5 percent of GDP for the period 2001-05, although such data for sub-national governments are unavailable.
- The central government's debt situation has improved significantly, as reflected in debt stock and flow indicators. Sub-national governments' debt is negligible. Macroeconomic stability and fiscal consolidation have been the underlying forces accounting for this improvement. Improved debt management by the central government has also made an important contribution.
- Although the 2005 adjustment to domestic fuel price freed up US\$10 billion, in 2006 Indonesia still spent US\$12 billion on subsidies, particularly on fuel and electricity. Yet several factors have prevented the government from taking full advantage of higher oil prices. Production volume has steadily declined over the past 10 years (by 40 percent). Spending capacity has proven to be more limited than expected. Also, financial transactions with Pertamina (the state-owned oil company) have been causing problems with the state budget. Finally, electricity subsidies—a regressive transfer—have constituted a rising financial burden on the budget.

Key Recommendations

- Reducing and reallocating inefficient and pro-rich subsidies would free up additional fiscal space of up to US\$12 billion. With high international oil prices, fuel and electricity subsidies continue to place an unnecessary burden on the budget. These resources could be better used to expand spending in key sectors, particularly infrastructure.
- Large increases in public investment are needed to make up for low public investment in the past five years and also to stimulate private investment. A key to achieving increased investment is improving public financial management (see Chapter 6). In particular, operationalizing the Medium-Term Expenditure Framework (MTEF) should strengthen budget formulation and hence implementation.
- Improving debt management is indispensable to further reducing the risks related to the public debt as the debt burden is not a debt management, but rather a fiscal policy, issue. For the progress in public debt management seen in recent years to be sustained, a strong focus on capacity-building and training of staff at the new DGDM (Directorate General of Debt Management) is pivotal. Also, a solid analytical framework needs to be put in place to support debt management strategy development. Likewise, accelerating the delivery of a TSA (Treasury Single Account) and incorporating transitory accounts (such as the Rekening Dana Investasi, or RDI/Regional Development Account, or RDA) will help to reduce risks associated with contingent liabilities.

Public Expenditure Trends

Total public expenditures increased by 11 percent in real terms between 2001 and 2005 and remained relatively stable as a percentage of GDP over this period at an average of 20 percent. This increase in government spending was largely financed by a proportional expansion in non-oil and gas tax revenues. Expenditures were characterized by:

- **A sharp rise in real transfers to the regions**, which now account for one third of central government spending. Transfers are now by far the largest spending item of the central government.
- **Wide fluctuations in the mix between routine and development expenditures between 1994 and 2003** and a slight decrease in routine expenditures after decentralization.
- **A significant increase in subsidies over 2004-05**, following a large increase in international oil prices and notwithstanding a significant reduction in fuel subsidies.
- **A continuous decline in debt service**, owing to a stable outstanding stock of domestic and external debt and a decline in interest rates.
- **A relatively stable share of personnel and material expenditures**, which averaged 25 percent and 7 percent, respectively.

Despite a decline in 2002, national public expenditures measured in real terms have increased since 1999 and have also slightly risen relative to the overall size of the economy.³ Over the period 1999-2006, public expenditures accounted for 20 percent of GDP on average. In nominal terms, public expenditures increased from Rp 198 trillion in 1999 to Rp 699 trillion in 2006 (preliminary) and a further increase to Rp 796 trillion is projected in 2007 (APBN) (Table 1.1). In real terms (at constant 2000 prices), national expenditures increased by 93 percent from Rp 206 trillion in 1999 to Rp 397 trillion in 2006.

Table 1.1 Total national public expenditures (central + province + district)

<i>Rp trillion</i>	1999	2000	2001	2002	2003	2004	2005	2006*	2007**
Nominal	198	234	353	336	405	445	532	699	796
Constant 2000 prices (adjusted by CPI)	206	234	316	270	305	315	341	397	425
Annual growth rate (%)	7.2	13.6	35.5	(14.8)	13.0	3.4	8.1	16.6	7.1
Constant 2000 prices (adjusted by GDP Deflator)	239	234	309	278	314	325	341	417	454
As percent of GDP (%)	16.3	21.9	25.4	20.0	21.8	21.8	23.4	25.6	24.0

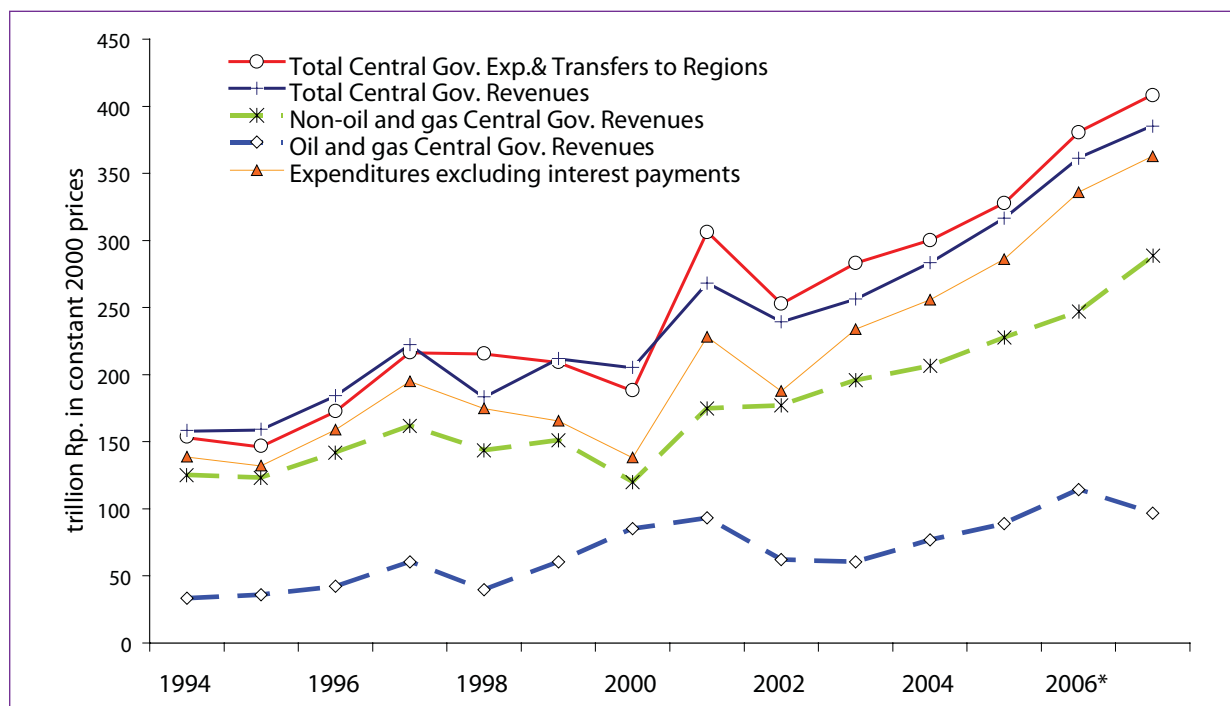
Source: World Bank staff estimates based on MoF and SIKD data.

Note: * = preliminary realization of APBN and estimates for sub-national spending, ** = central government budget (APBN) and estimates for sub-national governments.

Non-oil and gas revenues are increasingly driving the expansion in expenditures. In 2006, revenue increased by an estimated 14 percent, and in 2007 are expected to rise by a further 7 percent. In 2007, both revenue and expenditures are expected to increase by 7 percent. The increase in revenues comes mainly from non-oil and gas revenues (Figure 1.1).⁴ Oil and gas revenues are estimated to decrease by 14 percent in 2007, as a result of a continuing declining trend in oil production and a downward revision of the oil price assumption from US\$64/barrel (2006 revised budget) to US\$63/barrel (2007 budget).

3 National expenditures are defined in this report as the aggregate of central, provincial and district spending, net of inter-governmental transfers.

4 Non oil-revenues represent 68 percent and 75 percent of the total revenues in 2006 and 2007, respectively. The weighted increments of the non-oil revenues are 6 percent (out of the 14 percentage point increase in total revenue in 2006); and 12 percent (out of the 7 percentage point increase in total revenue in 2007; with a negative 5 percent in oil-revenues).

Figure 1.1 Central government expenditures and revenues, 1994-2007

Source: World Bank staff estimates based on MoF and SIKD data.

Note: *Based on central budget and estimations of sub-national allocations. National expenditures are defined herein as including spending by central, province and district levels of government.

While total national expenditures increased in real terms by 25 percent from 2001 to 2006, interest payments declined sharply. As a result, the share of interest payments in total national spending fell from 25 percent in 2001 to 11 percent in 2006 (Table 1.2). This sharp decline is mainly due to (i) lower interest rates; (ii) a stable stock of debt outstanding (and hence a lower share); and (iii) an appreciation in the exchange rate. By contrast, the share of material, and other routine and development expenditures, increased over this period.⁵

Table 1.2 Economic composition of national public expenditure, 2001-07

A. Rp trillion (at constant 2000 prices)

	2001	2002	2003	2004	2005	2006*	2007**
Personnel Expenditures	72.3	68.4	78.1	81.5	80.4	102.0	118.0
Material Expenditures	16.1	19.1	19.4	18.4	26.1	37.7	50.2
Interest Payments	78.2	65.0	49.1	44.2	41.8	44.8	45.5
Subsidy	69.5	35.0	33.0	64.9	77.4	61.1	55.1
Social Assistance	0.0	0.0	0.0	0.0	16.0	24.6	27.1
Others Routine	15.4	15.7	25.0	21.1	26.4	34.9	26.1
Development	65.0	66.6	100.1	85.2	45.6	57.8	61.7
Capital	0.0	0.0	0.0	0.0	21.1	33.9	41.1
Total National	316.4	269.7	304.9	315.3	334.8	396.7	424.7

⁵ Since 2005 budget is unified and classification changed. The category of *development expenditures* does not exist anymore. The new budget classification includes: personnel, material, social assistance and capital. For consistency this report continues to calculate development spending for the years 2005-07.

B. Percent share of total

	2001	2002	2003	2004	2005	2006*	2007**
Personnel Expenditures	23	25	26	26	24	26	28
Material Expenditures	5	7	6	6	8	9	12
Interest Payments	25	24	16	14	12	11	11
Subsidy	22	13	11	21	23	15	13
Social Assistance	0	0	0	0	5	6	6
Others Routine	5	6	8	7	8	9	6
Development	21	25	33	27	14	15	15
Capital	0	0	0	0	6	9	10
Total National	100	100	100	100	100	100	100

Source: World Bank staff estimates based on MoF and SIKD data.

Note: National expenditures are defined herein as including spending by central, province and district levels of government. Development expenditure figures for years 2005-07 include only sub-national governments, while capital expenditures for the same years include only central government.

* Based on central budget and estimations of sub national allocations.

** Central government budget (APBN) and estimates for sub-national governments.

Total expenditures in development projects increased slightly after decentralization. Central government transfers to regions increased sharply after 2001. First, during the “big bang” decentralization in 2001, transfers increased from 19 percent to 24 percent (and subsequently 31 percent in 2002). Second, transfers increased their shares again in 2006 from 30 percent to 33 percent (Table 1.3). In real terms, this second jump was as significant as in 2001 given that aggregate expenditures were much higher (see below and Chapter 7).

Table 1.3 Central government expenditures composition

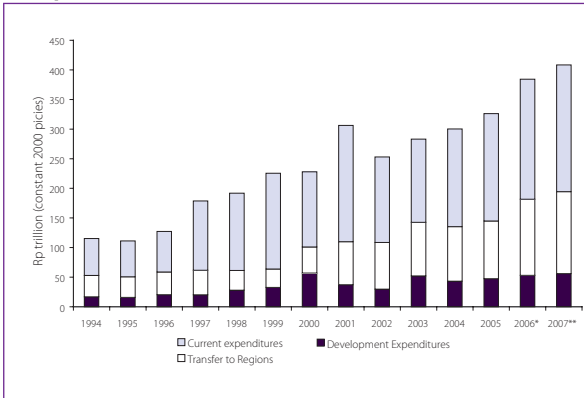
Percent								
	2000	2001	2002	2003	2004	2005	2006*	2007**
Routine	65.6	64.1	57.1	49.7	54.9	55.9	52.5	52.4
Development	15.1	12.2	11.8	18.4	14.4	14.6	13.7	13.7
Transfers to Regions	19.3	23.7	31.1	32.0	30.7	29.4	33.3	33.9
Total	100	100	100	100	100	100	100	100

Source: World Bank staff estimates based on MoF data on executed budgets.

Note: *2006 preliminary results, **2007 budget (APBN).

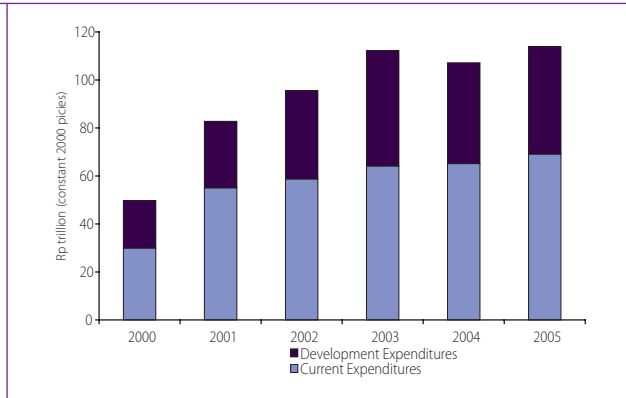
During this period of sharp increases in transfers, the share of both routine and development spending in overall central government expenditure declined slightly. In 2006, less than 14 percent of the central government budget was spent on development while routine spending accounted for slightly above 50 percent (Table 1.3). As expected, sub-national governments increased the relative size of both their routine and development expenditures. The distribution of sub-national government spending between development and routine remained relatively constant, with 60 percent going on routine expenditures and 40 percent on development projects (Figure 1.2 and Figure 1.3).

Figure 1.2 Central government share of economic composition



Source: World Bank staff estimates based on MoF and SIKD data.
Note: *2006 preliminary results, **2007 budget (APBN).

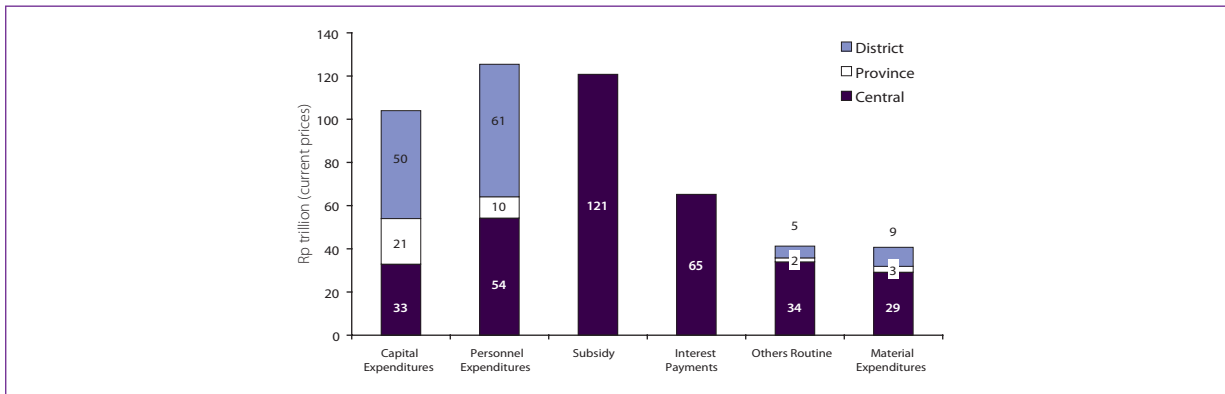
Figure 1.3 Sub-national governments (province + district)



Source: World Bank staff estimates based on MoF and SIKD data.

The main transfer to sub-national governments, the General Allocation Fund (DAU), accounted for an average of 19 percent of total expenditures in 2001-05, well below the 25 percent stipulated by law. The DAU has been consistently under-budgeted due to conservative assumptions of the international oil price in the budget (see Chapter 6). In 2006, the DAU increased by Rp 26 trillion in real terms (or 45 percent at constant 2000 prices), almost as large as the increase seen during the “big bang” decentralization. This increase was supported by a 14 percent increase in revenues, of which 6 percent derive from non-fuel revenues and 8 percent from fuel revenues (partly due to an increase in the budget assumption for the oil price from US\$52/bbl in 2005 to US\$64/bbl in 2006). Moreover, the impact of the increase in transfers on the overall budget in 2006 was mitigated by a 20 percent reduction in subsidies for that year.

Figure 1.4 Economic composition of public expenditure by level of government, 2005⁶



Source: World Bank staff estimates based on MoF data on executed budgets.

After decentralization, sub-national governments began to execute a significantly larger share of national personnel and material expenditures, accounting for 61 percent and 38 percent of the respective totals (Figure 1.4). However, the central government still accounts for almost all subsidy expenditures and interest payments.

The central government executes about half of its development spending directly, while the other half is channeled through its deconcentrated line ministries. The central government accounts for 51 percent of total national development expenditures, of which more than half (about 53 percent) are used to finance local government projects.⁷ Sub-national governments execute the remaining 49 percent of development spending, part of which

6 Interest payments by sub-national governments are not included as SIKD dataset reports this category aggregated with amortization payments. Sub-national subsidies are aggregated under other routine as they cannot be disaggregated with other pension and other assistance expenditures. At 0.3 percent, debt payments are negligible (see Table 1.6).

7 This estimation is based on the share of development spending in the form of “*dekonsentrasi*” for 2004, for all districts excluding Jakarta.

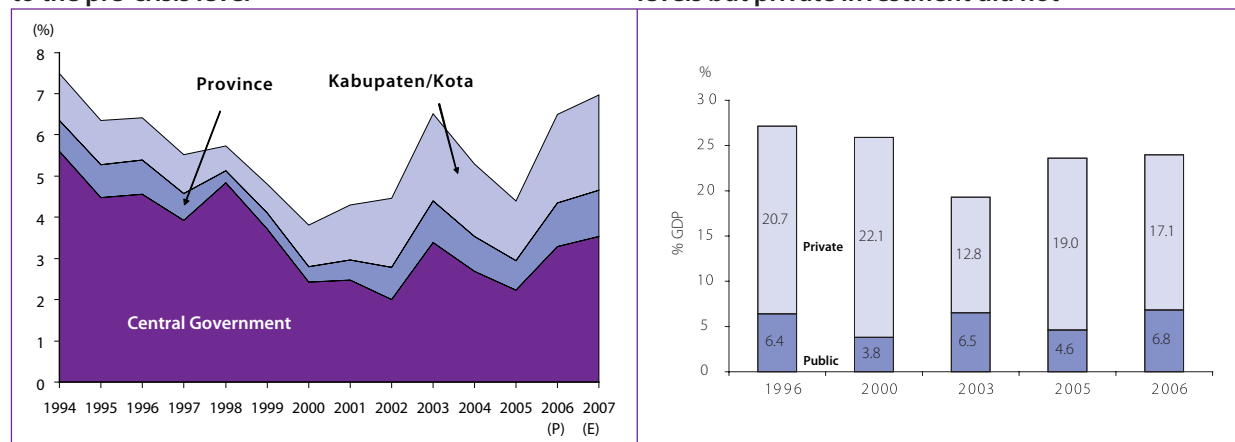
is earmarked by the central government in DAK transfers. As a result, about three-quarters of Indonesia's public investments are carried out at the local level.

Public Investment and Fiscal Space

Government development expenditures, a rough proxy for public investment, have been recovering. Total development expenditures as a share of GDP reached 6.5 percent in 2003 before slipping to 5.3 percent in 2004, almost back to the levels in 1995-96 (Figure 1.7). Regions are now contributing half the aggregate public investment and have been the main drivers of increased development expenditures in recent years. Between 2000 and 2003, total development expenditures increased by 2.7 percentage points of GDP (see Chapter 7). While development expenditures of the central government increased by 1.0 percentage point, those of regional governments increased by 1.7 percentage points (provinces 0.6 of a percentage point and districts/cities [*kabupaten/kota*] 1.1 percentage points). If development expenditures of sub-national governments increase at the same pace as for central government, total development expenditures will reach 6.4 percent of GDP in 2007.

Overall investment levels have still not recovered to pre-crisis levels. In 2005, total public and private investment reached 23.6 percent of GDP. While public investment has now recovered to pre-crisis levels, private investment has not. The recovery of public investment to 6.0 percent increased total investment to 23.9 percent of GDP in 2006 (Figure 1.6). However, public investment has been low for many years and needs to catch up the ground it has already lost. In addition, private investment remains about 5 percent below its pre-crisis level, in part because of shortfalls in complementary public spending.

Figure 1.5 Development expenditures have recovered to the pre-crisis level **Figure 1.6 Public investment recovered to pre-crisis levels but private investment did not**



Source: MoF, World Bank staff estimates.

Source: MoF, World Bank staff estimates.

Box 1.1 What do we mean by fiscal space?

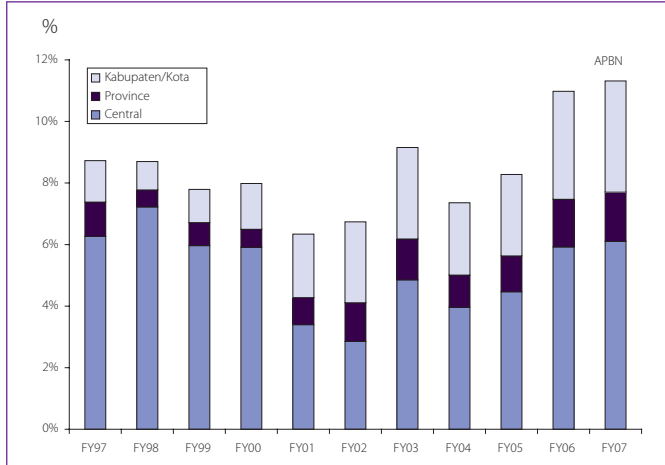
The term 'fiscal space' is frequently used in policy debates. However, its definition and correct practical usage remain controversial. The report on *Fiscal Policy for Growth and Development* (World Bank, 2006b) states that "fiscal space exists when a government can increase expenditures without impairing its fiscal solvency.

As a forward-looking concept, fiscal space can be useful. However, it does not necessarily address the size of fiscal space in the past. Furthermore, it seems important to separate discretionary from non-discretionary expenditures, since an increase in non-discretionary expenditures (i.e. personnel expenditures) does not necessarily equate to increased fiscal space for development spending.

This Public Expenditure Review defines fiscal space as discretionary expenditures that Indonesia can undertake without impairing its solvency. Fiscal space is defined as total expenditures minus personnel expenditures, interest payments, subsidies and transfers to the regions. This definition implies that the government should take 'solvency' into account when formulating the state budget. As a result, the gap between projected discretionary expenditures and actual expenditures is defined as 'unutilized fiscal space'.

Source: World Bank, 2000b.

Figure 1.7 Fiscal space continues to increase



Source: BPS, MoF, World Bank staff estimates.

Indonesia’s fiscal space has substantially increased. The recovery in public investment has occurred in tandem with a notable increase of fiscal space. Fiscal space (including center and sub-national) increased from 6.3 percent of GDP in 2001 to 10.3 percent in 2006.⁸ Fiscal space is projected to be 10.4 percent in 2007 (Figure 1.7).

The increase in revenues and decrease in fuel subsidies are driving the expansion of fiscal space. The fiscal space of the central government increased from a low 2.9 percent in 2002 to 4.3 and 7.2 percent in 2005 and 2006, respectively. Increasing revenues are by far the largest contributor to the change in fiscal space (Table 1.4). Between 2005 and 2006, the increase in revenues contributed some 3.0 percent of GDP followed by the increase in budget deficit by 0.5 percent. In this respect, it is important to note that higher oil prices affect both revenues (tax and non-tax) and expenditures (fuel subsidies and revenue sharing).

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Table 1.4 Quantifying the widening of fiscal space

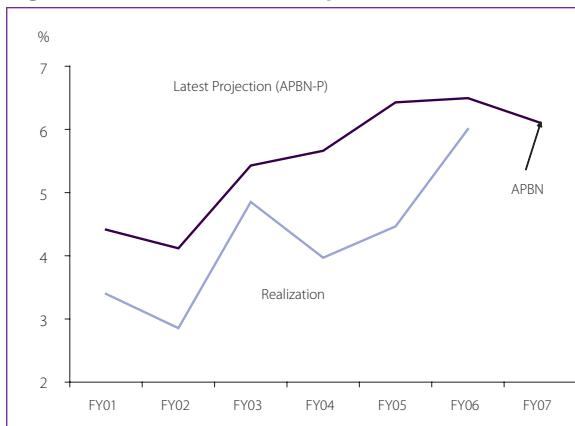
Percent	1996-2002	2002-05	2005-06
Revenues	0.2	0.6	2.9
- Oil and gas	0.1	0.3	1.6
- Non-oil and gas	0.0	0.3	1.4
Budget balance	0.4	-0.1	0.5
Non-discretionary expenditures	-1.3	0.0	-0.5
- Subsidies	-0.3	-0.7	1.1
Fiscal space	-0.8	0.5	3.0

Source: MoF, World Bank staff estimates.

Note: (Change between periods, percent of GDP, annual average); + denotes positive contribution to fiscal space and vice versa. For example, higher budget deficit contributes positively to fiscal space.

However, this expanded fiscal space has not been fully utilized by either central or sub-national governments. Although public investment has increased substantially in recent years, there is substantial room for improvement at all levels of government. The gap between the central government’s latest budget estimates (APBN-P) and realization is a proxy indicator of unutilized fiscal space. The gap widened from 1.0 percent in 2001 to 2.2 percent in 2005 (Figure 1.8). In the case of sub-national governments, the sharp increase in deposits provides evidence that regions are also under-utilizing their fiscal space (Figure 1.9). In August 2006, total deposits reached a record Rp 97 trillion, or 2.9 percent of GDP (see Chapter 7).

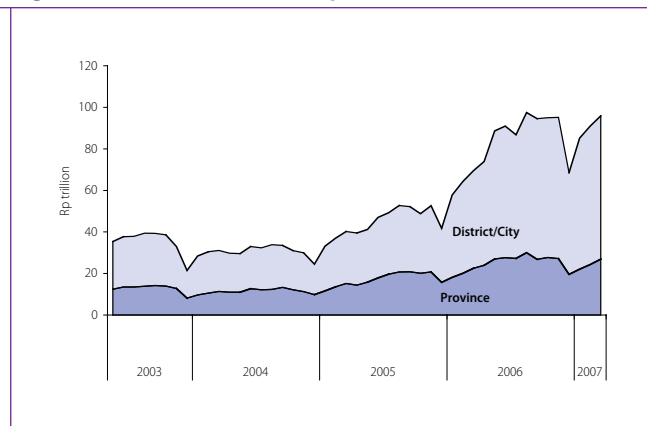
Figure 1.8 Unutilized fiscal space: central



Source: MoF, World Bank staff.

Note: Comparison between revised budget and realization by central government, percent GDP.

Figure 1.9 Unutilized fiscal space: sub-national



Source: Bank Indonesia.

Note: Deposit outstanding by regional governments, Rp trillion.

8 Regional governments’ figures are estimates.

In 2007, higher oil prices will have a slight negative impact on the budget because subsidies remain high while oil and gas production has declined. A US\$1/bbl increase in oil prices in 2007 will have a negative impact on budget balance of Rp 0.6 trillion (0.02 percent of GDP). This is in contrast to 2006 when a US\$1/bbl increase in oil prices had a slight positive impact by Rp 0.2 trillion. In 2007, a US\$1/bbl increase in oil prices will have the following impact on the central government budget:

1. **Revenues.** Increase of Rp 3.8 trillion (oil and gas tax revenues by Rp 0.7 trillion; non-oil and gas tax revenues and others by Rp 3.1 trillion).
2. **Expenditures.** Increase of Rp 4.4 trillion (fuel subsidy by Rp 2.6 trillion, electricity subsidy by Rp 0.4 trillion, revenue sharing by Rp 0.6 trillion and DAU by Rp 0.8 trillion).

The effect of international oil price fluctuations is not expected to cause pronounced shocks to sub-national budgets (prior to the budget approval each year).⁹ Even if oil prices decline, the negative impacts on regional budgets will not be substantial for three reasons (Table 1.5). First, oil tax and non-tax revenues represent only 32 percent of domestic revenues in 2006. Thus a given percentage increase in the price of oil does not translate in the same percentage increase in total domestic revenues net of revenue sharing (which is used as a base for determining the pool of transfers). Second, only 10 percent of regional governments receive revenue sharing from oil and gas. Third, regional governments receiving oil and gas revenues have accumulated windfall financial resources in the past few years and still possess unutilized revenues in bank accounts (Figure 1.9 and see Chapter 7).

Table 1.5 Oil price elasticity of sub-national revenues (estimates for 2008)

Rp billion

	Low case (US\$ 40/bbl)	Base case (US\$ 50/bbl)	High case (US\$ 60/bbl)	Oil price-elasticity of sub-national revenues
1. General Allocation Transfers (DAU)	175,937	182,704	189,470	0.19
2. Shared revenues	59,423	64,186	68,950	0.37
3. Special Autonomy & Adjustment Fund	7,331	7,613	7,895	0.19
Total Transfers to Sub-national revenues (1+2+3+others)	270,845	282,657	294,468	0.21

Source: World Bank staff calculations.

Debt

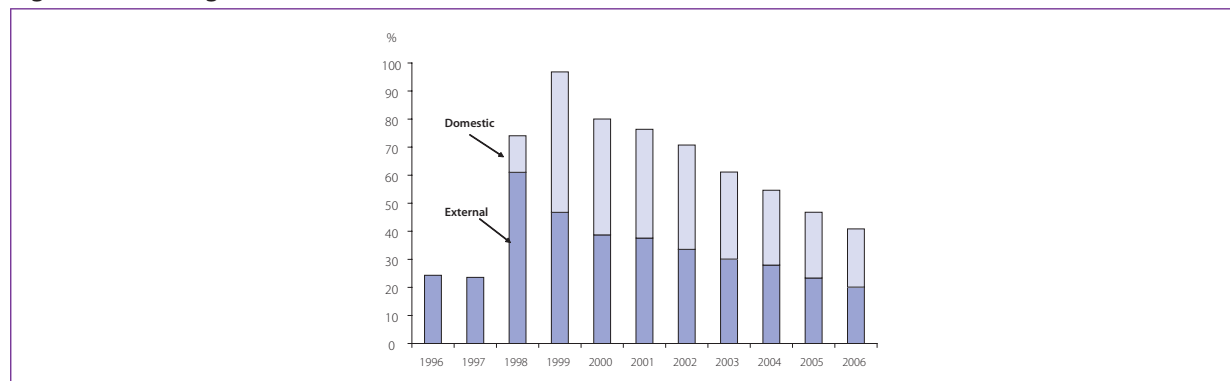
Central government debt

The government debt-to-GDP ratio has been more than halved over the past six years. The central government debt outstanding as a share of GDP fell from about 100 percent in 1999 to 47 percent in 2005 and improved further to 41 percent in 2006 (Figure 1.10). This decline was much faster than the World Bank and other observers had projected in 2000.¹⁰ A stable stock of debt outstanding, the appreciation of the rupiah and rising GDP have all contributed to easing the debt burden.¹¹ The government debt-to-GDP ratio in Indonesia at the end of 2005 (47 percent) was similar to neighboring countries such as Thailand (46 percent), Malaysia (46 percent), and significantly lower than the Philippines (72 percent) (Table 1.6).

⁹ Estimates simulate the effect of oil price changes on 2008 transfers, as budget 2007 was already approved in October 2006 and thus oil prices changes are already neutral for transfers in 2007.

¹⁰ For example, the World Bank projected the ratio to decline to about 45 percent only by 2010 (see "Indonesia: Managing Government Debt and Its Risks", May 2000).

¹¹ For example, the government debt to GDP ratio improved from 80.0 percent in 2000 to 46.8 percent in 2005. During that time, government debt outstanding was slightly reduced from US\$132 billion to US\$131.6 billion. Nominal GDP increased by 70.5 percent from US\$165 billion to US\$281.3 billion. The increase in nominal GDP contributed to the improvement.

Figure 1.10 Easing debt burden

Source: MoF, World Bank staff estimates.

Note: Government debt to GDP ratio, in percent.

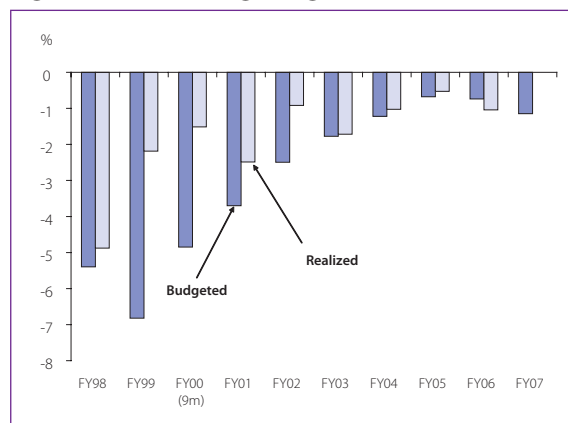
Table 1.6 International comparison of government debt

Percentage of GDP

	2000	2001	2002	2003	2004	2005
China	16.4	17.7	18.9	19.2	18.5	17.9
Indonesia	80.0	76.4	70.8	61.1	54.6	46.8
South Korea	31.8	35.3	33.4	32.6	33.5	36.4
Malaysia	36.6	43.6	45.6	47.8	48.1	46.2
Philippines	64.6	65.7	71.0	77.7	78.5	71.8
Thailand	57.0	56.5	53.8	48.7	48.0	46.4

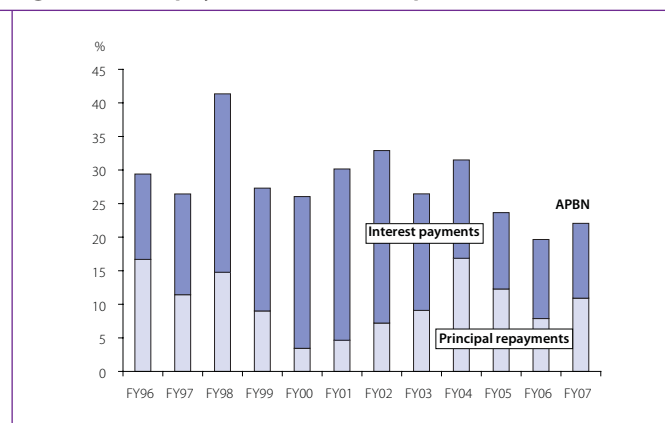
Source: World Bank data and staff estimates.

Fiscal consolidation and non-regular revenues, particular from the divestment of banks, contributed to declining debt levels. The central government's budget deficit improved from 4.9 percent of GDP in 1998 to 1.0 percent in 2006 (preliminary result). Realized budget deficits were mostly lower than budgeted (Figure 1.11). Also, the share of non-debt financing (i.e. deposit withdrawals, privatization receipts and asset sales from Indonesia's state asset divestment agency IBRA/PPA) exceeded 50 percent of total financing in 2000-03. After the crisis, the government issued domestic bonds and put them into commercial banks' balance sheets to salvage the banking system, while assets of liquidated/closed banks were taken over by the government. In 1999-2006, IBRA/PPA asset sales contributed 26 percent to gross financing needs.

Figure 1.11 Declining budget deficits

Source: MoF, World Bank staff estimates.

Note: Figures are percent of GDP.

Figure 1.12 Repayments are below pre-crisis levels

Source: MoF, World Bank staff estimates.

Note: Debt service in total expenditures.

As a percentage of total expenditures government debt service payments are now below pre-crisis levels.

Interest payments declined from Rp 78 trillion in 2001 to Rp 37 trillion in 2005 (constant 2000 rupiah prices). During 2004-06, debt servicing was on average 25 percent of total expenditures compared with 38 percent before the crisis (1994-96).¹² However, debt service payments are likely to increase modestly in the coming years when deferred payments will have to be repaid (Figure 1.12).

Three factors have contributed to the sharp decline in debt levels since the economic crisis:

- **Post-crisis, principal and interest rescheduling** under the Paris Club agreements.
- **Appreciation of the exchange rate from Rp 10,014 /US\$1 (1998) to Rp 9,141/US\$1 (2006)**
- **Increase in non-oil and gas domestic tax revenues** from 9.0 percent of GDP in 2001 to 11.5 percent in 2006. These are projected to increase to 12.8 percent in 2007 in the budget (APBN).

Government debt remains sensitive to macroeconomic turbulence, despite remarkable improvements in government debt indicators. An increase of 1 percentage point in the domestic interest rate costs Rp 2 trillion (or 0.07 percent of GDP) in additional domestic interest payments. Likewise, a 1 percentage point increase in global US dollar interest rates costs US\$0.2 billion (or 0.07 percent of GDP) in additional external interest payments. A 10 percent depreciation of the currency in 2005 would have increased the debt-to-GDP ratio by 4-5 percent, all other things being equal.

Table 1.7 Central and regional debt outstanding

Rp trillion

Level of governments	Debt	% total	% GDP
Central government	1,277.5	99.7	46.8
Regional governments	4.2	0.3	0.2
- Kabupaten/kota	0.7	0.1	0.0
- Province	0.3	0.0	0.0
- PDAM	3.1	0.2	0.1
Total	1,281.7	100.0	47.0

Source: MoF, World Bank staff estimates.

Note: Regional governments as of 2004, central government as of 2005.

Sub-national debt is insignificant (Table 1.7).

Sub-national debt owed by the provinces, districts (*kabupaten/kota*) and PDAMs was merely 0.2 percent of GDP in 2004, representing only 0.3 percent of the consolidated government debt (see Chapter 7). Sub-national debt mainly consists of obligations to the central government (through RDA/RDI) and to donors through the central government (Subsidiary Loan Agreements, or SLAs).

Debt management

Two major initiatives in debt management have been launched. Despite the recent improvement in debt indicators, risks to the government's budget remain substantial and improvements in debt management are essential to avoid future debt distress. The Ministry of Finance has made substantial progress in this regard. Two specific examples are the development and publication of a comprehensive debt management strategy in September 2005 and the creation of a Directorate General for Public Debt Management.

The debt management strategy is based on cost/risk analysis. The strategy for debt management is formulated in relatively broad terms, but is an important first step and provides a firm basis for developing a strategy based on cost/risk analysis. Borrowing is aimed at maximizing concessional, external borrowing, and borrowing in rupiah and, at the margin, issue US dollar-denominated global bonds. Regarding the debt composition, the main elements are a preference for increasing the share of rupiah-denominated debt, reducing the share of Japanese yen in the external debt portfolio and increasing the share of fixed-interest-rate debt.

The new Directorate General for Public Debt Management (DGDM) will help to reduce operational risks.

The creation of the DGDM facilitates further development of the comprehensive debt management strategy and implies a substantial reduction of operational risks. Furthermore, the unified debt management organization will facilitate the implementation of the debt management strategy through direct borrowing, buy-backs and the use of financial derivatives, with a view to utilizing all debt management instruments available. Initially, the DGDM will be

¹² In 1994-95, prepayment of government debt increased debt service sustainability but current levels are below the level in 1996 when there was no prepayment.

responsible for ensuring timely and cost-effective funding of the government and for managing the financial risks of the government's direct debt.

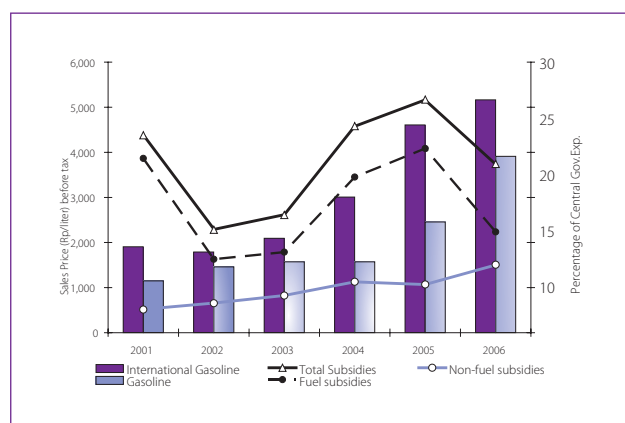
The DGDM uses organizational resources (e.g. staff) from the DPSUN (the Directorate of State Securities Management) and DPPHLN (the Directorate of External State Loans and Funds). In the past, loans and securities were managed separately under these two different directorates, with very little coordination of activities between the two. The DGDM will be organized along functional lines in front, middle and back offices. The front office will be responsible for the design and implementation of the borrowing program in line with the debt management strategy. The middle office will be responsible for strategy development and risk management. Finally, the back office will be responsible for maintaining a high-quality and updated database that will allow timely debt registration, disbursement and accounting functions.

There are several ongoing debt management improvements being undertaken. In order to ensure that the progress of recent years in public debt management is sustained, a strong focus on capacity-building and the training of staff in the new DGDM will be pivotal. In order to further improve debt management, the following activities are being implemented or planned:

- **Improving the existing debt management strategy:** The existing strategy is based on rather broad guidelines and general principles and a solid analytical framework is not yet in place. More work is needed to further develop financial risk management by developing tools that can help identify the preferred cost/risk trade-offs, i.e. scenario analysis and stochastic risk models.
- **Ensuring better access to comprehensive debt data:** There is on-going activity to link existing debt databases in order to facilitate the compilation of total debt data, while a web-site for the new DGDM is also under construction. This will make access to information on government debt far easier.
- **Producing regular reports on debt outstanding and risks:** Regular reporting is needed to improve transparency and accountability. Reports should cover domestic and external debt and be expanded to include on-lending and contingent liabilities at a later stage.
- **Legal framework:** To support a comprehensive debt management strategy, government borrowing should be governed by a single law. In practice this would imply merging the Government Securities Law with the Law on Government Borrowing (currently under revision).

Subsidies

Figure 1.13 Subsidies and gasoline prices



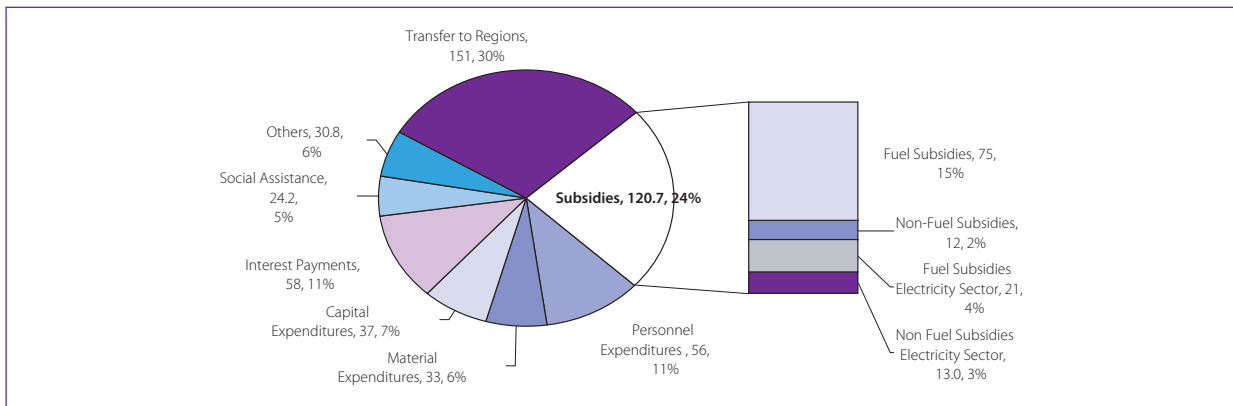
Source: MoF, World Bank staff estimates.

of Rp 21 trillion) and non-fuel subsidies were Rp 25 trillion (including a Rp 13 trillion subsidy to PLN). Fuel and electricity subsidies accounted for more than 90 percent of total subsidies (Figure 1.14).

Subsidies consume a large share of central government expenditures. Subsidies reached a peak of Rp 121 trillion in 2005 and accounted for 24 percent of total expenditures. After falling in 2002-03, they increased sharply in 2004-05 mainly due to higher fuel subsidies in the face of higher international oil prices, but decreased again after the reduction of fuel subsidies in March and October 2005 (Figure 1.13). The share of non-fuel subsidies also increased because of rising subsidies to the state-owned electricity company (PLN).

In 2005, the government spent 24 percent of total expenditures and 2.5 times total capital expenditures on subsidies. Fuel subsidies were Rp 96 trillion (including an implicit subsidy to PLN

Figure 1.14 Fuel and electricity subsidies are dominant

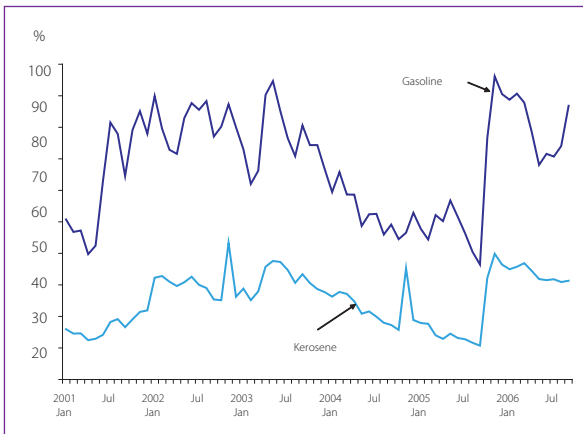


Source: MoF, World Bank staff estimates.

Note: The non-percentage number represents expenditures in Rp trillion.

Fuel subsidies

Figure 1.15 Domestic vs international fuel prices



Source: MoF, World Bank staff estimates.

Note: Figures are domestic prices percent of international prices.

Fuel subsidies placed a major burden on central government expenditures.

Since early 2003, the government kept domestic fuel prices constant, notwithstanding sharp increases in international oil prices (Indonesian crude oil prices or ICP) from US\$30/bbl in 2003 to above US\$50/bbl in 2005. In September 2005, domestic fuel prices as a share of international prices (before tax) fell to about 40 percent for gasoline and diesel, and 14 percent for kerosene Figure (1.15). Accordingly, fuel subsidies as a share of GDP increased sharply from 1.5 percent in 2003 to 3.0 percent in 2004 and 3.5 percent in 2005.

The government implemented bold fuel price adjustments in 2005.

Concerns over the increasing financial burden of fuel subsidies and the efficient use of public resources prompted the central government to implement three fuel subsidy adjustments in 2005: a 29

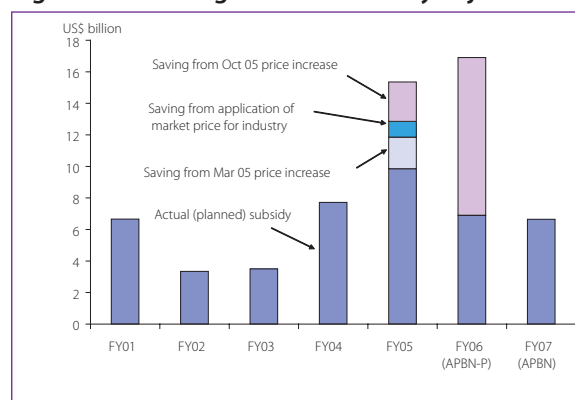
percent fuel price increase in March, the introduction of market prices for industry, and a 114 percent fuel price increase in October (Table 1.8). According to Keppres (Presidential Decree) No. 55/2005, remaining domestic fuel subsidies will be phased out although no schedule has been provided.

Table 1.8 Domestic fuel prices vs international prices

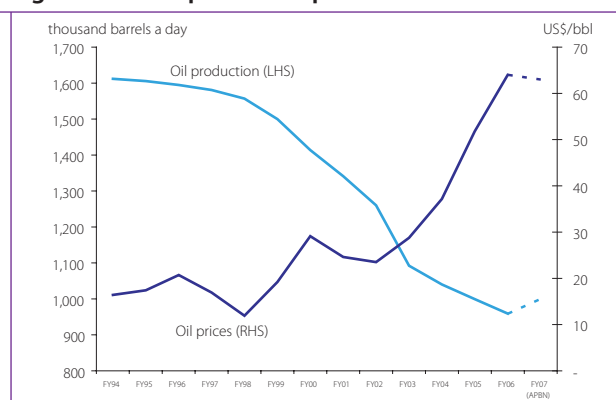
	Before October fuel increase (Sep 05)	After October fuel increase (Oct 05)	Latest (Sep 06)
A. Domestic Fuel Prices (Rp)			
Gasoline	2,400	4,500	4,500
Kerosene (household)	700	2,000	2,000
Diesel	2,100	4,300	4,300
B. International Prices 1/ (Rp)			
Gasoline	6,570	5,876	4,509
Kerosene (household)	6,493	6,218	5,808
Diesel	6,470	6,225	5,545
C. Domestic Prices as % of International Prices (A/B)			
Gasoline (%)	37	77	87
Kerosene (household) (%)	11	32	31
Diesel (%)	32	69	67
D. Economic Variables			
Crude oil price (ICP, US\$/bbl)	62	58	63
Exchange rate (Rp/US\$)	10,310	10,090	9,235

Source: MoF, World Bank

Note: 1/ MOPs plus 15 percent adjusted by exchange rates and tax.

Figure 1.16 Saving from fuel subsidy adjustments

Source: MoF, World Bank.

Figure 1.17 Oil prices and production

Source: MoF, World Bank.

Note: ICP Price/bbl.

The budgetary impact of the fuel subsidy reductions has been enormous. The 2005 fuel price adjustments reduced the budget deficit by US\$4.5 billion for that year. The October 2005 increase alone had a positive impact on the 2006 budget of US\$10 billion (Figure 1.16)¹³

Oil and gas balances of revenues and subsidies remain in surplus, but recent revenue performances have been disappointing. The oil and gas balance is defined as the revenues (both tax and non-tax) less expenditures, for example fuel subsidies. The budgetary impact of higher international oil prices cannot be measured only through their impact on fuel subsidies; indeed, revenues (tax and non-tax) also increase when international oil prices rise. The balance between revenues and subsidies for oil and gas has been in surplus for more than 10 years, while non-oil and gas accounts have been in deficit. In 2001-06, the oil and gas balance recorded an average surplus equivalent to 2.5 percent of GDP, while the non-oil and gas negative balance amounted to 3.8 percent of GDP. However, high crude oil prices since 2004 notwithstanding, oil and gas revenues have been disappointing. Between 2001 and 2006, while

¹³ The estimates are based on the oil price assumption in the budget. The higher actual oil prices rise, the larger the saving becomes. A significant proportion of the savings were re-directed towards compensation programs for the poor. More detailed explanations on this can be found in World Bank, 2006h.

crude oil prices soared by 160 percent, oil and gas revenues increased by only 93.3 percent. Currency appreciation (5 percent) and a decline in domestic oil production (28 percent) offset much of the gain from higher prices. Oil production has fallen by about 40 percent in the past 10 years (Figure 1.17).

Revenue transfers by Pertamina constitute a serious source of concern. Between 2001 and 2005, oil and gas revenues should have increased by roughly 120 percent (the crude oil price increase minus production decline and exchange rate appreciation). Nevertheless, actual oil and gas revenue increased by 93 percent. Gas prices are not perfectly linked with oil prices and gas production may have declined more sharply than oil production. However, an actual revenue increase of 93 percent is too small compared with the estimated 120 percent increase. One of the explanations for the gap is cash flow problems at Pertamina (the state-owned oil and gas company). These cash flow problems prevented Pertamina from transferring financial resources to the budget, including arrears, dividends and transfers from sales of oil and gas.

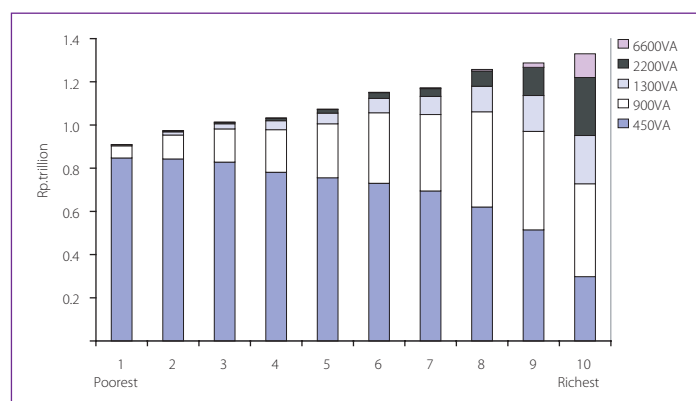
Fuel subsidy payments are often delayed. According to current regulations, the central government has to transfer fuel subsidies to Pertamina every month. This is meant to mitigate Pertamina's cash flow problems. Under the previous framework Pertamina received only 70 percent of budgeted subsidies every quarter. However, as of August 2006, only Rp 4.7 trillion (9 percent of the budgeted amount) in fuel subsidies have been transferred to Pertamina. Slow disbursement of subsidies can be explained by the following reasons:

- **Pertamina's arrears to the government:** Pertamina owed Rp 17 trillion to the government as of end-2005, including unpaid dividends and non-tax oil and gas revenues (IMF, 2006). This explains the government's reluctance to pay the fuel subsidy on time.
- **A complicated settlement system between the government, Pertamina and PLN:** The government has to pay electricity subsidies to PLN, while PLN has obligations to Pertamina. Inter-relationships among the three stakeholders complicate the settlement of the subsidies (see Annex Section C.15).
- **Delayed decree:** A decree from the Ministry of Energy and Mineral Resources on 'benchmark prices of certain types of oil fuels for the 2006 budget' was issued only on 18 July 2006.¹⁴ The delay in issuing the decree made it impossible for the Ministry of Finance to calculate the subsidy and make payments against it.

Electricity subsidies

Higher production costs have pushed up electricity subsidies. Subsidies to the electricity sector accounted for 28 percent of total subsidies. These comprised the direct subsidy to PLN (11 percent), plus an indirect subsidy through the provision of oil derivatives at subsidized prices (17 percent). The combination of fixed electricity tariffs and higher production costs due to higher fuel prices cost PLN some Rp 15 trillion.¹⁵ In light of this, the central government actually spent Rp 30 trillion on electricity subsidies in 2006

Figure 1.18 Regressive electricity subsidy, 2005



Source: World Bank staff estimates.

Electricity subsidies are regressive, although less so than fuel subsidies before the fuel price increases. In 2005, the Rp 11 trillion in household subsidies for electricity was distributed as follows: the poorest 10 percent of Indonesians received an estimated Rp 900 billion, while the richest 10 percent received Rp 1.3 trillion, 44 percent more in total than the poorest decile. Benefits to other population groups were between Rp 980 billion and Rp 1.3 trillion (Figure 1.18). Indonesia has five types of electricity subsidy, each distributed in very different ways. The most important one is for 450VA, a voltage

¹⁴ Decree of the Minister of Energy and Mineral Resources No.2308 K/22/MEM/2006, dated 18 July 2006.

¹⁵ In the 2006 APBN the central government originally planned to increase electricity tariffs by 20-30 percent. However, the idea was eventually dropped as public resistance mounted, with the result that the government incurred Rp 15 trillion in additional subsidy costs.

capacity that only allows for low-intensity electricity use (such as for light bulbs). The poorest households fall predominantly in the 450VA capacity group and this subsidy, which accounts for more than half of all electricity subsidies to residents, is progressive. Within the 450VA category, the poorest 10 percent of Indonesians receive Rp 850 billion, almost three times as much as the richest decile (Rp 300 billion). Therefore, the regressive nature of the electricity subsidy comes from other subsidy types (900VA up to 6,600VA). is for 450VA, a voltage capacity that only allows for low-intensity electricity use (such as for light bulbs). The poorest households fall predominantly in the 450VA capacity group and this subsidy, which accounts for more than half of all electricity subsidies to residents, is *progressive*. Within the 450VA category, the poorest 10 percent of Indonesians receive Rp 850 billion, almost three times as much as the richest decile (Rp 300 billion). Therefore, the regressive nature of the electricity subsidy comes from other subsidy types (900VA up to 6,600VA).

Civil Service Reform and Personnel Spending

Distorted incentives in the government bureaucracy have constrained policy implementation, as well as the delivery of public services. This challenge has been widely recognized for many years, but progress to date has been slow. There are, however, encouraging signs that the government is ready to consider a more comprehensive reform program in this area (Box 1.1). The main challenges can be categorized as follows:

- **Organizational structure.** A large number of agencies with overlapping authority share responsibility for managing and overseeing various aspects of the civil service. These agencies include the National Civil Service Agency (BKN), the State Ministry for State Apparatus Reforms (Menpan), the Ministry of Home Affairs, the National Institute of Administration (LAN), the Ministry of Finance, sectoral ministries and local governments. Adding to the complications, no single agency is proactively managing the structure and shape of the civil service and no agency has the recognized authority to undertake comprehensive civil service reform.
- **Recruitment and promotion.** There is excess demand for civil service positions. This results in a flawed recruitment system that often includes informal payments for entry and promotion. Performance criteria for promotion are weak and there are few credible sanctions for poor performance and corruption. Likewise, there are few incentives within the system to reward high performers, as most advancement is based on seniority.
- **Compensation.** Although base salaries of civil servants are low relative to the private sector and international benchmarks, the overall compensation package is characterized by a wide range of allowances and honoraria, many of which are non-transparent, discretionary and prone to abuse. Once the total compensation package is taken into account, studies show that many segments of Indonesia's civil service are in fact not underpaid compared with the private sector employees (Nunberg et al, 2000; and Steedman and Kenward, 2006). Therefore the key to eliciting high performance cannot be limited to wage compensation. It needs to include overall compensation (wage and non-wage) and address its weak link to either personal or group performance.

Box 1.2 Civil service reform is starting to happen

Recently, the Government has undertaken initiatives that point to one of the most promising opportunities for civil service reform in years. A key first step has been the effort to design a new remuneration policy for high-ranking state officials, so-called “*pejabat negara*” (e.g. ministers, legislators, judges and heads of special commissions and agencies). The minister of Finance has set up an inter-agency task force to examine the entire compensation package with the goal of creating a more transparent, systematic and coherent framework of pay and allowances linked to a comprehensive review of job classifications and categories. This is intended to lead to an independent remuneration commission to recommend both the level and structure of the compensation package to Indonesia’s highest ranking political officials. The work of the commission would be based on the modern techniques of functional analysis, development of job descriptions and pay grading. Such an approach would be followed by a similar comprehensive review of pay issues for the larger civil service.

Individual ministries are considering important initiatives that could serve as a model for a more comprehensive civil service reform. Teacher Law No. 14/2005 offers a dramatic increase in the total take-home for teachers on the basis of merit and qualifications through special “professional allowances” for those passing through a certification process. Meanwhile, the Ministry of Finance is considering a comprehensive reform of its part of the civil service to be integrated with the recently restructuring of the ministry’s core departments in treasury execution, taxation, and customs.

Finally, the **legal framework for the civil service is being reviewed and revised**, including the basic Civil Service Law of 1999, the Law on Government Organization and the Law on Pensions. Included in this review are a range of government regulations encompassing decentralization of the civil service, performance appraisal, separations, and civil service discipline.

There are also **strong civil service reform initiatives in several regional governments**, including such areas as performance budgeting, one-stop public services, productivity improvement measures and transparent recruitment for key positions. Promising initiatives have been launched in Yogyakarta, Jembrana (Bali) and Solok (West Sumatra).

Source: World Bank staff.

The entire civil service, with 3.6 million public servants, is not excessive for a country of Indonesia’s size. Yet there are numerous problems. Absenteeism is common and second jobs are frequent. Indeed, second jobs are often officially accepted (for example, teaching at universities) or awarded as rewards for loyal service (commissioners at SOEs).

Some 830,000 additional staff appear on the government’s pay-roll as temporary contract workers, roughly half of whom are teachers.¹⁶ These contract workers are in the process of being transferred to permanent civil servant status at a rate of 200,000 per year until 2009. It seems sensible to transfer contract health and education staff to civil service status, as most of them work in functional positions with relatively clear job descriptions. For teachers, recruitment should be linked to the functional requirements outlined in Teacher Law No. 14/2005 and based on a rational deployment (see Chapter 3). The transfer of temporary administrative staff may prove more complicated: additional staff may no longer fit the organizational requirements of individual agencies once they are given clear job descriptions.

Indonesia spends 25 percent of all public expenditures on personnel. Personnel spending covers two employment regimes (permanent and contractual), as well as allowances and honoraria. In addition, there are several off-budget allowances (e.g. remuneration to commissioners of SOEs). Spending on personnel increased by 15 percent in real terms from 2001 to 2005 but it remained stable relative to other categories of spending.

As of December 2004, districts accounted for 69 percent of the total number of civil servants, but only 50 percent of total national personnel expenditures (Table 1.9). The average monthly salary of civil servants at the district level is less than 40 percent of the average salary at the central level. At first glance this is puzzling, as a large majority of civil servants in Rank III and Rank IV—the highest ranks for functional positions—are found at the district level. The explanation lies in the fact that the central government comprises the bulk of Echelon I positions (the highest of four levels), which are better paid (due to allowances and honoraria). The central level accounts for 653 staff in Echelon I positions compared with just 35 at the provincial level and 58 at the district level.¹⁷

¹⁶ Most of these health and education staffs were assigned during the zero-growth policy between 1993 and 1997. See Barber et al, 2005.

¹⁷ There are two types of civil service position in Indonesia: structural and functional. A structural position is a management position, equivalent to administrative civil servants in other civil service systems. These positions are structured in four echelons, with Echelon IV being the lowest. A functional position is a non-management position required for the operations of certain trades or institutions, i.e. these positions should be occupied by certain types of experts. These functional positions are divided into four levels: *pertama*, *muda*, *madya*, and *utama*, *pertama* being the lowest. All civil service, both structural or functional positions, can also be divided into four ranks (*golongan*), where the lowest is rank I and the highest rank IV. The rank is a function of education level and length of services/experience. The rank in turn will determine salary level and potential position in structural or functional positions.

In general, average monthly salaries of civil servants are higher than monthly salaries of individuals with secondary or higher levels of education. The average monthly salary of civil servants is given as Rp 1.03 million per month in Indonesia's Labor Force Survey (Sakernas) 2004.¹⁸ Also, there are three sources of income that differentiate take home pay: honoraria, structural/functional allowances, and extra allowances. Fiscal space at the central level is higher, so this level can set aside more honoraria per person. Budget is also set aside to pay allowance for officers in the structural as well as functional positions. Since the relative number of the positions in the center is much higher than in the districts, the average level of pay is also higher in the center.

Table 1.9 Intergovernmental distributions of civil service by seniority and total personnel spending

Number of civil servants employed

Government Level	Rank (Golongan)								Total	%	Personnel expenditure (Rp trillion)	%	Average Monthly Salary (Rp)
	I	%	II	%	III	%	IV	%					
Central	21,836	2.6	276,337	33.5	450,460	54.6	76,011	9.2	824,644	23	34.9	43	3,525,540
Province	6,434	2.1	85,124	28.1	184,338	60.8	27,387	9.0	303,283	8	6.2	7	1,708,711
District	54,175	2.2	562,143	22.9	1,466,102	59.6	376,990	15.3	2,459,410	69	40.4	50	1,369,874
Total	82,445	2.3	923,604	25.7	2,100,900	58.6	480,388	13.4	3,587,337	100	81.5		1,894,057

Source: World Bank staff estimates based on civil service statistics and data on executed budgets from MoF.

Note: Figures are as of December 2004.

Medium-Term Fiscal Framework

The government debt burden is likely to decline further. The central government debt-to-GDP ratio is projected to fall from estimated 37 percent in 2006 to below 30 percent in 2009.¹⁹ Government debt is projected to increase only moderately (by about 12 percent to US\$166 billion) by 2010, while the expansion in nominal GDP should outpace this increase by a substantial margin. It is important to note that such a solid improvement in the government's debt-to-GDP ratio assumes macroeconomic stability, including a stable exchange rate and low inflation.

However, the pace of the improvement in debt levels will slow down. This is because Indonesia has already reached low levels of around 40 percent and it will be far harder to sharply reduce debt levels from such a relatively low base. Three additional factors contribute to this conservative projection. First, inflation is expected to be lower, which will result in lower nominal GDP. Second, the real exchange rate has been kept stable, compared with a real exchange rate appreciation over past few years. Third, payments from exceptional Paris Club rescheduling after the December 2004 tsunami will fall due in the coming years.

Non-oil and gas domestic tax revenues are forecast to increase until 2009. A continued increase in non-oil and gas domestic tax revenues is the key to medium-term fiscal sustainability. The baseline projection (Table 1.10) assumes that non-oil domestic tax revenues as a share of GDP will increase from 10.6 percent in 2006 to 11.9 percent in 2009 (0.4 percentage points annually). This is close to the observed progress between 2000 and 2005, when the ratio improved by 0.5 percentage points annually. Two factors are expected to underpin this performance, namely: (i) continued improvements in tax administration; and (ii) higher overall economic growth.

Government investment is forecast to rise to 7.7 percent by 2009. With high projected revenues and secure financing, the central government can increase development expenditures (the sum of capital spending and social assistance) from 3.1 percent of GDP in 2006 to 3.7 percent in 2009 without jeopardizing fiscal sustainability. Under the baseline scenario, the primary surplus will reach 1.8 percent in 2009 and budget deficits will be less than 2.0 percent of GDP. On a consolidated basis, total government investment is projected to increase from 6.6 percent in 2005 to 7.2 percent in 2010.

¹⁸ According to analysis on the same survey, civil servants' monthly earnings and hourly earnings are 24 percent and 47 percent higher than other paid workers, respectively, controlling for their level of education (see chapter 3).

¹⁹ The pace of improvement is projected to slow of 2007 for two reasons: (i) projected lower inflation of 2007 will affect nominal GDP, and (ii) this exercise assumes a constant real exchange rate, while in fact the real exchange rate has appreciated in the past few years.

Table 1.10 Medium - Term Fiscal Framework

Percent

	2004	2005	2006	2007	2008	2009	2010
	Act.	Act.	Act.	< World Bank Projection >			
1. Central Government							
(1) Revenue	17.4	17.8	19.1	17.6	17.1	17.0	17.1
Only with Non-oil and Gas	12.7	12.7	13.0	13.5	13.6	13.8	14.1
Only with Oil and Gas	4.7	5.0	6.0	4.0	3.5	3.2	3.1
Only with Grants	0.0	0.0	0.1	0.1	0.0	0.0	0.0
(2) Expenditure	18.5	18.3	20.1	19.3	18.6	17.5	17.7
Only with Capital Expenditure	-	1.2	1.8	2.0	2.5	2.1	2.2
Only with Social Assistance	-	1.0	1.3	1.3	1.9	1.6	1.7
Only with Fuel Subsidy	3.0	3.4	1.9	1.0	0.6	0.4	0.3
(3) Primary Balance	1.7	1.6	1.4	0.5	0.8	1.8	1.4
(4) Budget Balance	-1.0	-0.5	-1.0	-1.7	-1.5	-0.4	-0.6
(5) Financing	0.9	0.4	1.0	1.7	1.5	0.3	0.5
Gross financing needs (US\$ billion)	10.7	7.9	12.1	16.1	16.4	11.4	11.2
Government debt to GDP ratio	54	45	41	37	36	34	31
2. Consolidated Government							
(1) Revenue	19.5	20.3	21.7	19.9	19.3	19.2	19.3
(2) Expenditure	19.5	20.2	21.6	21.2	20.5	19.3	19.5
Only with Investment	-	4.7	6.6	6.4	7.4	7.2	7.5
(3) Budget Balance	0.0	0.1	0.1	-1.3	-1.1	0.0	-0.2

Source: World Bank staff estimates.

Policy Recommendations

Debt

The first priority is to ensure that macroeconomic stability is maintained. Improvements in government debt indicators have been made possible by sound macroeconomic developments in the past few years. However, a worsening of the macroeconomic environment would be likely to reverse the positive trend in government debt.

Contingent liabilities continue to pose a serious risk for debt sustainability and require proactive management by the government. The financial health of SOEs indirectly affects budget conditions through: (i) the government's capital participation, (ii) reduced contributions to government non-tax revenues in the form of profit transfers from SOEs, and (iii) the inability to transfer state assets to revenues (e.g., non-tax oil and gas revenues from Pertamina). Shortfalls in any of these areas require additional debt financing or they pre-empt revenues from other sources. Contingent liabilities should be included in the current debt management framework as rapidly as possible.

The Treasury Single Account (TSA) needs to become fully operational. The central government has yet to integrate the RDI/RDA and oil transitory accounts into the budgetary account. In addition, there are numerous independent, off-budget accounts. Although off-budget accounts have specific histories and functions, their existence complicates cash management and creates inefficiencies in debt management.

In order to ensure that the progress in public debt management seen in recent years is sustained, a strong focus on capacity-building and the training of staff in the new DGDM will be crucial. This should include the following issues:

- **Improving the existing debt management strategy.** The existing strategy is based on rather broad guidelines and general principles, and a solid analytical framework is not yet in place. More work is needed to further develop financial risk management by developing tools that can help identify the preferred cost/risk trade-off, i.e. scenario analysis and stochastic risk models.
- **Ensuring better access to comprehensive debt data.** There is on-going activity to link existing debt databases in order to facilitate the compilation of total debt data, while a website for the new DGDM is also under construction, making future access to information on the government debt much easier.
- **Producing regular reports on debt outstanding and risks.** Regular reporting is needed to improve transparency and accountability. Reports should cover domestic and external debt and be expanded to include on-lending and contingent liabilities at a later stage.
- **Legal framework.** To support a comprehensive debt management strategy, government borrowing should be governed by one law. In practice this would imply merging the Government Securities Law with the Law on Government Borrowing (currently under revision).

Subsidies

The government should go further with fuel price adjustments. Domestic fuel prices are still well below international prices, (with gasoline and diesel 10-15 percent lower and kerosene 65 percent lower). The implementation of further adjustments should take into consideration: (i) the impact on the poor; and (ii) the macroeconomic impact (fiscal, growth, inflation and balance of payments).

There is a need for a comprehensive subsidy management framework. Fuel and electricity subsidies account for about 60 percent of total subsidies. The rationale for these subsidies should be considered within a comprehensive subsidy management framework. The framework should assess:

- Costs/benefits;
- Monitoring mechanisms for disbursements;
- Recipients of the subsidies; and
- Consistency with national development objectives.

There is an urgent need for a formal settlement framework for subsidy transfers between the government and SOEs. The weak regulatory framework (notably the delayed issuance of the ministerial decree on benchmark prices) must be improved and delays in actual transfers reduced. Currently, only an ad hoc informal settlement mechanism exists. Stakeholders (including the Ministry of Finance, Ministry of Energy and Mineral Resources, Ministry of State-Owned Enterprises, Pertamina and PLN) need to agree on a more coherent subsidy transfer mechanism.



CHAPTER 2 Cross Sectoral Trends

Indonesia Public Expenditure Review 2007

Key Findings

- Since the economic crisis and decentralization, the composition of sectoral expenditures has changed substantially. Spending on infrastructure investment has still not recovered to its pre-crisis level and has remained at only 3.4 percent of GDP since 2001. This is only slightly higher than the 2000 post-crisis low in infrastructure spending. By contrast, spending on social sectors increased substantially. In particular, education spending nearly doubled from 2.4 percent of GDP (2001) to a projected 3.8 percent of GDP (2007).
- The current level of expenditures on administration is excessively high (15 percent of total government expenditures, mainly due to high spending in the regions) and suggests a significant waste of public resources.

Key Recommendations

- A larger share of future fiscal space should be allocated to infrastructure, at both the national and the local level. Additional investments are required to address the existing backlog as a result of prolonged under-investment and to undertake major new projects meet expanding demand and drive future growth.
- There is considerable scope for improvement in the use of financial resources and the government should aim to reduce the share to only 5 to 10 percent. In order to reduce spending on administration and the bureaucracy, it is recommended that spending be re-directed from administration towards additional funding for basic service delivery by:
 - Minimizing expenditures that do not directly benefit the public. For example, reducing government administrative expenditures and spending more on public services such as health and education.
 - Aligning recurrent expenditures to capital investments in public service delivery.

Indonesia has a very uneven distribution of expenditures. A multi-sector category (trade, business development, finance and corporate sector) is the dominant spending category because it also includes subsidies and interest payments. This spending category typically consumes 40 percent or more to the government's aggregate spending. If spending on "government apparatus and supervision" is added then more than half of all government expenditures are consumed without any allocation to sectors such as education, health or infrastructure.

However, the trade-business-finance spending category has been declining as a share of total expenditures, particularly since the reduction of fuel subsidies in 2005. This has opened up additional room for increasing spending on social sectors and defense. Indeed, with the exception of mining and infrastructure, all core sectors, such as education, health, defense, and agriculture have at least doubled since 2001 (Table 2.1).²⁰

Table 2.1 Sectoral distribution of national public expenditures

Rp trillion (at constant 2000 prices)

	2001	2002	2003	2004	2005	2006*	2007**
Agriculture	6.3	6.8	9.0	8.7	8.6	11.6	13.0
Education	40.5	43.1	54.3	48.8	52.9	75.0	80.9
Health	9.3	9.8	13.4	14.0	15.9	20.1	23.2
Mining	0.6	0.6	0.7	0.8	0.9	0.8	1.0
Trade, Nat. Business Dev., Finance & Corporate (includes debt service and subsidies)	192.8	133.0	126.3	151.1	167.2	175.9	175.9
Government Apparatus & Supervision Sector	31.7	31.3	42.7	42.6	45.3	66.5	63.0
Manpower Sector	0.6	0.9	1.3	1.2	1.1	1.5	1.5
Defense & Security	16.5	19.1	24.2	24.6	24.8	30.6	34.8
Environment and Spatial Planning	2.0	2.3	2.8	2.4	2.8	4.8	5.2
Infrastructure	32.4	31.5	43.3	32.7	38.8	49.5	50.7
Others	20.9	23.3	22.0	21.9	20.6	23.7	23.5
Total National	353.6	301.8	340.0	348.9	381.4	443.2	469.2

Source: World Bank staff calculations based on MoF and SIKD data.

Note: * = preliminary realization of APBN and estimates for sub-national spending, ** = central government budget (APBN) and estimates for sub-national governments.

Economic Services

Indonesia's spending shares have changed dramatically since 2001. With the decline in debt payments, so sectoral spending has increased. However, sectoral spending could have been increased far more had subsidy payments not increased so sharply in 2004 and 2005, crowding out additional spending in key sectors. The following trends and highlights stand out:²¹

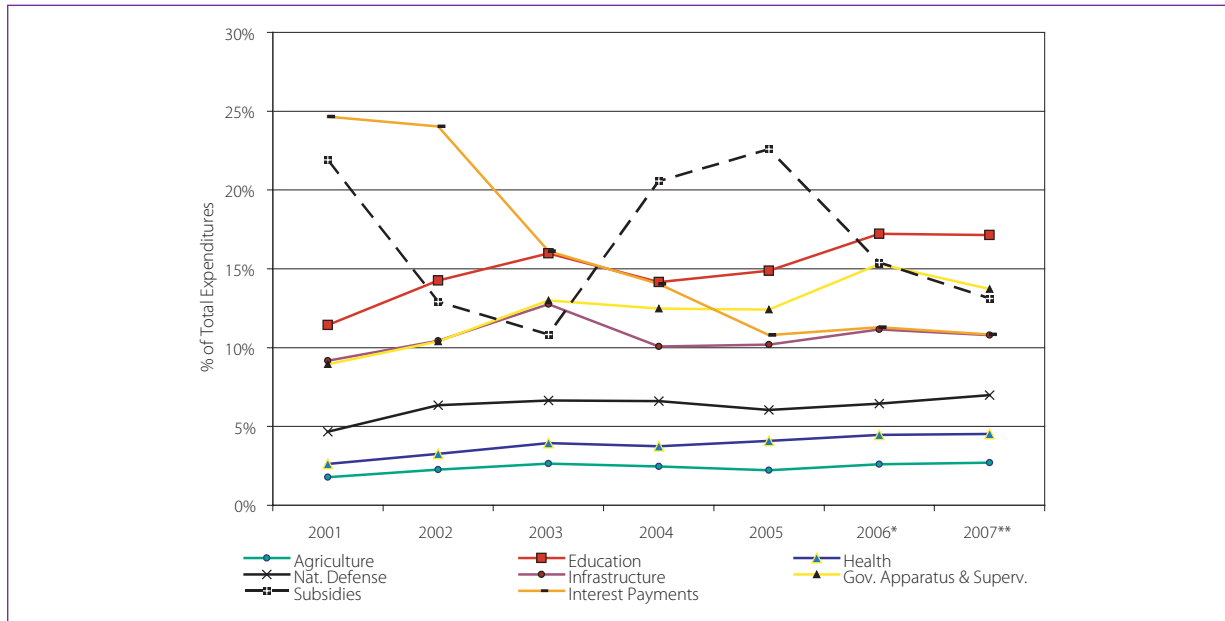
- **Education is now the number-one spending item in Indonesia.** This is followed by government apparatus and then subsidies.
- **Interest payments have been in continuous decline.** Being the main expenditure item in 2001 at almost 25 percent, interest payments only represent an estimated 11 percent in 2006.
- **Subsidies have always been significant but they have experienced significant fluctuations.** In 2004 and 2005, during the period of sharply increasing oil prices, subsidies became the government's number-one spending item and crowded out a substantial amount of spending on other sectors, particularly development spending.

²⁰ The figures reported in this chapter reflect actual (executed) spending from all levels of government (central, province and district). Figures for 2006 and 2007 (and sub-national data for 2005) are based on budgetary data (APBN and APBD) and estimations of sub-national budgets based on historical shares and allocated amounts of central government transfers. See Annex D-3 for more details on spending trends of each sector.

²¹ The underlying determinants and patterns of interest rates and subsidies are examined in further detail in the economic distribution of the budget.

- **Spending on core government services has been increasing steadily, reaching an estimated 15 percent of total government spending in 2006.** Since 2003, spending on core government administration has overtaken infrastructure spending and, since 2006, it is projected to be the second-largest spending item (after education)
- **Infrastructure lost share to other sectors particularly in 2004, but has recovered slightly since then.** Despite substantial declines in non-sectoral spending (on debt and subsidies) infrastructure spending remains below its relative level in 2003 (below 11 percent).
- **Spending shares for defense, health and agriculture have increased gradually.** Spending on defense is now 7 percent of the budget, up from less than 5 percent in 2001. Spending on health and agriculture still remains below 5 percent.

Figure 2.1 Distribution of national public expenditures in key sectors, 2001-07



Source: World Bank staff calculations based on MoF and SIKD data.

Note: * Central budget realization and estimates of sub-national allocations, ** Central budget (APBN) and estimates of sub-national allocations.

National public infrastructure spending fluctuated relative to other sectors from 2001 to 2006, accounting for an average 10.5 percent of total national expenditures, equivalent to about 2.1 percent of GDP. Public spending on infrastructure²² increased by 20 percent in real terms from 2001 to 2005 and is projected to increase by a further 28 percent in real terms from 2005 to 2007. While this may seem a substantial increase, it is still relatively small compared with the large accumulated financing gap in infrastructure after years of relatively low investment. This report looks at infrastructure as one of three strategic sectors, analyzing it in greater detail in Chapter 5.

National public spending on agriculture, forestry and fishing increased in real terms from 2001 to 2005, accounting for an average of 2.4 percent of total spending over the same period. It is interesting to note that by 2004 sub-national government spending had overtaken that of the central government. In 2004, central government spending accounted for 45 percent of total expenditure, compared with 55 percent from sub-national governments (with provincial spending accounting for 17 percent and district spending accounting for 38 percent). The central government, however, still accounted for the bulk of development spending in the sector.

²² In this section infrastructure does not include spending in state-owned enterprises, which are examined in the infrastructure sub-section of this report.

Social Services

Public expenditures in education increased significantly in the period from 2001 to 2006. National public spending in 2006 showed a significant increase for the sector, with real annual growth of more than 40 percent, demonstrating the government's strong commitment to improve education services. The 2006 and 2007 budgeted increases in education spending are being largely channeled to finance a teacher certification and quality improvement process, together with block grants for school operational costs (Bantuan Operasional Sekolah, or BOS). The estimated disbursement for this program in 2006 is Rp 11.12 trillion. A more detailed analysis of spending in the education sector can be found in Chapter 3.

Despite a strong increasing trend in executed and projected health spending, this sector is visibly underfunded relative to spending in other sectors in Indonesia. Public health expenditures increased in real terms by Rp 10.9 trillion in the period from 2001 to 2006 (a 108 percent increase). Health spending relative to other sectors also increased, with the sector's share of national total expenditures increasing from 2.6 to 4.5 percent over the same period. Furthermore, budgeted health expenditures reflect a further increase of 60 percent from 2005 to 2007. Nonetheless, while there is a strong increasing trend in health spending, this starts from a very low base. Health spending in Indonesia still stands at less than 1 percent of GDP, much lower than comparator countries in the region. Chapter 4 presents an analysis of the level, efficiency and equity of spending in the health sector.

General Public Services

Public spending on government apparatus and supervision increased by 110 percent in the period 2001-05 (Table 2.2). In 2001, spending in this sector accounted for 9 percent of the total national budget, increasing to 12 percent of total national expenditures in 2005. Sub-national governments alone account for more than 67 percent of the increase in spending on government apparatus.²³ The growth in administrative spending at the sub-national level can, at least partially, be explained by the creation of more than one hundred new districts over this period, an increase of 30 percent from 336 districts in 2001 to 437 districts in 2005.

Table 2.2 Trend of spending in the government apparatus sector

Rp trillion (at constant 2000 prices)

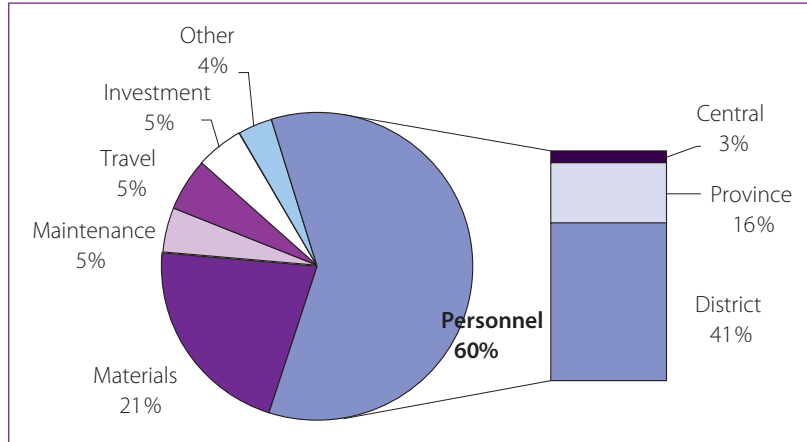
	2001	2002	Annual Growth (%)	2003	Annual Growth (%)	2004	Annual Growth (%)	2005	Annual Growth (%)	Growth Rate 2001-05 (%)	Weighted Growth Rate 2001-05 (%)
Central	3.6	3.4	(5.3)	5.6	63.3	5.5	(2.3)	7.2	31.7	98.9	13
Province	7.0	6.8	(2.3)	8.7	28.5	7.5	(13.6)	7.4	(1.6)	6.7	2
District	17.8	17.9	0.3	23.9	33.8	25.2	5.2	26.0	3.2	45.6	29
Total	28.4	28.1	(1.1)	38.3	36.1	38.2	(0.2)	40.6	6.3	42.9	43
Total as % of National Exp. (%)	9.0	10.4		12.5		12.2		11.9		---	---
Per capita (Rp)	137	133		178		175		184			---
Number of Districts	336	348		370		410		437		30.1	---

Source: World Bank staff calculations based on MoF and SIKD data.

²³ That is, if the weighted components of the growth rate (i.e. 9 and 28 percent, corresponding to provinces and districts, respectively) are expressed as a percent of the total (50 percent).

Personnel spending accounts for 60 percent of government apparatus spending. Districts account for more than two-thirds of all personnel spending, or 41 percent of the total government apparatus spending, whereas the shares for provinces and central government are much lower).²⁴ The decentralized structure of the government means that districts absorb as much as 69 percent of total civil service spending.²⁵

Figure 2.2 Economic composition of government apparatus spending

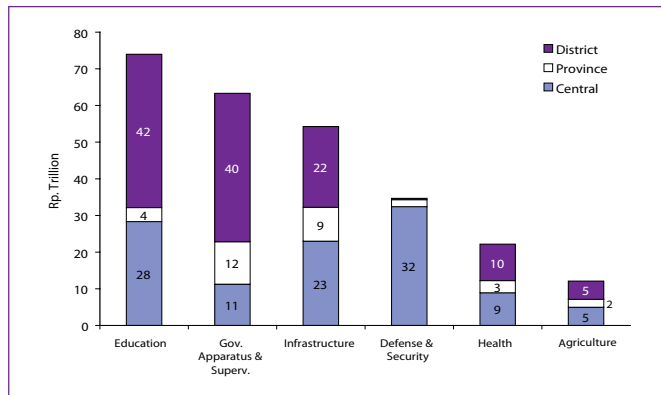


Source: World Bank staff calculations based on data from MoF and SIKD.

Defense and security spending increased from Rp 16 trillion in 2001 to Rp 48 trillion in 2006 (a real growth of 85 percent), accounting for an average of 6.9 percent of total national expenditures. The trend may partly reflect the government’s commitment to bring the security sector fully on budget, although this will be a long and gradual process. Currently, the security sector obtains the bulk of its funding off-budget, generating revenue through controlling interests in various business activities.

Intergovernmental Distribution of Sectoral Expenditures

Figure 2.3 Sectoral distributions of public expenditures by level of government, 2005



Source: World Bank staff calculations based on MoF and SIKD data.

Consistent with the decentralization of expenditure since 2001, sub-national governments now have a significant share of spending in almost all public sectors, with particularly large shares of social services (education and health) and government apparatus expenditures. Districts’ share of total spending is largest in the government apparatus and education sectors (accounting for 64 and 57 percent of the total, respectively), while district spending is almost equal to central spending in the health and agriculture sectors (see Annex D.5). However, despite the growing participation of district governments in these sectors, their decision-making authority is still limited by the fact that most district spending is non-discretionary in nature (e.g. routine spending for salaries).²⁶ In contrast to the highly decentralized spending in the social sectors,

expenditures in infrastructure and national defense are still dominated by central government spending. The following three chapters are dedicated to a detailed expenditure review and efficiency analysis of the three key sectors of education, health and infrastructure.

²⁴ Note that Figure 2.2 reflects only salary expenditures that are not accounted within other sectors, i.e. it does not include salaries for education, health, or infrastructure.

²⁵ See section on civil service in Chapter 1 for further details on the intergovernmental distribution of the civil service.

²⁶ Refer to the education and health chapters for a more detailed discussion of social sector spending in the regions.



CHAPTER 3 **Education**

Indonesia Public Expenditure Review 2007

Key Findings

- Indonesia is spending over 17 percent of its budget on education, putting it almost on a par with other developing countries and with Organization for Economic Cooperation and Development (OECD) countries. However, Indonesia's spending level is still relatively low compared with its East Asian neighbors.
- Implementing the current interpretation of the constitutional "20 percent" stipulation, specifically the more recent exclusion of teacher salaries from this benchmark in National Education System Law No. 20/2003, is unrealistic and problematic at the same time. In order to reach the 20 percent benchmark within the current definition, central government would need to more than double existing spending levels and spend the increment on non-salary expenditures, while overall sub-national spending on education (including salaries) would need to increase to at least 45 percent of total spending.
- There are significant differences in educational access and quality across the country, and effective targeting of additional resources is required to provide lagging districts and provinces with sufficient funds to catch up with better performing regions.
- Indonesia has an oversupply of teachers at the primary level and in urban areas, whereas it has a significant undersupply of teachers in remote areas.

Key Recommendations

- Given very high primary enrollment rates, it would be desirable for a higher share of resources to be allocated to improving enrollment rates of junior secondary schools, improving the quality of instruction throughout the education system and rehabilitating existing education infrastructure.
- A more appropriate definition of the 20 percent rule would include teacher salaries and combine spending at all levels of government. Under such a definition, Indonesia spent an estimated 17.2 percent on education in 2006.
- In order to ensure that Teacher Law No. 14/2005 translates into higher learning achievement, adequate mechanisms of performance control and accountability should be simultaneously implemented. The setting up of strong accountability institutions both within the sector and in civil society is a prerequisite for effective performance and control.
- The new Operational Aid to Schools (BOS) program can be a powerful tool to increase equity if the allocation mechanism is revised to consider potential students (as opposed to already enrolled students), as well as indicators of good performance and budget transparency.

Progress and Challenges in the Education Sector²⁷

In academic year 2004/2005, public and private schools at all levels of education enrolled 50.6 million pupils in over 270,000 schools. Based on National Education System Law No. 20/2003, formal education in Indonesia begins with two years of kindergarten followed by primary school, which is made up of six grades. Graduates from primary school can continue with secondary education, which is divided into junior and senior secondary levels, each level comprising three grades. Graduates from senior secondary schools can carry on to diploma or graduate programs, or to other types of higher education including university (with the number of years to completion varying depending on the program). In academic year 2004/2005, the distribution of students across these levels of education was: 5 percent kindergarten, 59 percent pre-school and primary education, 17 percent junior secondary education, 13 percent senior secondary and 6 percent higher education.

Indonesia is targetting 100 percent gross enrollment rates at the primary school level and 96 percent at the junior secondary school level by 2009. National Education System Law No. 20/2003 proclaims that every child aged 7 to 15 must attend basic education. This law implies that the government should provide free educational services to all pupils at the basic level of schooling. Achieving these enrollment targets in education, coupled with investments to improve the quality of education, is essential to sustaining Indonesia's growth and competitiveness in the region in the years ahead. Efficient and effective education spending is therefore a key element in Indonesia's poverty reduction strategy.

Since the 1970s, enrollment rates have increased significantly as a result of the government's sustained drive to build schools across the country. The results have been impressive: the net primary school enrollment rate increased from 72 percent in 1975 to nearly universal coverage by 1995 and stayed high even during the economic crisis of the late 1990s. In 2005, the net primary enrollment rate was 93.2 percent (and the gross enrollment rate even exceeded 100 percent).²⁸ The net enrollment rate for junior secondary education showed an even more marked increase, rising from 17 percent in the 1970s to 65.2 percent in 2005 (with a gross enrollment rate of 81.7 percent). The senior secondary enrollment rate has also been increasing, although at a more modest rate (Table 3.1).

Table 3.1 Gross and net enrollment rates for different levels of education, 1995–2005

Percent

	1970	1980	1995	1998	2000	2002	2004	2005
Net enrollment rate								
Primary level	72 (a)	88	91.5	92.3	92.4	92.7	93.0	93.2
Junior secondary level	17 (a)	--	51.0	58.4	61.7	60.9	65.2	65.2
Senior secondary level	17 (a)	--	32.6	36.9	39.5	36.8	42.9	41.7
Gross enrollment rate								
Primary level	80	107	107.0	109.3	110.1	106.1	107.0	107.1
Junior secondary level	16	29	65.7	70.3	76.0	79.5	82.2	81.7
Senior secondary level	16	--	42.4	46.4	51.5	50.4	54.4	52.9

Source: World Bank Education Sector Review 2005; various years of Susenas.

Note: (a) data points correspond to 1975.

However, education services are still not at the desired levels. Critical challenges remain to achieve the "Education for All" (EFA) goals. These challenges include reducing inequality in enrollment levels (income and geographic inequality) and improving the quality of education.²⁹ The following sub-sections provide an in-depth analysis of these challenges.

²⁷ This chapter represents a summary of a separate report on education expenditures. For the full version of the study, see World Bank, 2007a.

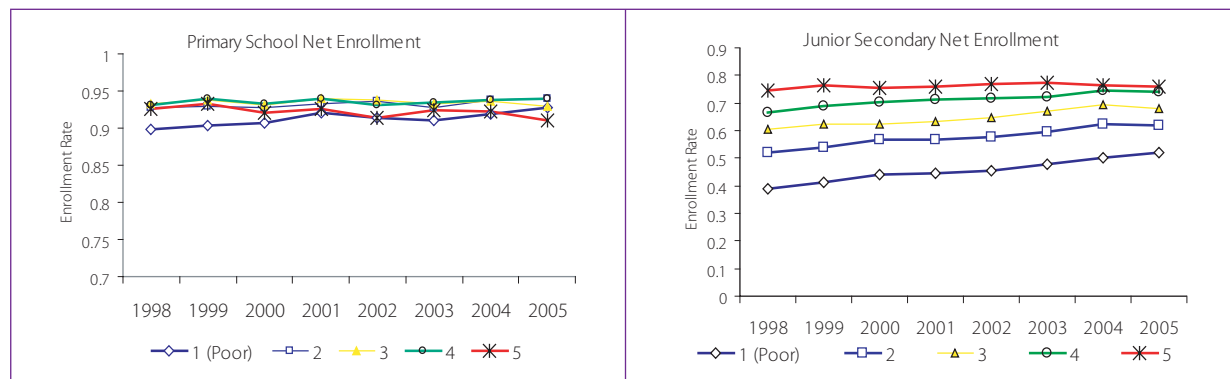
²⁸ The gross enrollment ratio in education is the total enrollment at that education level, regardless of age, as a percentage of the official school age population for that level. The ideal ratio is a 100 percent, but ratios greater than 100 percent can occur when there are high numbers of students in a level that does not officially correspond with the education level's age group. A high (greater than 100 percent) gross enrollment ratio can be indicative of inefficiencies in the educational system. The net enrollment ratio provides the number of students that are of the required age group and are enrolled in school divided by the total number of students in that age group.

²⁹ Indonesia's "Education for All" goals are: (i) enrolling all students through to the end of junior secondary level, (ii) ensuring that poorer and disadvantaged children have full and equal access to schools that provide an appealing learning environment and effective instruction and (iii) providing education that is of acceptable quality and is relevant to Indonesia's economy and society.

Reducing inequality in enrollment levels

Indonesia's past enrollment expansion closed the gap across income groups at the primary education level, but striking inequalities remain at the junior and senior secondary levels (Figure 3.1). In 2005, the primary school enrollment rates were 107.1 percent gross and 93.2 percent net. Problems with access become more significant at the junior secondary school level, where there is a considerable discrepancy in enrollments among income (Figure 3.1). A child coming from a poor family is 20 percent less likely to be enrolled in junior secondary than a non-poor child (World Bank, 2006). Officially, basic education (grades 1 to 9) is compulsory for children aged 7 to 15, but the main issue in terms of access to education concerns the transition to junior secondary schooling.³⁰

Figure 3.1 Enrollment rates by income groups for primary and junior secondary education



Source: World Bank staff calculations with Susenas 2005 core data.

Despite an impressive increase in enrollment at the national level, regional differences remain significant. In a country as large and diverse as Indonesia, some differences between regions are to be expected. However, while more than 90 percent of Indonesia's children have access to primary schools, some regions have been lagging for sustained periods and therefore need extra assistance. In 2004, net enrollment rates in primary education ranged from around 80 percent in Papua to about 95 percent in Central Kalimantan. At the junior secondary level, net enrollment rates varied from about 41 percent in Papua to 77 percent in Yogyakarta, and at the senior secondary level from around 20 percent in West Sulawesi to about 62 percent in Yogyakarta.

Improving quality of education

The quality of schooling in Indonesia is low and the education infrastructure is deteriorating. Some important determinants of education quality that need to be addressed include the level of teacher qualifications, the structure of teacher compensation, class-room quality, teacher attendance rates and class size. There is a clear need for teacher educational attainment to be improved in Indonesia. For primary and junior secondary levels, only 55 percent and 73 percent of the teachers, respectively, have the minimum qualifications required by the Ministry of National Education (MoNE, 2005a). The government is tackling the problem with its recent December 2005 law on teacher certification by providing incentives for all teachers to obtain certification. These additional incentives will significantly increase teacher income. The increases could translate into higher learning outcomes if adequate mechanisms and institutions of performance control (i.e. teacher attendance and teaching quality) are implemented. Furthermore, strong accountability is a prerequisite for effective performance control. Effective accountability mechanisms in other countries have combined bottom-up accountability (from schools to districts/provinces) with top-down accountability (from schools to constituents and parent committees).³¹ Deteriorating classroom quality is another serious problem for the Indonesian education system, particularly at the primary level, where only 44 percent of classrooms satisfy the minimum standards set by the MoNE (MoNE, 2005b). Finally, although the student-teacher ratio is low, large numbers of part-time and absent teachers result in a high actual student-class ratios.

³⁰ Tertiary education is outside of the scope of this report. Total gross enrollment rates at the tertiary education level are very low, a mere 16 percent. The poorest quintile has a negligible enrollment of 1 percent, whereas the richest quintile's enrollment is close to 50 percent.

³¹ A widely praised example of community participation bottom-up accountability is that of the EDUCO in El Salvador.

The Indonesian education system does not produce enough students with the knowledge and skills required to work in economic sectors with high growth potential. Indonesian newspapers frequently report on the gap between what schools offer and the needs of civil society for an engaged electorate, as well as the demands of the enterprise sector for employees and entrepreneurs with imagination and problem-solving skills. The results of the 2002 national examinations show that out of a possible 10 points for each subject area, more than 2.2 million students from nearly 20,000 schools who took the tests averaged scores of 5.79 for math, 5.11 for Bahasa Indonesia and 5.29 for English. Figures for the 2005/2006 academic year indicate a significant increase in scores, which now average 7.13 for math, 7.46 for Bahasa Indonesia and 6.62 for English.³² The reliability of the test results is questionable, however, and comparing test-scores across years is only valid if the test-designs do not change substantially.

Public Spending

Real national education expenditures increased by almost 42 percent in 2006 and the budget for 2007 shows a further increase of 8 percent.³³ Since the mid-1990s, Indonesia has experienced an upward trend in government expenditure on education. The two exceptions were a temporary decrease during the economic crisis and a slight decline in 2004. The decrease in the education share of spending in 2004 was caused by a combination of low budget execution and a relative crowding-out effect in most social sectors due to increasing fuel subsidies. In 2004, total national spending increased by around 4 percent. The share of education expenditures in total national expenditures reached peaks in 2003 and 2006, and should also reach a peak in the allocated budget for 2007 (Table 3.2).

Table 3.2 National public expenditure on education (central + province + district)

Rp trillion

	2001	2002	2003	2004	2005	2006*	2007**
Nominal national education expenditures	40.5	48.2	64.8	61.8	74.0	118.2	135.4
National education expenditures (2001 prices)	40.5	43.1	54.3	48.8	52.9	74.9	80.7
Growth real national education expenditures (%)	40.3	6.4	26.2	-10.2	8.4	41.6	7.8
Education exp. (% total of national exp.)	11.4	14.3	16.0	14.0	13.9	16.9	17.2
National education exp. (% of GDP)	2.4	2.6	3.2	2.7	2.7	3.8	3.8
Total nominal national expenditures	353.6	337.6	405.4	441.8	531.7	698.2	785.4
Total real national expenditures (2001 prices)	353.6	301.8	340.0	348.9	380.0	442.4	468.3
Government size (total exp. as % of GDP)	21.0	18.1	19.8	19.4	19.5	22.4	22.2

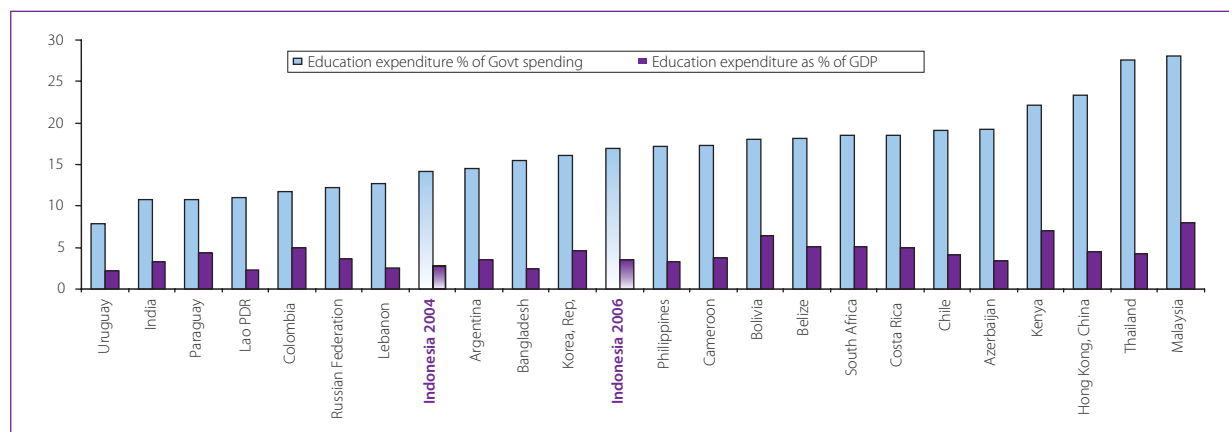
Source: World Bank staff calculations base on MoF and SIKD data.

Note: * = preliminary realization of APBN and estimates for sub-national spending, ** = APBN and estimates for sub-national governments. See Annex F.9 for further detail.

Due to the recent increases in spending, Indonesian education expenditures are now almost on a par with most developing countries. Indonesia has a low share of total expenditures compared with GDP, but it now spends almost as much as countries with a similar per capita income and countries sharing similar geographical and logistical constraints (Figure 3.2).

³² MoNE, Data from the Assessment Center.

³³ In this chapter education spending for central government is defined following the sectoral budget classification. Also from Sector 11: Education, National Culture, Belief in God Almighty, Youth and Sports Sector, the sub-sectors 11.1 Education and 11.2 Official and Informal Education sub-sector are included in the analysis, which together account for 98 percent of the sector total.

Figure 3.2 International comparison of education expenditures, 2004

Source: Edstats and World Bank staff calculations.

Note: Education expenditure is defined as the ratio of national (central and sub-national governments) education expenditures to national overall expenditures. Data for Indonesia are estimates that correspond to FY2004 (based on World Bank calculations using SIKD), whereas for the other countries estimates are for FY2003 (based on World Bank calculations using SIKD, GFS and Edstats).

Indonesia spends significantly less on education than some of its East Asian neighbors, particularly Malaysia and Thailand (Table 3.3). Malaysia invests more as a share of its budget and as a share of its GDP than any other country in the region. In contrast, Indonesia ranks among the lowest, together with the Philippines, on spending as a share of GDP. Indonesia's low share of education spending to GDP compared with Malaysia's is partially explained by the smaller size of the Indonesian government (i.e. government spending as a percentage of GDP) in general. However, this argument fails to hold against Thailand, where education spending as a share of GDP is still higher than Indonesia's, even though Thailand has a smaller size of government than Indonesia.

Table 3.3 Education public expenditure in Indonesia's neighboring countries

	Highest		Lowest	
Education Public Expenditure % of Total Expenditure	Malaysia 27.0	Thailand 27.0	Indonesia 16.9	Philippines 16.0
Education Public Expenditure % of GDP	Malaysia 8.1	Thailand 4.6	Indonesia 3.8	Philippines 3.1
Total Public Expenditure % of GDP (Size of Government Sector)	Malaysia 29.7	Indonesia 22.4	Philippines 19.6	Thailand 16.8
GDP per Capita (Constant 2000 US\$)	Malaysia 4,290	Thailand 2,356	Philippines 1,085	Indonesia 906
Population (million)	Indonesia 217.6	Philippines 81.6	Thailand 63.7	Malaysia 24.4
Percent Population Aged 0-14	Thailand 4.1	Indonesia 3.5	Malaysia 3.0	Philippines 2.8

Source: Data for Thailand, Malaysia, the Philippines are from the World Bank Development Indicators (latest year available); data for Indonesia are from the preliminary realization of central budget and estimates for sub-national spending for 2006 based on previous years (base data from Ministry of Finance).

Economic composition by level of government

In 2005, the majority of education expenditures—about 62 percent—was spent at the sub-national level. District governments are the main spenders, accounting for 57 percent of total spending, while provinces account for only 5 percent. The central government share of total education spending is still large in view of the mandated decentralization of the sector. Moreover, in 2005 the share of central government expenditure in total education expenditures actually increased slightly, from 31 percent to 38 percent, while averaging 33 percent over the past five years (Table 3.4).

Table 3.4 Nominal education expenditures by level of government, 2001–04

Rp trillion

	2001	%	2002	%	2003	%	2004	%	2005*	%
Central	14.1	33	14.7	29	22.5	35	19.4	31	28.3	38
Development	8.5	60	9.2	62	15.6	69	12.3	63	17.1	60
Routine	5.6	40	5.6	38	6.9	31	7.1	37	11.3	40
Provincial	1.9	4.6	4.0	7.8	3.9	6.1	2.6	4.1	3.8	5
Development	1.4	70	2.6	66	3.1	80	1.8	69	2.9	77
Routine	0.6	30	1.4	34	0.8	20	0.8	31	0.9	23
District	26.2	62	32.6	63	38.3	59	39.8	64	41.8	57
Development	3.0	11	4.6	14	5.3	14	4.6	12	5.1	12
Routine	23.2	89	28.0	86	33.0	86	35.2	88	36.8	88
Total expenditures	42.3	100.0	51.3	100.0	64.8	100.0	63.1	100.0	74.0	100

Source: World Bank staff calculations based on data from MoF.

Note: * Due to the reform in the budget system the 2005 central development spending figure reported here is an approximation of the old format equal to capital spending (Rp 2.0 trillion) plus social aid (Rp 15 trillion).

Although districts spend the majority of the total education budget, their expenditures are mostly non-discretionary routine expenditures. Hence, while decentralization formally devolved the responsibilities for education from the central level to the district level, the majority of the development budget is still spent by the central government. The average share of the central government in total education expenditures in 2001–05 was 64 percent, whereas districts only represented around one quarter (Table 3.5). Education spending suffered a slight decrease in 2004 primarily as a result of a decline in central development spending (Table 3.5). In 2004, development expenditures comprised about 44 percent of national consolidated expenditures on education, whereas in 2003 they accounted for somewhat less, at about 37 percent. Thus, local governments have surprisingly little discretion in managing funds and shaping key education sector decisions.

Table 3.5 Share of development and routine expenditures by level of government, 2001–05

Expenditure composition	2001	2002	2003	2004	2005*
Total development expenditures (Rp trillion)	12.89	16.40	24.09	18.68	25.07
Central development (% of total)	66.04	55.81	64.86	65.95	68.15
Province development (% of total)	10.57	16.14	13.02	9.42	11.66
District development (% of total)	23.40	28.05	22.12	24.63	20.18
Total routine expenditures (Rp trillion)	19.00	34.92	40.70	43.13	48.91
Central routine (% of total)	1.97	16.01	16.94	16.52	23.01
Province routine (% of total)	79.02	3.88	1.93	1.85	1.79
District routine (% of total)	79.02	80.11	81.13	81.63	75.20

Source: World Bank staff calculations based on data from MoNE.

Note: * Due to the reform in the budget system the 2005 central development spending figure reported here is an approximation of the old format equal to capital spending (Rp 2.0 trillion) plus social aid (Rp 15 trillion).

The majority of routine expenditures at the sub-national level are allocated for personnel spending, followed by goods expenditures. Hence, although sub-national governments account for a significant share of expenditures in the education sector, they actually have very little fiscal space for development expenditures. Routine expenditures on goods and materials at the sub-national level are the second-largest item of routine expenditures although far lower than personnel spending (Table 3.6).

Table 3.6 Routine expenditure distribution by level of sub-national government, 2002–04

Percent

Composition of routine expenditure	District				Province			
	2002	2003	2004	2005	2002	2003	2004	2005
Personnel expenditure	94.0	95.0	96.0	95.4	69.0	62.0	71.0	71.7
Goods expenditure	4.0	3.0	3.0	3.6	22.0	25.0	21.0	17.2
O&M expenditure	0.0	0.0	0.0	0.6	6.0	9.0	5.0	8.3
Travel expenditure	0.0	0.0	0.0	0.3	1.0	2.0	3.0	02.8
Miscellaneous and other expenditures	2.0	1.0	0.0	0.0	2.0	3.0	0.0	0.0
Total routine expenditure	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: World Bank staff estimates based on data from MoF.

Note: Development expenditures include non-formal and occupational education sub-sector for 2001–02. For 2003–05 reclassified from capital and operation and maintenance (O&M) expenditures. The sum of the percentages may not be exactly 100 percent due to the rounding.

Spending and efficiency by education sub-sector

In 2004, national spending on primary education accounted for 48 percent of total education spending; junior secondary accounted for 24 percent and senior secondary education accounted for 15 percent; and tertiary education accounted for 12 percent (non-formal education accounts for the remaining 1 percent). In 2004 the central government spent Rp 20.8 trillion on education. The majority of central government expenditures on education, Rp 17.1 trillion, or about 82 percent, was channeled through the Ministry of Education. The remaining Rp 3.7 trillion was executed by the Ministry of Religious Affairs. Central government spending on primary education, at Rp 2.84 trillion, consisted mostly of development spending (about 75 percent), while spending on tertiary education, at Rp 7.9 trillion, was composed mainly of routine expenditures (about 72 percent).

Secondary education, particularly junior secondary, is now a priority for Indonesia. In the context of rising education budgets, it would be desirable to allocate a larger share of the incremental budget to junior secondary schools. The MoNE recognizes the need for increased spending at the secondary level and states in its medium-term development plan (Renstra) its intention to increase the budget to Rp 8.9 trillion by 2009. This would be to fund strategic programs including the themes of educational expansion and equity, as well as quality improvements and relevance (Renstra and MoNE, 2005a). In the decentralized system, sub-national governments are responsible for providing secondary education. While spending on junior secondary education by districts is significantly lower than that of primary, higher central spending on junior secondary education partially compensates for this.³⁴ The largest share of central government routine expenditure is allocated to tertiary education. Salary expenditures for primary and secondary education are the largest component of district routine expenditures, and are financed through the DAU transfer and accounted for as sub-national expenditures.

Table 3.7 Social returns to education by level of education, 2004

Level of Education	Rate of Return (%)
Primary education	4
Junior secondary	25
Senior secondary	28

Source: World Bank staff calculations.

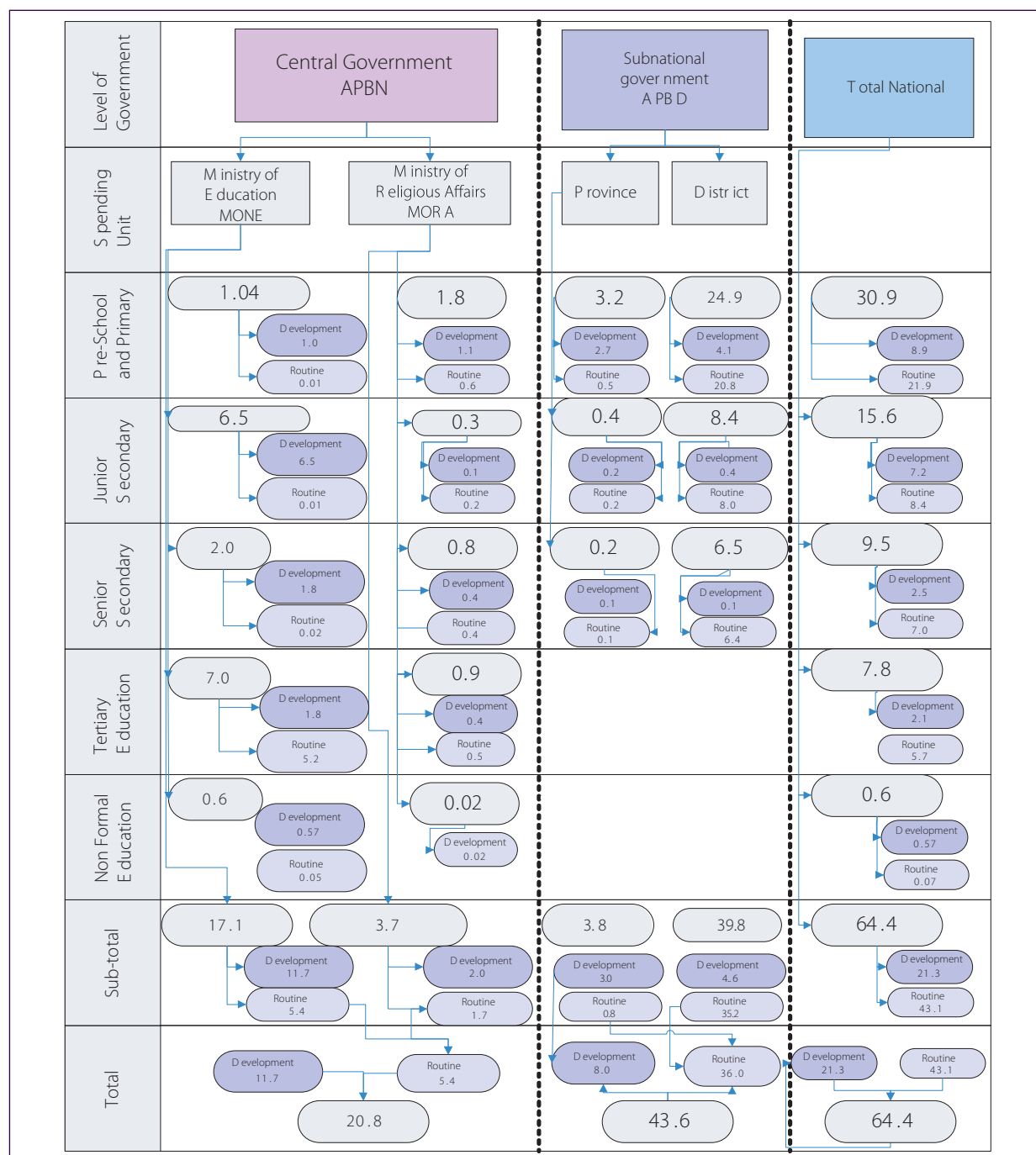
Identifying the optimal allocation of resources across education programs is crucial if the government is to increase education spending, as suggested by the Constitutional Court. The low enrollment rates for junior secondary

education are a clear sign that greater effort is required to improve access to this level of education. In addition, social rates of return to secondary education are higher than those for primary education. Cost-benefit analysis yields useful insights by comparing education programs based on their returns to society. Estimates of the returns to education investments are defined as the discount rates that equate a stream of education benefits to a stream of costs for providing education, at different levels, at a given point in time. The senior secondary level achieves the highest rate

³⁴ While spending per student is actually higher for junior education, this does not indicate an adequate level of spending at that level. It reflects the fact that costs of secondary education provision are typically higher and that the number of enrolled students in junior secondary education is low.

of return at 28 percent, slightly above the junior secondary school level, at 25 percent. By contrast, the rate of return for primary education is low at an estimated 4 percent (Table 3.7).³⁵

Figure 3.3 Education spending by program and level of government, 2004



Source: World Bank staff calculations base on MoF and SIKD data.

Note: Subcomponents do not necessarily add up to totals due to rounding.

The functional classification includes sub sectors Education (11.1) and Non-formal Education (11.2) while two other sub sectors (11.3 and 11.4) are aggregated under Tourism and Culture function (08). The Education function also includes the Religious Education sub sector (15.2).

³⁵ Education benefits were computed based in wage differentials (additional average earnings from those of the same age group at a previous level of education) from the Indonesian Labor Force Survey (Sakernas) 2006 and education costs from unit cost estimations reported by MoNE (2005a). See Annex F.2 for a more thorough discussion on the methodology employed for the computation of social rates of returns to education.

Allocations to the school level

Multiple sources contribute to school budgets, with the lion's share coming from district governments.

According to the GDS 1+ survey for budget data for 2002–03, 92 percent of primary school budgets are funded by district governments. This large share decreases in junior and senior secondary schools to 82 percent and 77 percent, respectively, as the share of parental contributions increases from 4 percent in primary to 13 percent in junior secondary and 17 percent in senior secondary.

The new financing mechanism allocates operational costs directly to schools. From 2001 to June 2005, the government allocated part of its fuel subsidy savings for special assistance for students (Bantuan Khusus Murid, or BKM) for poorer families. For the period July–December 2005, the government decided to change the direct recipient of the funds from households to schools by allocating block grants for school operational costs through the Operational Aid to Schools program (Bantuan Operasional Sekolah, or BOS). The BOS program is based on a per-pupil allocation mechanism. Since July 2005, the government has granted BOS resources to all schools at the primary and junior secondary levels while still partially continuing the BKM scholarship program.³⁶ The new allocation mechanism has significantly altered school budgets at the primary and junior secondary levels. The change means that the central government now funds a substantial share of schools' operational costs.

The BOS program covers around 41 million students, of which 62 percent are at the primary school level and 38 percent at the junior secondary level. The program disbursed Rp 5.3 trillion in June–December 2005 and then Rp 11.12 trillion in 2006, which equated to around 25 percent of the overall central budget for education. The size of the grant to each school is determined according to its number of pupils, with primary schools receiving Rp 235,000 (about US\$25) per pupil per semester and junior secondary schools receiving Rp 324,500 (about US\$35) per pupil per semester. BOS funds are to cover operational costs and are therefore intended to lower or even eliminate school fees. The BOS resources are transferred directly to schools. Schools set up bank accounts in which the funds are directly deposited, reducing the possibility of leakage and providing greater transparency.

A recent evaluation of the BOS program indicates that it has had a positive impact and was successful in a number of areas. Nonetheless, there are still many issues to overcome.³⁷ From a financing standpoint, the method of allocation has had both positive and negative effects. These include:

- The direct transfer of funds allows for little leakage, as almost all schools receive their full funds (although sometimes with delays).
- Lower fees due to the program may encourage more children from poor households to attend school. (This is an indirect effect, as the program does not target particularly poor households, schools, or districts.)
- The distribution mechanism may be distorted as schools have an incentive to inflate the reported number of students enrolled.
- Since provinces and districts are bypassed, the program tends to recentralize development spending, which goes against the notion of decentralization.
- The program does not demand measures of good performance or budget transparency from schools, which makes it difficult to assess its actual impact or adequate use of funds.

The government is debating a potential increase in the level of the grant, as the MoNE has requested an increase for primary students to Rp 300,000, and for junior secondary students to Rp 420,000. Given the fact that the current numbers are based on unit cost calculations at 2003 fixed nominal prices, increasing the level of per-pupil funds is desirable.³⁸ What is problematic is that the amount per student is set nationally and does not take into account regional price fluctuations. Although this is only a problem in certain regions, it can significantly reduce

³⁶ The schools that choose to participate in the program must sign a Letter of Agreement on the Provision of Aid. If a school agrees to take the funding Operational Aid from government, then they must comply with rules on the charging of fees including registration form cost, principal textbooks and supporting materials from library, cost for teachers training, examination fees and activity fee. See also (World Bank, 2006g) on the poverty impact of the BOS program.

³⁷ Conducted by SMERU in conjunction with the World Bank.

³⁸ These unit costs cover operational expenses only. The salary component of traditional unit cost calculations (about 80 percent) is omitted here.

the purchasing power of the transfer. For example, in Aceh, where inflation fluctuates around a level of 20 percent, the province's BOS funds will in effect finance around 20 percent less operational goods and services than it would elsewhere

Increasing the resource envelope: the 20 percent spending mandate

The size of the education spending envelope in the 2006 budget has been the topic of intense debate, as the National Teachers' Association (PGRI) requested the Constitutional Court to review the level of expenditures and assess whether it is in accordance with the law. The original text of Indonesia's 1945 Constitution contains the statement that every citizen has a right to education. In 2002, it was amended to stipulate that the government should spend at least 20 percent of its central and regional budget on education. Furthermore, since 2003, teacher salaries are no longer included in this 20 percent benchmark, putting pressure on the government to increase discretionary spending on the sector.

Box 3.1 Legal background of Indonesia's "20 percent rule"

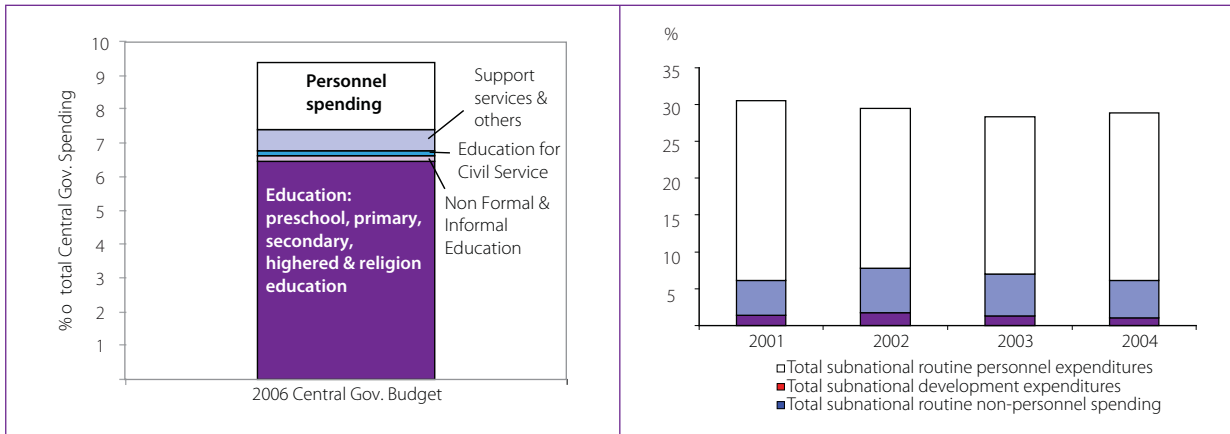
- 1945:** Indonesian Constitution stipulates in Article 31: (1) "Every citizen has the right to education" and; (2) "The government shall establish and conduct a national educational system which shall be regulated by law."
- 2002:** Nearly 60 years later in 2002, this Constitution article was amended to specify: "The state prioritizes a budget for education of at least 20 percent from the national budget and regional budgets to fulfill the needs of providing national education." The 2002 amendment was passed by the People's Consultative Assembly (MPR).
- 2003:** Later, National Education System Law No. 20/2003 on the National Education System (part 4, art. 49) again redefines the 2002 benchmark. The 2003 law narrows the range of spending items that count toward the 20 percent target by excluding salaries. As stated: "Education funds, excluding salary of educators and service education expenditure, are allocated at a minimum 20 percent of the APBN and a minimum of the APBD."

Bringing clarity to this debate entails three basic dimensions:

- Reviewing the adequacy of the level of the earmark at 20 percent and the very existence of a target of this type (as opposed to an expenditure formula based on education needs).
- Clarifying the various ways in which the education law has been interpreted and examining whether current levels of expenditures at the national and sub-national levels comply with the set standards.
- Defining how to allocate additional spending to different programs and other inputs, if additional spending in education is required.

In 2006, the central government allocated around Rp 44.1 trillion, or about 9.4 percent of the total central government budget, to the education sector (Figure 3.4).³⁹ When excluding personnel spending on teachers, as indicated in National Education System Law No. 20/2003, total central education government spending accounted for only about 7.4 percent of the 2006 APBN (Table 3.7). Calculating education expenditures in this manner, the level is insufficient to reach the stipulated 20 percent for the central government budget (APBN). Consequently, an additional Rp 59.2 trillion, or 12.6 percent, of the budget would need to be reallocated to the education sector in order for the education budget to reach the 20 percent benchmark

³⁹ The education sector includes preschool education, primary education, secondary education, non-formal and informal education, education for civil service personnel, higher education, religious education, research and development for the education sector, education support services and other spending on education.

Figure 3.4 Central and sub-national budget allocations to the education sector

Source: World Bank staff estimates.

Note: The estimation for central government includes all components of the functional classification, that is, sub-functions 10.01-10.90. The personnel spending part of the bar is an aggregate of personnel spending from each one of the education sub-functions.

Implementing the 20 percent rule within the current definition is both unrealistic and problematic at the same time. Although the education “20 percent rule” is still open to interpretation, various ways of computing the ratio have been examined. Most of them indicate that allocating 20 percent at the central or sub-national level excluding salary expenditures appears unfeasible (see Annex E.9 for a simulation of education spending ratios under different definitions).

- At the central level, the 2006 budget allocates an estimated 9.4 percent of the budget in education (Rp 44.1 trillion). Excluding personnel spending, this share declines to about 7.4 percent (Table 3.8).
- At the sub-national level, in 2004, education expenditures accounted for 29.9 percent of the sub-national total expenditures (Rp 44 trillion from a total sub-national spending— i.e. APBD I + APBD II—of Rp 151 trillion). Yet, as much as 79 percent of this amount was absorbed by personnel expenses. Excluding personnel spending, education sub-national spending accounts for only 6.1 percent of total sub-national expenditures (Table 3.8).
- If the education programs from all levels of government, all line ministries and other government institutions, as well as spending on salaries were counted as education expenditures, the share of national education spending in the national budget (APBN + APBD I + APBD II) would reach 17.2 percent (Table 3.8).

Excluding personnel expenditures, national and sub-national education spending is significantly lower than the target stipulated by National Education System Law No. 20/2003. Note, however, that since decentralization of education service delivery, which became effective in 2001, teachers’ salaries constitute the major share of sub-national expenditures on education. If local governments were to allocate the additional Rp 21 trillion necessary to reach the 20 percent target, excluding teachers’ salaries, the overall share of education spending at the sub-national level would account for as much as 45 percent of the total APBD. In order to increase the share of education spending in the APBD net of salaries, districts and provinces would need to make significant reductions in the shares of other sectors. Doing so would almost certainly not be politically possible or even desirable for a variety of reasons.

Table 3.8 Education spending as percentage of central sub-national and national spending⁴⁰

Percent

	Education spending share (official definition)	Education spending share (including salaries)	Share in total national spending
Central government	7.4	9.4	65
Sub-national governments	6.1	29.9	35
Total National	6.9	17.2	100

Source: World Bank staff estimates.

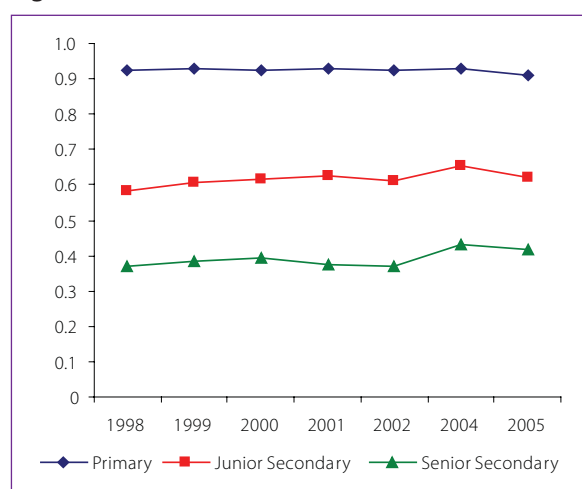
Note: For different definitions and computations of the 20 percent rule.

Earmarking 20 percent puts pressure on the central government to engage in education spending at the district level, which is not consistent with decentralization. The target stipulated for both levels of government is not based on an estimation of the financing needs arising from the intergovernmental distribution of education functions or the vertical distribution of fiscal resources. At a time when the MoNE is supposed to have devolved most of its functions to local governments, earmarking 20 percent of the APBN may be well intentioned but has disadvantages. Earmarking forces the MoNE to develop its own spending programs in the regions. This dynamic implies that most of the capital investments in education will become centralized and outside the control of district governments.

Education Public Expenditures and Equity

Equity in enrollment rates across levels and regions

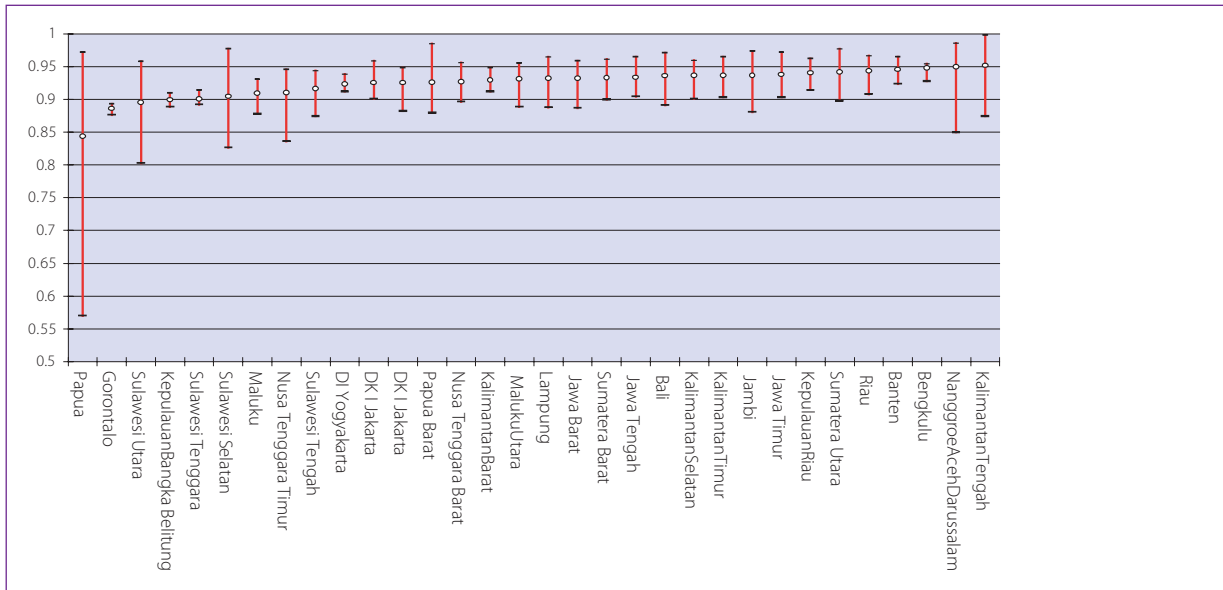
Education expenditures in Indonesia are mostly directed to the primary school level, which tends to be pro-poor. More than half of the combined education expenditures by central, provincial and district governments are directed to the primary school level. Fund allocation at this level tends to be pro-poor, given that a larger proportion of the poor attending school is found at the primary level. In contrast, at the junior secondary level, the poorest quintile makes up around 6 percent, while at the senior secondary level, its share is around 3 percent.

Figure 3.5 Net enrollment rates time trend

Source: World Bank staff calculations based on data from Susenas 1998–2005.

Indonesia's past enrollment expansion reduced the enrollment gap across income groups at the primary education level. However, striking inequalities remain at the junior secondary and senior secondary levels. In 2005, primary school enrollment rates were 107.1 percent gross and 93.2 percent net. Problems with access become more significant at the junior secondary school level, where the gross enrollment rate was 81.7 percent while the net enrollment rate was only 65.2 percent. Officially, basic education (grades 1–9) is compulsory for children aged 7 to 15. However, this is not strictly enforced. While access to primary schooling may still be a problem in remote areas, for the majority of the poor in Indonesia the most pressing educational access issue concerns the transition to junior secondary schooling.

⁴⁰ At the time of this report, sub-national government spending for 2004 is the most recent available. Total sub-national spending for 2006 is estimated based on the share of DAU on sub-national budgets and the education spending share in 2004.

Figure 3.6 Primary education: district enrollment rates within provinces

Source: Susenas 2004.

However, enrollment rates in Indonesia still vary widely by region and these regional gaps are more pronounced than the enrollment gaps in income levels. The poor's likelihood of enrollment varies by region, even within the same income quintile. The poor in Papua have low net enrollment rates even at primary school level (80 percent). In fact, the regional differences dominate conditions to such an extent that the richest quintile in Papua still has lower enrollment rates (92 percent) than the poorest quintile in Sumatra (World Bank, 2006). At the junior secondary school level, the level of access varies even more widely across provinces. Indonesia has largely similar and almost universal enrollment rates at the primary level across provinces. However, major differences in enrollment rates emerge for children aged 13 to 15. While Jakarta and Yogyakarta achieve enrollment levels of over 90 percent, the majority of provinces considered in this analysis fall below 80 percent. South and Central Sulawesi fall below 70 percent.

Equity of spending across districts

Inequality in enrollment rates across districts is related, at least in part, to the level of education spending at the district level.⁴¹ Regression analysis suggests that net enrollment rates are positively correlated with education spending per student and also with education spending as a share of overall district spending. Although the potential impact of additional spending on enrollment would be small, increasing per student spending might be part of the solution towards increasing junior secondary enrollment rates. In particular, increasing or reallocating resources from personnel to non-personnel spending (goods and materials expenditures) appears to be positively correlated with enrollment.⁴²

41 Enrollment rates are most likely only in part determined by district level education expenditures, because the districts predominantly spend on personnel costs, which are not necessarily assumed to be positively correlated with enrollment rates. Additional analysis, including DAK spending and other central level expenditures on district education, is being undertaken because these resources constitute the largest share of expenditures on education infrastructure—assumed to be highly correlated with enrollment.

42 See Annex F.3 for detailed regression outputs.

Table 3.9 District expenditures on education by poverty quintile

District Quintile	Per capita total district expenditure (Rp)		Education expenditure per public school student (Rp)		Education as % of Overall Expenditures		Non-personnel Education as % Total Expenditure	
	2001	2004	2001	2004	2001	2004	2001	2004
Poorest	558,116	725,459	165,486	215,523	35.7	34.4	5.5	5.3
2	364,804	724,234	148,595	228,492	40.1	36.3	4.4	4.7
3	393,305	690,836	144,850	209,021	43.0	35.0	4.3	4.6
4	493,893	899,841	184,214	245,510	40.0	32.0	4.9	5.6
Richest	619,163	950,714	182,893	272,704	32.9	31.1	5.2	3.9
All	484,758	798,819	165,168	234,718	38.2	33.7	4.8	4.8

Source: World Bank district expenditure data, 2001-04.

Note: Based on data of 350 districts; newer districts tend to not have data. Quintiles based on 2004 BPS poverty quintiles.

Education spending patterns at the district level indicate that rich districts not only have higher per-capita expenditures on education but also higher per-student expenditures. The latter can in part be explained by the fact that richer districts have more students in higher levels of education where unit costs tend to be higher. Table 3.9 provides an overview of expenditure by poverty quintile at the district level. Rich districts (particularly quintiles 4 and 5) tend to spend more on education per student, but the poorest districts are not too far behind.

Poorer districts tend to exert a greater fiscal effort as they allocate a higher proportion of their budgets to the sector (34 percent in the poorest districts vs. 31 percent in the richest districts). The 40 percent poorest districts spend, on average, 35.4 percent of their budget on education, while the richer districts spend 31.5 percent (Table 3.9).

Hence, poorer districts are not necessarily lagging behind due to insufficient spending as a share of their budgets. Rather, inequalities likely result from lower overall allocations to the sector. Thus, an increase in their overall budget levels might be desirable. This increase could be combined with a continued effort to spend reasonable budget shares on the education sector.

Increasing access: cost implications of quality “Education for All”

Ensuring greater equity in enrollment rates through the achievement of the “Education for All” (EFA) goals requires an increase in total spending, as well as in spending per pupil. The EFA goals include increasing net enrollment rates at both primary and junior secondary education levels by reaching out to the poor and disadvantaged populations and improving the quality of the education available. The cost implications of these goals were calculated by McMahon in 2003.⁴³ A key concept for his costing is adequacy, or “what it takes in terms of textbooks, teaching materials, teacher abilities and qualifications, school libraries and so forth to produce an educationally adequate education for each child” (McMahon, 2003).⁴⁴

43 The costs calculations are based on EFA goal targets that aimed to achieve 100 percent net enrollment rate by 2008 in primary education and 95 percent in junior secondary education by 2008, as referred to in the Education Sector Review performed by the World Bank in 2005. Although these targets—particularly for junior secondary—are rather high, this implies that cost-estimates described above are most likely higher than what they will turn out to be.

44 See Annex F.9 for further details on this computation.

Table 3.10 Cost estimates for “Education for All” (EFA)

	Primary		Secondary	
	2004–05	2008–09	2004–05	2008–09
Per-pupil Cost (Rp '000)				
Incremental cost of EFA	179	209	509	834
Current cost	966	966	1,449	1,449
Total	1,145	1,175	1,958	2,283
Total Cost (= Per-pupil cost X students enrolled) (Rp trillion)				
Incremental cost of EFA	5.1	5.7	5.3	10.2
Current cost	27.3	26.4	15.5	18.0
Total	32.3	32.1	20.8	28.4

Source: McMahon 2003.

Incremental costs associated with EFA per pupil for 2004–05 were 18 percent of the 2004 per-pupil cost for primary education and 35 percent for junior secondary education. These costs are much higher than the sums actually spent at the sub-national level per student. Primary and junior secondary costs should have totaled Rp 53 trillion in 2004 (Table 3.10). However, expenditures at the sub-national level were only Rp 43.6 trillion. For 2008–09, the total estimated expenditures will need to be nearly Rp 60 trillion for Indonesia’s education system to fulfill its enrollment targets.

Given the government’s intention of increasing spending on education, it may be feasible to close this financing gap and reach the necessary per-pupil expenditure levels. Nevertheless, solely increasing spending will by no means guarantee the achievement of the EFA goals. Costing EFA is an important step in understanding what is required to fulfill this national commitment, but more resources alone are not enough. In order to increase enrollment levels sufficiently, changes in the management of schools and the education system as whole will be necessary.

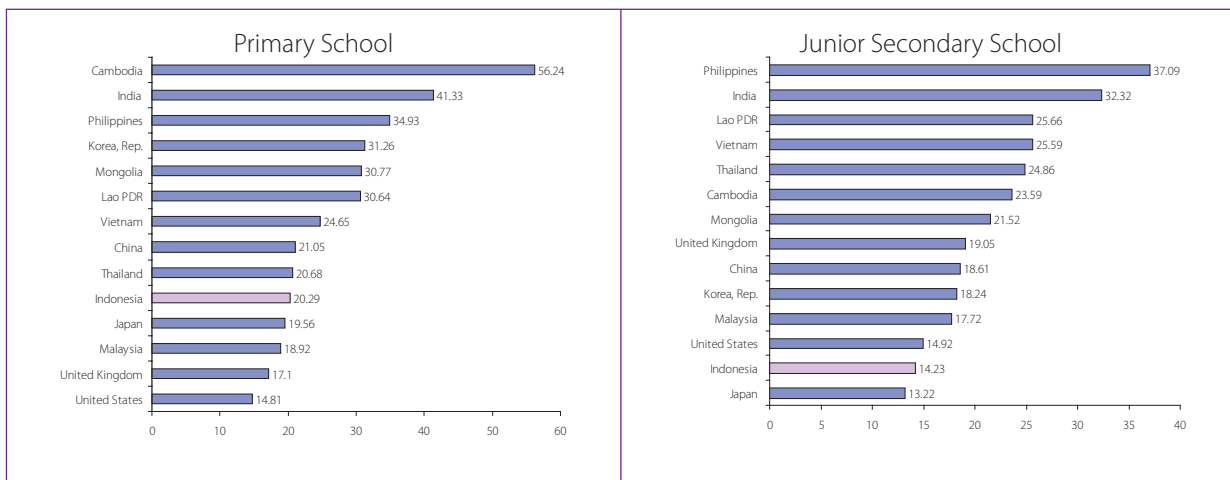
Education Public Expenditures, Efficiency and Outcomes

Efficiency in personnel management: teacher distribution

Although education budgets are increasing, Indonesia’s extremely low student-teacher ratio (STR) suggest inefficiencies in sector spending. While a low STR provides the potential quality benefit of more teacher-student interaction, general consensus is that a STR of 30:1 is optimal and that levels below this have very low marginal returns. Since teacher salaries are a significant cost, a low STR tends to carry a high financial burden. Indonesia has one of the lowest student-teacher ratios in the region, as illustrated in Figure 3.7. Comparable STRs for Asia/Pacific countries are around 31:1 for primary and 25:1 for junior secondary.⁴⁵ Indonesia’s rates are significantly lower, at about 20 and about 14 for primary and junior secondary, respectively (Figure 3.7). Indonesia’s ratios are on a par with or even lower than the ratios in the US and many European countries. It is also well below Indonesia’s national policy regarding the STR, which is set at 40:1 for primary and 28:1 for junior secondary (World Bank, 2006h).

⁴⁵ Source: EdStats database. Primary ratio clearly defined with weighted ratio, but secondary ratio estimated by authors due to unavailability of data.

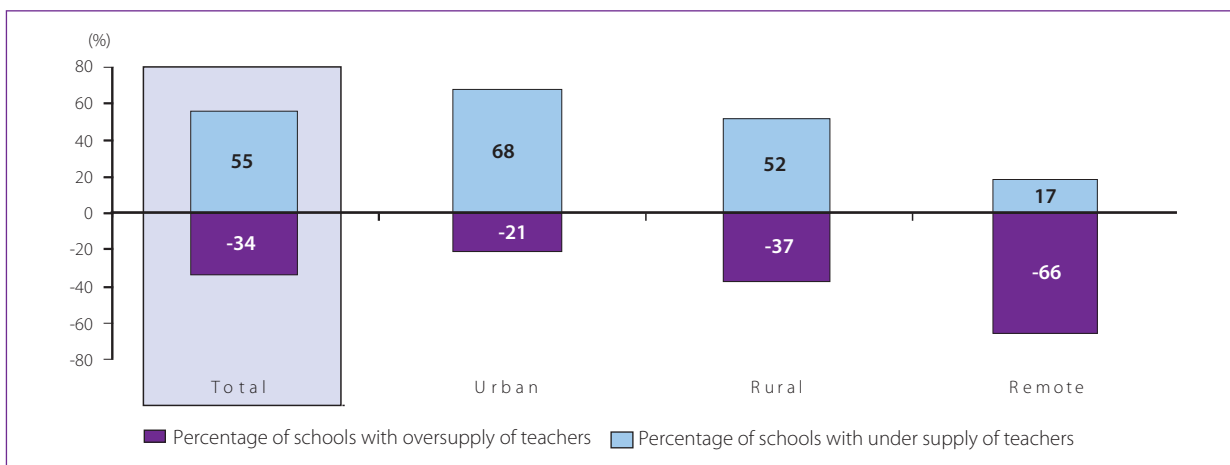
Figure 3.7 Primary and secondary school STRs by selected countries, 2003



Source: Edstats 2003.

The supply issue is in part related to distribution inefficiencies. Based on the standards set by the current staffing entitlement formula for primary school (nine teachers minimum and a target STR of 40:1), about 55 percent of schools are oversupplied, while 34 percent are undersupplied (Figure 3.8).⁴⁶ Inequities in teacher distribution are particularly evident when looking at the supply of teachers in urban, rural and remote schools. Urban and rural area schools have substantial oversupplies (with 68 percent and 52 percent of such schools having an oversupply, respectively), while remote schools have serious teacher shortages, with 66 percent of the schools being undersupplied. The government’s new policy of doubling the base salary for teachers working in remote schools should encourage more teachers to work in these schools.

Figure 3.8 Percent of primary schools with oversupply, undersupply by region



Source: Employment and Deployment Survey, 2005.

Note: Based on the current entitlement formula.

The current method of determining teacher supply requirements encourages oversupply. Under the current system, schools submit their teacher supply requirements to the district office. The districts then request the number of additional teachers required from the central education office. The central office subsequently allocates teachers to districts and provides the additional teacher salaries through the DAU. Under this system, the schools and districts—which do not actually pay the salaries—have a strong incentive to claim undersupply and request additional (and

⁴⁶ The total over and undersupply is calculated based on 2005 Employment and Deployment survey results of urban, rural and remote schools. The total is weighted based on 2004 Susenas calculations on the percent of children aged 7 to 15 living in urban and rural areas and assuming that 10 percent of schools are remote. Part-time teachers are calculated as full-time equivalents.

largely free) resources, with little incentive to use teacher resources efficiently. This is shown in practice, where schools almost always claim an undersupply, even when they have a large oversupply. In a 2005 survey of 276 primary schools, 65 percent of the schools claimed to have an undersupply while only 8 percent claimed an oversupply. However, according to the entitlement formula, 55 percent showed oversupply while 34 percent showed an undersupply. Of the schools that claimed an undersupply, 41 percent actually had an oversupply.

When considering the oversupply of teachers, it is important to take into account Indonesia's large share of part-time teachers. About 6 percent of Indonesia's primary school teachers and 25 percent of public secondary school teachers work part-time.⁴⁷ This has added to the claims of an undersupply of teachers in certain areas. Using part-time teachers only reduces the cost burden of the current personnel system slightly, because part-time teachers' salaries are not significantly lower than salaries of their full-time colleagues. Primary school teacher salaries (including district and school incentives) vary surprisingly little based on hours worked. This is true for secondary school teachers as well. The fact that part-time teachers do not earn significantly less than regular teachers means that they are actually more expensive on a per-hour basis. At the secondary school level, subject experts are often hired on a part-time basis. In order to increase cost-effectiveness, however, these teachers should be encouraged to improve their level of certification to ensure full-time employability. At the primary level there are fewer part-time teachers (6 percent nationally), although primary school teachers often have responsibilities other than classroom teaching and many tend to work fewer hours than the average classroom teacher.⁴⁸

The bottom line from a financing perspective is that the oversupply presents a significant cost burden. Using realistic STRs⁴⁹ that follow international best practice and are in line with the regional average, Indonesia shows a teacher oversupply of about 21 percent (Annex E.6). Even when using a conservative estimate and taking into account the large part-time teacher workforce, the cost burden of the oversupply of teachers for primary and junior secondary schools alone reaches over Rp 5 trillion, or about 8 percent of the total education budget. This high cost will be exacerbated when teachers' salaries are significantly increased as a result of the new incentives specified in Teacher Law No. 14/2005.

Teacher salaries, incentives and education quality

With the introduction of Teacher Law No. 14/2005 in December 2005, the government introduced a new teacher certification requirement that increases teacher remuneration, while also improving levels of qualification. Designing teacher salary and incentive structures that attract and retain the best and the brightest candidates to the teaching profession is a complex task. This fact is particularly true for Indonesia, where teacher salaries are considered relatively low. Low pay is likely to be one of the main reasons why teachers perform poorly, have low morale and tend to be poorly qualified. The level of teacher salaries in Indonesia, adjusted for purchasing power, is significantly lower than that in other countries (Unesco-UIS/OECD, 2005).

Indonesian teachers have lower salaries than comparable countries. A survey of selected World Education Indicator (WEI) countries shows that Indonesian teachers have the lowest salaries among those countries surveyed for all scales and levels of education. But cross-country comparisons can be problematic, as some countries may offer additional incentives that are not captured in the comparison. Nevertheless, the results seem to indicate that Indonesian teachers are relatively poorly paid. Even doubling teachers' incomes would still leave teachers' pay below

47 When private schools are taken into account, the percentage of secondary school teachers is 39 percent.

48 For example, at the primary level, 20 percent of the teachers are sports and religion teachers and another 11 percent are headmasters, who often still assume teaching responsibilities in smaller schools, but have more of a managerial role in larger schools (See Annex F.7).

49 A proposed entitlement is a minimum of four teachers in every primary school and a target STR of 32:1 in primary and a minimum of seven teachers in every junior secondary school and a target STR of 28:1, which results in an actual STR of 26:1 and 22:1 respectively.

Table 3.11 Comparison of teacher salaries in selected World Education Indicator (WEI) participant countries*US\$ at purchasing power parity (PPP)*

	Year	Primary Education		Junior Secondary Education		Senior Secondary Education	
		Starting salary	Salary at top scale	Starting salary	Salary at top scale	Starting salary	Salary at top scale
Chile	2003	11,709	18,437	11,709	18,473	11,709	19,302
Egypt	2002/03	1,046	--	1,046	---	---	--
Indonesia	2002/03	1,002	3,022	1,002	3,022	1,042	3,022
Malaysia	2002	9,230	17,470	13,480	29,151	13,480	29,151
Paraguay	2002	7,950	7,950	12,400	12,400	12,400	12,400
Philippines	2002/03	9,890	11,756	9,890	11,756	9,890	11,765
Sri Lanka	2002	3,100	3,945	3,100	4,509	3,945	5,073
Thailand	2003/04	6,048	28,345	6,048	28,345	6,048	28,345
Uruguay	2002	4,850	7,017	4,850	7,017	5,278	7,444
OECD mean	2003	24,287	40,539	26,241	43,477	27,455	45,948

Source: Unesco-UIS/OECD 2005 Education Trends in Perspective: Analysis of the World Education Indicators.

Comparing the salaries of teachers nationwide with the salaries of other workers with equivalent education levels, it is found that the most well-qualified teachers actually earning less than other workers with equivalent qualifications. Teacher salaries at lower levels of education are relatively higher, but this relative advantage decreases as education levels increase. An analysis of Indonesia's 2004 Labor Force Survey (Sakernas) reveals that the monthly earnings of primary teachers with qualifications below the diploma level (about 40 percent of teachers), are 16 percent higher than the earnings of other paid workers. This differential decreases to 6 percent for teachers with a first- or second-level diploma (about 32 percent of teachers) but then becomes negative for primary teachers with even higher levels of education. In particular, teachers with a third-level diploma (about 8 percent) or a university degree (about 19 percent) earn 21 percent and 35 percent less, respectively, than other workers with equivalent levels of education. These results suggest that teachers with relatively low levels of education are relatively overpaid, while those with higher levels of education are relatively underpaid. However, teacher hourly earnings compare rather favorably with those of other workers, because teachers tend to work fewer hours but typically are paid more per hour. According to data from the Labor Force Survey (Sakernas) 2004, teachers reported to be working around 34 hours per week, while other paid workers with similar levels of education reported to be working 43-46 hours per week (see Annex F.8).

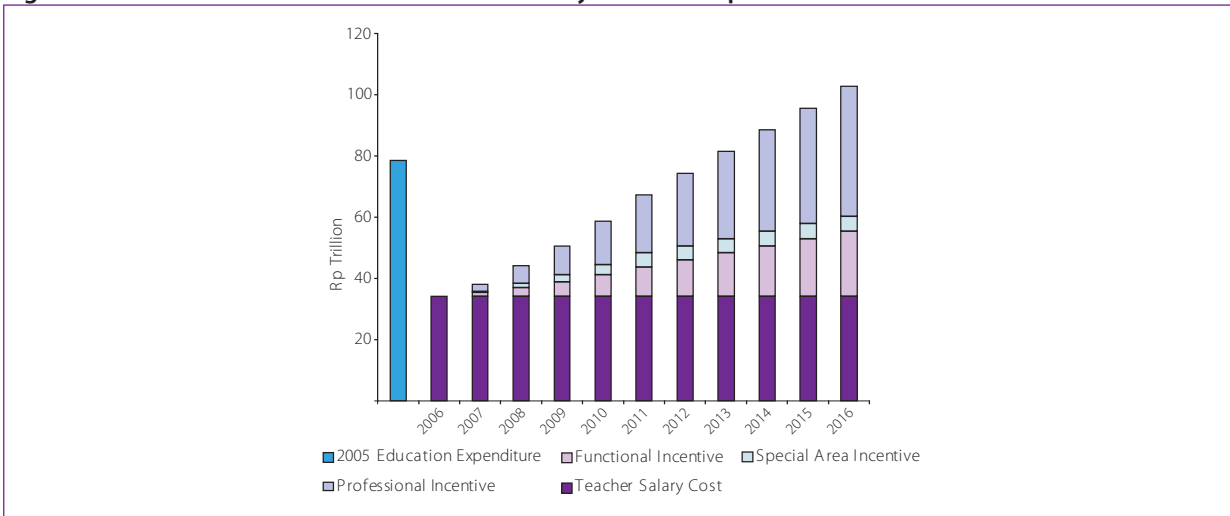
Teacher Law No. 14/2005 will significantly increase the level of routine spending on teacher remuneration (salaries and incentives) over the next 10 years. The law stipulates that all teachers must be certified within 10 years and that, upon certification, they will receive a professional allowance equivalent to their base salary plus a functional allowance equivalent to 50 percent of their base salary.⁵⁰ The law also specifies a special area allowance, which will be given to teachers in conflict, natural disaster, remote, and other hardship areas.

Total expenditures on teachers will double within eight years and actually overtake total 2005 education spending by 2013. Spending on the professional incentive will increase gradually each year as more teachers become certified (Figure 3.9). By 2016, an estimated Rp 102.7 trillion will go towards salaries and incentives (130 percent of the entire 2005 national spending on education).⁵¹ The MoNE may be using the professional allowance in order to justify allocating more of the overall budget to the education sector. This action was stipulated in the education law's "20 percent" regulation, especially since these allowances are not to be labeled as "salary expenditures."

50 The functional allowance specification of 50 percent base salary for certified teachers is part of the draft regulations that are expected to be passed before the end of 2006.

51 This estimation does not include district and school incentives, which are sometimes given to teachers.

Figure 3.9 Estimated financial cost of teacher salary and new stipulated incentives



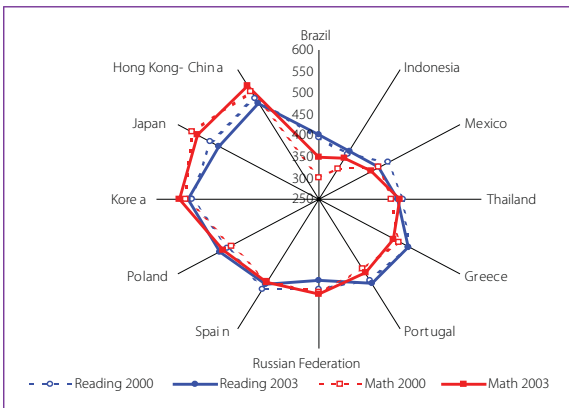
Source: World Bank calculations using MoNE 2004–05 teacher data.

Education outcomes: student performance and test scores

Indonesia ranks low in international standardized tests—an expected outcome as Indonesia was the only lower-middle income country that participated in the test. In 2003, Indonesia ranked 34 out of 45 countries in the Third International Mathematics Science Study (TIMSS); Indonesian eighth graders had particularly poor results in the higher cognitive areas such as problem-solving (Mullis et al, 2006). In the 2003 Program for International Student Assessment (PISA) examination, Indonesia ranked last out of 40 countries in both mathematics and language. Furthermore, on a proficiency scale from 0 to 6 for mathematics, over 50 percent of students did not reach level 1. In reading, only 31 percent could complete more than the most basic reading tasks. These student outcomes in Indonesia were lower than in other countries even after taking family socioeconomic status into account. This finding suggests that school system deficiencies, rather than the poorer backgrounds of students, are responsible for poor performance (EFA Global Monitoring Report 2005). At the same time, however, one has to acknowledge that the PISA examination targets mostly developed or middle-income countries and that Indonesia is one of the only lower-middle income countries in the group.

The trend in Indonesia’s scores on international examinations is slightly positive. Indonesia has participated in the PISA study for two consecutive rounds in 2000 and 2003. While Indonesian students remained behind comparable countries in the sample, they nonetheless improved their performance in reading and mathematics skills over this period (Figure 3.10).

Figure 3.10 Trend in reading and mathematics test scores in PISA International Standardized Test



Source: OECD 2003.

Low quality of schooling raises questions as to the adequacy of the secondary school system in delivering returns and improving employability and income prospects. Lack of quality education is an issue especially for poor rural migrants to urban areas. While there is a trade-off in terms of allocating resources to improving enrollment rates in education, investments in teaching quality are necessary in tandem in order to increase returns to education. Indonesia’s poor performance in this international rating reinforces the impression that the education system is not meeting the needs of the country’s development and returns to investment in the education sector are not being maximized.

Policy Recommendations

Finding “adequate” levels of education spending

Comparing education expenditures internationally, Indonesia is spending relatively less on this sector than its East Asian neighbors but is nonetheless close to other developing countries. Given the improved fiscal space, education expenditure levels in Indonesia are expected to be at least 17 percent of overall budget. The indicators analyzed in this report are education expenditures as a share of gross domestic product (GDP), education expenditures as a share of total expenditures and purchasing-power-adjusted spending per level of education. According to these indicators, Indonesian spending trends are only slightly lower than those of other developing countries, even Organization for Economic Co-operation and Development (OECD) countries. Indonesian spending levels on education are, however, rising. Expenditure trends and budget projections show marked increases, demonstrating the government’s commitment to improve services. According to an estimation that controls for several determinants of education expenditure allocations,⁵² Indonesia’s level of education spending was (in 2000) expected to be at least 17 percent of its overall budget. Given the fact that fiscal space has significantly improved since then, current levels can be expected to be at least 17 percent.

The current interpretation of the constitutional “20 percent” stipulation, specifically the education law’s exclusion of teacher salaries from this benchmark, is unrealistic at both the national and sub-national levels. Complying with the 20 percent stipulation of the education law would entail:

- *Sub-national level:* Increasing education spending by Rp 21 trillion. Doing so would raise the share of education spending to about 45 percent of the total sub-national budget (APBD). This would be politically problematic and economically unfeasible because it would almost certainly crowd out other necessary expenditures (health, infrastructure) at the district level.
- *Central level:* With the education budget at about Rp 46 trillion (2006), or 9.4 percent of the central government budget (APBN), allocating an additional Rp 59 trillion would be required to satisfy the stipulation in the law. This calculation is just one of the many that can be performed when interpreting the law. However, most of these calculations come to the same conclusion, namely, that at the central level, education expenditures will need to be almost doubled. Such an increase of resources at the central level runs counter to decentralization by increasing the center’s role in regional policymaking while decreasing the fiscal space and decision-making authority of the sub-national governments.

Given these implications and the fact that the net-of-salaries clause was only added to National Education System Law No. 20/2003 and is not in the constitution, the government would be wise to reconsider its interpretation. An interpretation of the 20 percent benchmark to include personnel expenditures would be a much more realistic target.

Improving spending mix

Since net enrollment rates at the primary level are already close to the 100 percent target, the focus at this level should be on investing in education infrastructure and other quality inputs, as class-room quality and teacher education are still far from satisfactory. Indonesia is close to reaching full enrollment for basic education. Thus, at the primary school level, access needs to be improved in certain remote regions. Nevertheless, 100 percent enrollment levels may not contribute to poverty reduction and growth if the quality of primary education is poor. Many primary schools lack adequate infrastructure and have teachers who do not possess the minimum teaching requirements. The spending mix among programs should be altered in favor of these quality inputs.

Allocating additional resources to the junior and senior secondary levels of education would have a high rate of return. Whereas quality in primary education is still a major issue requiring serious investment, the government should

⁵² Including population, population density, GDP per capita, level of fiscal decentralization and budget balance.

consider making secondary education the next top priority. According to analyses of the composition of education expenditures and estimated social rates of return to education, additional resources would best be allocated to the junior and secondary levels of education, because returns there are the highest. In addition, analysis of the functional composition of the budget demonstrates that the central government currently allocates its resources predominantly to programs in basic and tertiary education. It might be desirable to reconsider this spending distribution. Furthermore, the pattern of enrollment rates across education levels suggests that the government should increase its efforts to improve access and decrease drop-out rates at junior and senior secondary education levels, in particular. Whereas this is a general problem in Indonesia, it applies particularly to the poor.

Making education expenditures more equitable

Regional discrepancies in access, as well as in quality, should be diminished by ensuring local targeting.

Analysis of regional enrollment rates suggests wide differentials in educational access and quality in Indonesia. The government should allocate educational funds to provide lagging districts and provinces with sufficient resources to “catch up.” Poorer local governments tend to spend significant shares on the education sector. However, their absolute spending levels are low. Central government transfers should ensure that spending results in more equitable access to services. Transfers, potentially the Special Allocation Fund (DAK) could be increased or better aligned with poverty and (lack of) access trends.

The Operational Aid to Schools (BOS) program is an important development in the field of education finance and could be a useful means of improving affordability, although there are areas for improvement. If the government decides to continue allocating BOS funds (currently about 12 percent of the total consolidated education budget) to schools, it will be important to consider the following issues:

- While the direct transfer of funds to schools might diminish leakage, monitoring and tracking flows are required to prevent potential misuse and misallocation of these resources.
- The allocation mechanism might recentralize spending by bypassing provinces and districts.
- Because the size of the grant is determined based on the number of students, schools have an incentive to inflate enrollment figures if no adequate control mechanism is in place.
- The program does not provide performance measures or budget transparency conditions for schools. It thus is difficult to assess the actual impact of the program on school fees and teaching quality.

Ensuring equitable access to education is primarily an issue at the secondary and tertiary levels. Efforts to address this should be increased. The government should focus on improving the poor’s enrollment rates, particularly at the level of junior secondary education, which have high drop-out rates and low enrollment. More targeted programs should aim to address this issue from two directions:

- *Demand side*, by reducing households’ out-of-pocket spending or mitigating foregone earnings through mechanisms such as cash transfers.
- *Supply side*, by addressing the potential shortage of education infrastructure, with the focus on secondary schools, through the construction of new schools and other quality inputs.

Improving efficiency of education expenditures

To address the uneven distribution of teachers, it will be necessary to re-evaluate staffing policies, particularly the current entitlement formula, as well as the policies relating to transfers of staff and their deployment to remote areas. A potential option for staffing schools in the future is to determine school entitlements on the basis of the number of students, rather than the number of classes, with a weighting for smaller schools. This should be accompanied by greater flexibility in the range of subjects that teachers are required to teach. Moreover, the teaching service is part of the national civil service. Therefore, the government needs to provide not only for staff transfers among schools within a district but staff transfers also among districts and among provinces. To this end, it will be necessary to revisit the existing provisions to ensure that policies support flexibility and thereby access, equity and quality. Finally, Indonesia has a policy in place that requires teachers to serve in remote areas. The challenge here is

to determine what constitutes a reasonable period of required service. The new teacher law partly addresses the problem as it ensures the provision of additional financial incentives for teachers to serve in remote areas.

The overall excess supply of teachers has a major and continuing impact on the cost-effectiveness of the system. A reduction in the number of teachers would free up significant funding to support quality inputs currently in short supply. However, the oversupply is a localized problem and can be addressed partly by the local incentives that are introduced in the new teacher law. Additionally, the oversupply is to some extent a consequence of the fact that significant numbers of primary and junior secondary teachers work only part-time and have high absentee rates. Nevertheless, the total oversupply constitutes a cost burden of about 10 percent of the education budget. This burden will be exacerbated as a result of the teacher law's doubling of the base salary. A trade-off involving a reduction in the number of teachers should improve quality. Depending on the scale of the reduction, a proportion of the funds could be used to support the increase in salaries and incentives. While the implementation of an effective transfer policy will deploy teachers more equitably, reducing the excess supply presents perhaps the system's greatest challenge. Given that teachers are in the civil service, there are few options other than attrition or "pay out" to effect the reduction. The latter would have short-term budget implications. An important complementary strategy would be to reduce the intake of training institutions.

To ensure that teachers have an incentive to attain the proper qualifications, their salaries need to correspond with these qualifications. Teachers' salaries are generally considered low compared with those of other workers and civil servants with similar education levels. Although wage differentials become smaller when analyzing hourly earnings, teachers earn significantly less than their non-teaching civil servant colleagues. Moreover, there are wide regional disparities in wage levels for teachers, complicating the redistribution of teaching personnel. The new teacher law introduces policies to address these issues by linking an increase in teachers' base salaries to qualifications and performance. In addition, the provision of regional incentives for teachers in remote schools will compensate for local wage differentials and improve distribution.

Increasing teacher salaries upon certification seems justified. However, if these increases crowd out other recurrent education expenditures, they could negatively affect education outcomes. The new teacher law will substantially affect the education budget, since the new allowances over the next five years will approximate to the size of the current national education budget. The magnitude of the financial effect of this increased allowance pay can be negated if the government managed to simultaneously reduce the oversupply of teachers in Indonesia and reduce the number of part-time teachers.





CHAPTER 4 Health

Indonesia Public Expenditure Review 2007

Key Findings

- In general, health expenditures are low in Indonesia but public expenditure analysis shows that the main problem in the health sector is the unequal and inefficient allocation of the available resources.
- Currently, public health spending generally benefits richer income groups more than the poor through regressive subsidies for secondary healthcare. The poor have very little access to public hospitals and, hence, do not make use of the vast majority of the spending that channels into secondary care.
- The private sector's role in the Indonesian healthcare system has grown dramatically over the past decade. Today, the majority of healthcare professionals engage in the delivery of both public and private services. Notwithstanding the progress made in expanding the public healthcare system, access to and the quality of services remain low and the poor in particular rely heavily on private-sector provision.
- Indonesia's density of doctors and nurses by population is low compared with other countries in the region. The national average further masks significant regional disparities in terms of health personnel supply, which is not necessarily based on the characteristics of local needs.

Key Recommendations

- The government should consider allocating more resources to the health sector, since expenditures are much lower than for other countries in the region. Indonesia currently spends less than one third of the health sector spending of the Philippines—the second-lowest spender in the region. However, the first focus should be on allocative efficiency and equality before considering an overall increase in health spending.
- Inequalities should be reduced by increasing access to and quality of health services for the poor. This could be achieved by improving the targeting of DAK allocations to poor and under-served districts and by investing in demand-side activities, such as voucher programs, that improve poor people's access to quality health services.
- Priority should be given to identifying the right mix of investments in order to improve the effectiveness of the health sector in dealing with the double burden of long-standing diseases (communicable and non-communicable), as well as emerging diseases (HIV/AIDS and avian influenza).
- The public sector should play a stronger role as steward of the entire health system through regulating, licensing and accreditation of private providers and services. This would help to ensure the quality of private healthcare.
- It is important to identify the right combination of coordinated and reinforcing measures that will ensure a more equal distribution of health service providers and staff, especially doctors, and thereby improve the efficiency of investments in the health sector workforce.

Progress and Challenges in the Health Sector

Improving public health is central to Indonesia's economic development challenge. Not only is better health a key dimension of poverty reduction, but it is also an essential ingredient to economic growth. Disease and poor health conditions mostly afflict the poor and in turn it is poverty that prevents them from receiving appropriate treatment, even if cures are known and available. For example, the main causes of infant mortality are respiratory diseases, typhus and diarrhea. For these diseases affordable interventions are known and should be made widely accessible. Improving the performance of health services is one of the most important factors in enhancing the quality of public health, especially for the poor.

The government has tried to tackle the health-poverty nexus by focusing its agenda on a number of key issues. These include (i) improving access to medical services for underprivileged population groups, (ii) preventing and eradicating communicable diseases, (iii) fighting malnutrition with a focus on children under five and pregnant women, and (iv) improving the availability of generic medicine (RPJM RKP, 2006). Progress towards meeting these objectives is monitored through 12 specific targets that are to be met by 2007 (Box 4.1).

Box 4.1 Government targets for the improvement of health outcomes, 2007

- Free health services in Puskesmas and Class 3 treatment in hospitals for 100 percent of poor families.
- Universal Child Immunization (UCI) reaches 92 percent in a higher percentage of villages.
- TB case detection rate of over 70 percent.
- 100 percent of dengue hemorrhagic fever (DBD) patients are treated.
- 100 percent of malaria patients are treated.
- Diarrhea case fatality rate during KLB (extraordinary event) is decreased to 1.3 percent.
- 100 percent of people living with HIV/AIDS (ODHA) receive ART treatment.
- 85 percent of pregnant women consume Fe tablets.
- 60 percent of infants are exclusively fed with breast milk.
- Improved percentage of children under five consuming Vitamin A to 80 percent.
- Improved percentage of food product distribution meeting safety requirements of 70 percent.
- Extended scope of production facility examination in the context of proper medicine production (CPOB) to 45 percent.

Source: Gol, RPK 2006.

Over the years, the government's commitment to the sector has led to significant progress in reducing infant and child mortality. For example, the infant mortality rate fell from 46 per 1,000 live births in 1997 (IDHS 1997) to 35 per 1,000 live births in 2003 (IDHS 2002-03) and Indonesia is close to reaching the MDG target⁵³ for IMR (33 mortalities for every 1,000 live births by 2015).

The placement of midwives led to an improvement in child nutrition in the late 1990s, but recently malnutrition rates have been increasing. In the 1990s, 50,000 midwives were placed throughout the country to increase access to midwife services. These midwives had a significant positive effect on nutritional status; children born in villages with a midwife on average suffered from lower levels of malnutrition than children born in villages without one.⁵⁴ Despite these achievements, malnutrition rates increased between 2002 and 2003 for unknown reasons.⁵⁵

53 The MDG goal for reducing child mortality is measured by three indicators, namely: (i) the child under five mortality rate; (ii) the percent of children younger than a year that are immunized for measles; and, (iii) the infant mortality rate. In terms of the infant mortality rate, this will need to be reduced by two thirds between 1990 and 2015 (Bappenas-Unicef, Indonesia Report on MDGs, 2004).

54 Frankenberg, 2004.

55 Abreu, 2005.

Given the current trend and unsuccessful interventions in the field of maternal health, Indonesia is unlikely to achieve the MDG for maternal mortality.⁵⁶ Maternal mortality rates have not changed appreciably over time. The risk of death during childbirth or shortly after delivery remains significant in Indonesia, with a rate of 307 mortalities per 100,000 live births.⁵⁷ This implies that a woman who decides to have four children has a probability of 1.23 percent of dying as a result of her pregnancies. Indonesia is even a true regional outlier comparing maternal mortality, since its rate is more than six times higher than in China (50), and 10 and 15 times higher than Thailand and Malaysia (36 and 20), respectively (Table 4.1).

Indonesia compares poorly with its neighbors on most conventional measures of health outcomes. For instance, in terms of mortality and life expectancy, Indonesia ranks below the East Asian average and underperforms its neighbors (most notably Malaysia) by a significant margin. Indonesia also continues to have the lowest measles vaccination rate in the region, which demonstrates shortcomings in preventive care. The situation deteriorated especially in the aftermath of the economic crisis, with vaccination rates dropping from 80 percent to 70 percent in 2001. Rates have now stabilized at around 73 percent, a level still very low compared with Thailand, Vietnam and Malaysia. These differences in outcomes hold when per capita GDP is accounted for. Vietnam, despite having a lower GDP, fares better on all other measures, while the Philippines, a country with slightly higher GDP figures, does better on most measures (Table 4.1).

Table 4.1 Regional comparison of health outcomes, 2004

	GNP per capita (US\$)	Life	Crude death rate	IMR	U5MR	DPT rate	Measles	MMR	Births attended by skilled health staff
Indonesia	906	67.4	7.3	34.7*	45.7*	70	72	307*	72
Cambodia	350	56.6	11	95*	124.4*	85	80	437*	31.8*
Malaysia	4,290	73.5	4.7	10.2	12.4	99	95	20**	97
Vietnam	502	70.3	6.1	23.6*	66.7*	96	97	95	90
Thailand	2,356	70.5	7.2	18.2	21.2	98	96	36	Na
Philippines	1,085	70.8	5	28.7*	39.9*	79	80	172**	60
India	538	63.5	8.3	61.6	85.2	64	56	540	Na
China	1,323	71.4	6.4	26	31	91	84	50	96
East Asia	1,254	70.3	6.6	29.2	36.8	86.6	82.5	Na	86.1

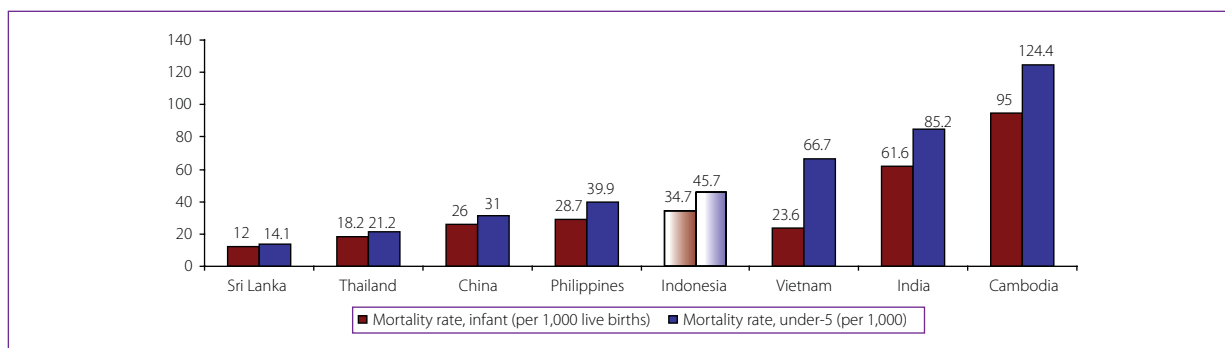
Source: WDI, UNDP and DHS.

Note: IMR : Infant Mortality Rate; Under Five Mortality Rate; and MMR: Maternal Mortality Rate. for estimates with * the data source is DHS. for estimates with ** data source is UNDP. The most recent MMR data available are for 2003 (World Bank, 2006g) and the most recent available data on birth attended by skilled health staff are for 2003 and 2004.

Indonesia's under-five mortality rate has decreased over time, but it still remains high compared with the regional average for Asia, at 46 per 1,000. Moreover, the mortality rate among children under five in poor communities is almost four times higher than rates in richer population groups.

⁵⁶ The Millennium Development Goal for Maternal Health indicates that countries should reduce their maternal mortality ratios by three quarters. See: <http://www.un.org/millenniumgoals/>. Although MMR appears to be decreasing the estimates are not sufficiently reliable to say this with certainty. The MMR data estimates in the period 1990-94 are 390/100,000, 1994-98 are 334/100,000 and 1998-2002 are 307/100,000. But due to high sampling errors at the 95 percent confidence interval all three estimates overlap, there is even overlap at the 67 percent confidence interval. There could in fact have been a dramatic decline, an increase or no change. However a decrease is likely given the improvements in proxies of MMR – skilled birth attendance increase, maternal anemia decrease and increase in institutional delivery. A very steep decline is unlikely given the continued high rates of births at home.

⁵⁷ This estimate is derived from the 2002 Indonesia Demographic and Health Survey (IDHS) and is based on reported deaths over the period 1998 to 2002.

Figure 4.1 Regional comparison of infant mortality and under-five mortality rates, 2004

Source: WDI, DHS and UNDP.

Box 4.2 The reoccurrence of polio in Indonesia in 2005

In March 2005, a 20-month-old boy in Sukabumi district, West Java, was paralyzed as a result of being infected by the polio virus. Since March 2005, a total of 303 children have been paralyzed by wild polio virus in Indonesia. Based on service statistics, the immunization coverage for infants has been consistently high, but this masks pockets where coverage was considerably lower. However, the Indonesia Demographic and Health Survey shows that immunization rates are much lower than reported in service statistics. The decrease in general immunization coverage (including polio) after decentralization appears to be the underlying cause of the reoccurrence of polio in Indonesia.

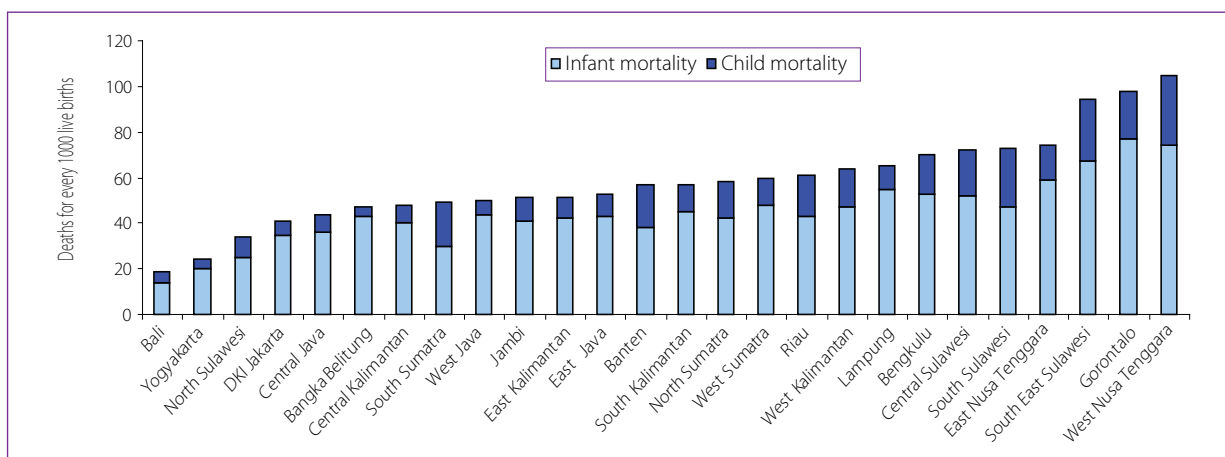
The Response: Two emergency vaccination campaigns and three rounds of National Immunization Days (NID) were started in May 2005; the latest round was carried out in November 2005. Since new wild virus cases were also detected at this time, a special NID was conducted on 30 January 2006 in 57 districts, with a target of 4.5 million children under five, a fourth and a fifth NID were carried out in February and April 2006.

Challenge for the government:

- Improve and maintain general immunization coverage and surveillance of the main indicator for polio
- Improve the accuracy of the service statistics to reflect actual coverage so areas where extra efforts are needed can be identified

Source: Unicef, 2005.

National data hide wide variations within the country. For instance, the poorer provinces of Gorontalo and West Nusa Tenggara have post-neonatal mortality rates that are five times higher than in the best performing provinces in Indonesia. Similar regional discrepancies are shown in under-five mortality rates (infant and child). While most provinces are below, or only slightly above, the 40 deaths for every 1,000 live births mark, nine provinces have rates of over 60. The rates for West Nusa Tenggara, Southeast Sulawesi and Gorontalo are as high as 90 or 100 (Figure 4.2).

Figure 4.2 Infant and child mortality rates by province, 2002-03

Source: Indonesian Demographic and Health Survey, 2002-03.

Over the past decade, the burden of disease has shifted, signaling that Indonesia is experiencing an epidemiological transition. Most diseases contracted are diseases such as tuberculosis, acute respiratory infections, malaria and diarrhea. Nevertheless, non-communicable diseases, especially cardiovascular diseases, are gradually replacing these communicable and 'traditional' diseases as the foremost causes of death. Between 1992 and 2001, the share of total deaths resulting from cardiovascular causes increased by 10 percentage points from 16 to 26.4 percent. Respiratory infections and TB are the next most important causes of death (15 and 11 percent, respectively) (National Institute of Health Research and Development and the National Health Survey, 1992, 1995, 2001). Indonesia therefore faces a double burden of disease, which, along with population growth and aging, will affect the quantity and types of health services that will be required in the future.

In addition, Indonesia is seeing the emergence of 'new' epidemics with diseases such as avian influenza and HIV/AIDS. The HIV/AIDS epidemic is at a crossroads with rising prevalence among high-risk groups (e.g. sex workers and injecting drug-users) and the population in Papua, while limited attention is being paid to preventing transmission. With respect to avian flu, the data show an increasing number of confirmed cases and fatalities. Therefore, mitigation and prevention efforts must be improved in a coordinated manner. Overall, these epidemics present new challenges for the sector with regard to disease surveillance, control and immunization.

Public Health Expenditures in Indonesia

Public expenditures in the health sector have significantly increased since 2001,⁵⁸ from Rp 9.3 trillion to Rp 22.2 trillion in 2005, which represents a more than 70 percent increase in real terms (Table 4.2). Moreover, the budget allocations for 2006 show a further 27 percent increase compared with 2005. Health expenditures have also increased relative to overall national spending, from 2.6 percent in 2001 to 4.2 percent in 2005. However, health spending as a share of GDP remains low and increased from only 0.55 percent to 0.81 percent over the same period.

Table 4.2 Trends in Indonesian health expenditures, 2001-07

Rp trillion

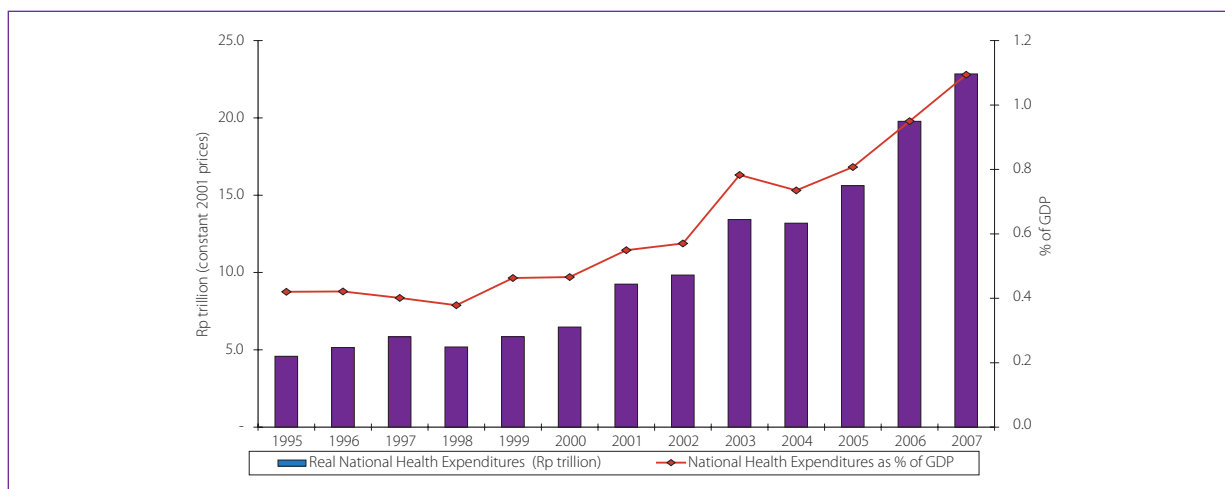
	2001	2002	2003	2004	2005	2006*	2007**
National Nominal Health Expenditures	9.3	11.0	16.0	17.7	22.2	31.8	39.0
Real National Health Expenditures (2001=100)	9.3	9.8	13.4	14.0	15.9	20.1	23.2
Annual Rate Growth Real National Health Expenditures (%)	42.8	6.3	36.5	4.2	13.3	27.0	15.4
Health Expenditures as % of National Total Expenditures	2.6	3.3	4.0	4.0	4.2	4.5	5.0
National Health Expenditures as % of GDP	0.5	0.6	0.8	0.8	0.8	1.0	1.1
Overall National Nominal Expenditures	353.6	337.6	405.4	441.8	533.6	699.5	786.9
Overall Real National Expenditures (2001=100)	353.6	301.8	340.0	348.9	381.4	443.2	469.2

Source: World Bank staff calculations based on MoF and SIKD data.

Note: * Budget Figures for 2006 and ** estimates for 2007

58 Before the crisis, health expenditures have not increased at similar rates and from 1994 to 2001 only grew by 5 percent a year on average. The expenditures trend we see since 2001 is hence a relatively new phenomenon.

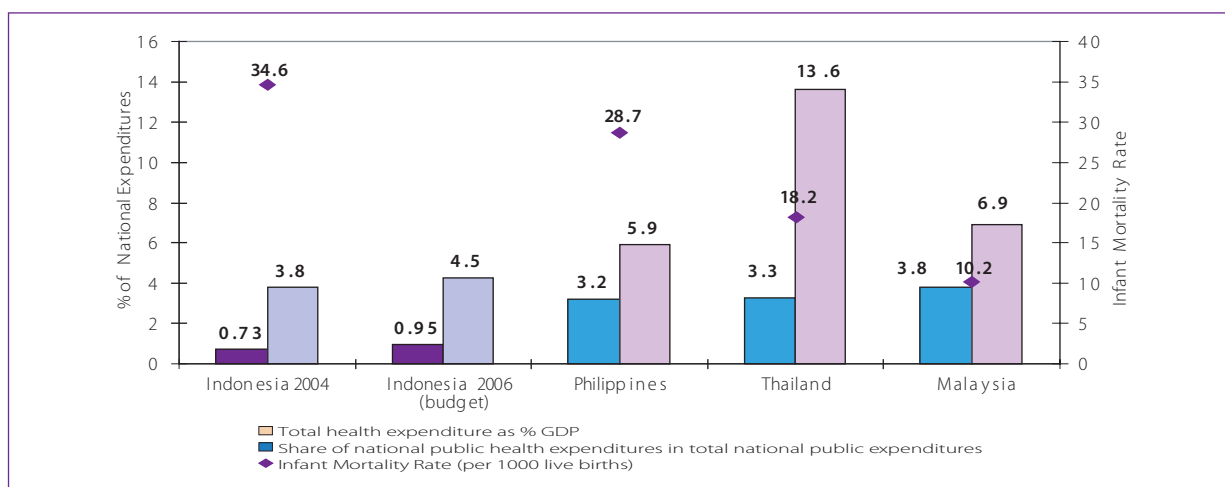
Figure 4.3 Trend in health expenditures, 1995-2007



Source: World Bank staff calculations, based on data from MoF.

Regional comparisons between levels of health expenditures show that Indonesia's spending levels are far below those of its East Asian neighbors, with less than 1 percent of GDP and only 4.5 percent of total expenditures spent on the health sector. Other countries, even those with similar and lower per capita incomes such as the Philippines, spend about 3 percent of their GDP on public health. In terms of health expenditures as a share of total expenditures, Indonesia again lags behind the Philippines, where close to 6 percent of total government resources are spent on health. These figures are even more striking when taking the respective infant mortality rates into account. Indonesia has a relatively high mortality rate per 1,000 live births, while spending extremely little compared with countries with lower rates.⁵⁹ Spending levels coupled with health outcome indicators show that Indonesia is not yet prioritizing health spending, nor achieving the results that are needed to achieve its MDG targets.

Figure 4.4 Regional comparison of health expenditures, 2004 (budget 2006) and IMR



Source: World Development Indicators 2006 and World Bank staff calculations.

⁵⁹ There is recent, yet limited, literature that demonstrates evidence of a positive correlation between government health expenditures and health outcomes as IMR and MMR (see Gottret, Gai and Bokhari, 2006). Until recently, however, the relationship was not proven and the missing link can be explained by three factors: (i) an increase in public health expenditures may result in a decrease in private health expenditures (a household may divert funds to other expenses than health once the government provides basic health care); (ii) incremental government expenditures may be employed on intensive rather than extensive margin; and (iii) even if extra funds are applied to healthcare (more services, staff and supplies) if complementary services (roads for example) are not provided the impact may be little or none. (See Musgrove 1996 for review of evidence; Wagstaff, 2002, for impact of complementary services; Jalal and Ravallion, 2003, for use of incremental health expenditures; and Anand and Ravallion, 1993; Bidani and Ravallion, 1997; Filmer and Pritchett, 1999; and Wagstaff, 2004.)

Economic composition and levels of government

The recent increase in overall public spending on health has been driven almost exclusively by development expenditure. Expenditures at the central, provincial and local levels grew at 42, 36 and 46 percent, respectively. Development expenditures shot up after 2001, while routine expenditures stayed essentially the same in absolute terms; a small decrease at central and provincial levels is balanced by an increase at the district level and routines spending even decreased in terms of spending shares per level (Table 4.3). Consequently, the increase in health expenditures is attributed mainly to an increase in development expenditures.

Table 4.3 Levels and shares of health expenditures at different levels of government

Rp trillion (at constant 2004 prices)

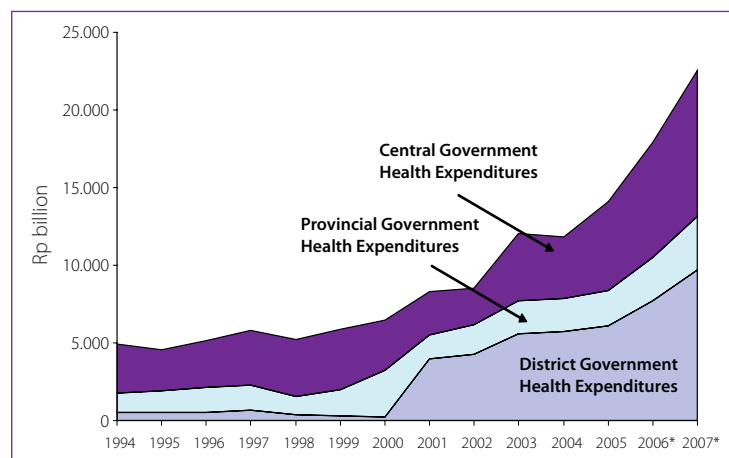
	2001	%	2002	%	2003	%	2004	%	2005*	%	2006*	%	2007	%
Central	3.1	34	2.9	26	5.7	36	5.6	32	8.9	40	12.8	40	17.5	45
Development	2.3	74	2.4	84	5.3	92	5.0	89	-	-	-	-	-	-
Routine	0.8	26	0.5	16	0.5	8	0.6	11	-	-	-	-	-	-
Provincial	1.7	19	2.4	22	2.8	18	4.0	23	3.3	15	5.1	16	5.6	14
Development	0.6	33	0.9	39	1.5	52	2.8	69	1.8	54	-	-	-	-
Routine	1.2	67	1.4	61	1.4	48	1.2	31	1.5	46	-	-	-	-
District	4.4	47	5.7	52	7.5	47	8.1	46	9.9	45	13.9	44	15.9	41
Development	1.2	28	1.5	26	2.9	39	3.1	39	4.0	40	-	-	-	-
Routine	3.2	72	4.2	74	4.6	61	5.0	61	6.0	60	-	-	-	-
Total National Expenditures	9.3		11.0		16.0		17.7		22.2		31.8		39.0	

Source: World Bank staff calculations based on data from MoF.

Note: * provincial and district spending based on transfers and revenues and predicted on the basis of previous years.

In 2005, the majority of health expenditures, around 60 percent, was spent at the sub-national level, mostly by district governments. At the sub-national level, districts account for 73 percent of total spending, while provinces account for only 27 percent. Shares of spending by the different levels of government have remained largely unchanged since decentralization. Districts spend roughly half of all public health expenditures, while one third is spent by the central government and the remainder by the provinces (Table 4.3 and Figure 4.5).

Figure 4.5 Trends in health expenditure by level of government

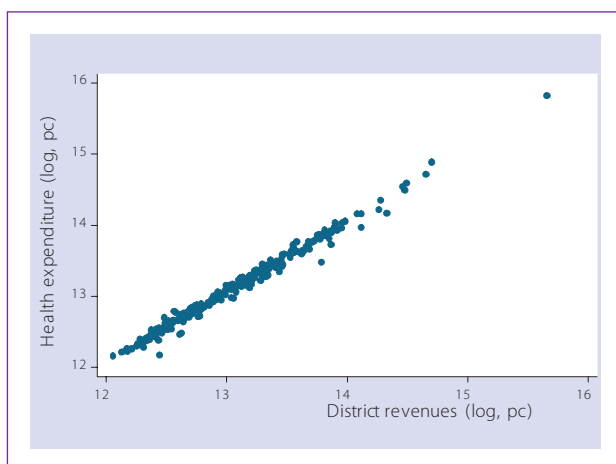


Although districts spend about half of the total health budget, these expenditures are for the most part non-discretionary routine expenditures. Hence, while decentralization formally devolved the responsibilities for health from the central level to the sub-national level, the majority of the development budget is still directly spent by the central government, while, since 2001, districts only cover about one third (Table 4.3). Local governments appear to have surprisingly little discretion in managing their public health funds.

Table 4.4 Share of health expenditures — development vs routine by level of government

	2001	2002	2003	2004
Total Development Expenditures (Rp trillion)	3.7	3.8	7.2	7.0
Central (%)	56	52	55	50
Province (%)	14	20	15	18
District (%)	30	29	30	32
Total Routine Expenditures (Rp trillion)	4.6	4.7	4.8	4.8
Central (%)	16	8	7	9
Province (%)	23	24	21	18
District (%)	61	68	72	73

Source: World Bank staff calculations based on data from MoF.

Figure 4.6 Health spending and district revenue, 2004

District spending on health seems to be determined by total revenues, not health needs.

Decentralization can improve the allocative efficiency of health spending, since district governments have the opportunity to tailor services and expenditures to better fit the preferences and needs of the local community. Analysis of health expenditure patterns among districts in Indonesia, however, shows a clear positive relationship between level of district revenue and health expenditures; the higher the district revenue the higher the health expenditures. There is hardly any variation in the share of district spending on health, despite significant regional variations in health outcomes. In theory, districts have the authority to improve the allocative efficiency of health spending. However, in reality health institutions and local governments often wait for instructions from the central government on how to spend their resources.

Spending can improve healthcare outcomes but it is equally important to improve the quality of health policy-making and health institutions. In a study covering 57 countries, Wagstaff et al. concluded that the quality of policy and institutions as measured by the Country Policy and Institutional Assessment (CPIA) Index highly influences the impact of increased spending on health outcomes. For countries with a low score of 1 or 2, improvements in health outcomes are not significant. For a country such as Indonesia with a score of 3.6, increasing the health budget by 10 percent of GDP could reduce the MMR by 7 percent, while changes in U5MR, TB and immunization would be insignificant. Further support in order to improve: (1) allocation of spending; (2) geographic, project, population and bottleneck targeting and; (3) provider accountability, would help to improve the efficiency of spending, which is a necessary first step to enable spending to actually affect health outcomes.

Routine expenditures at the sub-national level, in particular personnel spending, have increasingly crowded out expenditures on goods, operational spending and maintenance (Table 4.5). In 2005, districts and provinces spent a significant share of their routine expenditures on personnel, 81 and 64 percent, respectively, and most of the remaining funds were allocated to goods expenditures. Expenditures on goods have, however, decreased both as a share as well as nominally. District expenditures on goods decreased by 12 percent whereas provincial expenditures on goods decreased by almost one third. Analyzing the economic classification of the routine budget demonstrates that neither provinces nor districts allocate significant funds to operational and maintenance expenditures. This may in part explain the low levels of maintenance and problems with adequate supervision, especially at the community level where preventive health interventions are carried out. Although sub-national governments account for a significant share of expenditures in the health sector, they have actually very little fiscal space and most of their routine expenditures are non-discretionary, such as personnel spending.

Table 4.5 Routine expenditure distribution by level of government*Rp billion (at constant 2004 prices)*

	District								Province							
	2002	%	2003	%	2004	%	2005	%	2002	%	2003	%	2004	%	2005	%
Personnel	3,182	70	3,850	79	4,081	82	4,852	81	847	52	887	61	818	66	968	64
Goods	779	17	640	13	683	14	882	15	515	31	334	23	353	28	462	30
Operation and maintenance	119	3	116	2	115	2	152	3	62	4	64	4	59	5	75	5
Travel	28	1	47	1	49	1	70	1	8	1	12	1	14	1	19	1
Miscellaneous	421	9	215	4	56	1	14	0	207	13	147	10	5	0	0	0
Total routine expenditure	4,528	100	4,869	100	4,984	100	5,970	100	1,639	100	1,444	100	1,248	100	1,524	100

Source: World Bank staff calculations based on data from MoF.

Functional allocation of expenditures

In terms of the functional allocation of health expenditures, the programs that constitute the majority of the budget are the 'public health' and 'individual or personal health' programs. These categories cover the central government's main health programs but there is little detailed information on what these programs are. Generally, it appears that the 'public health' program is focused on the provision of public health centers and their networks, including community health centers (Puskesmas), mobile public health centers and village midwives, whereas the 'personal health program' is focused on providing hospital care in particular. These two categories together constitute 50 percent of the central government's health programs. Other substantial categories are related to management and administration. Prevention only makes up about 12 percent, and hygiene and sanitation only 3.2 percent of the budget. Nutrition and medicine supply comprise a mere 4 percent of the central government's health budget.

The various programs are mostly classified as preventive health interventions. The budget distinguishes between three main categories: curative, preventive and operational. Most programs are in the preventive category, although they still appear to contain curative components, given that at 20 percent the share of curative interventions seems low. The two largest programs focused on public health centers and hospitals appear to have curative components: as described in the government's Medium-Term Development Strategy (RPJM 2004-09), they have key sub-components related to the construction of health center facilities, maintenance of facilities, as well as the provision of medical instruments and supplies, including generic medicines.⁶⁰

Table 4.6 Functional allocation of the central government health budget, 2006*Rp billion*

Program	Curative	Preventive	Operational	Total	%
Health Promotion & Community Empowerment	--	132	--	132	1
Hygiene & Sanitation	--	433	--	433	3
Public Health	--	2,465	--	2,465	18
Individual Health	2,649	1,697	--	4,346	32
Prevention & Disease Control	--	1,620	--	1,620	12
Nutrition	--	582	--	582	4
Health Resources	--	--	906	906	7
Medicine & Medicine Supply	--	--	628	628	5
Health Management & Policy	--	--	1,126	1,126	8
Research & Development	--	--	1,74	174	1
Improving and Monitoring Accountability	--	--	43	43	0
Managing Human Resources	--	--	27	27	0
Administration	--	--	1,026	1,026	8
Training	--	--	15	15	0
Total	2,649	6,928	3,946	13,524	100
%	20	51	29	100	

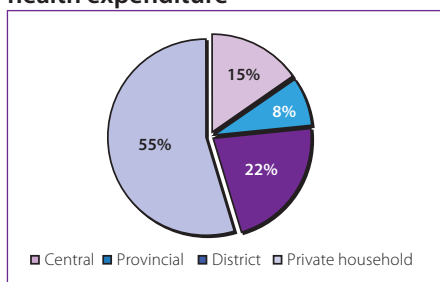
Source: Bappenas, 2006.

⁶⁰ See Annex Section F1 for a description of the Central Government's health programs for 'Public Health' and 'Personal Health Services'.

The ambiguity of the central government's health budget indicates the need for improved programmatic budgeting. In order for the government to link its expenditure allocation to outputs and outcomes, health information systems should be improved to ensure adequate monitoring and evaluation. However, in addition to this, the budget also needs more complete information in order to allow analysis by health program. At present these programs are described only in a very general manner, providing little insight into how to reallocate expenditures or change expenditure categories towards more efficient categories.

Household expenditures on healthcare and insurance

Figure 4.7 Composition of total health expenditure



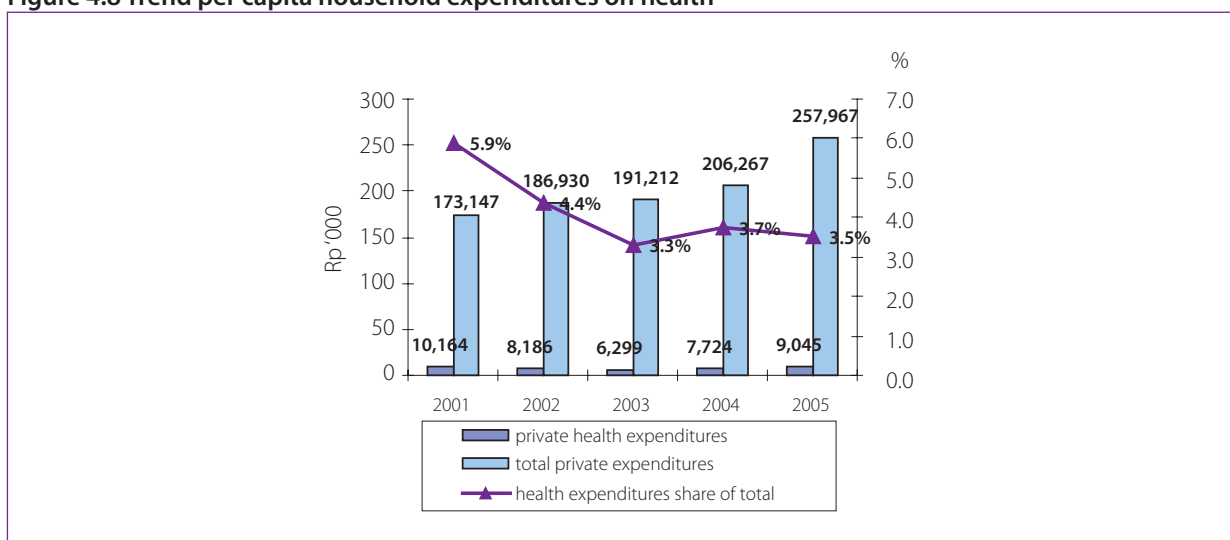
Source: Data from MoF and Susenas, 2004.

Household out-of-pocket expenses continue to constitute the majority of total health expenditures. In 2004, Indonesian households spent around Rp 20 trillion on health, contributing to 55 percent of total health expenditures (Figure 4.7). This is comparable to the average for lower-middle-income countries (50 percent) (World Bank, 2005). Between 2003 and 2005, household health expenses increased by 12 percent, slightly more than the increase in provincial and district spending (8 percent) over the same period.

In Indonesia, 3.5 percent of total household expenditures are currently spent on health, but the trend shows a decline (Figure 4.8). Over the past four years, out-of-pocket expenses have decreased

significantly from about 6 percent of total household expenditures to the current 3.5 percent. This decrease resulted from an absolute decrease in per capita health spending with increasing total household expenditures per capita, rather than a substitution due to increased government spending.

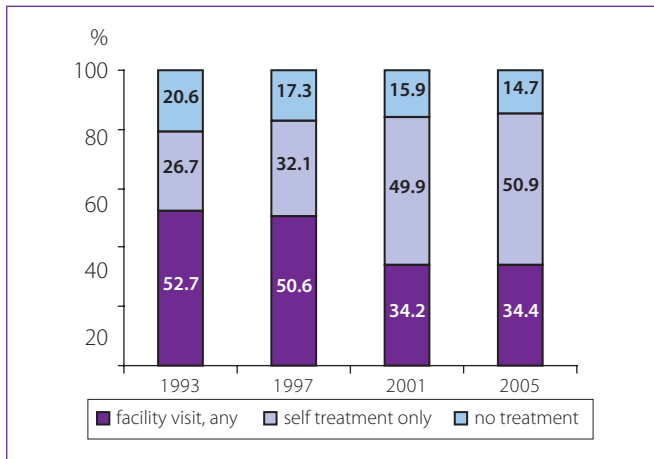
Figure 4.8 Trend per capita household expenditures on health



Source: WHO: Harimurti, Aguilar-Rivera, Xu – Update Susenas 2005.

The decrease in health spending can partly be attributed to declining utilization of professional healthcare. Between 1997 and 2005, utilization of professional healthcare decreased from about 53 percent to about 34 percent, with increasingly larger shares of the population self-medicating. Although government spending on health increased, utilization rates have not reverted to pre-crisis levels (Figure 4.9).

Figure 4.9 Time trend of healthcare utilization



Source: Susenas 2003, 2004, 2005.

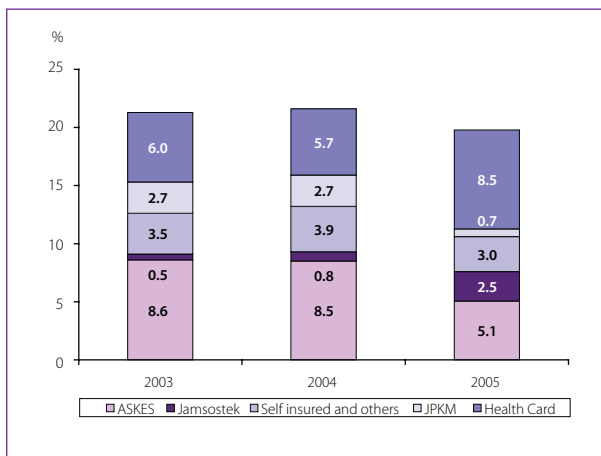
Although about 75 percent of private financing is through out-of-pocket payments made by households, private employers constitute the second most important source. Private employers account for almost 20 percent of household health spending through reimbursement of medical expenses and direct payment for provision of healthcare to their employees. Household prepayments cover the balance of 5 percent (Health Financing for the Poor, 2002). Out-of-pocket payments increase the vulnerability of households and individuals and can result in pushing them below the poverty line, especially when they face catastrophic health expenditure. These out-of-pocket payments doubled between 1999 and 2001, with significant differences between income

groups. There is wide variance between provinces. The percentage of households encountering catastrophic levels of spending on health increased, doubling from 1.5 in 1999 to 3.6 percent in 2001 (Susenas data). Households with children and elderly members have an increased risk of catastrophic spending and neither health cards nor membership of community health insurance offers protection (Harimurti, Aguilar-Rivera, Xu, 2005).

Participation in health insurance remains low in Indonesia. Between 2003 and 2005, participation in health insurance schemes decreased slightly from 21.3 percent of the total population to 19.8 percent, leaving around 80 percent of the population uninsured (Figure 4.10). In both years, the health card provided the largest share of insurance that people participated in. Askes insurance decreased a little in 2005, as well as the self-insured category. Little inequality exists in access to health insurance (Figure 4.11). The pro-poor distribution of the health card has decreased inequality in access to other types of insurance, such as private insurance, Jamsostek, and Askes.

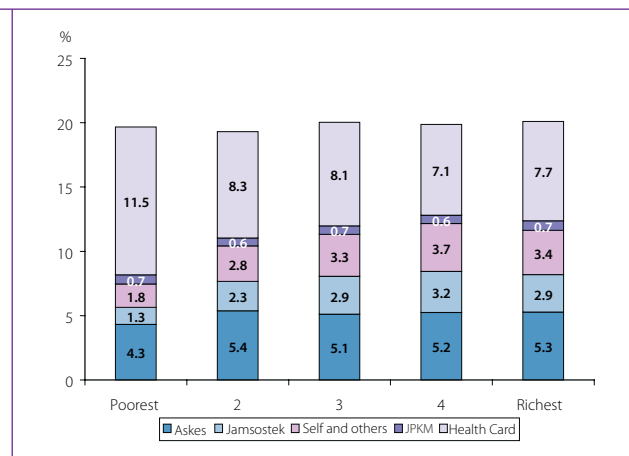
Having various types of health insurance mechanisms reduces the risk of catastrophic expenditure, but does not necessarily imply adequate protection. Households that have one of the two forms of social health insurance (Askes or Jamsostek) and those who are covered by a company and receive certain health benefits (self-insured), face less risk. However, neither health cards and the health fund, nor community health insurance schemes (JPKM) have reduced the risk of catastrophic expenditures. This can be partly explained by the limited benefits offered by the schemes and by the fact that on average only 21 percent of the people covered by the Community Health Insurance Scheme (JPKM) and 27 percent of those covered by health card were poor (Susenas 2005).

Figure 4.10 Percentage of participation in health insurance



Source: Susenas, 2001-05.

Figure 4.11 Insurance participation by quintile, 2005

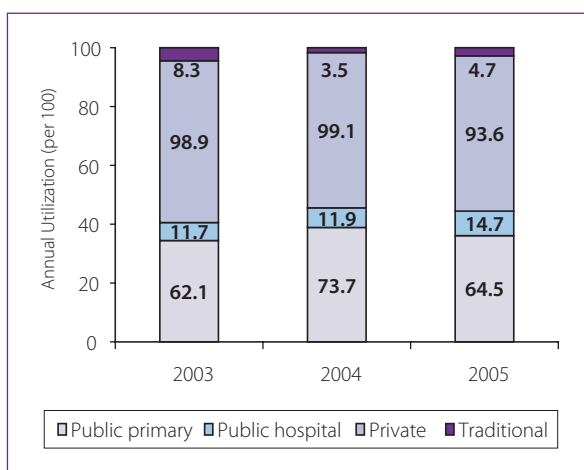


Source: Susenas, 2001 and 2005.

Private sector provision of healthcare

Notwithstanding the progress made in expanding the public healthcare system, access and quality of healthcare remain low and the poor in particular rely heavily on private sector provision. The utilization of public health facilities remains low; when seeking healthcare, less than half of Indonesians receive treatment at a public health facility. The reasons for not using public facilities include poor access, low quality of treatment and restricted opening hours. Persistently low government spending on healthcare is at the root of these problems. In the 1990s and especially after the economic crisis, utilization of private health services increased, even though public services were widely available. While the trend has now reversed to an increase in use of public services, the rate is still well below pre-crisis levels (World Bank, forthcoming paper on private health sector, Susenas data). Even the poorest often prefer private providers over highly subsidized public health centers. At present, only in about 45 percent of the occasions that people seek health services do they use public service providers, mostly public primary care and at times public hospitals (World Bank, 2006g).

Figure 4.12 Time trend utilization public and private services



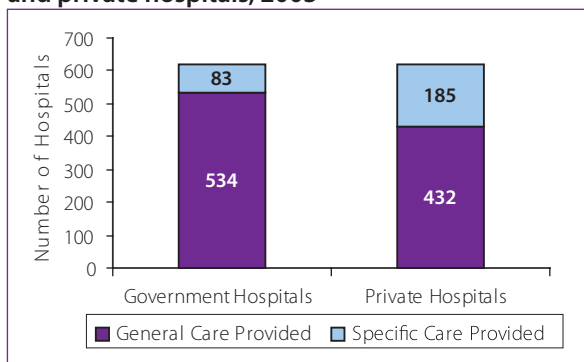
Source: Susenas 2003, 2004, 2005.
 Note: Annual utilization rates per 100 and shares of total are reported.

Figure 4.13 Number of hospitals by type of provider/owner



Source: MoH, 2004.

Figure 4.14 Specialized vs general care in public and private hospitals, 2003



Source: MoH, 2004.

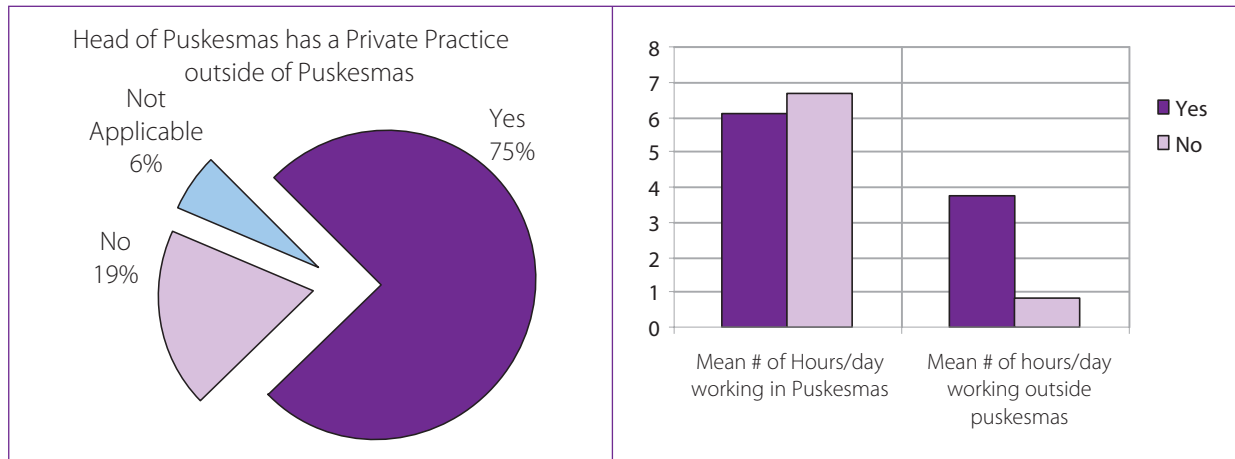
More than half of Indonesian hospitals belong to the private sector and ownership has not changed significantly over time. About 51 percent of all hospitals in Indonesia can be classified as public hospitals and, since decentralization, most belong to provinces and districts and to a lesser extent to the army and police, state-owned enterprises and ministries (Figure 4.13). Of those ‘government’ hospitals, the majority provides general care and only about 30 percent of all the specialized health interventions are performed in these public hospitals. For specialized care, Indonesians need to use private healthcare providers (Figure 4.14).

Today, the majority of healthcare professionals in Indonesia engage in the delivery of both public and private services. In the 1980s, when relatively low salaries

of government health workers made it difficult for them to keep practicing their profession, the government—rather than restricting levels of employment and raising salaries—allowed its staff to maintain private practices outside of their normal working hours. While this dual position of public health providers created perverse incentives and lowered the quality of services in the public health system (mainly due to the reduced number of hours these doctors put into public practices), it also allowed the private provision of services to develop and the average number of hours

served by trained physicians and paramedics to increase (Figure 4.15). Arguably, the service gap in areas where public provision has been inadequate in supply or quality has to some extent been filled by the private sector. In this situation, private providers are very much part of health service delivery in Indonesia and their training and the contracting and monitoring of their services need to be an integral part of government health policy (World Bank, 2006f).

Figure 4.15 Dual practice in Puskesmas



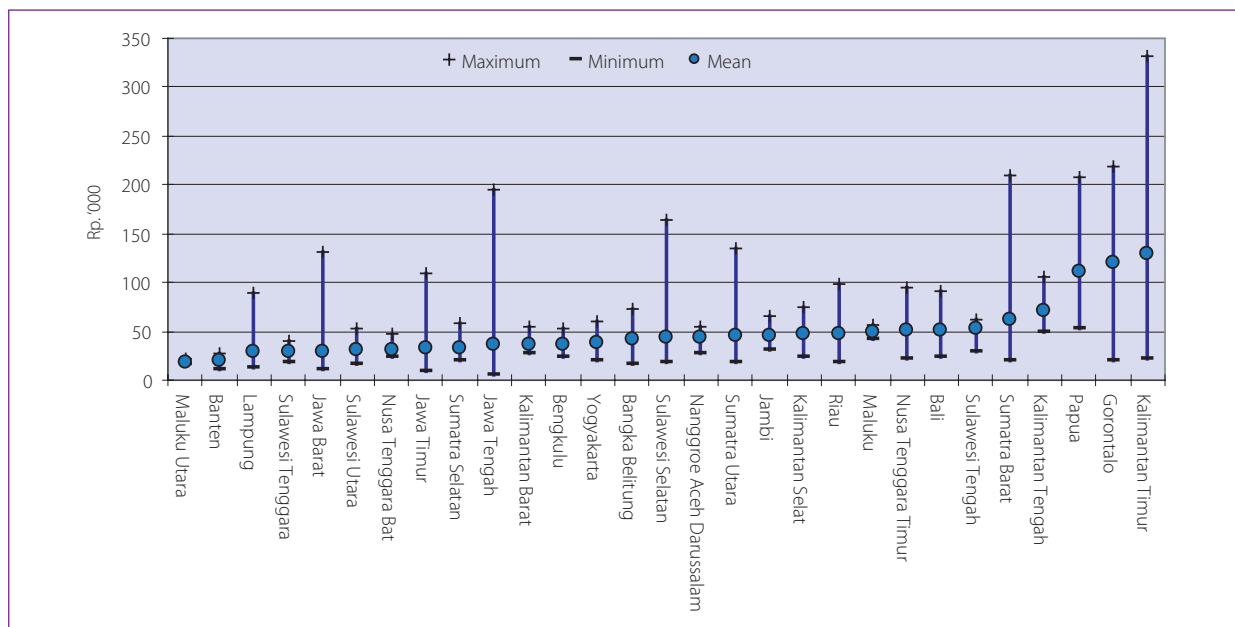
Source: GDS1+Puskesmas Survey.

Equity: Inequality in Public Spending, Benefit Incidence and Utilization of Health Services

Inequality in public health expenditures

There are major regional differentials in per capita public health expenditures at the local level, illustrating local disparities and inequalities. Average per capita public expenditures on health are similar across most provinces, with Papua, Gorontalo, and East and Central Kalimantan being the main exceptions. However, disparities within provinces and across districts are more common, as there are wide variations around the mean.

Figure 4.16 Per capita public expenditure on health by province, maximum, minimum and mean



Source: Susenas, 2004.

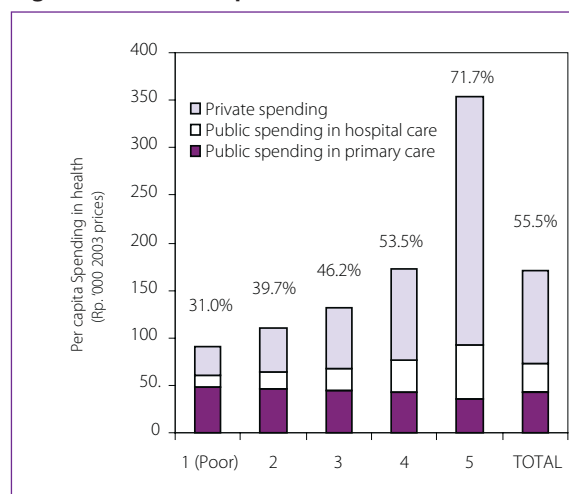
At the district level, there is considerable inequity in public spending, driven in particular by regressively targeted deconcentrated central government expenditures.⁶¹ Health expenditures from the central government in the form of deconcentrated spending are ineffective in terms of targeting poorer districts. This is especially important as these public transfers constitute nearly half of central government development expenditures and are therefore crucial resources for policy interventions. Also, in 2004, deconcentrated health expenditures made up about 29 percent of total national health expenditures. Public health expenditures made through the sub-national budget (APDB), at the province as well as the district level, are also higher for richer local authorities than for poorer ones. This is partly explained by the fact that these expenditures are determined not only by DAU allocations, but also by own-source revenues, which tend to be higher in districts with higher per capita expenditures. DAK contributions at the district level are at present not used as a pro-poor tool to improve health service delivery in lagging districts, shown by the weak response of DAK per capita spending or access to health facilities (USAID, 2006).

Benefit incidence of public health spending and utilization of services

Currently, public health spending generally benefits richer income groups more than the poor through regressive subsidies for secondary care. The benefit incidence of public spending on primary healthcare is not pro-poor but neutrally distributed among quintiles. However, spending on secondary healthcare is certainly not pro-poor, with most of the benefits accruing to the richer quintiles. While the public health services most utilized by the poor are basic healthcare facilities, Indonesia spends about 40 percent of public healthcare resources on regressively targeted subsidies to public hospitals. (World Bank, 2006g).

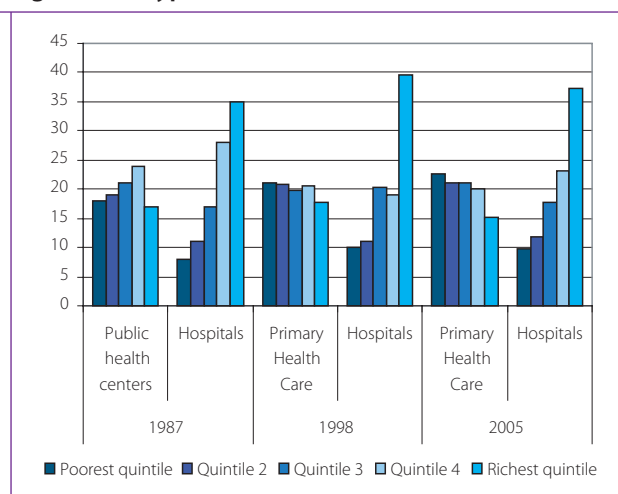
The poor have very little access to public hospitals and, hence, do not make use of the vast majority of the spending that is channeled into secondary care. Of the funding that is spent on hospital care, the benefits that accrue to the poorest quintile of the population are about 10 percent, while those that accrue to the richest quintile are about 38 percent. Spending on secondary care is a highly regressive way of allocating limited resources in healthcare at a time when Indonesia is struggling to meet its medium-term development targets in health.

Figure 4.17 Private/public healthcare utilization



Source: Susenas 2005.

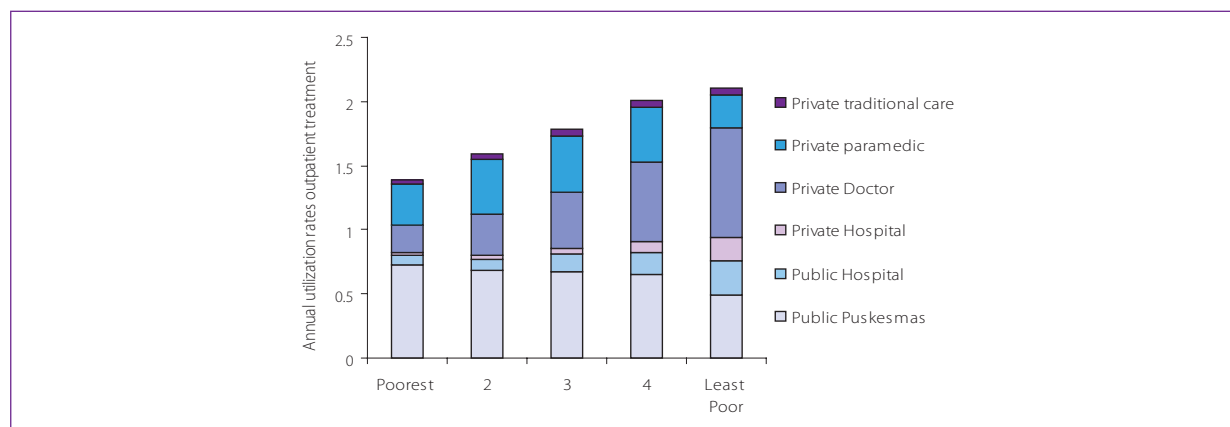
Figure 4.18 Type of healthcare utilization



Source: World Bank, 2006f, updated with Susenas, 2005.

Government efforts to improve the utilization of health services by the poor and their capture of health spending have had little effect since 1998. The fuel subsidy reduction compensation healthcare program (PKPS-BBM) is aimed at increasing access to both basic and secondary healthcare for the poor in a targeted way. This program, if effectively targeted and implemented, could be the key in expanding health services for the poor (see Box 4.3 on PKPS-BBM below). Nevertheless, for the poor to be able to utilize private healthcare facilities through the program, incentives need to be provided for these providers in order to enable them to participate.

⁶¹ See Annex Figure F2 on the relationships between (1a) sub-national health expenditures, (1b) DAK and (1c) Deconcentrated health expenditures and (2) mean per capita household expenditures.

Figure 4.19 Utilization of outpatient care, 2005

Source: Susenas, 2005.

When the poor seek treatment, they choose private providers in 43 percent of cases. Of those private providers, the poor make most use of private paramedics (nurses, midwives etc) and doctors. With increasing income there is a move away from paramedics towards doctors. The average-odds ratio of participation is highest for the poor in public Puskesmas, private doctors and private paramedics (nurses, midwives etc). This means that investments in these areas, if participation rates remain the same across quintiles, are more likely to benefit the poor than the richer quintiles.⁶² In contrast, investments in public and private hospitals are among the most pro-rich investments in Indonesia given the underlying utilization rates for health services (World Bank 2006f). They will remain so unless investments are targeted to make these services more accessible to the poor. The high utilization of private providers by the poor also calls for improvements in stewardship (regulation, accreditation, licensing) of the private health sector in order to control quality and improve equity.

Box 4.3 The PKPS-BBM 2005 health program

In 2005, the government introduced a massive program to counter-balance the negative impact on the poor of the reduced fuel subsidies. This included a Rp 3.875 trillion provision to improve access and quality of health services for the poor. The program provided free access to local health centers, outpatient visits at hospitals and Class 3 ward inpatient services at previously assigned private and public centers. The intervention sought to increase demand for health services by providing health insurance for the 60 million poor and at the same time ensure adequate supply by supporting Puskesmas, mobile health clinics and Posyandu services. An assessment was recently carried out and led to several important findings:

1. Demand-side interventions proved to be an efficient way of improving utilization by the poor, as opposed to classic supply-side interventions.
2. Since formal fees are only part of total expenses faced by those seeking health services, waiving these may only still result in excluding the poor who may be unable to cover transportation and maintenance costs.
3. Supply-side interventions (particularly the provision of medications, physical facilities and medical instruments) had an impact on the quality of services provided by the Puskesmas.
4. Increase in in-patient services (Class 3 wards) resulted in higher income for hospitals.
5. Targeting the poor proved to be more difficult than anticipated, in particular as non-poor could not easily be excluded from program benefits

Areas of improvement highlighted in the report include targeting, public information about the program, funds allocation, complaint resolution system, monitoring and evaluation.

Source: Rapid Assessment of PKPS-BBM 2005 Health Program, 2006.

Quality of Health Services and the Health Workforce

Indonesia's density of doctors and nurses by population is low compared with other countries in the region. While Cambodia's number of all health personnel distribution per 1,000 is also low, a country such as the Philippines,

⁶² The average-odds ratio of participation, which is given by the ratio of the quintile-specific average participation rate to the overall average, provide a useful tool for understanding the current utilization of services and highlighting those quintiles the services are likely to benefit most.

which has a similar per capita income to Indonesia, performs much better on this indicator. Most provinces have only about 13 public doctors per 100,000 inhabitants, which implies that, on average, a doctor will need to facilitate health services for about 7,600 people who might seek public healthcare.

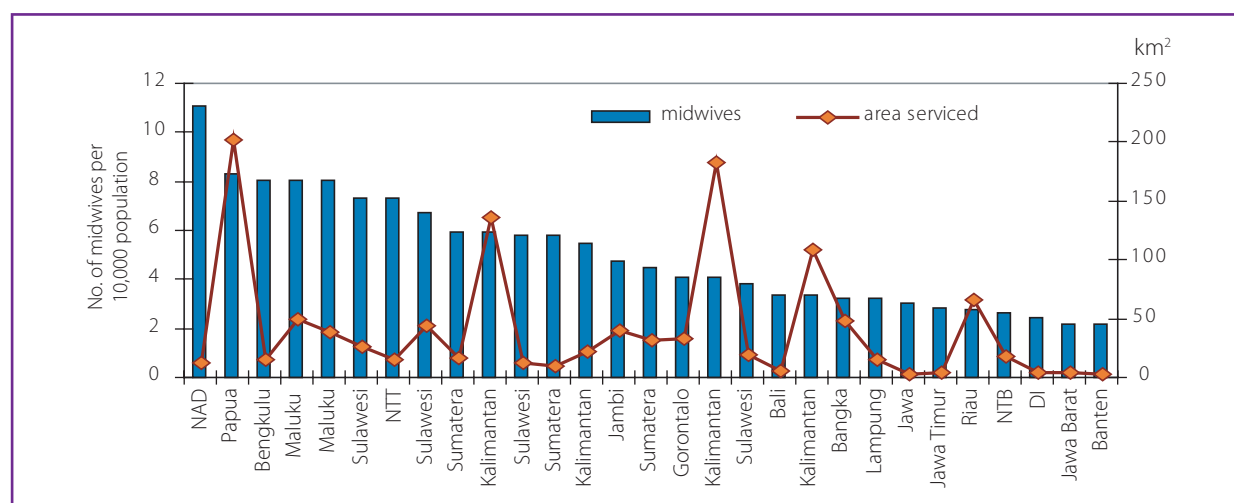
Table 4.7 International comparison of health workforce

Country	Physicians			Nurses			Midwives		
	Number	Density per 1000	Year	Number	Density per 1000	Year	Number	Density per 1000	Year
Indonesia	29,499	130	2003	135,705	620	2003	44,254	200	2003
Cambodia	2,047	160	2000	8,085	610	2000	3,040	230	2000
Thailand	22,435	370	2000	171,605	282	2000	872	10	2000
Viet Nam	42,327	530	2001	44,539	560	2001	14,662	190	2001
Philippines	44,287	580	2000	127,595	1,690	2000	33,963	450	2000
India	645,825	600	2005	865,135	800	2004	506,924	470	2004
Malaysia	16,146	700	2000	31,129	1,350	2000	7,711	340	2000

Source: WHR, 2006, Annex Table 4 'Global Distribution of Health Workers in WHO Member States'

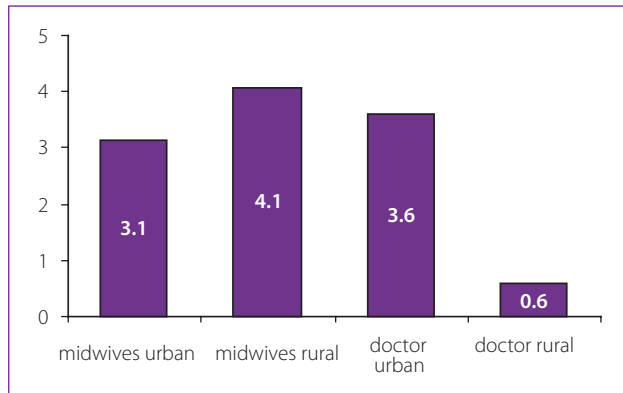
The national averages mask significant regional disparities in terms of health personnel supply not necessarily based on needs. Provider per population rates differ greatly across regions, with only six public doctors per 100,000 population in Lampung and East Java, as opposed to ratios as high as 30 and 40 per 100,000 in North Sulawesi and Bali, respectively. In many provinces these ratios improve when the private doctors are included but, even then, service areas remain large. For example, in West Kalimantan, on average, a doctor will have to serve an area of about 300km² and the service area doubles for people who can only afford services from public doctors. On average, there are about 36 health workers per 100,000 population in Indonesia.

Figure 4.20 Ratio midwives and service area



Source: Podes 2005.

Ratios of nurses and midwives per population are far higher than those of physicians, but again regional distribution issues exist. The midwives' service areas for public midwives are generally smaller than those of doctors (depending on the number of private service personnel in any given province). Aceh has a particularly high figure, with around 111 midwives per 100,000 population, whereas Banten only has 20 midwives per 100,000. Ratios for nurses per population are high, which implies that, given the low doctor density, most people (particularly the poor) will be serviced by nurses and other assisting health personnel rather than by doctors. When analyzing the figures for more skilled and specialized personnel, such as public dentists (national average 2.9), pharmacists (national average 0.6) and nutritionists (national average 3.2), density in most remote provinces is close to zero.

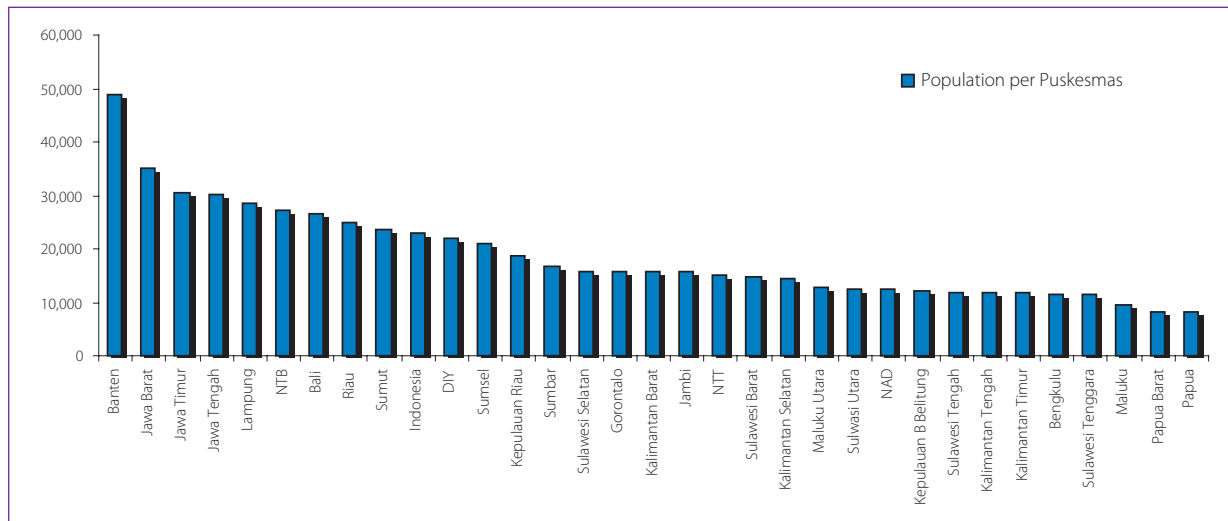
Figure 4.21 Distribution doctors and midwives

Source: Podes, 2005.

For example, the distance to a Puskesmas is about 10km on average, but in some districts it comes close to 26km. The availability of a doctor at each Puskesmas is also not guaranteed; overall, 18 out of Indonesia's 33 provinces have, on average, less than one doctor per Puskesmas. Consequently, people are dependent on less well-equipped and smaller integrated health posts (Posyandu) or possibly private nurse practitioners, midwives, or traditional care.

Differences within provinces are particularly characterized by health providers favoring urban over rural and remote areas, although more midwives are found in rural areas. Incentives should be increased, particularly for skilled health personnel, in order to encourage them to relocate to rural and remote areas.

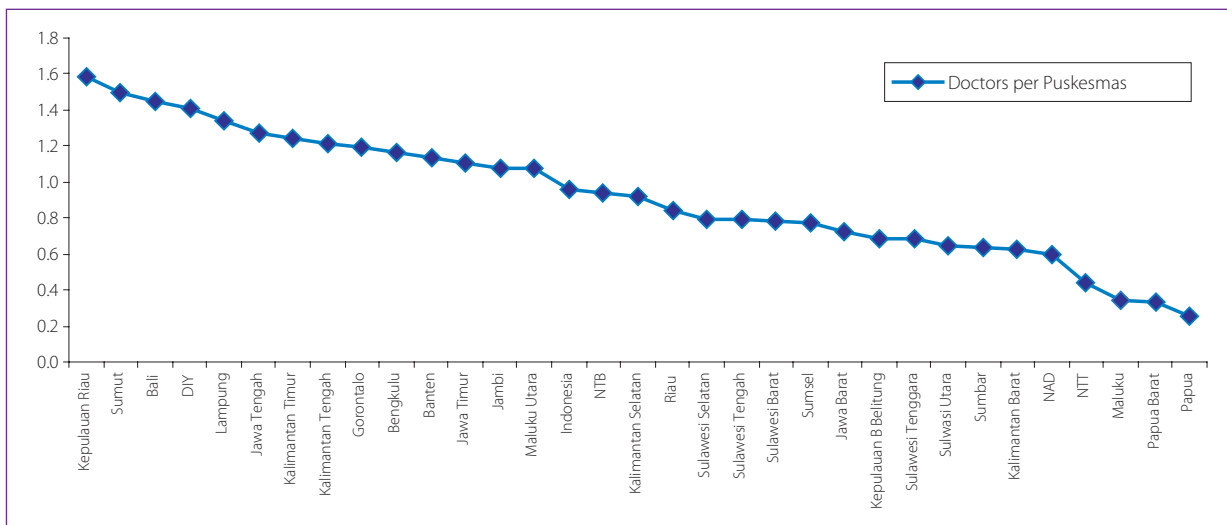
The number of doctors per health center is mostly insufficient, particularly given that the average health center facility serves around 23,000 people (Figure 4.22). The poor, who are largely dependent on these health centers, need to travel large distances to reach the facilities (the average Puskesmas serves those within an area of 242km²). In the province of Aceh, for

Figure 4.22 Population per Puskesmas

Source: Health Profile 2004, Ministry of Health.

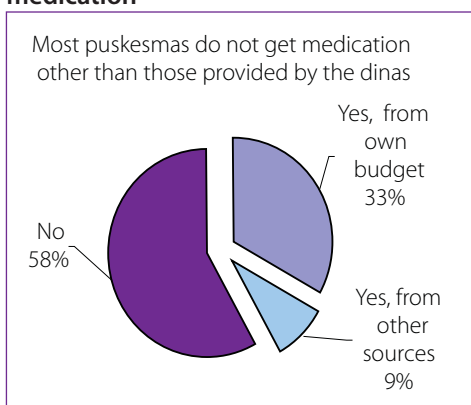
The Ministry of Health is making an effort to improve the distribution of health personnel by encouraging contractual temporary doctors (PTT) to serve in remote areas by providing additional financial incentives and shortening their service periods in particular areas. There are various wage categories for these contract doctors based on their location. Salaries in ordinary areas are about Rp 1 million a month for three years. Those in areas classified as very remote, earn about Rp 5 million a month and are required to work in such locations for only six months. This higher level of remuneration in remote areas is part of a new regulation that came into effect in June 2006 and signals the government's commitment to improving the distribution of health personnel across the country. Nevertheless, this regulation only covers contractual doctors and the government may wish to consider encouraging districts to provide similar incentives for other medical personnel contracted at the local level. This will require an assessment of civil service laws and regulations that may constrain policy changes.

Figure 4.23 Doctors per Puskesmas



Source: Health Profile 2004, Ministry of Health.

Figure 4.24 Puskesmas - sources of medication



Source: GDS1+ Survey.

Monthly and hourly salaries of public doctors, midwives and nurses appear to compare favorably with those of other workers of similar education,⁶³ but incentives are needed for them to provide quality services to the poor. Given that public doctors can significantly complement their public salaries by practicing privately, it is hard to determine whether current public wage levels are adequate. A 1994 review of the health sector workforce estimated that private practice accounted for about 79 percent of total income for specialists in urban areas and varied from 25 to 70 percent for rural general practitioners in outer islands (non-Java/Bali). Given that the poor also use private sector healthcare, albeit less than the rich, doctors (private and public) need incentives to provide quality services to the poor.

Overall, the quality of healthcare services in Indonesia is low, with low availability of medication, inadequate infrastructure and often an insufficient supply of healthcare personnel. Service

delivery is further reduced by high absentee rates of health personnel. A recent study has shown that Indonesian health workers are absent about 40 percent of the time.⁶⁴ Low quality facilities, a lack of clean water and low living standards appear to provide too few incentives for health workers to stay at their assigned posts. Puskesmas indicators from the GDS+1 survey further indicate that the average Puskesmas only has between 75 and 80 percent of the basic drugs and medication that such health facilities should have,⁶⁵ and there are also shortages (around 7 to 9 percent) in terms of essential vaccines. Most Puskesmas only receive medication from the local Dinas. If the local government does not supply Puskesmas adequately, their own budgets tend to be insufficient to compensate for shortages.

63 Based on econometric analysis performed with the Sakernas labor force survey, 2004, from BPS Indonesia. See Annex Table F3 for the regression outputs.

64 Providers were counted as absent if they could not be found in the facility for any reason at the time of a random unannounced spot check. Source: Chaudhury, et. al (2006).

65 Calculated by taking the mean number of missing drugs in each Puskesmas and dividing by the number of basic drugs the Puskesmas should have (12 basic). Dataset: GDS33 Puskemas. The twelve basic medicines and their availability rates are: Amoxicillin 500mg (73 percent), Amoxicillin Syrup (75 percent), Antalgin 500mg (89 percent), CTM (84 percent), Paracetamol 500mg (90 percent), Paracetamol syrup (77 percent), OBH (77 percent), Oralit (84 percent), Cotrimoxaxol 480 (78 percent), Antacid tablets (87 percent), Anti TBC med (71 percent), and OAT for children (67 percent).

Policy Recommendations

In the longer term, the government should certainly consider allocating more resources to health expenditure, as Indonesia currently has the lowest health spending in the region. However, the government should first focus on allocation efficiency and equality before considering an overall increase in health spending. In general, health expenditures are low in Indonesia but, as this PER clearly shows, the main problem is the inefficient and unequal allocation of the available resources. Given the challenges that the health sector is facing, and considering the government's increased fiscal space and the low levels of spending compared with other countries in the region, a logical recommendation would be to raise the level of public health spending to around 3 percent of GDP. This would achieve a level similar to that of the second-lowest spender in the region, the Philippines. However, this review also shows clear inefficiencies and inequalities in the allocation of funds across income groups and districts. Government policies in the sector have not been properly reflected in the budgetary allocation, with more resources going to services predominantly used by richer income quintiles. It is therefore strongly recommended to focus first on equity and allocative efficiency before considering an overall increase in health spending.

Inequalities should be reduced by increasing access to, and quality of, health services for the poor. This can be done by better targeting DAK allocations to poor and under-served districts and by investing in demand-side activities that improve poor people's access to quality health services.

- **Targeting of DAK allocations should be improved in order to ensure that these funds increase access to health services especially in poorer, under-served districts.** Currently, public health spending generally benefits richer income groups more than the poor through regressive subsidies for secondary care. Specialized intergovernmental funding allocations (DAK) for the health sector from the center to local governments are badly targeted, as the transfers are not related to the mean per capita expenditures at the district level. The DAK should be better used as a central government instrument to target those districts that have shortcomings in terms of access to health service delivery, particularly as these funds can be spent on health infrastructure.
- **Investing in demand-side activities that increase the access of the poor to quality healthcare.** Pro-poor financing for hospital care is being implemented through targeted vouchers (health cards) and should be expanded. The system provides free healthcare for the poor and is intended to improve the quality of care accessible to the poor. In order to improve the poverty reduction impact of health financing, all other subsidies to secondary care facilities should be channeled into primary care. There may be special merit in subsidizing ambulatory care, especially in remote regions. Allowing the poor to claim health-card benefits when using private providers could be an additional policy option. Investing in improvements in the quality of private-sector providers giving healthcare to the poor would further improve the situation.

Priority should be given to identifying the right mix of investment to improve effectiveness of the health sector in dealing with the double burden of long-standing diseases (communicable and non-communicable), as well as emerging diseases (HIV/AIDS and avian influenza).

- **Persistent communicable diseases and low performance on the main MDG outcome indicators reiterate the continued importance of investment in preventive care.** On MDG indicators such as infant and under-five mortality rates, as well as for maternal mortality, Indonesia's performance is still lagging behind. These rates can be improved by strengthening preventive care and intensifying programs that tackle communicable diseases, particularly in remote and less developed areas of Indonesia. In response to the re-emergence of polio, additional rounds of campaigns and adequate funding are urgently needed.
- **As non-communicable health interventions become increasingly important, the public health sector will need to be adequately equipped to address these challenges.** Although Indonesia has a strong private health sector, which provides the majority of specialized care, addressing the rising number of non-communicable diseases, particularly among the poorer segments of the population, will require general hospitals to provide similar services to accommodate the higher (as well as more specialized) demand.
- **In order to tackle emerging diseases such as HIV/AIDS and avian influenza, health information and surveillance systems will need to be improved.** Building an evidence base, strengthening a weak surveillance system and programming for preventing transmissions are priority areas. Improved data on

health spending and disbursements at the district and provider level are also required in order to ensure policy is guided by efficiency principles and equitable utilization. Especially since decentralization, there has been a lack of transparency in budget flows and expenditures. At the district level, there is particularly limited information about programmatic and development expenditures. Greater information on functional expenditure allocations would further enable unit-cost analysis that could provide insights in determining adequate levels of spending for the health sector.

The public sector should take a larger role as steward of the entire health system through regulation, licensing and accreditation of private providers and services to ensure the quality of these services. The private sector in Indonesia's health system has grown dramatically over the past decade. Despite the importance of private providers, little is known about who they are, where they are and what services they provide. Almost 40 percent of the poor who seek healthcare treatment do so from private providers. Moreover, determining the 'right' level of spending for the public sector requires better insights into the level and scope of private healthcare provision.

The right combination of coordinated and reinforcing measures to ensure a more equal distribution of health service providers, especially doctors, needs to be identified to improve effectiveness of investments. Given persisting inefficiencies and inequalities in the distribution of the health sector workforce and considering that the majority of public routine expenditures at provincial and district level are allocated to pay for the salaries of health providers, there is an urgent need to look into how these funds can be spent more efficiently and equally. A number of policies and incentive structures have already been tried in Indonesia but have not proved sustainable. To help in identifying the right combination of coordinated and reinforcing measures, two important questions need to be answered: (i) what are the characteristics of the current health workforce, including both public and private providers, and is it adequate to achieve the current priority outcomes in terms of quantity and quality; and (ii) what would keep doctors and other health providers, whether public or private, in remote areas for a sufficient period of time to meet the healthcare needs in those areas?



CHAPTER 5 **Infrastructure**

Indonesia Public Expenditure Review 2007

Key Findings

- Indonesia is investing too little in infrastructure. Infrastructure investment fell from 5-6 percent of GDP before 1997 to a low of 1-2 percent of GDP in 2000, and is currently stable at 3.4 percent of GDP. Addressing this backlog of past under investment, while also undertaking major new projects to meet expanding demand and further drive growth, will require significantly large additional investments (estimated at an additional 2 percent of GDP, or US\$6 billion annually, just to reach pre-crisis levels.
- The water and electricity sectors are in crisis. A decade of low investment has resulted in insufficient capacity and power shortages in the electricity system and deteriorating piped water services. Below-cost retail tariff levels discourage the extension of networks, as well as the adequate maintenance and more efficient operation of existing assets. Uniform tariffs for electricity are regressive and do not provide incentives to connect consumers in the high-cost areas of eastern Indonesia. Urban piped-water utilities urgently need new tariff arrangements and access to finance, together with the enforcement of regulations that prevent districts from claiming dividends when water utilities (PDAMs) are incurring losses.
- Private investment has declined sharply since 1997, particularly in the water, energy and transport sectors. Before the economic crisis, private investment commitments in a given year represented on average 30 to 40 percent of government development spending in infrastructure. In 2003 and 2004, it represented less than one quarter of government spending, despite the low levels of public investment. Since 2000, the vast majority of private sector investment commitments went into telecoms (90 percent). It has been particularly difficult to attract private investors into sectors that are traditionally dominated by the government or state-owned enterprises (SOEs), due to the uncertainties of the legal system, the lack of a government strategy for investment guarantees and contingent liabilities, and the fundamental issues behind the underpricing of services for social and political reasons.

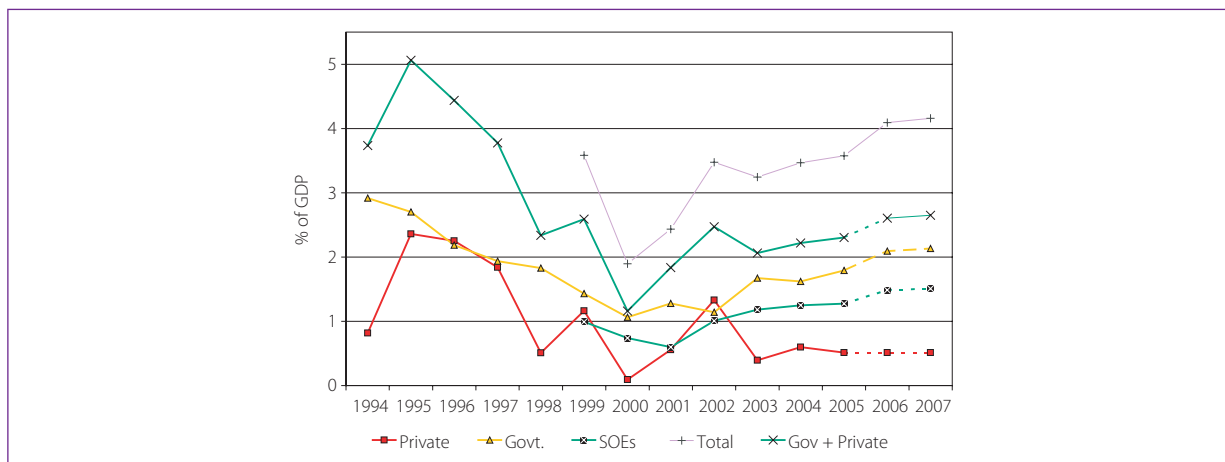
Key Recommendations

- The central government needs to take the lead in addressing the PDAM crisis. An urgent priority is the removal of current impediments to long-term borrowing by PDAMs. A first step in this process is the restructuring of PDAM loan arrears. The process of debt restructuring should give priority to the most credit-worthy PDAMs and give incentives to the remaining PDAMs to improve their credit-worthiness and allow them to increase tariffs and cut costs by addressing commercial and physical losses.
- National strategies for increased access to sanitation and rural electrification should be developed. Central and local government roles need to be clarified and coordinated for the implementation of the strategies. Adequate public funding mechanisms, such as rural access funds, should be considered because of the broad impact that the lack of basic infrastructure services has on broader public health and education outcomes.
- The electricity subsidy and tariff structure should be revisited. Electricity subsidies encourage excessive electricity consumption and provide greater support to rich consumers when access is limited to the better-off income groups. Over time, tariffs should be revised upwards and their structure reviewed to reflect the true cost of service provision. Following the reduction in fuel subsidies, the consequent major distortion of electricity pricing is such that the increased costs incurred by PLN due to higher fuel prices are not passed on through electricity tariffs. A well developed plan for an orderly transition is needed, as the political implications of radical change are high and a rapid increase of electricity tariffs to account for real costs could destabilize the entire economy. A starting point for tariff revisions could be tariffs covering 900VA and above, which almost exclusively benefit the better off. However, a coherent long-term plan needs to be developed to align prices with economic costs and provide targeted support for low-income households and poor areas. Subsidies should be directed away from consumption towards connection, in order to allow for regionally differentiated approaches to electrification.
- Fiscal incentives should be provided to sub-national governments to ensure adequate road maintenance. Sub-national governments, particularly in rural areas, spend only a small share of their budgets on road maintenance. Fiscal incentives need to be developed to address this issue. For example, central government co-financing of sub-national roads investment could be made conditional on adequate road maintenance within sub-national jurisdictions.

Performance of the Infrastructure Sectors

Annual infrastructure investment in Indonesia (comprising government investment spending, as well as investments by state-owned enterprises and the private sector) reached 5 percent of GDP before the 1997 economic crisis. Since then, infrastructure investment fell to dramatic lows of below 2 percent of GDP in 2000, and by 2005 was still only 3.6 percent of GDP (Figure 5.1). While a slowdown in infrastructure investment was to be expected in the immediate aftermath of the crisis, investment has not kept pace with the resurgent economy, let alone addressed the needs of those who have never had access to basic infrastructure services, such as piped water, electricity, or all-season roads. Indonesia now has some of the poorest infrastructure indicators in the region.

Figure 5.1 Infrastructure investment, 1994-2004



Source: MoF, processed; annual report for SOEs; World Bank PPI database.

Note: GDP reference is for Fiscal Year (FY) or Calendar Year (CY) depending on base data period; a/ Infrastructure-related development expenditure, all government levels; b/ Private investment measured as investment commitments at moment of financial closure of deal; c/ Investment or capital expenditure (Capex). SOE series incomplete; the figures for 1999-2001 may underestimate expenditures by SOEs.

Many infrastructure indicators have deteriorated in the past decade and Indonesia has fallen behind its neighbors. Electricity load-shedding is occurring in Java and Bali, while other major islands are experiencing serious power shortages. Urban roads are severely congested and new expressways that would help to drive growth are only in the preparatory stages. The proportion of the population with access to piped water has actually fallen, because of the closure of some utilities and population growth. Indonesia outranked Thailand, Taiwan, China, and Sri Lanka in the Global Competitiveness Report's 1996 index of 'overall infrastructure quality.' By 2002, these countries had all surpassed Indonesia (Table 5.1).

Table 5.1 Regional ranking for access to infrastructure services

Infrastructure	Indonesia	Regional Rank
Electrification ratio (%)	53	11 of 12
Access to sanitation (%)	55	7 of 11
Access to clean water (%)	14	7 of 11
Road network (km per 1,000 people)	1.7	8 of 12

Source: World Bank, 2004b.

Electricity⁶⁶

Demand for electricity has grown at around 6 percent annually since 2000, but there has been no corresponding growth in available system capacity.⁶⁷ Peak demand has progressively approached available capacity and reserve margins are now inadequate (Table 5.2). Load-shedding and blackouts are occurring, particularly on the islands outside the Java-Bali system. Annual demand growth of 7 to 9 percent is forecast for the next decade.

Table 5.2 PLN's electricity system capacity vs peak demand

	2000	2001	2002	2003	2004
Installed Capacity (MW)	23,949	24,246	24,359	24,475	24,920
PLN (MW)	20,762	21,059	21,112	21,206	21,470
IPP (MW)	3,187	3,187	3,247	3,269	3,450
Available Capacity (MW)	21,853	22,077	20,841	22,048	21,494
Aggregated Peak Demand (MW) ⁷²	15,320	16,313	17,160	17,949	18,896
Reserve Margin based on total capacity (%)	56.3	48.6	42.0	36.4	31.9
Reserve Margin based on available capacity (%)	42.6	35.3	21.5	22.8	13.7

Source: PLN annual financial reports.

Fuel subsidy reductions have substantially altered the least-cost fuel mix of PLN. Around 27 percent of PLN's power production is oil-based. Domestic oil prices increased by a weighted average of 29 percent in March 2005 and 114 percent in October 2005 (see Chapter 1). The cost of oil is sufficiently high that consideration is being given to leaving some diesel plants idle and replacing them with new coal-burning plants, as the extra capital costs may be outweighed by fuel savings. Around 3,400MW of power plants were designed for gas, but have been operated on diesel because of difficulties in securing gas supplies. The new high cost of diesel places a premium on resolving these gas supply difficulties.

The fuel subsidy reductions may also induce 'captive power' producers to purchase power from PLN, contributing to PLN's demand growth. 'Captive power' producers are large industrial and commercial consumers whose own private generators represent around 14,600MW of capacity, and provide nearly 30 percent of electricity consumed. Over 60 percent of this capacity is diesel, which has become substantially more expensive to operate following the reductions in fuel subsidies.

Table 5.3 Selected electricity indicators

	Households with electricity connection (%)		Transmission and distribution losses (%)		Average residential electricity tariff (nominal US\$/kWh)
	1998	2003	1998	2003	2003
Cambodia	13	17	20.6	12.7	0.09-0.15
China	97	99	8.1	7.7	0.05-0.08
Indonesia	--	55	12.2	11.7	0.02-0.07
Laos	30	41	22.6	21.2	0.04
Mongolia	67	90	--	22.0	0.05
Philippines	72	79	14.1	12.4	0.11
Thailand	82	84	8.7	7.3	0.06
Vietnam	63	81	15.6	13.4	0.05

Source: World Bank, 2005a.

⁶⁶ Expenditures on the electricity sub-sector represent close to 90 percent of the total spent in the energy sector.

⁶⁷ It should be noted that in 2006, an additional 2,500 MW of capacity has been brought on-line by PLN. However, this is still insufficient to meet the growing demand and alleviate the capacity shortage longer term.

⁶⁸ As detailed peak load data is not available, aggregated peak demand is used. Although this does not reflect the actual situation of various systems which are not interconnected, it provides a reasonable indication of the demand and supply situation in Indonesia.

The level of household access to electricity is low and expansion is hindered by current pricing policies (Table 5.3). Average residential tariffs are lower than the cost of production, so PLN has no commercial incentive to increase household connections—every new connection increases PLN's losses and further constrains capacity. Since costs are higher in rural and remote areas, the current low uniform tariff policy has a particular impact on the level of access in those areas.

Roads⁶⁹

The efficiency of Indonesia's cities is reduced by severe traffic congestion. Currently, 43 percent of the road network on Java, and a higher percentage in Jakarta, is congested causing long travel times and higher costs. Congestion is expected to increase to 55 percent of the network by 2010. The total road network grew by 12 percent between 2000 and 2004. The proportion of paved roads has increased by 28 percent since 1998. In the same period, the number of motor vehicles per 1,000 population has increased by 80 percent (Table 5.4).

Table 5.4 Increasing road congestion

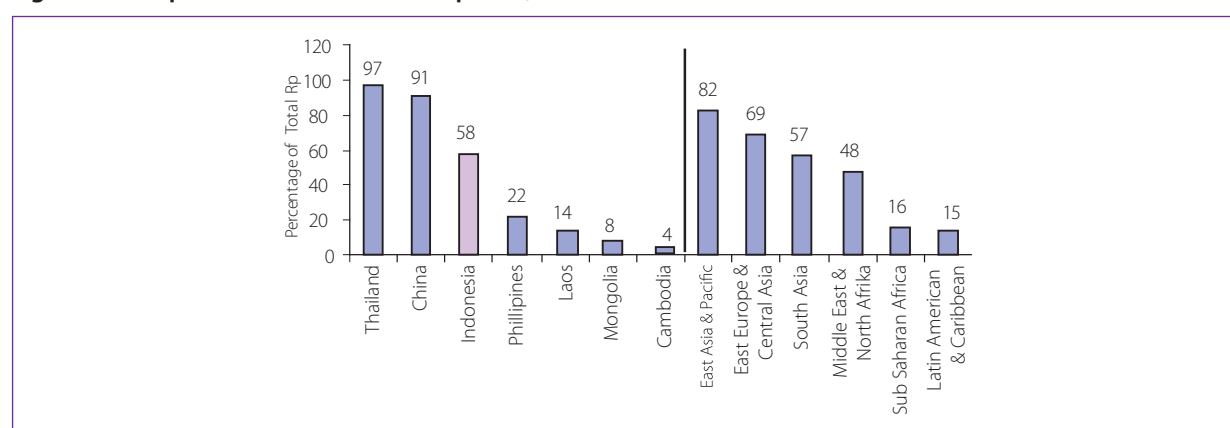
Indicators	1998	1999	2000	2001	2002	2003	2004	2005	% change 1998-2005
Paved Roads (% of total)	47.3	57.1	57.1	58.9	57.6	58.3	--	60.5	28
Motor Vehicles (per 1,000 population)	87.8	89.5	92	100.1	108.5	118.7	133.2	158.2	80

Source: CGI June 2006, Indonesia: Transport Sector Review (January 2006): Overview of Road Sector Findings.

High-grade highways, including ring-roads for urban centers, would help relieve some of the congestion and, by enhancing inter-city linkages, provide a boost to growth. For the most part, however, these highways are only at the planning stage. Preparation is underway for private investment in Jakarta's outer ring-road, but financial closure will require the resolution of a variety of issues, including arrangements for land acquisition and the nature and level of government support. Plans for a trans-Java highway linking Jakarta and Surabaya will need to address the same issues. These plans are further complicated by the fact that private firms were contractually awarded some sections of the route prior to 1998, but have been unable to achieve financial closure.

Improved public transport solutions are needed to relieve road congestion in urban centers. In Jakarta, a system of dedicated bus lanes started operating in January 2004 and, by March 2006, the number of passengers per day had reached 120,000. However, despite this gridlock remains a daily fact of life in the city. Additional bus lanes and a monorail mass rapid transport system are also being introduced or under development in Jakarta.

Figure 5.2 Proportion of roads that are paved, 2003



Source: World Bank. 2005a.

⁶⁹ Expenditures in the roads sub-sector represent 80 percent of the total spent in the transportation sector.

The quality of Indonesia's national roads is relatively high, but too many sub-national roads are poorly maintained. Compared with other countries in the region, a relatively high proportion (around 60 percent) of Indonesia's roads are paved (Figure 5.2). While the proportion of national roads maintained in good-to-fair condition has declined since 2000, it is still over 80 percent. In contrast, the average quality of sub-national roads has remained constant since 2002, but also inadequate with only half judged to be in good-to-fair condition (Table 5.5). Some of the poorest areas of eastern Indonesia, where population densities and traffic demand are low, still do not have all-season access.

Table 5.5 Road quality, 2000-06

	Length (km)	Condition (% good-to-fair)		Surface Standard (% paved)
		2000	2006	
Freeway/Toll Roads	649			100
National Roads	34,628	87	81	90
Provincial Roads	37,164	81	63	89
District Roads	240,946	49*	49	52
Total Km of Roads	339,005			60.5

Source: CGI June 2006.

Note: * Data for districts correspond to 2002 due to inconsistencies regarding this value in 2000.

Water and sanitation

Access to piped water is very limited and water utilities (PDAMs) are in crisis. Piped water provided by utilities is the most sustainable, safest and, in the long term, least costly solution for the provision of water in urban centers. Despite this, only 31 percent of the urban population and 17 percent of the total population have access to piped water—both very low levels by regional standards (Table 5.6). Water quality and regularity of service delivery are declining, and few if any utilities supply potable water. Water losses, both physical and administrative, account for 50 and sometimes up to 60 percent of PDAM production. Unless there is a change in policies and, given their poor operational performance and virtually no access to finance, Indonesia's 316 PDAMs will gradually become insolvent and close, further reducing the level of access to piped water.

Table 5.6 Access to piped water, 2003

Country	Urban (%)	Nationwide		Capital
		Rural (%)	Total (%)	City only (%)
Malaysia	95	64	84	100
Philippines	60	22	44	58
Thailand	80	12	34	83
Vietnam	51	1	14	84
Indonesia	31	5	17	51
Indonesia (2005)	32	8	19	47
Cambodia	31	1	6	84

Source: UNDP, 2004; ADB, 2004.

The political pressure for reform is weak because households have developed coping strategies. These strategies are reflected in official statistics that report access to "improved water" as 69 percent of the rural population and 89 percent of the urban population. But the coping strategies involve private, and often unregistered, wells drawing unsustainably from increasingly contaminated groundwater. In some areas, extraction by private wells has reached levels that cause sea water infiltration and land subsidence.

Indonesia lacks adequate sanitation and waste-water treatment systems. Official statistics suggest that 71 percent of the urban population and 38 percent of the rural population have access to “improved sanitation”, but these statistics include a high proportion of connections to septic tanks. In practice, these are almost never pumped and simply leak untreated sewage into the surrounding soil and groundwater. Just 1.3 percent of the population is connected to a sewerage system—a small system operating in Jakarta. The failure to treat waste-water leads to pollution of water sources, which further raises the cost of clean water production and contributes to the high prevalence of typhoid and other communicable diseases in Indonesia.

Public Expenditure in Infrastructure: Composition and Trends

Indonesia’s aggregate (public and private) infrastructure spending (investment and routine) is around 8.4 percent of GDP. Annual infrastructure investment is around 3.4 percent of GDP, with operations and maintenance representing a further 5.0 percent of GDP (Table 5.7). Public infrastructure spending accounted for 10.1 percent of national expenditures in 2004, a lower percentage than in the two previous years (10.4 percent). Expenditure in infrastructure has declined mainly due to the continuous decline of private investment. The decline in infrastructure investment since the late 1990s is a central issue of concern for infrastructure policy. The level of infrastructure investment is low by regional standards, especially compared with countries such as China and Vietnam, which invest around 10 percent of GDP in infrastructure, or less-developed countries such as Laos and Mongolia, which invest 4 and 7 percent of GDP, respectively.⁷⁰

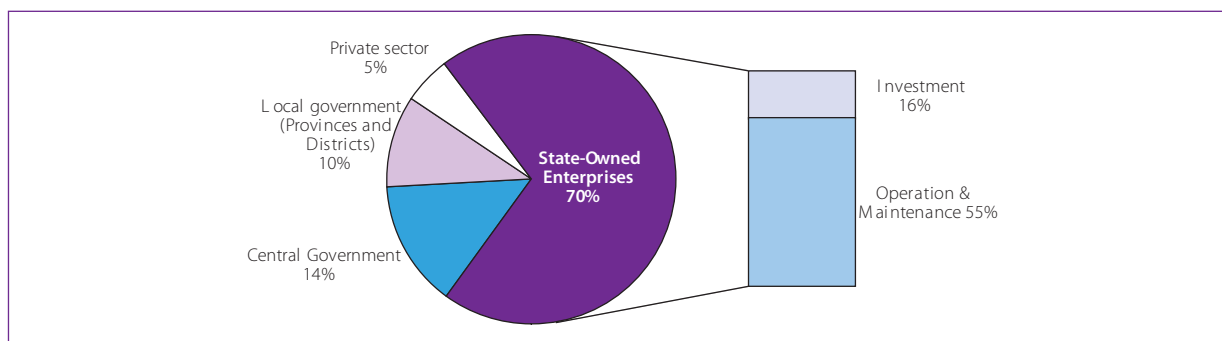
Table 5.7 Infrastructure spending at a glance

	Rp Trillion (at constant 2004 prices)			% of GDP			
	2002	2003	2004	2002	2003	2004	Avg. 02-04
1. Infrastructure Public Spending (2 + 3)	174.74	179.48		8.2	8.3	7.7	8.4
Investment	69.59	64.51	62.18	3.3	3.0	2.7	3.4
O&M	105.15	114.97	115.08	4.9	5.3	5.0	5.0
2. On-budget all levels of government a/	36.23	47.33	39.88	1.7	2.2	1.8	2.1
Central Government	16.61	22.74	17.40	0.8	1.0	0.8	1.2
Investment b/	7.88	13.83	9.70	0.4	0.6	0.4	0.8
O&M	8.73	8.91	7.70	0.4	0.4	0.3	0.4
Local governments	19.61	24.59	22.48	0.9	1.1	1.0	0.9
Investment	12.43	16.64	14.97	0.6	0.8	0.7	0.7
O&M	7.19	7.95	7.51	0.3	0.4	0.3	0.2
Total on-budget (1) as % of the total National budget	9.5	11.0	9.0	--	--	--	--
3. SOEs	110.44	123.65		5.2	5.7	5.6	5.5
Investment c/	21.21	25.54	28.37	1.0	1.2	1.2	1.2
O&M	89.23	98.11	99.87	4.2	4.5	4.4	4.4
4. Private sector	28.45	8.93	9.58	1.3	0.4	0.4	0.7
Investment commitments d/	28.07	8.50	9.14	1.3	0.4	0.4	0.7
Total Infrastructure spending (2 + 3 + 4)	174.73	179.48		8.3	8.3	7.8	8.3
Total investment	69.58	64.51	62.18	3.3	3.0	2.7	3.3
Total O&M	105.15	114.96	115.08	5.0	5.3	5.1	5.0

Source: MoF processed; company annual reports and balance sheets; World Bank PPI database.

Note: a/ Processed from government budget, all levels of government. b/ Slight variations with respect to the earlier public investment figures are explained by access to more disaggregated data for the period 2002-04, allowing a more detailed categorization of total expenditures into investment and O&M. c/ Investment or Capex figures. Where no other information could be found, the year on year difference in the stock of assets was taken as approximation of Capex. d/ Private investment measured as investment commitments at the moment of deal’s financial closure.

70 World Bank, 2005. Connecting East Asia: A new framework for infrastructure, data appendix.

Figure 5.3 Composition of infrastructure expenditures, 2004

Source: MoF, processed; SOE annual reports; World Bank PPI database.

Spending by state-owned enterprises accounts for more than 70 percent of total infrastructure spending.

However, spending by state-owned enterprises (SOEs) is mostly driven by operations and maintenance, and less so by investment (Figure 5.3). Within budgetary public expenditures, the central government accounts for a slightly larger share than sub-national governments. The role of private-sector spending remains very limited, representing only 5 percent of the total.

Both public and private investments in infrastructure have declined relative to the overall size of the economy

(Table 5.8). Private investment commitments were over 2 percent of GDP in the mid-1990s, but fell below 0.5 percent in 2003 and 2004. Government investment (national and sub-national) amounted to nearly 3 percent of GDP in the mid-1990s, whereas since the crisis the figure has hovered in a range from 1.1 to 1.8 percent. From 2002 to 2005, investment by SOEs has gradually increased from 1.0 percent of GDP to 1.3 percent, but this has not been enough to offset reductions in government and private investment. Although government investment has steadily increased in absolute terms since 2002, it has not grown at the same pace as the economy. During 2002-04, the only period for which complete data are available, total investment increased in absolute terms but declined as a proportion of GDP from 3.5 percent to 2.9 percent.

Table 5.8 Investment trends

	Rp trillion (2001 constant prices)				% of GDP			
	Private a/	Govt b/	SOEs c/	Total	Private a/	Govt b/	SOEs c/	Total
1994	8.56	32.59	NA	--	0.8	2.9	--	--
1995	26.91	32.84	NA	--	2.4	2.7	--	--
1996	28.12	29.75	NA	--	2.3	2.2	--	--
1997	25.52	31.41	NA	--	1.8	1.9	--	--
1998	6.79	27.94	NA	--	0.5	1.8	--	--
1999	14.78	20.13	12.61	47.52	1.2	1.4	1.0	3.6
2000	1.46	16.49	11.45	29.40	0.1	1.1	0.7	1.9
2001	9.38	21.52	10.09	41.00	0.6	1.3	0.6	2.4
2002	22.16	18.98	16.75	57.88	1.3	1.1	1.0	3.5
2003	6.71	28.67	20.17	55.55	0.4	1.7	1.2	3.2
2004	7.21	23.09	22.40	52.71	0.4	1.3	1.2	2.9
2005	--	--	24.84				1.3	

Source: MoF, processed; SOE annual reports; World Bank PPI database.

Note: 1/ Includes electricity, gas, telecommunications, roads, ports, airports, railways, piped water and sanitation, water resource management, and irrigation; a/ Private investment measured as investment commitments at moment of deal's financial closure; b/ Infrastructure-related development expenditure, all government levels; c/ Investment or capital expenditure (Capex). d/ SOE series incomplete; data was available for the bulk of, but not all, infrastructure SOEs 1999-2001.

Prior to the crisis, private investment was distributed across all infrastructure sectors; since the crisis it has been concentrated largely in the telecommunications sector (Table 5.9). In the mid to late 1990s, private investment reached 2.3 percent of GDP. In 2003 and 2004, it represented a mere 0.4 percent of GDP.

Table 5.9 Private investment trends**Rp billion (at current prices)*

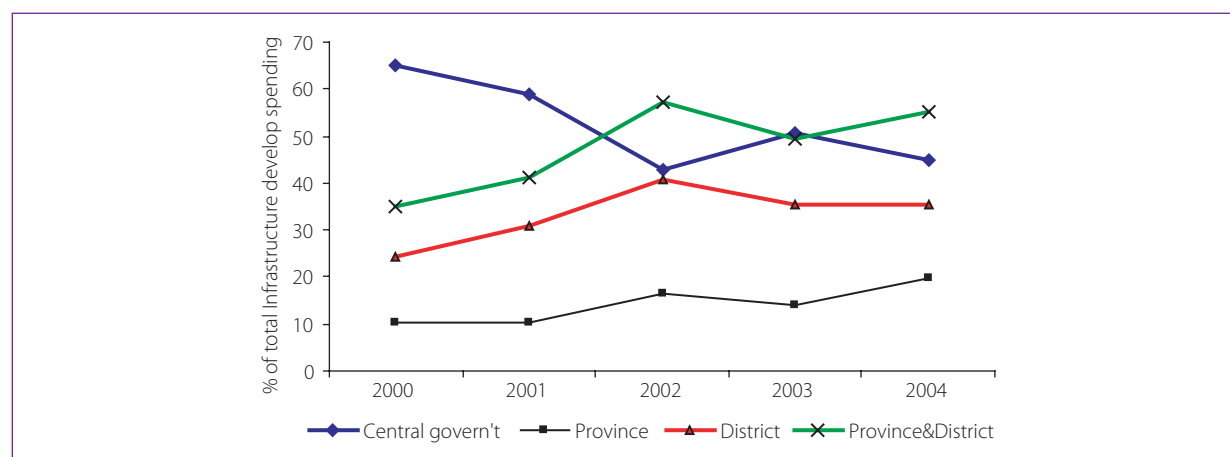
	Energy	Water and Sanitation	Transport	Telecommunications	Total
1994	466	0	236	2,417	3,119
1995	5,531	448	607	4,143	10,729
1996	7,851	0	0	4,142	11,993
1997	7,600	364	2,067	1,522	11,553
1998	1,530	2,931	0	410	4,871
1999	976	0	8,028	3,780	12,784
2000	0	0	0	1,312	1,312
2001	0	377	0	9,006	9,383
2002	1,933	0	6,045	16,814	24,792
2003	0	0	0	7,998	7,998
2004	1,084	0	31	8,021	9,137
2005					
Total	26,971	4,119	17,015	59,566	107,671
% of total	25.0	3.8	15.8	55.3	100.0

Source: World Bank PPI database. Figures exclude cancelled projects.

Note: Exchange rate used is for Calendar Year (CY), sourced from Gol.

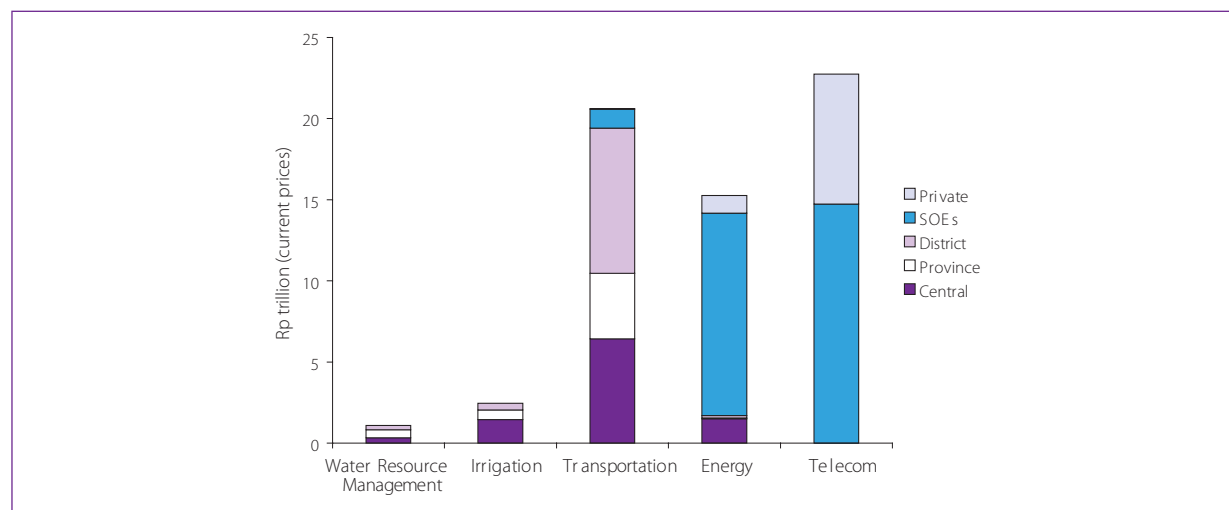
* Private investment measured as investment commitments at moment of financial closure of deal.

Since 2001, sub-national governments have been responsible for an increasing share of development budget spending on infrastructure, as part of Indonesia's general decentralization of government responsibilities. Sub-national governments' share of the infrastructure development budget increased from 35 percent in 2000 to 55 percent in 2004, of which provincial governments accounted for 20 percent and district governments accounted for 35 percent (Figure 5.4).

Figure 5.4 Impact of decentralization on government infrastructure investment

Source: World Bank Staff calculations based on MoF and SIKD data.

Within the total development budget, the proportion of decentralized investment varies considerably by sub-sector (Figure 5.4). The largest component of the total development budget is transportation, within which roads investment is dominant. Between 2000 and 2004, transportation's share of the development budget increased from 62 percent to 75 percent, and the sub-national share of this transportation spending increased from 56 percent in 2001 to 64 percent in 2004. In monetary terms, sub-national development expenditure on transportation increased from Rp 4,498 billion to Rp 14,460 billion over the same four year period. The central government retains the largest share of development budgets for water resources and irrigation. The development budget plays only a small role in energy and telecommunications, where SOEs and private firms are much more important players, but the role that remains for government is dominated by the central government.

Figure 5.5 Distribution of investment expenditures by spending unit

Source: World Bank staff calculations based on MoF and SIKD data.

Note: SOE (PDAM) spending can only be approximated very broadly. Industry experts estimate that investment is close to zero.

Sub-national governments' development spending on infrastructure has not matched the rate of growth in their real revenues. This may in part reflect sub-national priorities, with education and health occupying an increasing proportion of sub-national development spending, but it is also possible that sub-national governments are constrained in their ability to increase infrastructure investment. The lower spending on infrastructure could also reflect planning delays, in which case the balance between infrastructure and other spending categories may revert over time. However, it could also be that for capacity or other reasons, sub-national governments are simply unable to increase desired infrastructure investment. In this respect, it is of some concern to note that sub-national governments' bank deposits have rapidly accumulated from less than Rp 10 trillion in January 2001 to more than Rp 70 trillion (2.6 percent of GDP) in April 2006, suggesting an inability or an unwillingness of sub-national governments to spend their full budget allocations. A more detailed study is required to determine why sub-national government infrastructure investment has not kept pace with sub-national government revenues, particularly given the low quality and poor access indicators prevalent for much of Indonesia.

Table 5.10 Public spending on investment and operations and maintenance a/

Average 2002-04

	Investment (Rp billion)	O&M (Rp billion)	Ratio of O&M over Investment
Water & Sanitation 1/	1,131	9,278	8.21
Transport (Excluding roads)	10,716	6,539	0.61
Roads 2/	15,159	3,328	0.22
Natural Gas 3/	2,641	1,046	0.40
Electricity 4/	9,551	61,025	6.39
Telecom 5/	13,156	21,772	1.66
TOTAL	54,817	102,989	1.88

Source: original figures from SOE annual reports and company accounts.

Note: a/ Includes all levels of government and SOEs; 1/ extracted from Water resource management for on-budget spending; PDAMs for off-budget spending; 2/ Toll roads for off-budget spending (SOE); 3/ PGN; 4/ PLN; the O&M figure includes the explicit subsidy payment PLN receives to subsidize its tariffs. This subsidy accounts for the quasi-totality of O&M costs passing through the government budget in the electricity sector; 5/ Indosat and Telkom.

The ratios of operational expenses to investment in Indonesia suggest inadequate maintenance in roads and inadequate investment in water and electricity (Table 5.10). The electricity sector also has a high ratio of operational to investment expenses, suggestive of inadequate investment, but this is largely because subsidies incurred by the central government to cover revenue shortfalls of PLN are reflected as operational expenses. The appropriate balance

between investment and operational expenses varies across sectors and time according to capital intensiveness and demand growth. Detailed sector studies and comparison with technical benchmarks are recommended in order to determine adequate spending levels given Indonesia's infrastructure assets and development targets.

The operational and maintenance spending of telecommunications and electricity SOEs has increased as a proportion of GDP in recent years. The growth in telecommunications is likely to be a reflection of the growing importance of the sector in the economy. The growth of PLN's operational and maintenance expenses may also in part reflect demand growth in the economy, but the key explanation lies in the rising price of fuel since 2005 and the operational subsidies necessitated by revenue shortfalls caused by below-cost tariffs. Operational and maintenance expenses of SOEs that provide toll roads, ports, airports and gas services have all occupied a stable proportion of GDP in recent years.

Table 5.11 Operations and maintenance of SOEs

Percentage of GDP

	1999	2000	2001	2002	2003	2004	2005
Toll Roads (SOE)				0.04	0.05	0.05	0.05
Airports (Angkasa Pura)		0.05	0.05	0.08	0.08	0.08	0.07
Sea ports (Pelindo I-IV)			0.09	0.10	0.10	0.10	
Natural gas (PGN)		0.03	0.03	0.03	0.04	0.05	0.05
Electricity (PLN)	1.96	1.96	1.94	2.81	2.88	2.63	2.79
PT Telkom			0.53	0.63	0.74	0.85	0.90
PT Indosat	0.12	0.11	0.20	0.26	0.29	0.32	0.29

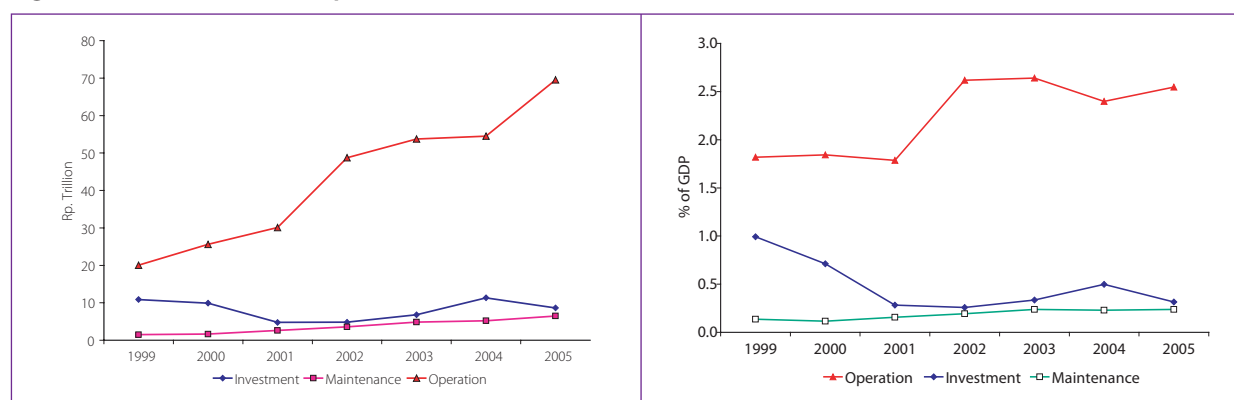
Source: original figures from SOE annual reports and company accounts.

Electricity

PLN invested Rp 8,620 billion in 2005, while its operational and maintenance costs amounted to Rp 76,024 billion (Figure 5.6). The government budget has also made a contribution to investment through electrification schemes, averaging Rp 1,903 billion annually in 2002-04. Total expenditure in the electricity sector amounts to around 3.2 percent of GDP.

The cost of explicit and implicit government subsidies to PLN's operations was around Rp 38 trillion (1.4 percent of GDP) in 2005. The government provides an explicit subsidy to PLN to cover the difference between regulated tariffs and actual costs of serving different customer classes, including residential, industrial and commercial consumers. The explicit subsidy payment was Rp 16,890 billion (0.6 percent of GDP) in 2005, and may reach Rp 24,000 billion in 2006. As fuel subsidies have not been completely eliminated, PLN also benefits from an implicit subsidy on its fuel. This implicit subsidy was estimated to be Rp 20.6 billion in 2005. Finally, the government provides a connection subsidy to increase rural electrification. This subsidy cost Rp 500 billion in 2005 (see Chapter 1 for further details on the electricity subsidy).

Figure 5.6 Trends in PLN's expenditures



Source: PLN annual financial reports.

In the area of electricity generation, some of the distortions and obstacles to expanding access are the result of pricing policies and subsidies. Fuel subsidies induced PLN to burn oil to generate electricity, including in plants designed to burn natural gas. With the increase in oil prices in recent years and the dramatic reduction in fuel subsidies, PLN's real cost of service has risen rapidly. Yet, PLN's tariffs remain fixed and PLN now makes substantial commercial losses—losses that need to be covered by the government. Going forward, there is a need for the retail price of electricity to reflect costs in order to restrain electricity consumption and enable additional investment. The current level and structure of electricity tariffs result in an inefficient allocation of resources and ill-targeted subsidies. Meanwhile, the existing uniform tariff provides no incentive to connect consumers in the high-cost areas of eastern Indonesia.

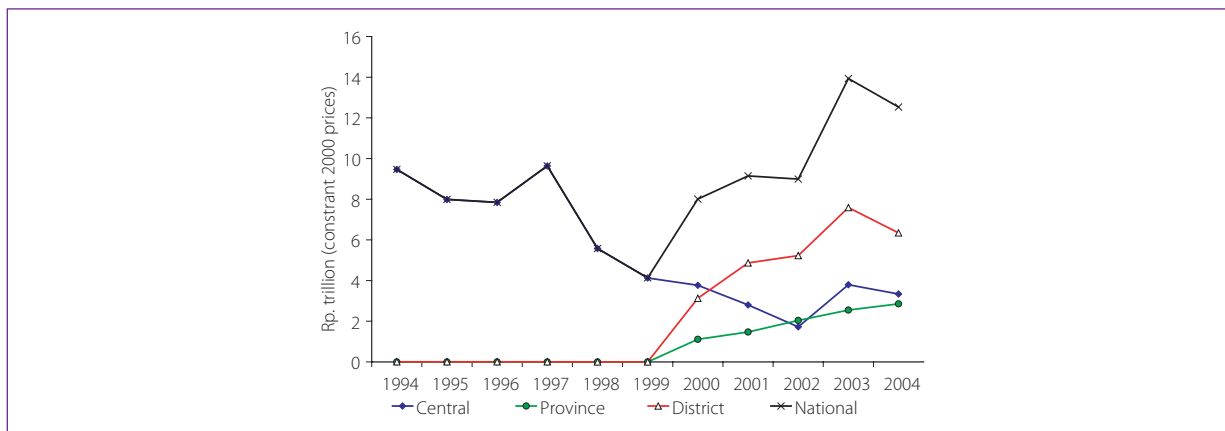
A major step towards filling the investment gap and reducing production costs is being addressed by current plans to boost the electricity generation capacity of PLN with up to 10,000MW of coal-fired power plants in the next few years. In 2006, PLN brought additional capacity of 2,500MW online. In addition, PLN's expansion plans are being reviewed to ensure that the additional capacity is brought on-line with careful phasing and that the positioning of generation plants, together with associated transmission and distribution facilities, matches the most important centers of demand growth. In addition to these plans, the government will seek to lessen the debt burden on PLN by inviting private investors to build independent power plants to sell power to PLN.

Roads

In 2004, roads expenditure constituted almost 1 percent of GDP, with road investment having returned to close to its pre-crisis level. Investment amounted to Rp 18.2 trillion (0.8 percent of GDP), road operations cost Rp 1.4 trillion (0.06 percent of GDP), and maintenance cost Rp 2.5 trillion (0.11 percent of GDP) (Figure 5.6, Table 5.4)

Road maintenance expenditures reflect the relative conditions of national, provincial and district roads. Central government spent Rp 32 million per kilometer on routine and periodic road maintenance, provincial governments spent Rp 18 million per kilometer, and district governments spent Rp 2.5 million per kilometer.⁷¹ Higher grade roads are more expensive to maintain and may require more frequent maintenance because of greater usage. Nevertheless, the poor condition of sub-national roads suggests that expenditures on sub-national road maintenance should be increased. Given the poor state of existing sub-national roads, it is likely that additional maintenance will yield a high social rate of return.

Figure 5.7 Investment in roads per level of government and private sector



Source: Budget figures; SOE annual reports; World Bank PPI database.

Construction of major inter-city expressways and new ring-roads for major cities will require a huge increase in road investment. Construction of the trans-Java highway connecting Jakarta and Surabaya with about 870km of new expressways is estimated to cost Rp 49 trillion, of which land acquisition may account for Rp 5 trillion. A similar

71 Calculated using maintenance figures for 2004 from Table 5.12 and road network lengths in 2006 from Table 5.5.

expressway system will be needed for Sumatra. The government is looking to the private sector to shoulder the burden of financing many of these highways, and the private sector will then recoup the costs through tolls. Given the massive financial stakes involved, careful project preparation is required in order to maximize the leverage of any government support offered to these projects.

Table 5.12 Roads operations and maintenance, 2004

	Rp billion		% of GDP	
	Operations	Maintenance	Operations	Maintenance
Central Government	450	1,105	0.020	0.049
Province	--	609	--	0.027
District		590		0.026
State-Owned Enterprises	910	204	0.040	0.009
Total	1,360	2,508	0.060	0.110

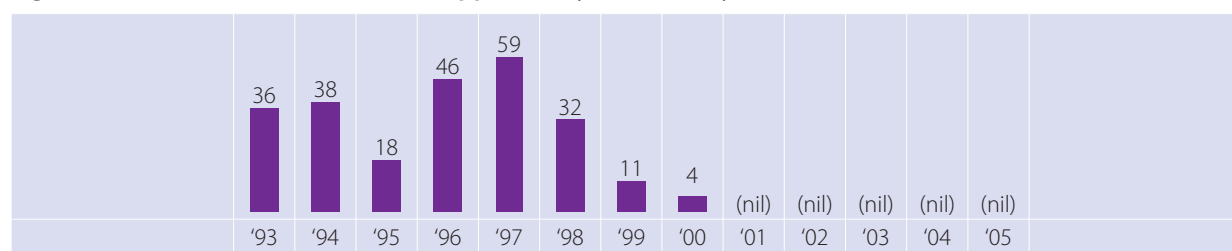
Source: Budget figures and SOE annual reports.

The construction of privately operated toll roads for urban ring-roads and inter-city expressways could make a significant contribution to growth in coming years, but the difficulties of attracting private investment are likely to slow down these projects. The government has developed a new framework for private infrastructure investment to ensure an appropriate allocation of risk for public support to private infrastructure projects. Institutional arrangements have also been developed to support careful project preparation. Nevertheless, insufficient experience and capacity within government to prepare transactions while simultaneously reforming the policy environment could further delay this process.

Water and sanitation

Expenditure data for the water and sanitation sector are scarce and unreliable. Nonetheless, there is virtually no PDAM investment, and operations and maintenance expenditure is inconsistent with service quality. With tariffs typically well below full cost, PDAMs are unable to finance new investment from their own revenues, and most PDAMs are not sufficiently credit-worthy to borrow. Central government spending by the Ministry of Public Works was historically the main source of new investment but, since decentralization in 2001, local governments have been expected to take responsibility for water supply investment. Previously, long-term lending provided by international financial institutions such as the World Bank and the ADB was also an important source of investment. However, not a single such loan has been approved by the Ministry of Finance since 2000 (Figure 5.8), with the result that there has been virtually no PDAM investment in the past seven years.

Figure 5.8 Number of loans to PDAMs approved by the Ministry of Finance, 1993-2005



Source: MoF.

Only community-driven projects and a handful of innovative mayors offer positive examples. Indonesia has made remarkable progress in providing a basic level of water services through community-driven development projects, particularly in rural settings. However, these solutions are unlikely to be least cost effective in urban settings. There are also a few isolated cases of PDAMs where innovative mayors have installed pro-active managements, and progress has been made in cutting unaccounted water losses and improving services.

The appalling situation of most PDAMs is the result of a combination of inappropriate policies. Many countries set water tariffs below full cost-recovery levels, but the average water tariff for low-income households in Indonesia is less than half the lowest tariff in Vietnam (a much poorer country), and far below those of other ASEAN countries. Nearly half of all PDAMs are reported to set tariffs below the cost of operations and maintenance. The situation in Indonesia is exacerbated by weak corporate governance arrangements. This allows local governments as owners of the PDAMs to declare “dividends” even in loss-making situations, permitting the diversion of PDAM cash-flow for alternative political priorities. Poor operating performance in Indonesia is exacerbated by excessive fragmentation. Many PDAMs are smaller than optimal, resulting in excessively high operating costs. Consequently, the possibility of mergers should be considered. (See also Chapter 7 on sub-national borrowing.)

The current impasse over donor loans to the sector requires urgent attention. Among the criteria required for new PDAM borrowing is that neither the PDAM nor its local government owner has any arrears on prior borrowings. Around 60 percent of the urban population lives in jurisdictions where the local government or PDAM has debt arrears and these people are for the moment effectively barred from any improvement in PDAM services. The actual amount of PDAM debt arrears varies, but could in most cases readily be re-structured and paid for with the assistance of new lending. Under current plans for limited debt restructuring it is likely that several years will pass before new investment can begin. A greater sense of urgency is required.

Spatial Balance and Equality of Access

There are wide disparities across provinces in access to infrastructure, with those outside Java and Bali lagging behind (Table 5.13). Papua, Nusa Tenggara, and Maluku share the lowest rankings in terms of access to infrastructure in the sectors of electricity, piped water, and roads. Increasing access to piped water should be a priority, as the share of villages with access to piped water is exceptionally low. In Papua only three percent of the villages have access to water, whereas the same statistic in Nusa Tenggara, Maluku, and most provinces in Sumatra is below 10 percent.

Table 5.13 Access to infrastructure: percentage of villages with access to selected infrastructure

Island/Province	Electricity Supply		Water Supply		Road	
	Village with PLN Electricity		Village with Piped Water		Village with asphalt road	
	%	Rank*	%	Rank*	%	Rank*
SUMATRA	66	3	9	4	51	3
North Sumatra	83	3	12	11	49	20
Nanggroe Aceh Darussalam	73	10	6	25	44	22
West Sumatra	70	15	29	3	78	5
Riau	60	17	1	33	39	27
Jambi	56	23	18	6	61	13
South Sumatra	56	22	8	22	55	17
Bengkulu	57	20	10	17	68	10
Lampung	51	28	4	29	45	21
Bangka Belitung Archipelago	78	6	2	32	89	3
Riau Archipelago	76	7	16	7	49	19
JAVA/Bali	73	1	12	3	71	1
DKI Jakarta	99	1	47	2	100	1
West Java	76	8	9	19	73	8
Banten	79	5	6	23	57	15
Central Java	65	16	11	15	74	7
DI Yogyakarta	83	2	10	18	79	4
East Java	71	12	12	12	67	12
Bali	75	9	50	1	98	2
NUSA TENGGARA	32	7	9	5	49	4
West Nusa Tenggara	34	31	12	10	77	6
East Nusa Tenggara	30	33	8	21	40	25
KALIMANTAN	67	2	12	2	36	6
West Kalimantan	60	18	6	27	33	28
Central Kalimantan	57	19	6	28	18	33
South Kalimantan	71	13	20	5	57	14
East Kalimantan	80	4	15	8	28	30
SULAWESI	63	4	14	1	54	2
North Sulawesi	72	11	23	4	71	9
Central Sulawesi	52	27	11	14	57	16
South Sulawesi	70	14	15	9	55	18
SouthEast Sulawesi	49	29	10	16	43	23
West Sulawesi	53	25	6	26	29	29
Gorontalo	46	30	8	20	67	11
MALUKU	55	5	9	6	40	5
Maluku	56	21	6	24	39	26
North Maluku	53	24	12	13	42	24
PAPUA	38	6	3	7	19	7
Papua	34	32	3	30	18	32
West Papua	52	26	3	31	21	31

Source: Podes, 2005.

Note:* Reported ranks for island and provinces correspond to its relative position across all islands and all across provinces, respectively.

Electricity

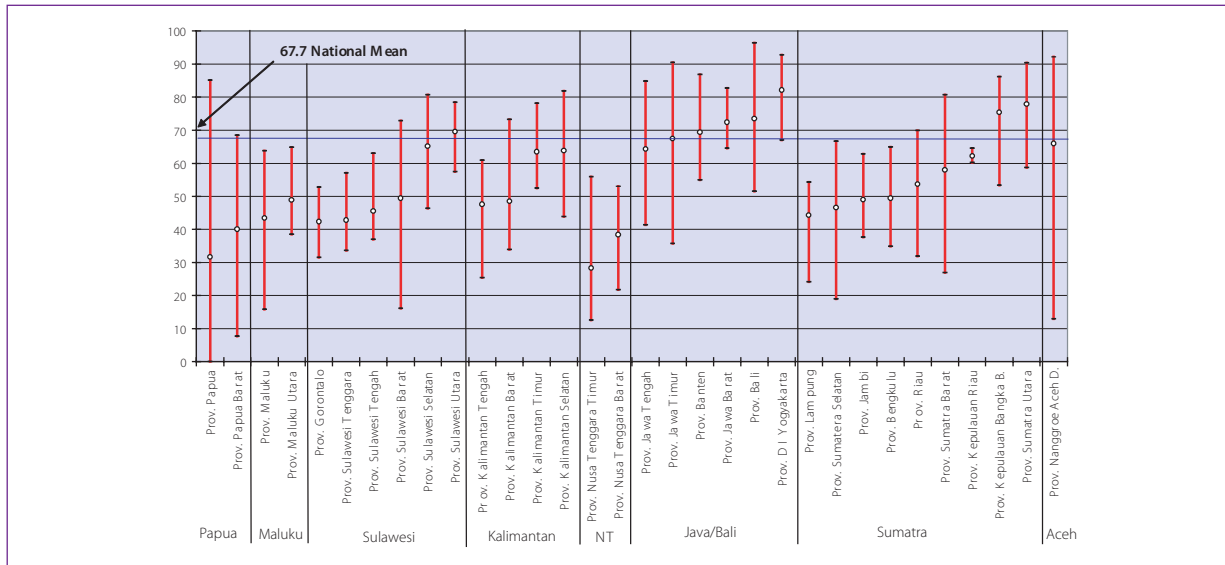
The consumption subsidy provided by holding electricity tariffs below cost is regressive in its impact, delivering greatest benefits to richest consumers, and least benefits to poorest consumers. Residential consumers absorb the majority of the electricity consumer subsidy (66 percent of the total in 2006), followed by industrial consumers (29 percent), and commercial businesses (5 percent). Although tariffs are lowest for low voltage connections, typically used by the poorest consumers, the poorest consumers also typically purchase small quantities of electricity. The

combined effect is that the poorest consumers receive relatively less of the total subsidy than the richest consumers, whose consumption is greater. It would be possible to re-design tariffs to deliver greater subsidies to the poorest consumers, while simultaneously cutting the total cost of the consumption subsidy.

The regressive impact of the consumption subsidy is even worse when it is considered that half of the rural population does not even have electricity access, and so receives no benefit at all from the electricity subsidies.

Wide disparities in access to electricity between and within provinces (Figure 5.9) are driven by cost differences across regions, a national uniform tariff that removes incentives for PLN to connect customers in high-cost regions, and high charges for connection that impede consumer willingness to seek connection. In a survey of households without electricity connections, 87 percent mentioned the high cost of connection as the reason for not seeking connection and just 4 percent mentioned high monthly fees. A reallocation of government resources between consumption and connection subsidies could substantially improve poverty targeting.

Figure 5.9 Variation in the percentage of households with electricity connections



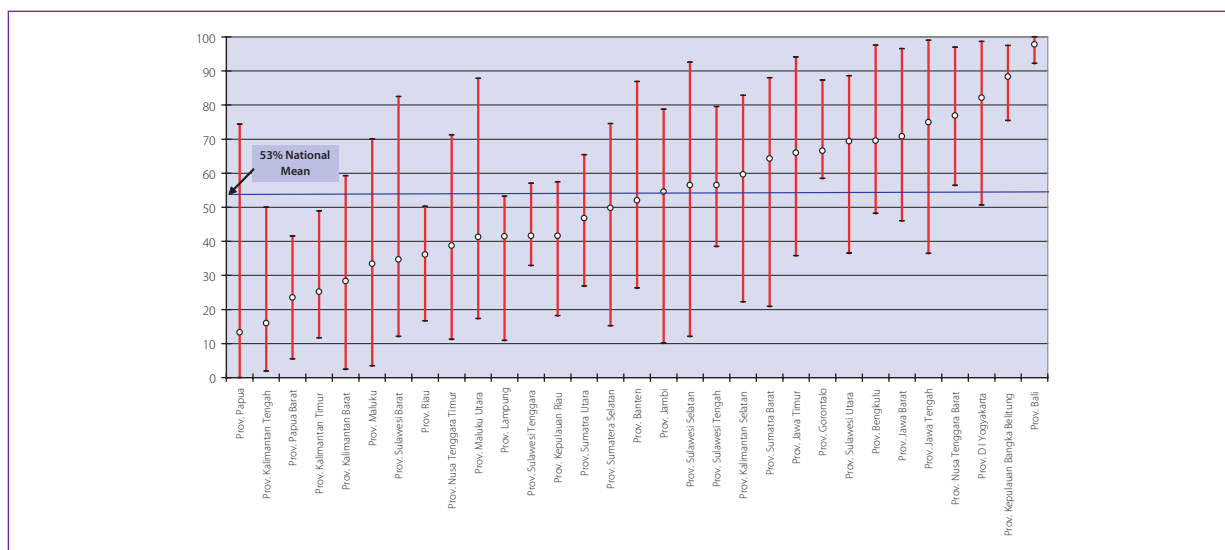
Source: World Bank staff calculations, based on Podes 2005.

Note: sample of rural districts from each province. The graph maps the proportion of households in a rural district that have electricity connections. Each red vertical bar represents the range of these statistics across districts in an individual province. The yellow dots on each bar indicate the provincial means for these statistics.

Roads

There is great inequality between districts in the level and quality of access to roads. An indication of this inequality is seen in the variation across and within provinces in the proportion of villages with a sealed main access road (Figure 5.10). The provision of all-season access roads has been found to have a major impact on poverty. Investment at the district level is required to meet the needs of villages without all-season access.

Figure 5.10 Variation in the percentage of villages with asphalt road as the main access road



Source: World Bank staff calculations, based on Podes 2005.
 Note: sample of rural districts from each province.

Districts are responsible for 51 percent of road expenditures, but their access to revenues bears little relationship to their spending needs. The largest source of resources for most district governments is the general allocation fund (DAU), which is distributed on the basis of the salary bill of the civil service, leaving poorer regions with inadequate resources for roads expenditure. Deconcentrated transfers are targeted to ensure a higher allocation to districts with low road access, but conditional transfers to district governments (DAK) are not well targeted (Table 5.14).

Table 5.14 Sources of finance for roads in rural districts

Rp trillion

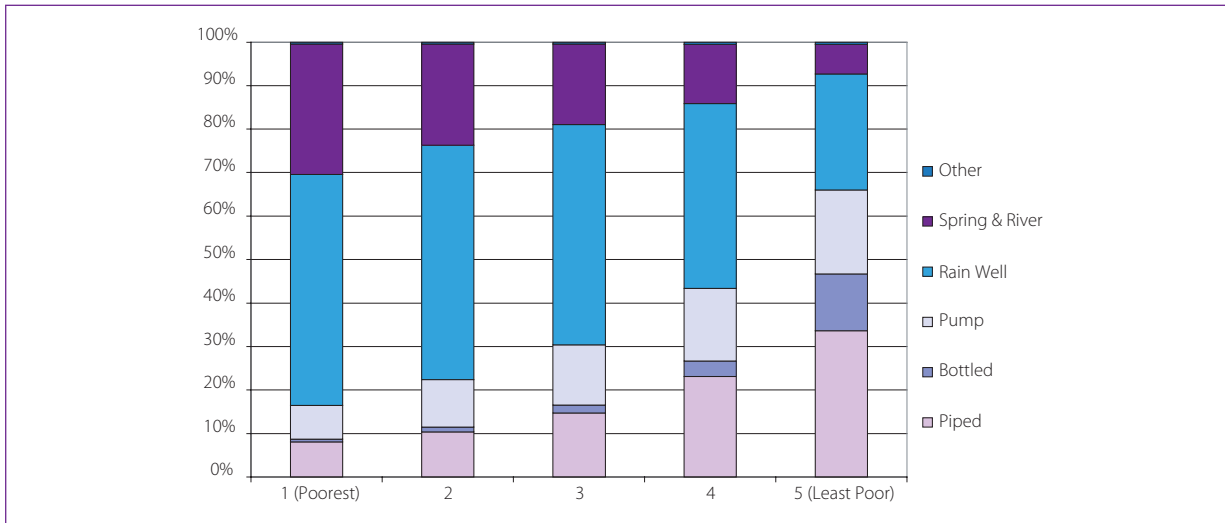
Rural districts ranked by the Proportion of villages with road access	District Spending (excluding DAK)	%	DAK Roads	%	Deconcentration (Transport)	%	Total
1 (Lowest road access)	1.74	21	0.11	17	0.56	33	2.41
2	2.22	27	0.16	25	0.49	29	2.87
3	1.80	22	0.18	28	0.24	14	2.22
4	1.70	21	0.14	22	0.33	20	2.17
5 (Highest road access)	0.67	8	0.05	8	0.07	4	0.79
All	8.1	100	0.7	100	1.7	100	10.5
As % of total Transport Expenditures		77.6		6.3		16.1	100

Source: World Bank staff calculations based on data from detailed realization APBD from SIKD, MoF, and Podes 2005.

Water

Access to piped water is limited in all provinces, but the poorest sections of the community have the lowest levels of access (Figure 5.11). More than 80 percent of households in the poorest quintile of the population rely on water from wells and from natural sources such as rain and river springs, whereas the rate of households using these sources, declines to less than 35 percent for the richest quintile.

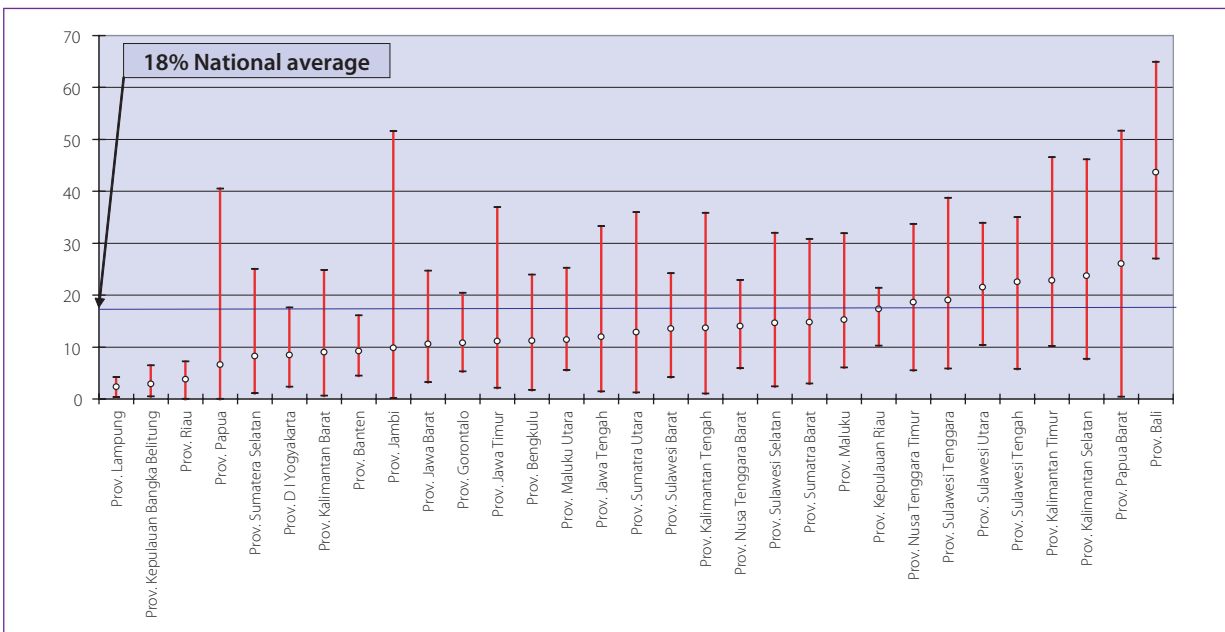
Figure 5.11 Distribution of households by source of water use and consumption quintile



Source: Susenas, 2005.

The lack of access to piped water is relatively uniform across provinces—and uniformly a characteristic of the poor (Figure 5.12). Only Bali stands out as having made progress in the provision of piped water, and even there less than half of all households have access. In general, all provinces have at least one district in which only less than 10 percent of the population has access to piped water. PDAMs have virtually no resources to increase connections to poor households due to the low amounts collected from sales revenues. The justification for keeping piped water tariffs low is extremely weak when the majority of the poor do not even have access to piped water, and when the consequence of low tariffs is that financially unviable utilities are unable to extend services to the poor.

Figure 5.12 Variation in the proportion of households in sampled villages with access to piped water



Source: Susenas, 2005.

Recent Government Initiatives

The present government, installed in November 2004, rapidly recognized infrastructure as one of the key constraints to growth and poverty reduction. Much attention has been paid to attracting private investment and reversing the slump in private investment experienced since the crisis. In January 2005, a high-profile Infrastructure Summit was held, inviting a potential US\$22.5 billion of private investment in 91 projects. The government announced its commitment to focus its own resources on economically non-viable infrastructure projects, while creating a “new partnership” with the private sector to develop commercially viable projects. The reaction was disappointing: investor confidence remains affected by the post-crisis renegotiation of many infrastructure projects; existing policy blockages to the preparation of bankable projects remain in place; and the projects offered were not well-prepared. As a result, none of the 91 projects had reached financial closure as of the end of 2006.

Recognizing the obstacles, the government has put considerable effort into removing policy blockages and building up institutional capacity in order to prepare for private investment and create a conducive investment climate. In February 2006, the government released an “Infrastructure Policy Package,” reporting on 50 policy outputs (laws, regulations, policy papers, reviews) achieved during 2005, and a further 156 policy outputs to be achieved during 2006. The broad objectives of this program are to encourage competition, to eliminate discriminatory practices that obstruct the private sector’s participation in infrastructure provision, and to redefine the government’s role, including the separation of policy-making, regulatory, and operational responsibilities.

The new institutional framework represents an important governance improvement, but will take time to bear fruit. Prior to the crisis, private infrastructure investment provided political insiders with a disproportionate share of the investment returns and left the public purse bearing an inappropriate share of the risks. The new approach is one of open and transparent competitive bidding, with careful project preparation, appropriate risk allocation and overall limits on the government’s risk exposure. It will, however, be at least another 18 months to two years before well-prepared transactions can be brought to market and financially closed, and probably even longer before the pipeline of private projects begins to make a significant contribution to infrastructure investment as a proportion of GDP.

In addition to private infrastructure, there is also a need to boost public investment. While the central government’s priorities have led to a greater share of the national budget being allocated to education and health, more could be done to support sub-national governments’ infrastructure expenditure, including co-financing, targeted incentives, and training to address capacity blockages.

Policy Recommendations

Cross-cutting recommendations

Private sector investment will be slow to mobilize, implying that greater attention should be paid to increasing public sector investment in order to meet Indonesia’s immediate infrastructure needs. Given the large infrastructure investment needs in the coming years, it is desirable that the financing burden be shared with the private sector. But attracting large amounts of private investment in infrastructure will require much better project preparation than has so far been demonstrated by the government. To believe that the private sector can prepare the projects, including carrying out the demand analysis, feasibility, environmental, and social impact studies for the government, would be misguided.

Given the difficulties inherent in designing private infrastructure transactions, it makes sense for the government to focus its efforts on the careful preparation of a few “model” transactions across different infrastructure sectors. In light of the limited experience within government in the preparation and design of these transactions, it is important that the government seeks the advice of experienced transaction advisers and that realistic timetables be established for the preparation of all relevant studies and documents. Experience gained with these model transactions can then be scaled up to increase the private sector’s contribution to infrastructure investment.

Even where private investment is mobilized, substantial public support will be required. Most private infrastructure investments will require some element of government support, in the form of land acquisition, operational or capital subsidies, or contingent guarantees. Where government support is provided, there is a need to ensure the effective use of resources, and an appropriate allocation of risks between the government and private developers. Private developers alone cannot be relied upon to provide the necessary information to the government, nor is it the role of the private sector to set targets for socially desirable outcomes such as service expansion. Competitive processes can be designed to elicit some of the information from developers, but this requires a sophisticated transaction design. Carefully designed public funding mechanisms for commercially unattractive public service objectives will be needed.

In addition to increasing the volume of infrastructure investment, improving the effectiveness of spending is a key issue. The government plays a pivotal role in developing and managing infrastructure in Indonesia and better public management of infrastructure has been identified as an area with considerable potential for overall efficiency improvements. A committee of government ministers, the National Committee on Policy for Accelerating Infrastructure Provision (KKPPI), was established in 2005 and is taking the lead in improving the policy framework for increased investment in the sector.

Greater efforts should be made to tackle corruption in public infrastructure projects. Progress is being made on economy-wide efforts to strengthen detection and prosecution, through institutions such as the State Audit Agency (BPK) and the Anti-Corruption Commission (KPK). The new governance arrangements being put in place for private infrastructure investment will help to avoid some of the egregious transactions seen prior to 1998. What remains is the need to tackle some of the specific corruption risks involved in public infrastructure investment. Many potential improvements are possible, including improved risk-focusing of physical audits, greater transparency of procurement processes, heightened sanctions for firms and staff found guilty of corruption, and revised staff incentives (Olken, 2006).⁷²

Electricity

Huge investments are required to meet expanding electricity demand in the coming years and it is likely that the brunt of this will have to be borne by the public sector. It is important that this public investment follow fundamental principles of least-cost expansion. Fuel-mix decisions remain distorted by ongoing subsidies for oil and separate pricing for export and domestic gas. These distortions should be removed to enable fuel-mix decisions to be based on true economic costs.

Current electricity subsidies are hugely inefficient, encouraging excessive electricity consumption and providing greater support to rich consumers than to the poor. Going forward, tariffs should be revised upwards and their structure reviewed to reflect the true cost of service provision; the current government transfer to compensate for the gap between increased fuel prices and the unchanged tariff revenue of PLN needs to be phased out. A well developed plan for an orderly transition is needed, as the political implications of dramatic price changes are high and a rapid increase of electricity tariffs to account for real costs could also destabilize the entire economy. Subsidies should be directed away from consumption towards connection. Because PLN's costs differ from region to region, consideration will also need to be given to regionally differentiated approaches to electrification.

Roads

A fundamental re-evaluation of the government's current approach to toll-road transaction design is required. Disputes over the form and level of government support are the most critical issue impeding the private development of major expressways. A straightforward approach to the issue would be to determine all project parameters—including procedural arrangements for land acquisition, toll-rate escalation, and guarantees in respect of specific project risks—with the exception of the level of government support. Then the government should competitively award concession rights to the firm requesting the lowest level of government support.

⁷² For recent relevant research and evidence on corruption in the Indonesia's infrastructure sectors, see for example Ben Olken: Corruption and the costs of re-distribution: Micro-evidence from Indonesia, *Journal of Public Economics* 90 (4-5), pp. 853-870, May 2006.

Fiscal incentives should be provided to sub-national governments to ensure adequate road maintenance.

For example, national government co-financing of sub-national roads investment could be made conditional on adequate road maintenance within sub-national jurisdictions.

Water and sanitation

The national government needs to take the lead in addressing the PDAM crisis, allocate the necessary fiscal resources, and provide fiscal incentives for local governments to deal with the issue.

An urgent priority is the removal of current impediments to long-term borrowing by PDAMs. A first step in this process is the restructuring of PDAM loan arrears. The process of debt restructuring should give priority to the most credit-worthy PDAMs and give incentives to the remaining PDAMs to improve their credit-worthiness (i.e. increase tariffs and cut costs by addressing commercial and physical losses). The aim should be to remove impediments to borrowing for the best PDAMs within one year. The next step should be the actual approval of long-term loans for PDAMs. Going forward, consideration should be given to removing the link between PDAM loan approvals and the issue of the debt arrears of their local-government owners. However, this should be linked to improved corporate governance to better separate the financial affairs of PDAMs from their government owners. A suggestion would be to set up a commission with the task of assisting the MoF in the investigation of PDAM portfolios and the negotiation of restructuring plans with interested local governments.

Local governments now carry the main responsibility for the performance of water and sanitation services and their capacities need to be built up to reflect this.

Local governments are the owners of the PDAMs and are accountable to their local citizens for PDAM service quality. Since decentralization, local governments have access to additional financial resources for infrastructure, which should provide the opportunity to interrupt the long-standing cycle of sub-optimal tariff policies, inadequate maintenance and investment spending, and deteriorating service. However, issues of insufficient planning, programming and implementation capacities need to be addressed, and the central government can play an important role in coordinating a national strategy and providing incentives for local officials.

The central government needs to provide much stronger signals regarding the national importance of water and sanitation, and should develop a system of fiscal incentives that rewards local governments for progress in reforming their PDAMs.

A substantial pool of national funds, calculated with reference to the investment needs of the PDAMs, should be provided to local governments conditional upon reform progress. The initial focus of this incentive scheme should be on improving the financial position and operational performance of PDAMs. As PDAM performance improves, the focus of the incentive scheme could shift to increasing household connections. The obvious focus for such a scheme would be the DAK—an existing system of conditional cash transfers to sub-national governments. The linkages and overlaps between DAK payments and deconcentration funds, which currently represent an important source of grant money for PDAMs, need to be clarified to avoid conflicting incentives provided by different sources of central transfers.

In 2005, the central government made a start by earmarking Rp 203 billion of Special Allocation Funds (DAK) for water supply.

It committed Rp 608 billion from the DAK in 2006. These resources are granted only to districts that fulfill some eligibility criteria, and are allocated and accounted through the regular local budget. DAK projects have to be completed within one year, as sector allocations are not guaranteed for multiple years.

In support of these schemes, the central government should insist upon reliable PDAM data collection.

Audited PDAM accounts and physical indicators should be made publicly available on the internet to provide for informed policy analysis and to increase public pressure for improved PDAM performance. Timely provision of these data by local governments should be a minimum criterion for participation in national incentive schemes focused on access to long-term loans and conditional cash transfers.





CHAPTER 6

Public Financial Management

Indonesia Public Expenditure Review 2007

Key Findings

Budget formulation and execution

- Indonesia has undertaken a major initiative to increase transparency and clarity in the budget process. However, the new budget system continues to rely on excessively detailed and input-focused budget documents that require considerable time to prepare and deliberate.
- Parliament has recently gained substantial powers over the budget, but interactions between the executive and legislative branches are focused on details at the expense of policy discussions. This consumes a disproportionate amount of time.
- Budget execution, particularly of development projects, is typically slow and skewed towards the end of the fiscal year. Slow disbursements are a symptom of structural blockages along the entire budget cycle, including overly detailed documentation, complicated and lengthy revision procedures, massive mid-year budget revisions and slow procurement processes.

Procurement

- While the regulatory framework for public procurement has been improved, capacity to carry out compliant procurement processes is insufficient, delaying project implementation.

Audit

- The staffing levels and geographic presence of the external audit agency, the State Audit Agency (BPK), and the main internal audit agency, the State Development Audit Agency (BPKP), are out of line with their respective mandates. The BPK is responsible for the external audit of the entire government apparatus, but has half the number of certified auditors as the BPKP, which now has a more limited role.
- As a result of the redefinition of the roles of BPK and BPKP, there is even less clarity and more overlap in the functions of the three internal audit bodies, namely the BPKP, the Inspectors General (IG) of the ministries, and sub-national auditors (Bawasda).

Key Recommendations

Budget formulation and execution

- Provided that ex post controls are strengthened, gradually replace the use of line-item budgeting, reduce the level of detail in budget documents and simplify the process for issuing them.
- Legislative budget deliberations and approvals should focus on spending policies and priorities.
- Establish a Medium-Term Expenditure Framework, allow for a multi-year budgeting facility and simplify the carry-over facility. A first step could be the authorization of multi-year budget appropriations, particularly in larger infrastructure projects.

Procurement

- The National Procurement Office should be given greater independence. An overall approach and strategy to e-procurement is needed. The nation-wide regulatory framework should be strengthened through the establishment of a procurement law and the capacity of procurement practitioners should be strengthened.

Audit

- The institutional set-up for internal audit could be streamlined. The various internal audit institutions could be consolidated into one internal audit institution with a clear obligation to work with the BPK.
- Staff and provincial infrastructure should be re-balanced between internal audit and external audit in order to adequately reflect the new mandate of the BPK.
- The role of parliament in holding executive agencies to account based on the BPK's audit findings should be more clearly defined.

Progress and Challenges in Public Financial Management⁷³

With increasing financial resources, sound public financial management systems are even more important to ensure spending quality and to mitigate risks of corruption. With more public resources to spend, the demands on the planning, budgeting and execution of expenditures will inherently become greater. Modernization of the systems, processes and institutions within the budget cycle is required if increased spending is to achieve government priorities such as poverty alleviation and growth. Furthermore, high quality and results-oriented public financial management is needed to sustain public support for expanded public spending and revenue collection.

Indonesia has made major advances in establishing a sound legal framework to manage its public finances and improve transparency. The enactment of the State Finance Law, the Treasury Law, the State Audit Law and the National Development Planning Law were significant steps towards bringing Indonesia into line with good international practice. The Ministry of Finance has undergone a major reorganization to better execute its function. The laws are now being implemented, most notably in making the national budget compatible with the international standard GFS-classification, the establishment a Treasury Single Account (TSA) and in the unification of the previously separate recurrent and development budgets.

However, significant problems remain. Despite the recent progress in public financial management reforms, weaknesses in the public financial management framework still remain in terms of planning and budgeting, budget execution, accounting and reporting, external accountability. Notwithstanding the general legal framework that is now in place, significant challenges remain with regard to underpinning the reforms through sound implementation and re-engineering the underlying business processes.

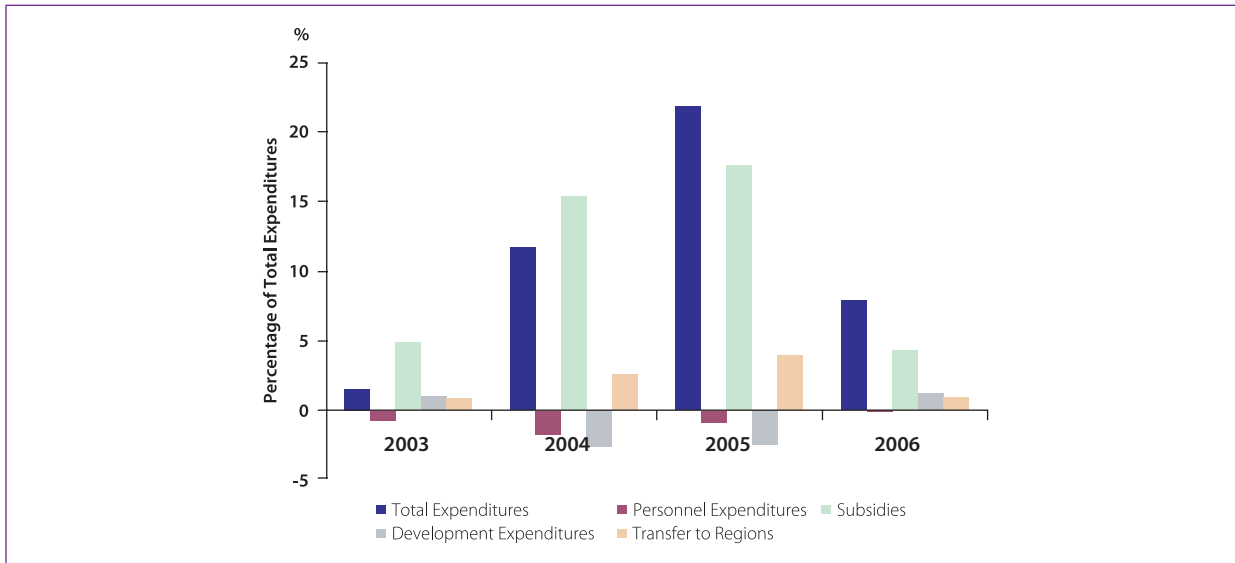
Table 6.1 Regulatory framework underway

Reform area	Status of implementation
<ul style="list-style-type: none"> Budget Planning and State Finances 	<ul style="list-style-type: none"> Government regulations on annual work plans, departmental work plans and budgets have been passed, introducing (i) more output and performance based budgeting, (ii) GFS-classification, (iii) unified budget reclassifying budget categories. Implementing regulation on accrual-based accounting not yet in place.
<ul style="list-style-type: none"> Treasury System 	<ul style="list-style-type: none"> Regional accounting offices (KAR) and local verification offices (Kasipa) are now merged into local Kanwil and KPPNs. Local payment offices (KPPNs) will take on an internal verification function. Zero Balance Accounts are being piloted in 50 selected regional treasury offices (KPPN), but a large share of expenditure is still executed through multiple government accounts. Regulation cash management not yet in place.
<ul style="list-style-type: none"> Audit 	<ul style="list-style-type: none"> Regional presence and staffing of BPK has been substantially expanded. BPK has now 16 provincial offices and 3,500 staff. State Audit Law requires seven implementing regulations, none of which has been issued yet. BPK Law No. 15/2006 passed in November 2006. Implementing regulations pending.

Source: Bappenas, World Bank staff.

⁷³ This chapter focuses on national PFM. For sub-national PFM refer to Chapter 7.

Figure 6.1 Gap between budget and realization

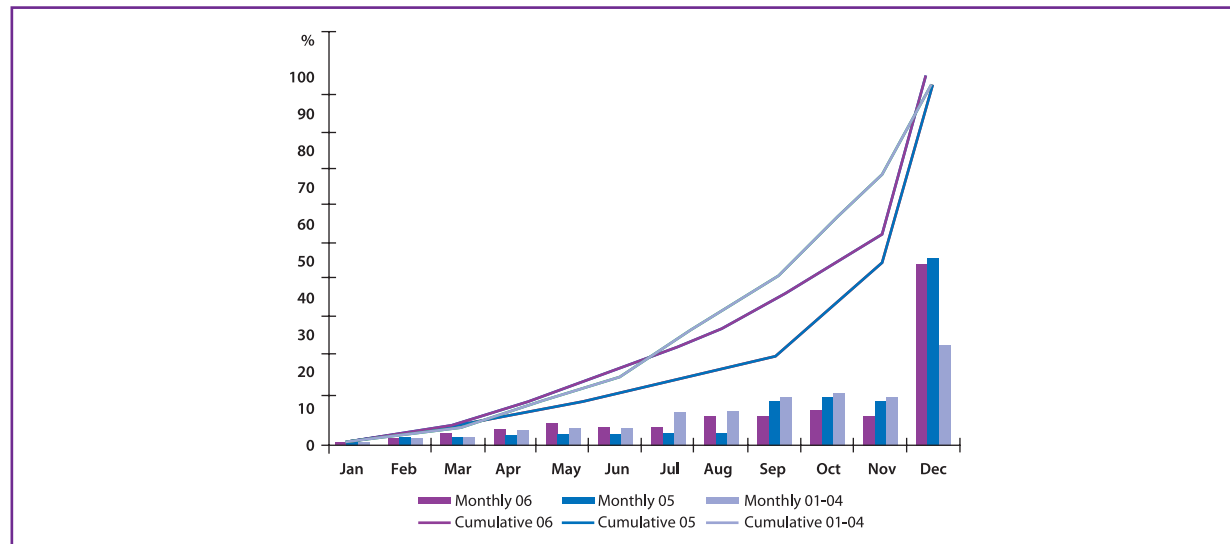


Source: MoF, World Bank.

Note: Figures are percent of total expenditures before mid-year revisions. 2006 based on preliminary realization data.

So far, some key indicators of government budget performance have not improved, particularly the budget realization indicators. Actual central government expenditure has consistently deviated from initial plans. Subsidies as well as transfers to the regions, tend to be substantially under-estimated, as a result driving overall overspending. At the same time, other parts of the budget—most notably realized capital/development expenditures—are often lower than initially budgeted (Figure 6.1). In addition, Indonesia still spends 50 percent of its total capital expenditure in the final quarter of the year. For the past five years, spending has always started slowly and then accelerated towards the end of each year (Figure 6.2). This spending pattern is cause for concern because project implementation is disrupted by an adverse cycle. Project implementation starts late and, in the case of multi-year projects, is interrupted at the beginning of each year.

Figure 6.2 Disbursement of non-recurrent expenditures



Source: MoF, World Bank staff.

Note: Figures are percent of annual total budget. FY2001-04 refers to development expenditures, FY2005 and FY2006 refer to capital expenditures and goods and services expenditures. December 06 based on preliminary budget realization data.

Slow and back-loaded disbursements are symptoms of more severe challenges that are encountered at each stage of the public expenditure management cycle. There are three main reasons that explain the difficulties in efficient budget implementation: (i) weak budget preparation; (ii) rigid budget execution; and (iii) implementation bottlenecks.

First, weak budget preparation, in particular excessive under-estimations of the oil price, has led to substantial mid-year budget revisions (issued in August). Since 2001, mid-year budget revisions have amounted to an average of 13 percent of the total budget. Such substantial revisions reduce the credibility of the approved budget and make implementation difficult, as only four months remain to implement a substantially revised and often increased budget (Box 6.1). This improved substantially in 2006 when mid-year revisions were only marginal thanks to the adjusted oil price assumption underlying budget preparations.

Box 6.1 Under-estimating the price of oil

From 2003 to 2005, Indonesia understated its aggregate revenue and fuel subsidy expenditures by setting low oil price assumptions. The oil price is a critical parameter in Indonesia's budget because 28 percent of revenues come directly from oil and gas (Pertamina) or indirectly through taxes on oil and gas products. In recent years the average oil price has been more than 50 percent higher than initially projected in the state budget (see Table below). The oil price assumption has an immediate impact on the level of transfers to sub-national governments because the DAU (equalization transfers) is set at 26 percent of the state budget. Given the substantial upward revisions seen in 2005, the DAU in reality only represented 19 percent of the budget. In 2006, the state budget used a substantially higher—and more realistic—oil price assumption, resulting in a 65 percent increase of DAU transfers.⁷⁹

Budget compared with realization

	Oil price			Total expenditure		
	Budgeted (US\$/bbl)	Realized (US\$/bbl)	Difference (%)	Budgeted (Rp trillion)	Realized (Rp trillion)	Difference (%)
2001	24	24.6	2.5	341,562.6	295,113.5	15.74
2002	22	23.5	6.8	315,529.2	344,008.9	-8.28
2003	22	28.8	30.9	376,505.2	370,591.6	1.60
2004	22	37.2	69.1	423,974.9	374,351.2	13.26
2005	24	51.8	115.8	508,938.0	397,769.5	27.95

Source: MoF.

Second, the government maintains a comparatively rigid budget execution process. Detailed input controls aim at ensuring that the composition of the budget complies with political priorities and that the budget will not be altered during execution. Spending warrants (DIPAs), while now issued at the beginning of the fiscal year, are based on a line item budget leaving little flexibility for adjustments in the composition of inputs needed to carry out a given activity. Re-allocations across DIPAs from delayed programs to better performing ones that could enhance satisfactory implementation of the overall expenditure program require a lengthy revision process involving the parliament (DPR). Allowing for more flexibility in the budget execution process to speed up spending will require introducing credible objectives and performance targets and putting in place other safeguards, including adequate monitoring and reporting capabilities to mitigate the risk of inconsistencies with initial programming objectives and improper use of funds.

Third, slow disbursement is related to downstream issues in the implementation capacities of agencies. In particular, limited capacity for timely completion of procurement processes compliant with the tightened procurement rules is holding up disbursement.

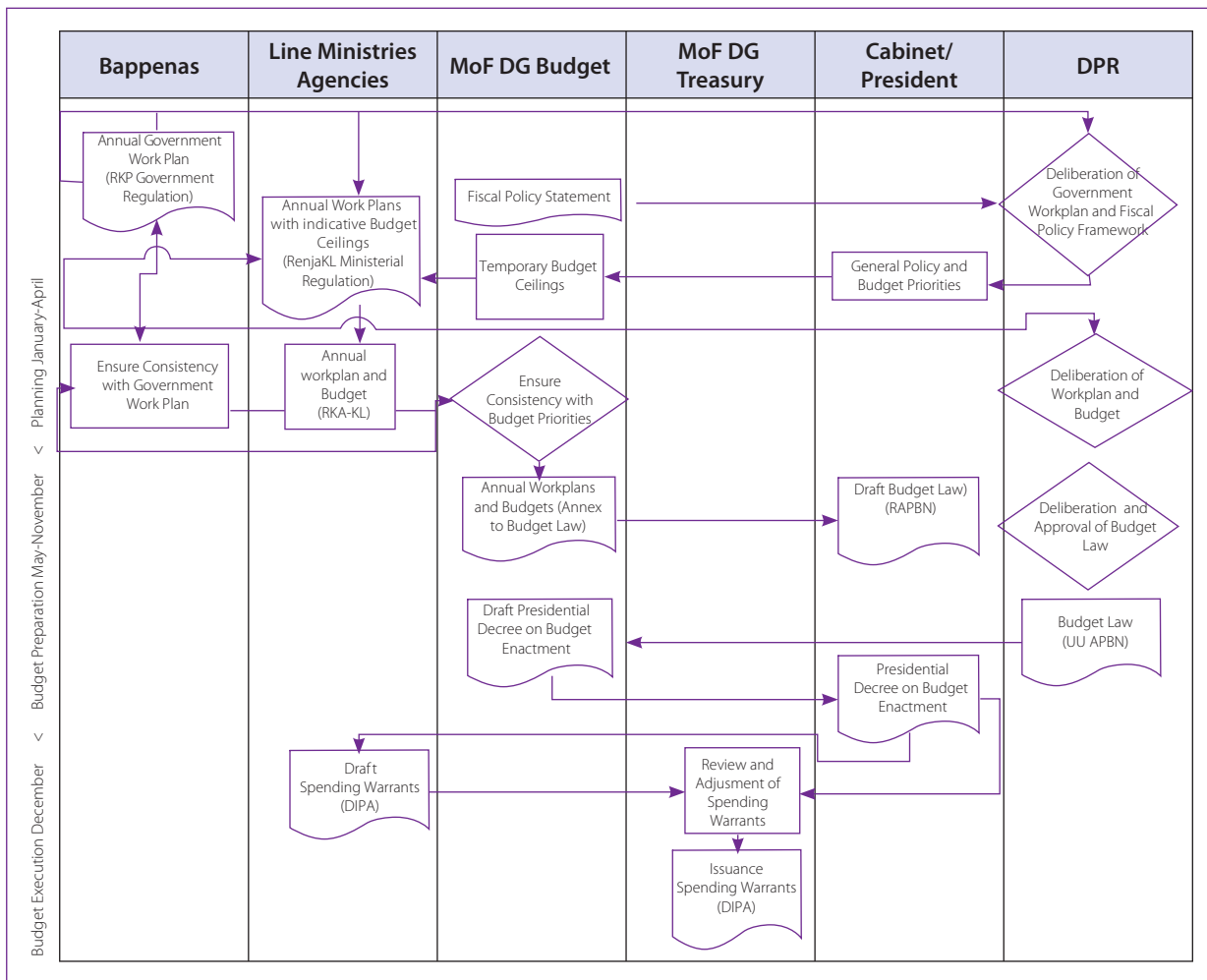
74 See Chapter 7 for a detailed analysis of 2006 transfer allocations.

Budget Formulation and Approval

Given the problems of estimating revenues and setting realistic expenditure targets, efforts need to be made to increase the overall quality of budget preparation. Increasing the quality of the budget can be done by enhancing the quality of macro-economic forecasting and modeling, and improving revenue estimation. In addition, the quality of expenditure budgeting must be given separate attention. These initiatives relate both to capacity-building and to changes in the way the budget is formulated.

The responsibility for planning and budgeting is divided between Bappenas, the Ministry of Finance and the line ministries. The division of labor between Bappenas, Ministry of Finance (DG Budget and DG Treasury) and line ministries is designed to achieve (i) policy-based budget formulation and (ii) a bottom-up approach (Figure 6.2). Each ministry and agency prepares its work plan (Renja-KL) with reference to the overall government work plan (RKP) and indicative budget ceilings. Following discussions with the parliament, ministries then prepare their work plans and budgets (RKA-KLs) on the basis of revised ceilings from the DG Budget. Spending warrants (DIPAs) are prepared by ministries and then sent to DG Treasury for approval. At the same time, the DG Budget checks the consistency between DIPAs and RKA-KLs. This is followed by implementation, which involves the ministries and the DG Treasury.

Figure 6.3 Who is in charge? Responsibilities in the budget preparation process



Source: Bappenas, World Bank staff. PP No. 21 on RKA-KL.

Further integration of planning and budgeting processes could be part of the move towards performance-based budgeting. The budget is supposed to be policy-based and formulated in a bottom-up budget formulation process. So far at least, these processes appear to have been largely paper exercises with limited impacts on allocative decisions.

Indonesia is slowly moving towards performance-based budgeting. The current medium-term development plan (RPJM) lists 32 priority areas, about 250 programs and 1,300 activities to address these priorities. Both Law No. 17/2003 and Law No. 25/2004 have formally strengthened the links between planning and budgeting. The programs that are outlined in the RPJM, the annual government work plan (RKP) and the ministerial work plans (Renja-KL) formally provide the basis for the preparation of the annual budgets by the line ministries.

In practice, however, decision-making processes between line ministries, DG Budget, Bappenas and the DPR are still driven by a focus on input compositions of budgets rather than compliance of the spending program with political priorities and objectives. Budget appropriations and execution are still based on detailed line item budgets that limit spending flexibility within programs and undermine the full benefits of performance budgeting. Likewise, little progress has been made in developing a more performance-oriented budget, let alone a performance-oriented culture. Implementation will take considerable time and a clear strategy to make it happen has been lacking. Moreover, in previous fiscal years substantial parts of the budget, such as subsidies, were excluded entirely from the planning and budgeting process. In the budget preparation for FY2008 the government is moving to a more comprehensive coverage of the budgeting process.

The current strictly annual budgeting cycle is insufficient to address medium-term public investment needs. To address this challenge Indonesia plans to implement a Medium-Term Expenditure Framework (MTEF) in 2008. Regulations in the State Finance Law provide for indicative budget ceilings to be issued for the next two years. However, in the 2006 and 2007 budgets temporary ceilings have been issued only for the forthcoming budget year.

Parliament (DPR) has strong powers over ex ante deliberation and approval of the annual budget. The budget is input-based, detailed and plays an important role in the strong focus on ex ante controls. Accordingly, deliberations in the DPR tend to focus on line items and discussion on details as opposed to overall allocations, political priorities and achievement of results. In practice, every line item of the budget is approved or rejected by the DPR. In addition, the DPR has the power to change the revenue estimates and macroeconomic assumptions upon which the budget is based.

Box 6.2 Involvement of the DPR in the budget process

The parliament participates throughout the entire budget cycle. The National Development Planning System Law (Law No. 25/2004 Article 25) and State Finance Law (Law No. 17/2003 Article 12) stipulate that budget formulation should be based on the government work plan (RKP). The RKP, together with fiscal policy statements and macroeconomics framework, is submitted to the DPR in May of the preceding year for deliberations (Law No. 17/2003 Article 13). Agreements achieved in the deliberations become references for ministries and agencies in preparing their budget proposals (RKA-KLs). They send their RKA-KLs to their counterpart commission (sector commission) in the DPR by mid-June for preliminary discussions. The results of these preliminary discussions are sent to the MoF by mid-July as a reference in preparing budget for the following year (Law No. 17/2003 Article 14). The government submits the Draft State Budget (R-APBN) to parliament by August of its preceding year for deliberations (Law No. 17/2003 Article 15).

Deliberations are organized as follows:

- Plenary Session: Parliament makes general comments on the government's proposal and the government responds to the comments.
- Budget Committee Session: Deliberations focus on macroeconomic assumptions, government revenue, expenditure priorities and the financing of the budget deficit.
- Sector Committee Session: Deliberations focus on RKA-KL.

Decisions on the draft budget law (R-APBN) have to be taken at the least two months before the budget period starts, i.e. October of the preceding year (Law No. 17 Article 15). The DPR approves the budget breakdown by unit of organization, type of expenditure, function, program and activities (Law No. 17 Article 15). As a follow-up to the enactment of the budget, the president issues a regulation (Perpres) on budget details in November. Based on this decree, ministries and agencies revise their RKA-KLs and prepare their budget execution documents (DIPA) in December.

The Indonesian budgeting system faces particular difficulty when flexibility is needed. Indonesia has recently experienced a number of large-scale natural disasters. Such events place high demands on the public financial management system: disasters call for a rapid government response and usually require large-scale in-year reallocation and mobilization of resources. In general, Indonesia has an inflexible budgeting system with regards to in-year reallocations. Agencies receive separate appropriations for salaries and other operating expenditures. Only with detailed parliamentary approval can funds be transferred between different appropriation lines or between operating expenditures, investments and program funds. As in most other countries, Indonesia operates only a small central reserve fund to meet general unforeseen expenditures (For a review of Indonesia's PFM performance after the December 2004 tsunami in comparison with other countries, see the forthcoming Fengler et al. 2007).

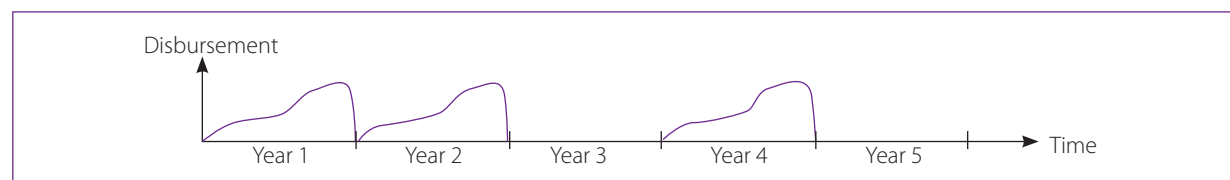
Budget Execution

In 2005, the back-loaded pattern of disbursement was more pronounced than usual and progress in 2006 was disappointing. At the end of October 2005, the government had only spent 68 percent of capital expenditure and 72 percent of material expenditure compared with the approved budget. Fifty-four percent of total capital expenditure was disbursed in December alone. Although slightly better than 2005, the disbursement record in FY2006 is still cause for concern. While aggregate government spending as of September 2006 stood at 62 percent of the budgeted funds mainly due to timely disbursement of routine expenditures such as civil service wages, the variable components of central government expenditure were again strongly affected by spending delays. As of September 2006 only 41 percent of targeted capital expenditures and only 40 percent of funds for procurement of goods and services had been disbursed.

The rigidity of the current budget execution framework is one of the factors causing a skewed in-year disbursement pattern. As a result of government efforts to accelerate spending in the first quarters of the fiscal year, spending warrants (DIPAs) for 2006 were issued at the beginning of the budget year, spending warrants (DIPAs) for 2006 were issued at the beginning of the budget year.⁷⁵ DIPAs are required to include the project manager, treasurer and procurement officer responsible of the project. Although most DIPAs were issued in January 2006, the majority of project staff had not yet been appointed by the implementing agencies.⁷⁶ The selection of staff took place during the first quarter of the fiscal year, presumably causing delays in project implementation. Reportedly, a number of DIPAs were issued despite their being incomplete but disbursement was then blocked.

The problem has been amplified by the fact that appropriations and DIPAs are strictly annual. The regulatory framework for budgeting establishes a carry-over facility, but it only relates to a one-year budget allocation. Consequently, budgets for multi-year projects have been bumpy. In-year disbursement has been skewed, project implementation has come to a halt at the end of each budget year and, in some cases, funding for projects has ceased entirely in some years only to continue later (Figure 6.4).⁷⁷

Figure 6.4 Schematic profile of project disbursement



Source: World Bank staff.

⁷⁵ In 2005, spending warrants were issued in the second quarter or, in some instances, even later.

⁷⁶ The new DIPA format was introduced in 2005. In previous years, the government issued DIPs only for development expenditures. Historically, spending warrants were issued in the second quarter or, in some instances, even later. The previously used DIP format also included names of project implementation teams.

⁷⁷ It could be argued that the problem is exaggerated as economic activity, i.e. the actual building of a road or a school, would be more evenly distributed over any given budget year. Hence, payments for any given contract will often fall after the work has been undertaken based on the degree of completion. Even so, project implementation is bumpy and economic activity uneven.

This stop-and-go approach to budgeting has created huge inefficiencies in project planning and implementation. A multi-year budgeting facility needs to be designed in a way that takes into account governance issues in an Indonesian institutional context. A prudent approach could be for the total multi-year project cost to be budgeted in one year with the money allocated to a special account for which only the project organization would have drawing rights.

Budget allocations should be commensurate with absorptive capacity. In recent years, budgets for almost all spending agencies have increased significantly. However, the spending capacity of the agencies has come under pressure. The weak link between planning and budgeting is partly responsible. Neither the government work plan (RKP), nor the budget plans of spending units (RKA-KLs), takes project planning and procurement into account. As a result, the amounts budgeted for the capital expenditure of programs tend to be higher than the absorption capacity of the spending agencies. Over-budgeting creates pressures to spend beyond spending capacity, especially in the strict annual budget system, at the cost of spending quality. Planning and budgeting have to be pragmatic and take the absorptive capacity of spending ministries into account.

Developing the absorption capacity of institutions, as well as staff skills, is needed. Given that almost 30 percent of the budget is allocated for projects (capital and material), more should be done to develop the spending capacity of line ministries. Planning and procurement skills need to be enhanced and the Public Administration Institute (LAN) could be assigned to provide such services. The LAN can recruit additional trainers from the line ministries. If deemed necessary, spending ministries should also be allowed to recruit and train staff for the implementation of these projects.

Fragmented cash management systems impair transparency and accountability in the execution of the budget. Implementation of a single treasury account (TSA) as foreseen by State Treasury Law No. 1/2004 is ongoing. Zero-balance banking arrangements with commercial banks have been successfully piloted in 50 selected regional treasury offices (KPPN) and roll-out of these pilots to all 178 KPPNs will consolidate more than 1,000 treasury accounts into one TSA. Meanwhile, a large share of the budget is still being executed through bank accounts held by both spending units and state officials (penjabat pemerintah) at commercial banks. According to the BPK Audit Report 2005, this includes about Rp 8.5 trillion held in some 1,300 current and savings accounts that are not recorded in the treasury system. These off-the-books funds not only distort the consolidated government cash balance, but are also highly vulnerable to embezzlement and corrupt activities. The adoption of government regulations on cash management will enhance the powers of the minister of finance to close unauthorized bank accounts and provide legal backing for a census of all government accounts in 2007.

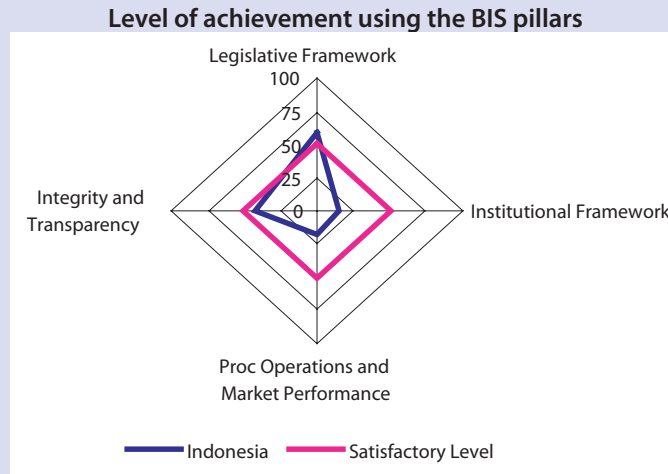
Procurement

The legal and regulatory framework for public procurement has been greatly improved with the introduction of Presidential Decree (Keppres) No. 80/2003. This decree promotes the basic principles of procurement: transparency, open and fair competition, economy and efficiency. In other words, it meets most of what is generally regarded as accepted international practice, addressing serious deficiencies that had previously existed in the system.

However, public procurement is still confusing due to the multitude of legal instruments across levels of government. Decentralization regulations allow local governments to establish their own arrangements for public procurement. Ministries and state-owned enterprises can also issue regulations on public procurement. The impact of these different instruments on public procurement is not yet documented. However, there may be inconsistencies in application due to misunderstandings and/or differing interpretations of the various regulations.

Box 6.3 The international Baseline Indicator System (BIS) for procurement

The international Baseline Indicator System (BIS) is a methodology, jointly developed by the OECD and the World Bank, to make a quantitative and qualitative analysis of a given public procurement system. The assessment is based on 12 baseline indicators, which are organized into four groupings called pillars: (i) the legislative and regulatory framework, (ii) the institutional framework and management capacity, (iii) procurement operations and market practices and (iv) the integrity of the public procurement system. Using the BIS tool, an assessment of Indonesia's public procurement system was conducted in 2001. The result of the analysis is indicated below. This assessment will be updated in the FY2007 CPAR using version 4 of these indicators, in addition to compliance/performance indicators that measure actual performance of the system.



Scores represent percentage of baseline elements constituting a desirable "good practice standard" that are met by a given country. The baseline level for satisfactory performance is set at 50 percent under each indicator. While generally below this level, Indonesia scores better on regulatory framework and integrity but less well on market performance and the institutional framework.

Source: OECD 2006 Methodology for assessment of national procurement systems.

The regulation of public procurement through presidential decrees is not anchored in sufficiently high level law. The main concern is that in a decentralized environment, the regulation of public procurement through presidential decrees has not anchored the basic principles and policies governing public procurement at a sufficiently high juridical level of the law. This is why there is a need for a procurement law that has regard to both generally accepted international principles and practices and specific Indonesian requirements. Bappenas, through the National Procurement Policy Office (NPPO), is in the process of preparing a draft law on procurement. The passing of a new law on procurement will strengthen the regulatory framework and provide the necessary over-reaching legal instrument.

Historically, there has been no single agency or central authority to lay down uniform and consistent policies, rules and procedures in public procurement, and ensure clear and enforceable sanctions and enforcement mechanisms. Keppres No. 80/2003 requires the establishment of a National Procurement Policy Office, or NPPO. Preparatory work for an NPPO has been completed and an interim arrangement was to establish the NPPO within Bappenas with the objective of strengthening it gradually to become an independent body.

There is a need to set up the NPPO as an independent and empowered procurement agency with adequate resources. While the NPPO within Bappenas is taking the main responsibility in procurement policy, the current institutional set-up does not provide functions for advisory services for procuring agencies, collecting procurement performance data, building a procurement community among public officials, or servicing a procurement complaints system and, most importantly, the continuous development of the public procurement system.

Introduction of basic-level training and tests for the certification of procurement practitioners are important initiatives. Procurement proficiency is limited to a small number of individuals in selective line ministries. There is no cadre of procurement practitioners, and no career stream or remuneration incentive for either project or procurement

management, with project managers and tender committee members returning to former positions upon completion of a project. This creates fragmentation in accumulating procurement experience in the civil servants cadre. Keppres No. 80/2003 set January 2005 as a deadline for certifying tender committee members in basic procurement. This target date has been shifted twice and now stands at January 2008.

Certification of practitioners at intermediate and high levels will be introduced in the future but specific dates are still lacking. The percentage of those civil servants who have passed the exam is less than 12 percent of the 168,000 public servants who had taken the basic certification exam by the end of 2006. The proposed certification of procurement practitioners is a step in the right direction but there is a lot of demand still to be covered. The government should consider additional remuneration upon certification due to the added responsibilities and encourage certified practitioners to make a career using this expertise.

Previous regulations had the effect of limiting competition and dividing the internal market, ensuring that local SMEs were awarded contracts in their local government jurisdictions. The success of opening markets under Keppres No. 80/2003 still has to be examined given the newly decentralized environment and the possibility of provincial practices and legal instruments impacting participation at the provincial level. However, the absence of an over-reaching procurement law critically undermines elimination of such practices. The development of a set of standard bidding documents would be a major step forward in ensuring consistency of the tools across agencies and provinces. The development of these documents is under way and is expected to be piloted in 2007.

One of the main challenges facing public procurement reform in Indonesia is the need to enhance transparency and improve mechanisms to address corruption. While progress has so far been so, there are promising signs in this area. For example, one of the main initiatives on enhancing transparency and access to bidding opportunities is the use of e-procurement. A draft law is being prepared to provide the overall legal framework for the authorization and use of electronic signatures. The next important step for the NPPO is to develop a master plan for the deployment of e-procurement that will set a common protocol to be applied across the country, develop a robust e-procurement system and enact the draft presidential decree.

There is a need to strengthen internal controls and especially enforcement capacity within government agencies, including the application of strict, credible and enforceable sanctions in cases of malfeasance or non-performance. While Keppres No. 80/2003 allows for a complaints mechanism, it is still routed through the user (purchaser) line agency and is not independent. In addition, the Anti-Corruption Commission (KPK) and the Business Competition Supervision Commission (KPPU) have a role when complaints relate to corruption cases in the case of KPK and unfair competition in the case of KPPU. This arrangement raises issues over the reliability and efficiency of the complaints system. As for a sanctions mechanism, there are anti-corruption provisions in Keppres No. 80/2003. However, as long as there continues to be weak capacity, low salaries with no satisfactory career path for government procurement practitioners, no credible independent complaints handling mechanism and weak enforcement with no sanctions for corrupt behavior, then corruption will continue to flourish.

Audit

Strengthening the internal and external audit functions is becoming more important as Indonesia modernizes its public sector. With the comprehensive decentralization of public expenditure and the need for increased budgetary flexibility in government agencies, coupled with the generally accepted need for increased transparency and accountability of public expenditure, audit reform becomes central.

Table 6.2 The audit landscape

Institution	Is accountable to	Coverage	Capacity	Regional presence	Type of audit
External Audit					
State Audit Agency (BPK)	The Audit Board	Whole of government	3,500 staff	16 provinces	Mainly compliance audits, occasionally performance audits
Internal Audit					
State Development Audit Agency (BPKP)	The president through the Ministry of Manpower	Ministries, including deconcentrated spending	6,800 staff	25 provinces	Mainly performance audits
Inspector Generals	Ministers	Ministries, including deconcentrated spending	2,300 staff	NA	Mainly performance audits
Sub-national government internal auditors (Bawasda)	Governors and district heads	Sub-national governments	16,000 staff	All staff work in the 440 districts	Both compliance and performance audits

Source: World Bank staff assessments based on prevailing laws and regulations and interviews with government officials. BPK Profile 2006.

The complex institutional set-up and the fragmented nature of the accompanying regulatory framework do not facilitate transparency, accountability and coordination among audit institutions. Furthermore, there appear to be no informal mechanisms in place to overcome these structural impediments to efficient and effective auditing. The relatively limited numbers of trained and certified auditors in Indonesia are therefore not used as effectively and efficiently as they could be. In addition, only the reports of the State Audit Agency (BPK) are subject to scrutiny by elected officials and made available to the public.

The reports rendered by the BPK to the public and to parliament are very general and do not have the characteristics of an audit report. Irregularities found by audits are presented in very general terms using broad classifications such as (i) non-compliance, covering irregularities where regulations have not been followed, (ii) uneconomic and inefficient practices, and (iii), ineffectiveness, covering expenditure not in accordance with the original purpose. Most of the irregularities reported to parliament fall in the non-compliance category. No detailed break-down of this category is included in the report, although it must encompass a very wide range of irregularities from very serious offences to more trivial irregularities.

The BPK is an independent institution but may benefit from a stronger role for parliament in holding it accountable, if this is done with care. In accordance with the 1945 Constitution, the State Audit Law does not provide for external accountability of the BPK. The BPK is accountable only to its board, which is appointed by parliament through a presidential decree. The board decides itself whether a member should resign.

There would be several benefits from giving parliament a stronger role in holding the BPK accountable: (i) Parliamentary involvement will create stronger pressure for making the audit relevant and responsive. (ii) Parliamentary involvement could strengthen public awareness of the BPK and of its reports. (iii) A strengthened role for parliament might provide pressure for increased efficiency and effectiveness of the BPK.

Attention should be given to clearly defining the role of parliament in regard to audit institutions and reports so that all stakeholders know and agree on their roles. An appropriate mechanism will need to be put in place—either a new and separate committee (a Public Accounts and Audit Committee), an existing committee, a subcommittee of an existing committee, or a special and new form of organization. In addition, the members of the DPR and their secretariat need to build necessary capacity to handle audit reports and information constructively.

The BPK now has a broad mandate but faces limitations in delivering on its expanded remit. Law No. 5/1973 established the BPK as the 'supreme' audit institution in Indonesia. The State Audit Law enacted in 2004 provides the BPK with a mandate to audit all public institutions at all levels of government. The BPK is also entitled to audit state-owned enterprises, except those that have raised capital through the Indonesian capital markets, in which case existing regulations require registered audit firms to be the auditors. Military institutions are currently not subject to audit. According to the State Audit Law, the BPK undertakes financial audit, performance audit and forensic audit. The BPK submits annual and six-monthly summary reports of audits undertaken to parliament and also presents audited accounts of municipalities and regions. These reports certify the financial statements of the audited reporting entities and comment on any irregularities or inefficiencies in budget execution that may have been noted. In addition, the BPK is authorized to set government auditing standards, although it has yet to issue such standards for internal use.

The staffing of the BPK does not correspond to its new mandate. The external audit institution with only about 3,500 employees is expected to guarantee the quality of the internal audits of nearly 25,000 staff. Prior to the enactment of the new audit law, financial audits were within the remit of the BPK, as well as the State Development Audit Agency (BPKP), which is the internal government auditor institution. The BPKP now has a clear mandate to undertake internal audits, in addition to other agencies (e.g. Inspectorates General of each line ministry). This change in responsibility has not been fully reflected in a reallocation of staff and resources between these audit agencies. The result is that the BPKP is disproportionately well-resourced compared with the BPK. As an example, the BPKP has its offices in 26 provinces nationwide, whereas the BPK has offices in only 16 as of end 2006.

The mandate of the BPK is relatively clear but its strategy does not correspond to existing levels of skills and staffing. State Audit Law No. 15/2004 achieves the intended clarity in roles of different audit institutions by confirming the BPK as the independent external auditor for public agencies at all levels, national as well as sub-national. The BPK prepared an institutional development plan in 2001 and has taken important practical steps to help prepare itself for the expanded mandate. An internal strategy of the BPK for the period 2006-10 has been prepared and a tactical implementation plan is being finalized. Given the challenges facing the BPK in delivering basic external audit services within the area of financial management and given its present capacity, it is better placed to focus on delivering high quality and timely traditional financial audits than delivering on a more sophisticated audit agenda.

While the State Audit Law gives the BPK a strengthened mandate, it remains silent on the BPK's own internal governance and management structure. A separate law on these aspects is now being developed and is considered essential to put this institution on a robust footing as a credible and independent organization.

The mandates and division of labor between the three internal audit institutions are unclear. Internal audit is within the remit of the BPKP, the Inspector General (IG) of each ministry, and the audit functions of regional and district government Bawasda. The BPKP was established by a presidential decree in 1983. Subsequently, the mandate of the BPKP has been changed through numerous decrees. At present, the BPKP's mandate is unclear. It can assist IGs, municipalities and regions upon invitation and it provides training for these entities. Although its mandate has been significantly reduced, it maintains fully staffed decentralized offices in 26 province and its 6,800 staff are under-utilized. The BPKP's staffing levels no longer reflect its reduced mandate, in particular when compared with the external government auditor, the BPK. Furthermore, reports from the BPKP are neither made available to the public nor to the DPR.

The IGs have different roles in different ministries. The IGs' actual mandate, staffing and activities are determined by the minister in charge of their respective ministries. The IGs therefore operate as individual institutions corresponding to the number of ministries. They generally focus on routine technical and performance audits, including compliance with technical standards. Professional backgrounds of IG staff therefore normally include technical qualifications and not accounting or financial auditing. Audits are conducted on a random basis or in accordance with an approved annual audit plan, but not on a risk-based methodology.

The Bawasda undertake general audits of regional budget expenditure, but lack capacity. The auditing of financial transactions in each of the 33 provinces and more than 440 local governments is undertaken in a very complex institutional set up. There is a Bawasda in each district, but Bawasda staff generally do not possess the skills to undertake all audit responsibilities. In addition, different sources of funding of expenditure in local governments are audited

by different audit institutions. The Bawasda are consequently supported by the BPKP, the IGs of different ministries, the BPK and the Bawasda in other districts in undertaking internal audits in their respective local governments. The BPK is the external auditor of all local governments. The IG of the Ministry of Home Affairs coordinates the activities of the different audit institutions undertaking internal audit functions in each district. The Bawasda submit annual audit reports to the respective regional administrators and provide copies to the IG of the Ministry of Home Affairs, the provincial Bawasda and the auditee. Reports are not made available to the public or the DPR. However, the BPK submits a consolidated audited report to the DPR covering all the Bawasda.

Expenditure control and payment systems are being improved, but implementation remains unsatisfactory.

In order to strengthen responsibility and accountability over the appropriated budget by the line ministries, the function of payment order issuance has been transferred to the line ministries. This has resulted in better segregation between the functions of verifying transactions and issuing payments. While this segregation of duties is well designed, implementation experience has not been entirely satisfactory in the absence of clearly defined standards of accounting evidence, verification procedures and well-staffed prepayment audit units in the spending agencies. One endemic weakness that has been noted in accounting practices is the quality of accounting evidence that is accepted for payments from the DG Treasury.

Policy Recommendations

The ongoing reforms in budget preparation, budget execution and audit, would benefit considerably from a continuous and systematic evaluation of Indonesia's budget system. Typically expenditure reviews focus on sectoral expenditures and increasingly analyze the institutional aspects of budgeting. This report also provides a first attempt at comprehensively analyzing the quantitative dimensions of budget performance in Indonesia. Several follow-up activities are on the way or could be envisaged to further strengthen the analytical basis of future budget decisions and nurture a culture of budget evaluation. These follow-up activities include: (i) public expenditure tracking surveys to identify leakage; (ii) an updated World Bank Country Procurement Assessment Report (CPAR) to assess progress in procurement modernization; and (iii) an analysis of the role of parliament in ex ante and ex post oversight of the budget.

Budget formulation and execution

The introduction of performance-based budgeting (PBB) and a Medium-Term Expenditure Framework (MTEF). Given the nature of these reforms a long-term vision is needed. A realistic, operational and comprehensive road-map for budgeting reforms should be drawn up taking into account the unique Indonesian governance setting, the weak control environment and well known problems of corruption. At the same time, achievable, demonstrable and well defined changes should be introduced in the shorter term to respond to the political pressure for rapid change and to sustain reform momentum. Such short-term changes could include the review and simplification of budget documents and procedures, and the establishment of annual output statements for departments and programs, as well as the authorization of multi-year budget appropriation for large investment projects.

In the medium term, output controls should gradually replace the use of input controls and line-item budgeting. Reforming the budget process, together with the content and structure of budget documents, is integral to the introduction of a performance-based budget. A PBB is often understood to imply that input controls are replaced with output controls and that financial and management responsibilities of implementing units and agencies are increased accordingly. Managers are given the freedom to manage, but at the same time they are held accountable for their results and their use of public funds. Given that governance issues are prevalent in Indonesia and given the weak ex post controls in place at present, reforms in this area should proceed with caution and ex post controls need to be strengthened before input controls are relaxed.

Legislative budget deliberations and approvals should be adjusted to focus on spending policies and priorities. Parliament has strong powers over ex ante deliberation and approval of the annual budget. The budget is input-based, detailed and plays an important role in the strong focus on ex ante controls. Accordingly, deliberations

in parliament tend to focus on line items and discussion of details as opposed to overall allocations, political priorities and achievement of results. Capacity-building measures, as well as institutional reforms, should focus on clarifying the role of the DPR in budget formulation with the aim of focusing deliberations on results and spending priorities.

The process for rapid in-year mobilization and reallocation of financial resources in disaster situations should be streamlined. Work should be undertaken to develop a fast-track budget process for use in times of extraordinary need for public expenditure, while maintaining sufficient accountability safeguards to ensure that public funds are spent efficiently and effectively.

Procurement

The establishment of a new procurement agency would be an important systemic contribution to fighting corruption, leading to lower input prices and improved procurement governance. In addition, roll out of a comprehensive e-procurement strategy should be pursued to contribute to increased market transparency and competition.

Audit

The many separate regulations covering external and internal audit do not provide for coordination and clarity. Consolidating regulations under one law and streamlining the responsibility for issuing decrees and secondary regulations would provide greater transparency and facilitate coherence.

There are potential synergies and other benefits from consolidating the three internal audit institutions into one. The consolidation of the internal audit institutions would have the following benefits:

- Better coordination of internal audit without duplication.
- More resources would be available to undertake development of new audit products and there would be potential for lower costs for support services such as management, HR and finance management and management.
- Better coordination and cooperation between the internal and the external audit institutions as there would be only two parties to coordinate.
- Strengthening the independence of internal audit. This is particularly critical at the sub-national level.

The introduction of accrual accounting has huge implications for the skills of budget officials, auditor and users of the national budgets and accounts, including members of parliament. According to the State Finance Law No. 17/2003, budgets for 2006 have to be submitted on an accrual basis and the financial statements of that year correspondingly have to be submitted and audited on an accrual basis. The phased introduction of those reforms should be planned taking into account current skill levels and should include training activities for internal and external auditors, among others.



CHAPTER 7

Fiscal Decentralization And Regional Inequality

Indonesia Public Expenditure Review 2007

Key Findings

- Indonesia's main development challenge is no longer to transfer money to poorer regions but to ensure that those poorer regions spend the money well. Indonesia's most important source of sub-national financing—the General Allocation Fund (Dana Alokasi Umum or DAU)—increased nominally by a remarkable 64 percent in 2006. Most regions have now enough resources to make a real difference for the lives of their citizens. Even regions considered fiscally poor now command an average of US\$425 per capita annually and have seen increases in their DAU transfers of 75 percent in 2006.
- More than half of the DAU increase will go towards financing the civil service wage bill of provinces and districts. The full coverage of the sub-national wage bill provides disincentives for sub-national governments to streamline their civil services.
- Many local governments have difficulty spending their additional resources. Their reserves in local bank accounts been rising rapidly and have reached a record 3.1 percent of GDP by November-2006.
- The largest spending item of sub-national governments is on core government administration, which absorbs 32 percent of all sub-national expenditures. This large share of administrative spending has crowded out spending in key sectors, particularly health, agriculture and infrastructure.

Key Recommendations

- Monitor the performance of sub-national governments; provide incentives for good performers and technical assistance for those lagging behind. Indonesia's main decentralization challenge is to ensure effective allocation of its resources towards the improved delivery of public services and pro-poor policies. A credible performance system could help establish an allocation system that captures needs and performance.
- Remove full coverage of the civil service wage bill. This would not only strengthen the DAU's equalizing impact but, more importantly, also provide incentives for streamlining sub-national civil services. Such a measure would empower sub-national governments to find the optimal combination of inputs (size of workforce, capital, intermediate inputs and outsourcing) for public service delivery.
- Reduce the excessively high sub-national spending on government administration. Sub-national governments should prioritize expenditures that directly affect public service delivery.

Inequality and Decentralization

Indonesia is an extremely diverse and dispersed country. It spans more than 17,000 islands (of which 6,000 are inhabitable) across three time zones and offers everything from rainforest and agricultural plains to alpine mountains. A trip from the Western-most tip of Indonesia (Sabang in Aceh) to the eastern-most point (Merauke in Papua) takes more than 10 hours by plane and is impossible to complete within a day. Almost 300 ethnicities speaking more or less 250 different languages live throughout the archipelago.

Indonesia is home to Java, one of the most densely populated regions in the world, as well as Papua, one of the least densely populated regions. If all of Indonesia was as densely populated as Java, Indonesia would have a population of two billion people and be by far the largest country on earth. By contrast, if Indonesia was only as densely populated as Papua, the total population would only be 11 million (similar to Belgium).

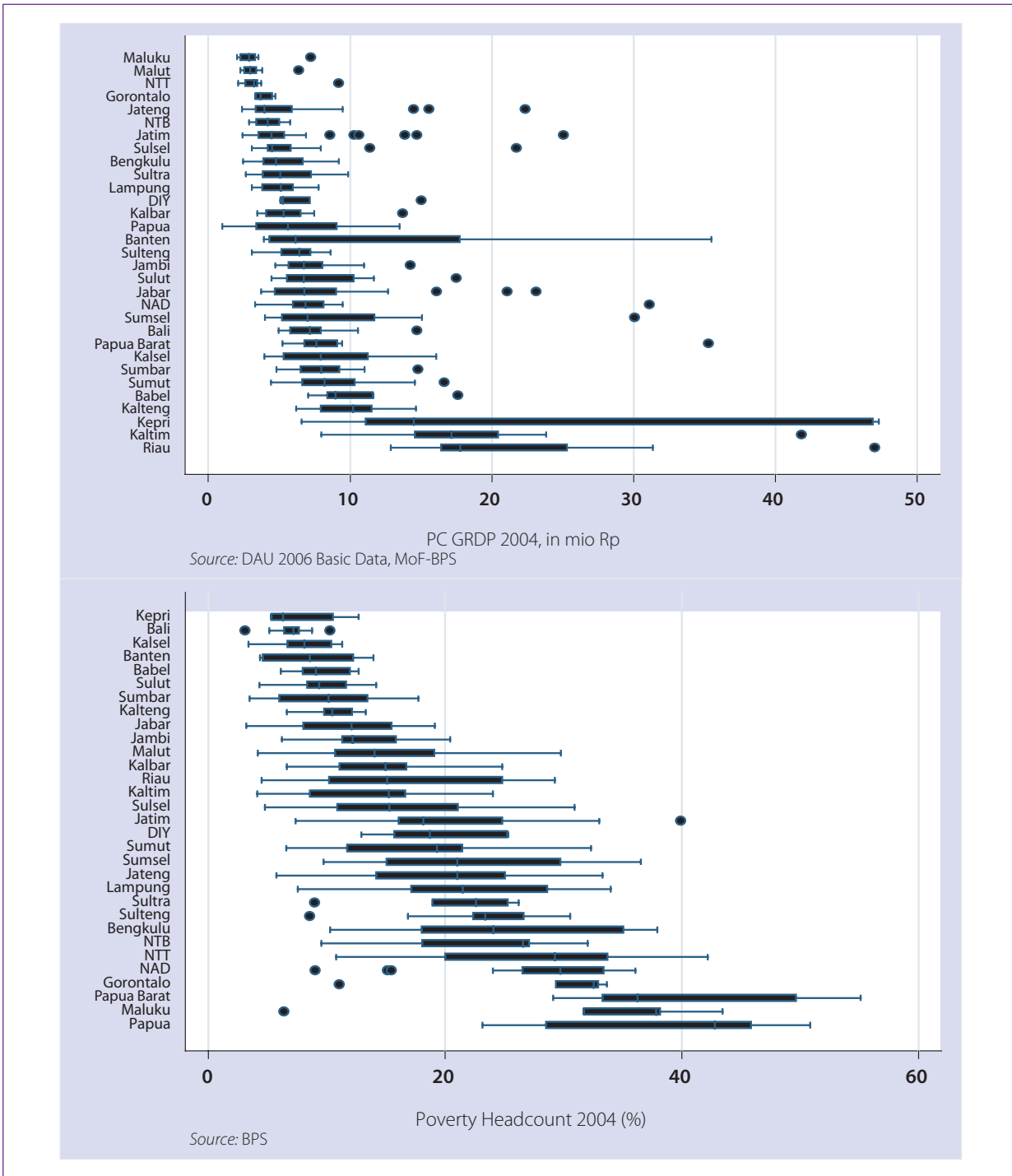
This diversity and geographic disparity are mirrored by very significant differences in social and economic conditions. While some parts of Indonesia give the appearance of an advanced mid-to-high income country, others share more similarities with low-income societies (Table 7.1). Education facilities in Jakarta and other big cities are as high as other developing countries, while education and health standards, particularly in eastern Indonesia, are as poor as those in most African countries:

- **The regional GDP per capita differs widely.** For instance, the per capita GDP of Riau and East Kalimantan, two oil and gas producing regions, is almost 20 times higher than that of Maluku or East Nusa Tenggara (NTT). The levels of GDP per capita of districts within provinces also show wide disparities as indicated by the length of the horizontal boxes in Figure 7.1.
- **Poverty rates at the districts level vary widely within and across provinces** (Figure 7.1). Poverty rates are below three percent in selected cities (Denpasar, Bali, and Bekasi, West Java), but above 50 percent in Manokwari, West Irian Jaya, and Puncak Jaya, Papua.
- **The Human Development Index (HDI) average for Indonesia in 2002 was 0.66.** At the district level, the HDI varied from as low as 0.47 in the *kabupaten* of Jayawijaya to 0.76 in East Jakarta.

These extreme disparities influenced Indonesia's ambitious decentralization in 2001 most notably with respect to the fiscal framework. The "balancing fund" (*dana perimbangan*) is a key element of the decentralization architecture. It consists of several transfers and aims to minimize the gap between expenditure needs and the fiscal capacity of local governments. Its aim is to enable districts to deliver decentralized services of sufficient quality and quantity considering the socio-economic differences across Indonesia. Oil and gas producing regions have also benefited enormously, as they now receive 15.5 percent of these oil and gas revenues.

Decentralization has devolved much of the responsibility to the local level by assigning authorities rather than functions to local governments. According to the Decentralization Law No. 22/1999, obligatory sectors for local government include health, education, public works, environment, communication, transport, agriculture, industry and trade, capital investment, land, cooperatives, manpower and infrastructure services. Provincial governments coordinate local governments and perform functions that affect more than one local government. Within one single year, much of the responsibility for public services was decentralized. The regional share in government spending almost doubled, while two thirds of central civil services were likewise reassigned to the regions and more than 16,000 service facilities were transferred.

Figure 7.1 Pronounced regional disparities



Source: World Bank staff estimates.
 Note: The charts plot the distribution of per capita regional GDP and poverty headcount at the district level grouped by the province. The length of the box represents the distribution of the 25 percentiles around the median. The length of the whisker is 1.5 times the distance between the median and the first or third quartile. The dots outside the whiskers are the outliers. In the first chart, the regions with Per Capita Regional GDP larger than Rp 50 million are omitted for presentational purposes.

Table 7.1 The significance of Indonesia's social and economic disparities

Indicator	Strongest district	Weakest district	District average	Standard deviation	Mexico (middle high)	Zambia (low)
GRDP per capita (US\$)	33,759 ⁷⁸	208	1,055	2,104	6,500	491
Poverty rate (%)	3	51	18	10	20	73
Adult literacy rate (%)	99	21	91	9	90	68
Secondary gross enrollment rate (%)	125	9	82	15	109	26
Life expectancy (years)	73.7	57.5	66.3*	3.1*	75	38

Source: World Bank staff estimates based on BPS 2004, Human Development Report (Bappenas and UNDP, 2004), Little Data Book (World Bank, 2006).

Note: * Based on province level data.

Six years into decentralization, the assignments of functions across levels of government is far from clear due to weaknesses in the decentralization laws themselves. Clarity in assigning functions is needed to guarantee accountability at the local level. Law No. 32/2004 was passed with the aim of significantly reshaping intergovernmental administrative relations. It introduced the direct election of sub-national heads and provided more clarity than the preceding Law No. 22/1999 in terms of obligatory functions. However, the government's implementing regulation, which intends to regulate the assignment of these functions, has still not been passed by the DPR. Moreover, the central government still needs to ensure that sectoral laws promulgated by sectoral ministries do not contain conflicting interpretations of service responsibilities across levels of government. In addition, Law No. 32/2004 also reaffirms the role of provinces as representatives of the central government in the regions. This came with new significant oversight and operational functions for provinces vis-à-vis *kabupaten/kota*, as well as stronger central control through the Ministry of Home Affairs and the governor as the center's representative.

Box 7.1 Key decentralization laws, 1999-2006

May 1999 : Framework laws for decentralization promulgated. Law No. 22/1999 governs regional autonomy and Law No. 25/1999 governs fiscal relations. Implementation was in January 2001.

December 200: Law No. 34/2000 on regional government taxation passed by parliament (DPR).

August 2001 : Special Autonomy for Aceh and Papua. These two laws grant the two provinces an additional oil and gas revenue share to strengthen their fiscal capacity and accelerate development. Papua is also awarded a special autonomy fund (2 percent of the national DAU pool).

October 2004 : Amendment to Decentralization Laws No.22 and 25/1999): Law on Regional Autonomy No.32/2004 and Law on Regional Finance No.33/2004.

May 2006 : Aceh Government Law No. 11/2006 redefined special autonomy and introduces an additional special autonomy fund (2 percent of national DAU pool) which will be allocated to Aceh starting 2008.

Source: World Bank staff.

Since decentralization, income levels have improved across the country, but the richest districts have outstripped the poorest.⁷⁹ The national poverty rate declined from 24 percent (1999) to just under 18 percent (2005). Although all districts in Indonesia experienced a decline in poverty, richer districts benefited disproportionately from the recovery. The richest districts saw the poverty headcount halved but in the poorest districts the rate only fell by one sixth. Consequently, the income gap between richest and poorest districts has widened. On average, the richest districts grew above the national average, while the poorest districts were below the national average.

Poverty is particularly concentrated in regions dependent on agriculture (see Annex G.2). Poverty is positively associated with the share of GDP coming from agriculture and negatively associated with the share from manufacturing. A larger service sector is also associated with a lower poverty headcount. As the manufacturing and service sectors outgrow agriculture so the gap between rich and poor regions will widen.

78 The city of Bontang in East Kalimantan has by far the highest per capita regional GDP in Indonesia. The city has 117,000 inhabitants and its main activity is oil and gas manufacturing, particularly from liquid natural gas (LNG), which contributes to 87 percent of its GRDP in 2004. The district with the second-highest per capita GDP is the kabupaten of Mimika in Papua with US\$13,052 per capita GDP. The district has 126,000 inhabitants and its main economic activity is mining.

79 The richest districts are those 20 percent of the districts with the lowest poverty headcount; the poorest districts are the 20 percent with the highest poverty headcount. See Annexes H.1 and H.2 for poverty and economic indicators by district.

Regarding the quality of service delivery, there is no clear trend. First evidence on a limited subset of *kabupaten/kota* shows that decentralized government services in health, education and administration have improved (Kaiser, Pattinasarany and Schulze, 2006), while the quality of the police service, which has not been decentralized, has deteriorated. However, sectoral studies have highlighted the deficiencies and decline in several key services, particularly water and electricity (see Chapter 5). Research on the local investment climate also revealed a large number of weaknesses with local government.⁸⁰

Central government's efforts in developing minimum service standards might help clarify service responsibilities across levels of government. The central government has passed government regulation PP No. 64/2005 imposing minimum service standards across all sub-national governments. By the end of 2006, minimum service delivery standards are at varying stages of progress across the full range of sectors in which they are being developed. Those for education and health are at an advanced state of readiness according to the Ministry of Home Affairs. If the exercise is continued and fully implemented it might help clarify service responsibilities, given that in principal service responsibilities must be clear before standards are set.⁸¹

Expenditures

Sub-national spending

Sub-national governments have almost complete authority over the spending of their fiscal resources. Sub-national governments and their parliaments control spending from all revenue sources. These include own-source taxes and charges, shared revenues from taxes and natural resources, and grants (with the exception of the special purpose grant). Provincial and district governments are now managing about 36 percent of total public expenditure, compared with 24 percent in the mid-1990s.

The largest spending item of sub-national governments is government administration, followed by education. Spending on administration is particularly significant at the provincial level (38 percent of total spending) and the district level (30 percent). This is in stark contrast to what is found in more modern economies, which typically allocate 5 percent or less of their budgets to such expenses. The largest items in administrative spending include salaries and allowances for the local head of the executive and his/her staff and parliamentarians, as well as public office building rehabilitation and construction (see Chapter 3 for a full analysis of spending on administration).

⁸⁰ See Annex H.3 for existing evidence on decentralization and service delivery.

⁸¹ See World Bank 2006, *Making the New Indonesia Work for the Poor*, p. 236-238 for an analysis of the clarity of function of between levels of government and suggested functional assignments

Table 7.2 Spending at the sub-national level by sector, 2004

	Province		Kabupaten/ kota		Total (Province + Kabupaten/kota)		Central /		Total	
	(Rp bn)	(%)	(Rp bn)	(%)	(Rp bn)	(%)	(Rp bn)	(%)	(Rp bn)	(%)
Agriculture	1,823	6	4,201	4	6,024	4	2,679	8	8,703	5
Education	3,815	12	39,805	33	43,620	29	7,345	23	50,965	28
Health	3,000	9	8,108	7	11,108	7	2,395	7	13,503	7
Mining	195	1	74	0	269	0	230	1	499	0
Trade, NBD, FCS	479	1	681	1	1,160	1	185	1	1,345	1
Government Apparatus and Supervision Sector	12,327	38	35,529	30	47,856	32	613	2	48,469	26
Manpower Sector	426	1	452	0	878	1	177	1	1,055	1
National Defense and Security Sector	0	0	0	0	0	0	400	1	400	0
Environment and Spatial Planning	619	2	1,233	1	1,852	1	148	0	2,000	1
Infrastructure	8,321	26	17,147	14	25,468	17	14,099	43	39,566	22
Others	1,399	4	11,728	10	13,127	9	4,168	13	17,294	9
Total	32,404	100	118,959	100	151,363	100	32,437	100	183,801	100

Source: World Bank staff calculation based on SIKD and DG Treasury data (MoF).

Note: NBD = National Business Development, FCS = Finance and Cooperative Sectors. Others category includes pensions, subsidy to subsidiary regions and other category. To avoid double counting the subsidy to subsidiary regions of the province is excluded. * = Preliminary figures from DG Treasury, MoF.

The sectoral allocation of sub-national budgets remains sub-optimal. Because of the large share of administrative spending, other sectors receive an insufficient share of local budgets (Table 7.2). This is particularly true of health and agriculture.⁸² The World Bank (2004b) has estimated that Indonesia needs to invest around five percent of GDP annually in public infrastructure, much of which is local in character, in order to sustain a 6 percent medium-term economic growth target. In addition, the bloated share of administrative spending can be prone to corruption and other type of budget misuse without adequate accounting and reporting procedures (Box 7.2)

Box 7.2 Increasing “unspecified” expenditures in Papua

Papua has been among the main beneficiaries of decentralization. This most remote province has not only received one of the highest per-capita allocations through transfers, but starting in 2002, Papua also received a special autonomy fund. This additional fund has not only boosted the development expenditures of the province but also recurrent expenditures, particularly salaries. While Papua received this large increase in resource transfers, a category titled “others” increased disproportionately, doubling between 1999 and 2001. Items classified as “others” include unforeseen expenditures, pensions and assistance, and other expenditures not included in the previous classifications. Petty cash funds of local offices (*dinas* or *kantor*) are examples of expenditure reported under “others”. These so called “tactical funds” (*dana taktis*) are not illegal but difficult to track and prone to corruption and other types of budget misuse.

Source: World Bank 2005, Papua Public Expenditure Analysis; Regional Finance and Service Delivery in Indonesia’s Most remote Province.

82 Chapter 2 and Chapter 4 provide a more detail discussion of the levels of agriculture and health spending.

Deconcentrated spending

Central government spending in the regions (deconcentrated spending) has been rising steadily. In 2004, central government departments spent more than 50 percent of their development budgets in the regions, particularly in the social sectors, which have been expanding since 2003. Central spending in the regions augmented total sub-national spending by about 21 percent (Lewis & Chakeri, 2004). Deconcentrated development spending on the education and social sectors is among the highest. In 2004, these two sectors accounted for 17 percent and 63 percent of sub-national expenditure, respectively. Deconcentrated development spending on transport and industry is especially significant because 2004 sub-national spending in these two sectors almost doubled. Except for government administration, more than half of central spending is carried out in the regions. Central spending on state apparatus is, predictably, concentrated in Jakarta.

Deconcentrated development spending tends to benefit regions that are already fiscally well off. During the first three years of decentralization, Indonesia's richest province, East Kalimantan, received more central spending than any other province in the country and ranked second after Maluku in per capita terms. The *kabupaten/kota* in East Kalimantan, Riau, Aceh, and Papua—fiscally the richest local governments—received more than twice as much central spending on average as did other local governments between 2003 and 2004. In 2004, deconcentrated spending per capita was positively correlated with total fiscal revenue and, as a result, failed to contribute to fiscal equalization.

Box 7.3 Overlapping spending between central and sub-national levels: The case of East Java

Most deconcentrated spending in the regions goes towards financing the provision of services that have become the responsibility of provinces and *kabupaten/kota*. A recent study of central development spending in East Java estimated that 90-95 percent of central education, health, and public works (settlements) spending in the province went towards financing sub-national tasks as defined in the decentralization legislation. In addition, this research documented a new and increasingly important type of 'deconcentrated' expenditure, called *anggaran belanja tambahan* (ABT) or, roughly translated "expenditure budget supplements". The ABT consists of departmental cash transfers to local government budgets and substitute for direct central project implementation. These transfers often occur just before the mid-year revision of the budget. Such transfers from central line agencies to sub-national budgets contradict with current decentralization laws and should preferably be converted into DAK.

Source: Oosterman and Samiadji, 2005.

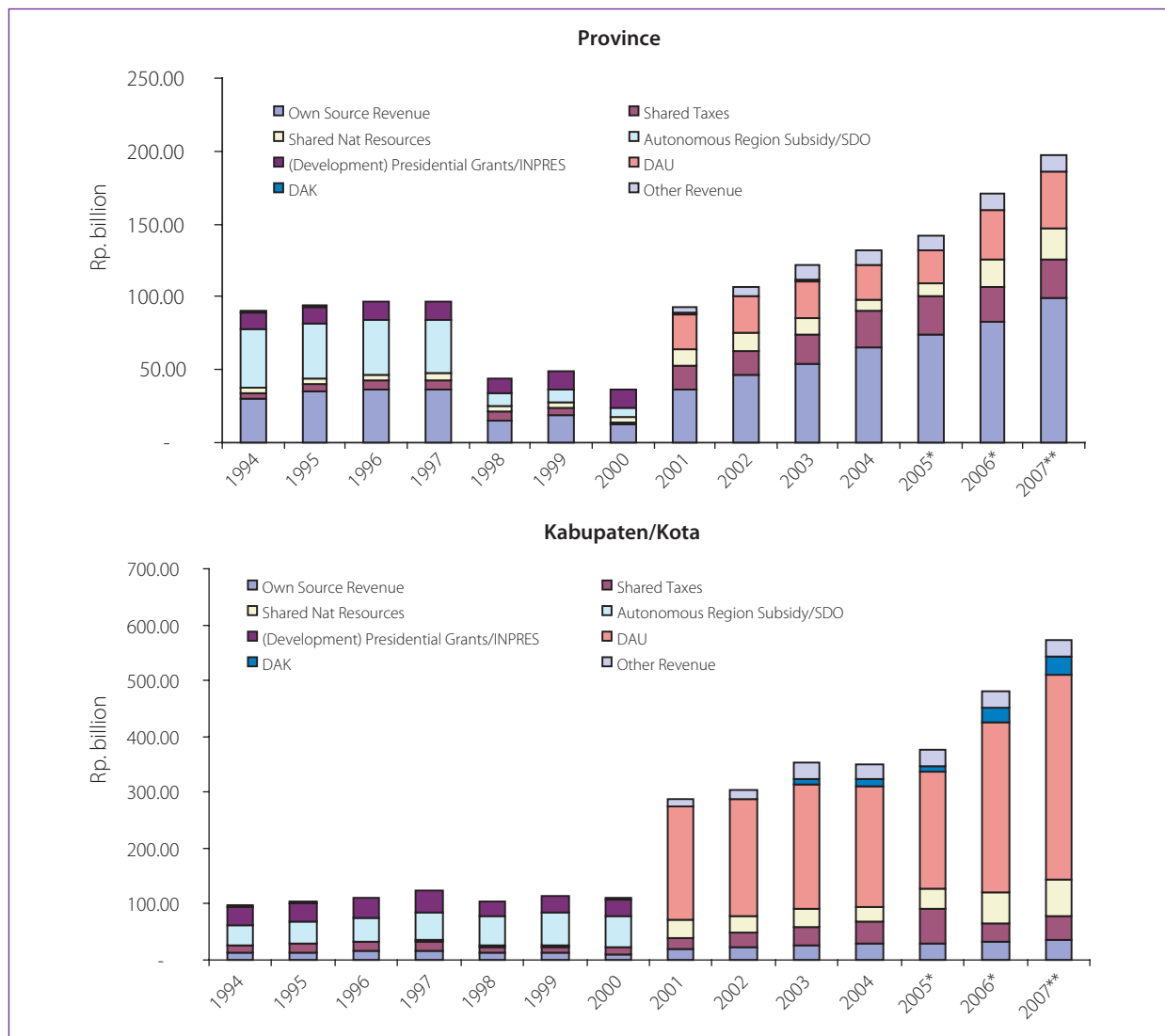
The official governmental policy, as embodied in Law No. 33/2004, is to re-channel central spending to decentralized tasks through the special purpose transfer (DAK). However, central departments have so far managed to delay the implementation of this agenda. They have been able to do so in large part because of continuing legal ambiguities concerning precise service assignments across levels of government (Smoke, 2003). A Ministry of Home Affairs government regulation, based on Law No. 32/2004, is intended to clear up the assignment problem, but has not yet been issued. This regulation will outline central, provincial and district government spending authority in 30 sectors. However, for many sectors the delineation of authorities remains vague and the draft regulation notes that forthcoming ministerial decrees from central departments will provide additional details regarding the assignment of services across levels of government.

Spending authority needs to be clearly and transparently delineated between the levels of government. The government's work plan (RKP) and annual budget (RKA-KL) procedures contain a possible, albeit more bureaucratic, solution to the problem of unclear and conflicting service assignments. During the planning and budgeting cycles, central departments submit detailed work programs and expenditure plans to Bappenas and the MoF for approval. In theory, Bappenas and the MoF could define central spending on local functions and evaluate departmental work programs and spending plans with a view to determining and eliminating such expenditures by departments. This approach is expected to be implemented in the near future, yet it is far from straightforward. One of the challenges will be for Bappenas and the MoF to reach a consensus on an operational definition of central spending on local tasks.

Revenues

After decentralization, Indonesia’s sub-national governments have become among the fiscally strongest in the developing world. Before decentralization, central transfers were mostly in the form of earmarked grants. The largest was the subsidy for autonomous regions (Subsidi Daerah Otonom, or SDO). Development spending was financed by the Inpres (Instruksi Presiden) system, a presidential instruction fund that served an array of specific purposes, from re-greening to the construction of schools and public markets. After decentralization in 2001, central transfers were designed to minimize the vertical and horizontal fiscal imbalances incurred in providing the regional governments’ functions stipulated in the decentralization law. These transfers were therefore called ‘balancing funds’ (*dana perimbangan*).

Figure 7.2 Sub-national revenue before and after decentralization



Source: World Bank staff calculation based on BPS data and SIKD MoF.
 Note: Data in real terms (1994 price = 100). * = Planned budget. ** = Estimated budget.

Sub-national governments are mainly funded by intergovernmental fiscal transfers. The balancing fund comprises three elements: shared revenues (tax and non-tax), a non-earmarked general allocation grant (Dana Alokasi Umum, or DAU), and an earmarked special allocation grant (Dana Alokasi Khusus, or DAK). The shared tax revenue comes from property and income taxes that are administered by the central government and transferred back to the regions. The shared non-tax revenue is basically the natural-resource revenue that is distributed back to the regions

on a derivation basis.⁸³ The DAU is a general allocation grant for equalization purposes and the DAK is a specific grant given to finance certain sectors that are national priorities (Figure 7.2). In addition, sub-national governments receive own-source revenues from local taxes and charges.

Intergovernmental fiscal transfers

The largest component of the balancing fund is the DAU, which accounts for about 45 percent of sub-national revenues. The DAU accounts for 56 percent of kabupaten/kota revenues and only 16 percent of provincial revenues. The largest revenue source for the provinces is own-source revenues, which mostly come from taxes.

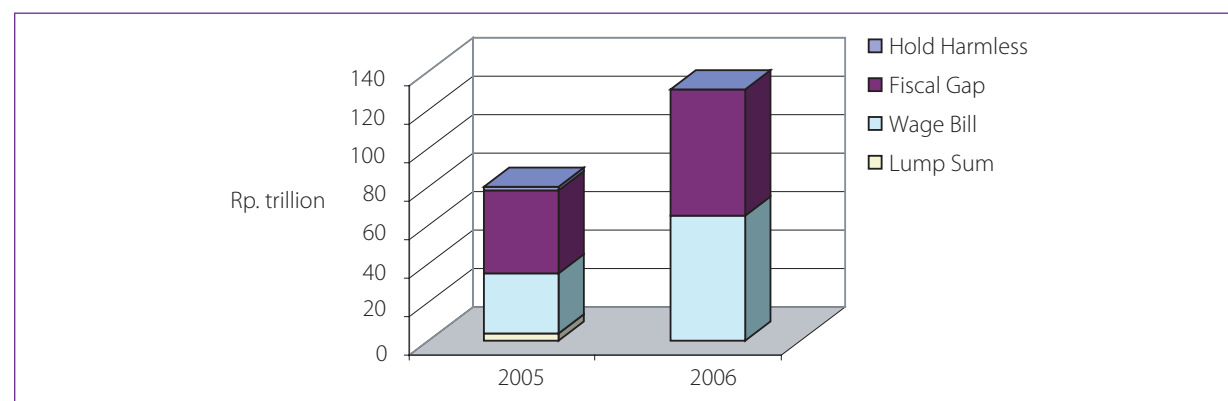
Table 7.3 Sub-national government revenue, 2005

	Province		Kabupaten/Kota	
	Amount (Rp bn)	Share (%)	Amount (Rp bn)	Share (%)
Own-source Revenue	28,014	49.2	12,530	8.8
Shared Taxes	9,312	16.3	15,122	10.6
Shared Natural Resource Revenue	6,190	10.9	17,488	12.2
DAU	9,181	16.1	79,843	55.9
DAK	16	0.0	4,628	3.2
Other Revenue	4,260	7.5	13,196	9.2
Total Revenue	56,973		142,807	

Source: World Bank staff calculation based on SIKD, MoF.

The DAU allocation employs a formula-based allocation mechanism. The overall DAU pool at the national level is calculated as a share (currently 26 percent) of net national revenues (net of shared revenues). The DAU formula has two components, the 'basic allocation' (BA) component and the 'fiscal gap' (FG) component. Until 2005, the 'basic allocation' component consisted of a lump sum and a civil service wage bill component that covered only a portion of the wage bill. Starting in 2006, the DAU covers the full wage bill of each sub-national government before applying the formula. The fiscal gap is calculated as the difference between fiscal capacity (FC) and expenditure needs (EN), which will be partially covered by the DAU. The FG component of DAU is allocated to the districts pro rata of their fiscal gaps. It is the main driver of equalization. Although the proportion has been increasing, the importance of the fiscal gap formula in the distribution mechanism is only partial. Indeed, only 50 percent of the total DAU pool is distributed using the fiscal gap formula (Figure 7.3).⁸⁴

Figure 7.3 The composition of the DAU pool



Source: World Bank staff calculation based on SIKD-MoF and BPS.

Note: Data for kabupaten/kota DAU pool only and in real terms (2005 price = 100)

83 The distribution arrangement is regulated in Government Regulation (PP) No. 55/2005

84 For an analysis of the DAU allocation over time see Annex H.5.

Box 7.4 The DAU formula

The 2006 DAU is allocated according to the following formula.

$$DAU_i = BAI_i + FGI_i \quad (1)$$

The subscript *i* indicates the respective kabupaten/kota.

$$FGI_i = EN_i - FCI_i \quad (2)$$

$$EN_i = [0.3 * \text{Population Index}_i + 0.1 * \frac{1}{HDI_i} + 0.15 * \text{Area Index}_i + 0.3 * \text{Cost Index}_i + 0.15 * \text{Regional GDP per capita Index}_i] * \text{Avg Expenditure of subnational Government} \quad (3)$$

$$FCI_i = OSR_i + STX_i + SDA_i \quad (4)$$

where STX = Shared Tax Revenue, SDA = Shared Natural Resource Revenue, HDI = Human Development Index, OSR = Own Source Revenue.⁸⁵

Source: Law No. 33/2004.

The ‘hold harmless’ provision limits the extent of fiscal equalization through the DAU allocation. This provision stipulates that the regions will not receive fewer transfers than in the previous year. It was introduced in the first year of decentralization when the FC component accounted for only 18.5 percent of DAU and did not include the natural-resource revenue as part of the fiscal capacity component. Today, this provision favors resource-rich districts, but by law it will be phased out by FY2008.

Box 7.5 Innovations in DAU allocation

Effective in 2006, the DAU allocation contains significant changes in the overall allocation mechanism and in the fiscal gap formula:

1. Total DAU pool at 26 percent of the net national revenue.
2. Basic allocation of the DAU to cover total wage bill of each regional governments.
3. Fiscal capacity components—own-source revenue (PAD), shared tax revenue, shared natural resource revenue—now fully weighted.
4. The poverty gap indicator in the expenditure needs a formula substituted by an inverse of Human Development Index (HDI) and Gross Regional Domestic Product (GRDP) Per Capita.
5. Hold harmless provision to be lifted by FY2008.

Source: Law No. 33/2004.

Full coverage of the sub-national civil service wage bill provides a disincentive for sub-national governments to streamline their civil services. The main variable determining the basic DAU allocation is a district’s wage bill. Any cut in a district’s wage bill (without a concomitant cut in all other districts) implies a decrease in the basic allocation of the DAU (with a one-year lag). As mentioned, the basic allocation is about half of the total DAU. Consequently, this component of the DAU formula effectively eliminates half of any reformist government’s savings in its wage bill savings by reducing the DAU.⁸⁶

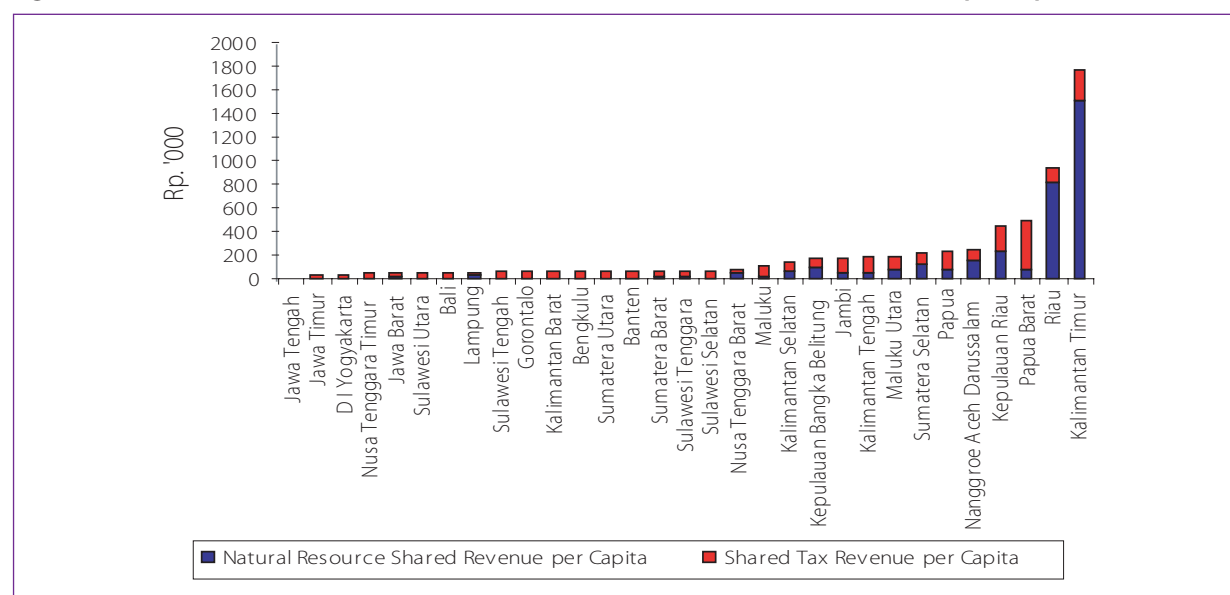
The revised decentralization law will have mixed effects. The net effect of the removal of the hold-harmless provision and the introduction of full wage bill coverage will yield mixed results on most conventional measures of equalization. In per capita income terms the allocation will be more equalizing, but it will result in a less equitable distribution of fiscal resources in terms of the ratio of sub-national revenues to expenditure needs (Arze, 2005).

⁸⁵ The area index gives the relative size of the district or province, the cost index refers to the relative cost of construction, the regional GDP per capita index gives the GDP per capita relative to the average of all districts or provinces. The weighted indexes are then multiplied by the average expenditures of the province (districts) for the DAU allocation for provinces (districts).

⁸⁶ It is worth noting, however, that if a district decides to lower its wage bill, it will receive more discretionary funds through the increase of the fiscal gap (FG) component, but the gain will still be less than the reduction in the wage bill. While this does not penalize those districts cutting their wage bills, it may or may not be an adequate incentive for districts. Meanwhile, all those districts not making any reduction to their wage bills will receive more funds. On the other hand, if all districts cut their wage bills concurrently, then the gains would not only be more significant, but they would also be experienced by all districts that have positive fiscal gaps (some 95 percent of all districts in 2006). This fiscal incentive will only exist if districts have hiring-and-firing capacity in order to identify the effective number of civil servants they need to provide basic services.

The second-largest transfers to sub-national governments are shared revenues, including shared taxes and revenues from natural resources. In 2004, shared revenue amounted to some 20 percent of sub-national budgets. While shared taxes represent about two-thirds of these transfers, revenues from natural resources are highly concentrated in a small number of oil producing regions, making them one of the main beneficiaries of decentralization. In 2006, only 62 out of 440 *kabupaten/kota* and only five out of 33 provinces are oil and gas producing regions and therefore receive oil and gas shared revenues. Most of these *kabupaten/kota* are located in Riau, archipelago Riau and East Kalimantan.⁸⁷

Figure 7.4 Distribution of natural resource shared revenue and shared tax revenue (per capita, 2006)



Source: World Bank staff calculations based on MoF allocation data.

In 2009, the regions will receive an even higher share of oil and gas revenues. A provision in Law No. 33/2004 stipulates that regions will receive an additional 0.5 percent of oil and gas revenues. The increase is earmarked for the basic education budget. However, it remains unclear how this new stipulation will be enforced.

Table 7.4 Property tax by sector, 2005

Sector	Rp bn	%
Urban	3,121.7	19.3
Rural	555.5	3.4
Estates	359.3	2.2
Forestry	151.6	0.9
Extractive	12,018.0	74.2
Total	16,206.0	100.0

Source: World Bank staff estimates based on MoF.

The centralization of all property taxes denies local governments a potentially important policy and revenue tool. While property taxes are administered and collected locally in a majority of countries, it remains centralized in Indonesia. The central government defines the bases, sets rates (across all property tax sectors), administers the tax and keeps 9 percent of total tax receipts as an administrative fee. In 2005, total property taxes amounted to Rp 16 trillion, a sum that represents 120 percent of total local government own-source revenues. Within total property taxes, the extractive industry sector (mainly oil and gas) accounts for the largest share (nearly three-quarters in 2005) and has grown substantially with rising oil prices. The other important tax is the urban property tax, which accounted for 20 percent of the total property tax in 2005 (Table 7.4).

Decentralizing property taxes would give local governments a revenue instrument that they could tailor to their needs and use to compete with neighboring jurisdictions.⁸⁸

87 As indicated by Coefficient of Variation (CoV) and Gini Coefficient. The CoV and Gini for Natural Resource Shared Revenue per Capita are 2.7 and 0.84. The CoV and Gini for Shared Tax Revenue per Capita are 2.48 and 0.73.

88 For a detailed analysis of property taxes trends and potentials see Annex H.5.

The property tax has the potential to be increased substantially. Decentralizing urban and rural property taxes would conform to international best practices in tax assignment across levels of government. Property tax revenues in these two sectors are currently equivalent to one-quarter of kabupaten/kota own-source revenues. The potential for further increasing their yield is high. The current statutory tax rate is between 0.1 and 0.2 percent, depending on the sector and appraised value and, as such, among the lowest in the world. In addition, (central) administration of the tax is currently weak. Recent evidence suggests that only around 40 percent of total property tax revenue is realized, given current tax base definitions and tariffs (Lewis, 2003a). Property valuation is the most problematic aspect of administration, but coverage and collection are also inefficiently carried out.

The DAK has grown rapidly but remains modest relative to other transfers. In 2001 and 2002, the DAK amounted to less than Rp 1 trillion. In 2005, the DAK stood at Rp 3.9 trillion (up from Rp 3.6 trillion in 2004). It is expected that the DAK will become even more important in the years to come, especially if the Ministry of Finance succeeds in re-channeling central deconcentrated spending on decentralized tasks through the DAK, as required by Law No. 33/2004.

There is no consistent pattern of DAK usage. The sectoral coverage of the DAK in the initial years of operation was limited to education, health, local infrastructure (roads and irrigation), and government office buildings (for newly created local governments). In 2006, the DAK was dedicated to infrastructure of basic services and its coverage expanded to new local infrastructures (potable water), fisheries, agriculture and the environment. Several goals have been mentioned at different points in time covering a broad range of potential uses from the promotion of key sectors to poverty, spillover corrections, or minimum standards achievement. In such a policy vacuum, there is a risk that the grant will become fragmented across many sectors and purposes.

The poorer and politically more unstable provinces, particularly Aceh and Papua, have been among the main beneficiaries of fiscal transfers. Both provinces have also been granted “special autonomy status” with Law No. 18/2001 for Aceh and Law No. 21/2001 for Papua. With special autonomy both provinces received additional resources. Starting in 2002, Aceh and Papua received a higher share of oil and gas revenues. In addition, Papua received a substantial Special Autonomy Fund (Dana Otsus) representing 2 percent of the national DAU pool. Following the enactment of the new Aceh Governance Law No. 11/2006, Aceh will also receive a Special Autonomy Fund starting in 2008 for 15 years. The allocation will then be reduced to 1 percent from 2023 until 2028 (Box 7.6).

Box 7.6 Distribution and management of the Special Autonomy Fund

The Special Autonomy Fund (Dana Otsus) adds about 20 percent to Papua’s already substantial resources. In Aceh, the Dana Otsus will likely represent up to 30 percent of sub-national revenues in 2008. In Papua, the Special Autonomy Fund is partly allocated to strategic programs, while the remainder is distributed to the districts on a formula basis that is similar to the DAU formula. The provincial government of Aceh still needs to determine the allocation formula for its 2008 Special Autonomy Fund.

Transparency and accountability, however, remain a challenge in managing the Special Autonomy Fund in both provinces. Delays in transferring the Special Autonomy Fund and the special share of oil and gas revenue are frequent, which constrains planning, financial management and cash flow at the local level. Regional governments do not have access to detailed information about oil and gas production and costs. The cumbersome reporting procedure also contributes to delays.

Analysis of the Special Autonomy Fund indicates that its distribution mechanism and management can be greatly improved by:

- Identifying the main purpose of Special Autonomy Fund. If it is intended to equalize the share of the formula allocation it should be increased and the formula itself should be improved. If it is targeted at accelerating development of certain sectors then earmarking should be enforced.
- Simplifying the reporting procedure at the central, as well as district, level and improving accountability, information flow, and management and evaluation systems.
- Clarifying the ambiguous definitions in the regulation to improve allocation effectiveness and efficiency.

Source: Papua Public Expenditure Analysis: Regional Finance and Service Delivery in Indonesia’s Most Remote Region (World Bank, 2005); Aceh Public Expenditure Analysis, Spending for Reconstruction and Poverty Reduction (World Bank/DSF, 2006).

Own-source revenues

Despite recent increases, total sub-national own-source revenues remain low at only 8.5 percent of the total.

Own-source revenues remain heavily centralized. In 2001, sub-national own-source revenues increased to 5 percent of total domestic revenues, up from 3.5 percent in 2000. Between 2001 and 2005, sub-national revenues rose steadily but slowly to reach 7.6 percent of total public revenues. Seventy percent of sub-national own source revenue is collected by provinces (Table 7.5).

Table 7.5 Sub-national and central government own-source revenue

Rp billion (constant 2001 prices)

	2001		2002		2003		2004*		2005**	
		%		%		%		%		%
Kabupaten/Kota	5,267	1.7	6,650	2.3	7,302	2.4	8,020	2.3	9,764	2.5
Provinces	10,005	3.2	12,720	4.4	14,925	4.8	17,920	5.2	23,028	6.0
Total Sub-National	15,272	4.9	19,370	6.8	22,227	7.2	25,940	7.6	32,793	8.5
Central	299,183	95.1	266,831	93.2	285,901	92.8	316,083	92.4	352,288	91.5
Total Public	314,455	100.0	286,201	100.0	308,128	100.0	342,023	100.0	385,081	100.0

Source: World Bank staff estimate based on data from MoF and Bank Indonesia.

Note: * Sub-national figures are preliminary estimates based on executed budgets; central figures are final budget executions. ** Sub-national figures are preliminary estimates based on executed budgets; central figures are preliminary executed budget estimates.

Sub-national governments' own-source revenues include local taxes, user charges and fees. Taxes on electricity, and hotels and restaurants make up 75 percent of total district level tax revenues. Charges for health services provided by local public clinics (Puskesmas), the issuance of building permits and public market fees make up about 50 percent of total charge revenues. Other own-source revenues include those generated by local government enterprises (such as PDAMs) and interest income on unspent balances. Each of the three main types of local revenue—taxes, charges, and others—contributes roughly one third of total own-source revenues. In comparison, the own-source revenues of provinces are more prominent than those of the districts. The most significant taxes at the provincial level are on motor vehicles, and transfers of titles and registrations. Motor-vehicle taxes account for almost 80 percent of total provincial tax revenues. The most significant user charges are for health, building permits and fees for the use of public assets. These three charges make up two-thirds of total charge revenues. Interest income on bank balances is the most noteworthy 'other' source of own-revenues. Taxes constitute the most significant source (90 percent of the total) of provincial own-revenues (Table 7.6).

Local tax administration tends to be extremely inefficient. The costs of administering local taxes and charges consume over 50 percent of receipts.⁸⁹ There is, however, significant variation in efficiency across local governments. In the early 1990s, the Ministry of Home Affairs established a computerized tax administration system in some large local governments. However, this system no longer appears to be operational. Consequently, whether a computerized system may help to reduce the huge inefficiencies has still to be determined.

89 See Lewis and Suharnoko, 2006. By comparison, cost-to-yield estimates from the US range from less than 1 percent for most local taxes to around 1.5 percent for the property tax (Mikesell, 1982). The US cost-to-yield ratio is defined as administrative cost divided by revenue *net of cost*, however. Using this definition, the overall cost-to-yield ratio for local governments in Indonesia becomes as high as 110.5 percent.

Table 7.6 Kabupaten/kota and provincial revenues, 2004

Kabupaten/Kota Revenue	Rp bn	%	Provincial Revenue	Rp bn	%
Local Taxes	4,034	3	Local Taxes	20,084	43
Electricity	2,037	50	Motor vehicle title transfer	9,058	45
Hotel and restaurant	1,009	25	Motor vehicle registration	6,608	33
Other	988	24	Other	4,419	22
User Charges	3,423	3	User Charges	1,165	3
Health	1,266	37	Health	523	45
Building permits	370	11	Building permits	157	14
Other	1,787	52	Other	485	42
Other own-source revenue	2,702	2	Other own-source revenue	1,447	3
Transfers	112,080	92	Transfers	23,903	51
Total	122,239	100	Total	46,599	100

Source: World Bank Staff calculations based on SIKD and MoF data.

Most of the newly established local revenues have proven to be economically harmful (Barnes et al, 2005). With decentralization, district governments were given the authority to create their own taxes and charges and provinces the ability to create new user charges. Since 2001, sub-national governments have in fact established a wide array of new revenue instruments.⁹⁰ A Survey of Regional Investment Attractiveness carried out by the Regional Autonomy Watch (Komite Pemantauan Pelaksanaan Otonomi Daerah, or KPPOD) in 2004 captured the opinion of business owners who found local tax regimes to be an important constraint on investment. Although the local tax burden is moderate, compliance costs, especially those associated with business licensing, may have some negative impacts on the business climate, at least in certain sectors (Lewis and Suharnoko, 2006). There is also a problem of corruption related to local taxation, which has not been cured by decentralization (Kuncoro, 2004; von Luebke, 2005).

The draft revisions to Law No. 34/00 on Regional Taxation restrict the ability of sub-national governments to levy taxes and charges to a predetermined list. The government expects that the new policy will reduce the proliferation of sub-national taxes. The government's ability to monitor compliance will be a key determinant in the success or failure of this reform.

Sub-National Public Financial Management

Performance of the budget system

The regulatory framework for regional public financial management reforms is largely in place. Before decentralization local governments followed the finance administration manual, Makuda, which had not been updated for almost 20 years. After decentralization, the central government passed comprehensive legislation for financial management reforms at the regional level.⁹¹ Major components of reforms include budget unification, performance budgeting, medium-term expenditure frameworks and some organizational restructuring of financial management units in sub-national governments. One major achievement is that most funds transferred to local governments will soon be included in local budgets (e.g. the transformation of deconcentration funds into DAK).

⁹⁰ Recent work indicates that sub-national governments may have passed as many as 6,000 new tax and charge by-laws (Peraturan Daerah—Perda) issued during 2000 through mid-2005, many of which have introduced new taxes and charges, the remainder changing the tariffs and/or bases of existing taxes and charges, as allowed by Law No. 34/2000 (LPEM-FEUI, 2005a).

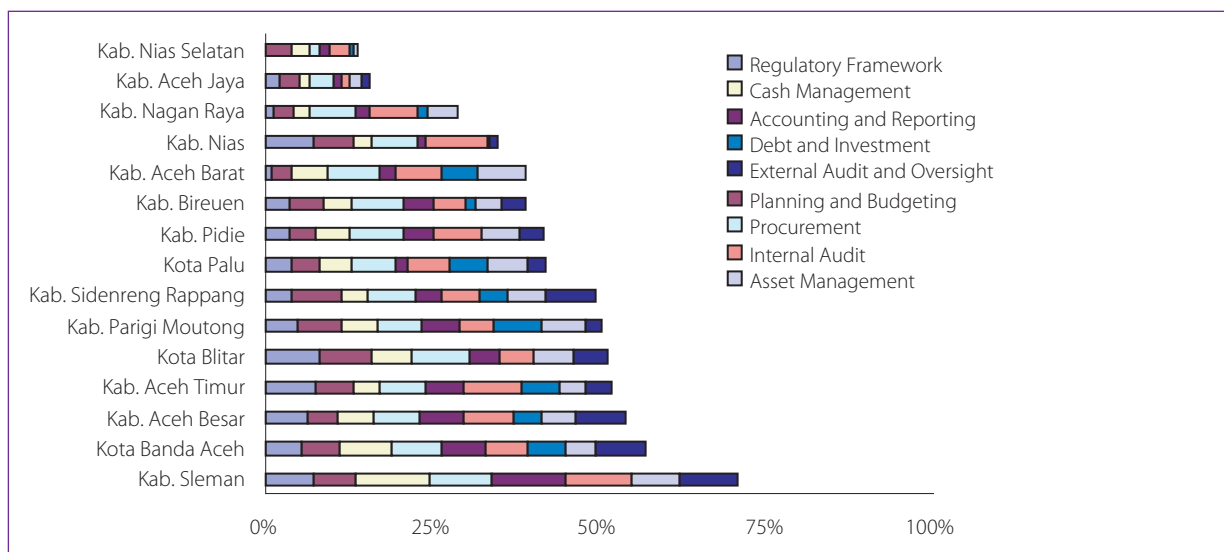
⁹¹ The main legal umbrella for regional financial management is the Law on Regional Autonomy (No. 32/2004), Fiscal Balance (No. 33/2004), National Planning System (No. 25/2004), State Finance Law (No. 17/2003) and the State Treasury Law (No. 1/2004). The main implementation regulation is No. 58/2005 on regional financial management and the implementation guidelines Ministerial Decree No. 13/2006, superseding Ministerial Decree No. 29/2002.

However, there are no mechanisms to address severe problems related to fiscal distress and insolvency at the sub-national level. The new regulatory framework makes no provisions for forced budget interventions or for default or bankruptcy of sub-national governments. The government has expressed interest in developing such mechanisms but nothing has been accomplished yet.

Most regions need to improve technical capacity and human resources to implement the reforms, while the central government needs to provide adequate guidance to support implementation. The unclear division of tasks between the Ministry of Finance and the Ministry of Home Affairs has resulted in inconsistent and contradictory legislation with regard to regional financial management, causing confusion among most local governments. Newly introduced concepts, such as performance-based budgeting, have been poorly implemented and local budget management is far from being efficient and transparent. While sub-national governments are obligated by law to report certain fiscal and financial information to the central government, many do not (the data may be missing or simply deliberately withheld). Sub-national governments are under no obligation to publicly disclose pertinent fiscal and financial information and the vast majority does not make such information available to the public at large. This lack of transparency, poor record-keeping, and subsequent misallocation of funds, make financial management processes prone to corruption.

Overall, public financial management systems at the sub-national level are weak and risks of corruption are very high. Findings from an in depth-assessment (and rating on a 100 percent scale) of selected local government financial management performance in 15 local governments has shown that the institutional and human capacity to manage local funds is still low and that financial management processes are still weak, and lacking in transparency and accountability. The average performance, measured against the requirements of national legislation for regional financial management, only reaches 44 percent.⁹² In sharp contrast to this is the performance of some reform-minded local governments. For example, the district of Sleman in the province of the Special Region of Yogyakarta has achieved a performance score of 100 percent in the areas of cash management and reporting and accounting. However, such performance is still exceptional. The creation of incentives for regions could be an important way to move the anti-corruption reform agenda forward.

Figure 7.5 Results from the PFM performance measurement framework



Source: PFM Survey, 2006.

92 Indonesia: Local Government Financial Management – A Measurement Framework (World Bank Office Jakarta, Ministry of Home Affairs, 2005). This framework assesses the performance of local governments in nine areas of regional financial management, measured through indicator score accumulation in each of the nine areas. The overall achievable score for each area is 100 percent. The results, derived from the implementation of the financial management measurement framework, reflect the average performance of 15 local governments (three in Sulawesi, two in Java and eight in Aceh and two in North Sumatera) in the nine areas of financial management, piloted in 2005 and 2006, partly in collaboration with USAID-LGSP.

Local government performance in the areas of debt, investment and external audit are particularly weak. This reflects the absence of a sound national regulatory framework and the lack of resources at the national level.

- **External audit (average performance score of 35 percent).** The State Audit Law (No. 15/2004) gives a mandate for external audit to the State Audit Agency (BPK). Yet to date, according to a BPK official, only about 60 percent of local governments across Indonesia are regularly audited by the BPK. One of the reasons for this is that the central government provides inadequate funding to the BPK. Weak external audit functions mean that record-keeping is inadequate and follow-up on audit findings is the exception rather than the rule. Although external audit reports of local governments are submitted to local parliaments they are not disclosed to the public. Such practices increase the danger of corruption. Financial information on budgetary performance and allocations, and the enforcement of accounting standards would enhance accountability mechanisms inside local governments and across levels of government.
- **Debt and investment (average performance score of 29 percent).** Most local governments assessed have neither developed a sound policy for future investments nor a borrowing strategy. Investments are commonly done on an ad hoc basis and not linked to medium-term plans or budget projections.

Budget surpluses and borrowing

Surpluses

Sub-national governments have recently benefited from record-high reserves. In mid-2006, these reserves reached Rp 95 trillion or 3.1 percent of GDP. This is in sharp contrast to the pre-decentralization period, when surpluses were non-existent. Between 2001 and 2005, provinces and *kabupaten/kota* accumulated more than Rp 35 trillion in reserves—about 21 percent of (2005) sub-national expenditure and 1.4 percent of (2005) GDP (Table 7.7). Reserves started to soar in the first half of 2006.

Table 7.7 Sub-national government revenue, expenditure and surplus

Rp billion (constant 2001 prices)

	2001		2002		2003		2004*		2005*	
		(%)		(%)		(%)		(%)		(%)
Kabupaten/ kota										
Revenue	78,699	--	83,466	--	96,637	--	96,420	--	102,073	--
Expenditure	71,624	91.0	80,344	96.3	96,673	100.0	93,924	97.4	77,183	75.6
Deficit/Surplus	7,075	9.0	3,122	3.7	-36	0.0	2,497	2.6	24,890	24.4
Province										
Revenue	25,484	--	29,471	--	33,295	--	36,320	--	40,722	--
Expenditure	23,109	90.7	28,828	97.8	33,335	100.1	34,214	94.2	35,288	86.7
Deficit/Surplus	2,375	9.3	643	2.2	-40	-0.1	2,106	5.8	5,435	13.3
Total Sub-National										
Revenue	104,183		112,937		129,931				142,795	--
Expenditure	94,733	90.9	109,171	96.7	130,008	100.1		96.5	112,471	78.8
Deficit/Surplus	9,450	9.1	3,766	3.3	-76	-0.1	4,602	3.5	30,325	21.2

Source: World Bank staff estimates.

Note: * Provincial and kabupaten/kota figures are preliminary estimates based on executed budgets (SIKD MoF); surplus figures are estimates based on data from Bank Indonesia.

The level of accumulated reserves varies greatly across provinces and districts. Accumulated reserves tend to be high in regions rich in natural resources, such as East Kalimantan, Riau, Aceh, and Papua. Sub-national governments in Java and in eastern Indonesia have saved smaller shares of their revenues since decentralization. It is legitimate and useful for sub-national governments to hold some reserves, as these can help to address cash flow problems,

emergency needs and finance capital expenditure. A commonly used rule of thumb is that sub-national government reserves should be between 5 and 10 percent of general expenditures (Wolkoff, 1987). However, this threshold is greatly exceeded by many of Indonesia's local governments.

There are four factors contributing to under-investment and spending by local governments. First, sub-national government budgets tend to be approved disbursements only after substantial delays, sometimes not until late in the second quarter of the fiscal year. This has been exacerbated by the introduction of a new budget authorization process (Law No. 32/2004), whereby the Ministry of Home Affairs has a right of approval over provincial budgets and provincial authorities over district budgets. Second, central government transfers (especially those derived from shared natural resources) tend to come in late in the fiscal year. Third, direct central government spending in the regions crowds out local spending and forces local governments to review their spending plans—a cumbersome and slow process. Fourth, sub-national governments may not have the capacity to spend the resources at their disposal, especially when such resources increase significantly and suddenly. This is especially true in the case of the 64 percent increase in DAU from 2005 to 2006, which led to a sudden and significant increase in reserves (see Chapter 1).

Large reserves indicate inefficiencies in the budgeting process that may not be easy to remove. First, budget approval processes need to be streamlined, which will require a change to Law No. 32/2004. Second, local governments need to build capacity to better budget and spend resources. Third, Law No. 33/2004 stipulates that transfers of shared revenues must occur on a quarterly basis, which requires timely production estimates from the sectoral ministries.⁹³

Borrowing

From a macroeconomic perspective, sub-national debt is insignificant. Provincial and local government debt (including debt from the regional water companies, or PDAMs) amounted to 0.18 percent of GDP, or 0.33 percent of the total public sector debt in 2005. Seventy-five percent of this sub-national debt belonged to the PDAMs, and 17 percent and 8 percent of the PDAMs were owned by *kabupaten/kota* and provincial governments, respectively. The bulk of sub-national debt comes from the central government (from the RDA/RDI accounts) and from donors through the central government (via Subsidiary Loan Agreements, or SLAs).

The amount of on-lending to sub-national governments and their PDAMs has varied significantly over time. It started to increase in 1986 with erratic swings, peaked in the mid-1990s and declined thereafter. Since decentralization lending has been near zero. Repayment of loans has been generally poor. At the end of 2004, total payments due were Rp 7,104 billion, of which about half were paid back.

Table 7.8 Borrowing and arrears by type of borrower

Type	No. of loans	Value (Rp bn)	Share (%)	Arrears (%)
Province	81	931	16.2	9.9
Kabupaten	204	379	6.6	29.2
Kota	116	702	12.2	41.8
PDAM	437	3,735	65.0	61.9
Total	838	5,747	100.0	48.0

Source: Lewis (2007).

local infrastructure projects will require own-source funding, which may be detrimental to efficiency and equity. Third, government and donors will be allowed to lend only to sub-national governments without arrears on repayments of past loans from the central government. In addition, lenders may only lend to PDAMs as long as both the PDAMs and their associated local governments are free of arrears on prior SLA or RDA loans. This effectively means that 107 out of 384 local governments, 16 out of 32 provinces, and 189 out of 320 PDAMs that have arrears will not be allowed to borrow (Table 7.8).⁹⁴

The new regulatory framework for sub-national borrowing introduced new rules on on-lending but there are a number of problems.

First, the new mechanism for submitting and reviewing project proposals and approving loans (the so called "blue book" system) is unnecessarily long and cumbersome. Second, the new arrangements stipulate that long-term lending to sub-national governments may only be used to finance public infrastructure that directly yields revenues for sub-national government budgets. As a result, many

⁹³ Sub-national governments could engage in short-term borrowing to support spending of forthcoming revenues. However, only some local governments have indeed begun to borrow for this purpose.

⁹⁴ Based on the MoF 2004 data.

Individual sub-national government reserves are sufficient to cover the vast bulk of arrears. About 85 percent of local governments in arrears could clear their balances by drawing on their stocks of reserves. Yet they have been reluctant to do so. Increasing the number of potential borrowers further would require that those sub-national governments and water enterprises with repayment arrears on past loans clear away those arrears, either by using their reserves to immediately pay off their arrears or through debt restructuring.

The new regulatory framework for on-lending is unlikely to substantially improve outcomes. Market alternatives to government or donor lending may constitute a more viable option. The ability of sub-national governments to issue bonds still needs to be leveraged. There are, however, important constraints to local government borrowing from private markets, in particular the dearth of creditworthy sub-national governments.

The Impact of Fiscal Decentralization on Inequality

Fiscal inequality across regions has been significant both before and after decentralization. In 1999, the richest district in fiscal revenue per capita was 30 times richer than the poorest. The figure remained the same in 2004, four years after decentralization. However, fiscal disparity is lower across provinces than districts. Before decentralization, the richest province had revenues 13 times greater than those of the poorest. The figure worsened in 2004, when the coefficient reached 15. The Gini coefficient and the coefficient of variation also show that fiscal inequality has increased with decentralization (Table 7.9).

Table 7.9 Fiscal inequality before and after decentralization

Province:	1999		2002		2004	
	CoV	Gini	CoV	Gini	CoV	Gini
PC OSR	1.55	0.48	1.42	0.45	1.24	0.42
PC (OSR+SDA)	1.24	0.51	1.41	0.53	1.13	0.45
After transfer ...						
PC (OSR+SDA+TAX)	1.35	0.52	1.53	0.55	1.39	0.52
PC (OSR+SDA+TAX+DAU+DAK)	0.83	0.38	1.07	0.44	0.97	0.39
PC Total Revenue	0.83	0.38	1.05	0.43	1.05	0.44
PC (Total Revenue-SDA)	0.82	0.35	1.09	0.41	1.04	0.42
PC (Total Revenue-TAX)	0.75	0.36	0.97	0.42	0.85	0.38
Kabupaten/Kota:						
PC OSR	3.20	0.55	1.40	0.49	1.36	0.47
PC (OSR+SDA)	2.60	0.55	2.53	0.73	2.50	0.66
After transfer ...						
PC (OSR+SDA+TAX)	1.56	0.47	2.08	0.65	1.78	0.57
PC (OSR+SDA+TAX+DAU+DAK)	0.79	0.31	0.95	0.39	0.83	0.37
PC Total Revenue	0.78	0.31	0.95	0.39	0.83	0.36
PC (Total Revenue-SDA)	0.78	0.30	0.66	0.32	0.65	0.32
PC (Total Revenue-TAX)	0.77	0.31	0.96	0.40	0.84	0.35

Source: World Bank staff calculations based on SIKD-MoF and BPS.

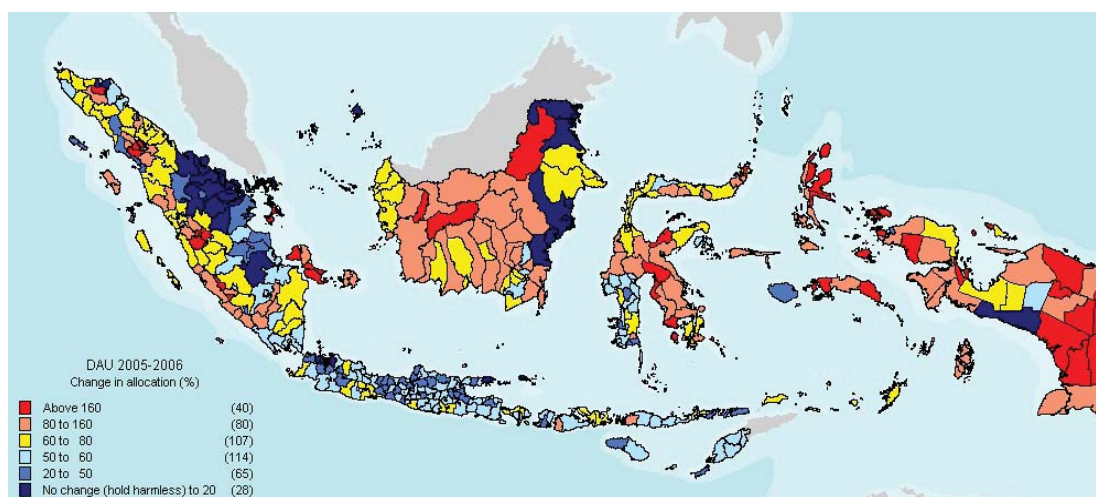
Note: OSR=Own-source revenue, SDA=Natural Resource Shared Revenue, TAX=Shared Tax Revenue.

The inequality in the inter-government fiscal system is strongly influenced by the allocation of natural resource revenues. Although natural-resource revenues only contribute 7 percent to total sub-national revenues, their allocation is extremely unequal.⁹⁵ Less than 10 percent of Indonesia's local governments have a significant share of oil and gas revenues, and these few local governments capture more than 90 percent of these revenues. As in other countries, own-source revenues are also distributed very unevenly. The richer districts, particularly cities, collect disproportionately more revenues.

The DAU is equalizing the distribution of own-source revenues and natural revenues, but this effect could be improved. However, two factors mitigate this role: the hold harmless provision and the limited importance of the fiscal-gap formula. The DAU increased significantly in 2006 and became significantly more equalizing. The increased and more realistic assumption of the international oil price in the central government budget has resulted in a nominal 64 percent increase of the national DAU pool.⁹⁶ But 57 percent of this increase has been absorbed by the full coverage of districts' wage bills, leaving only 43 percent to be distributed using the fiscal-gap formula (see figure 7.3).

The distribution of the 2006 increase varies considerably across regions. More than half of provinces and districts received increases of over 60 percent and 40 districts even experienced an increase of more than 160 percent. Most of the districts in eastern Indonesia (except NTB, NTT and parts of Sulawesi) and Kalimantan benefited from very large increases. In Papua more than half of the local governments saw increases of 100 percent or more. There are sharp contrasts in Sumatra and Aceh, with oil producing districts received a zero DAU increase and a few local governments seeing large increases, sometimes over 160 percent. Districts in Java, Bali, NTB and NTT had increases mostly below average, but still significant at around 50 percent (Figure 7.6).

Figure 7.6 Regional distribution of 2006 DAU increase



Source: World Bank staff estimates based on BPS and MoF data.

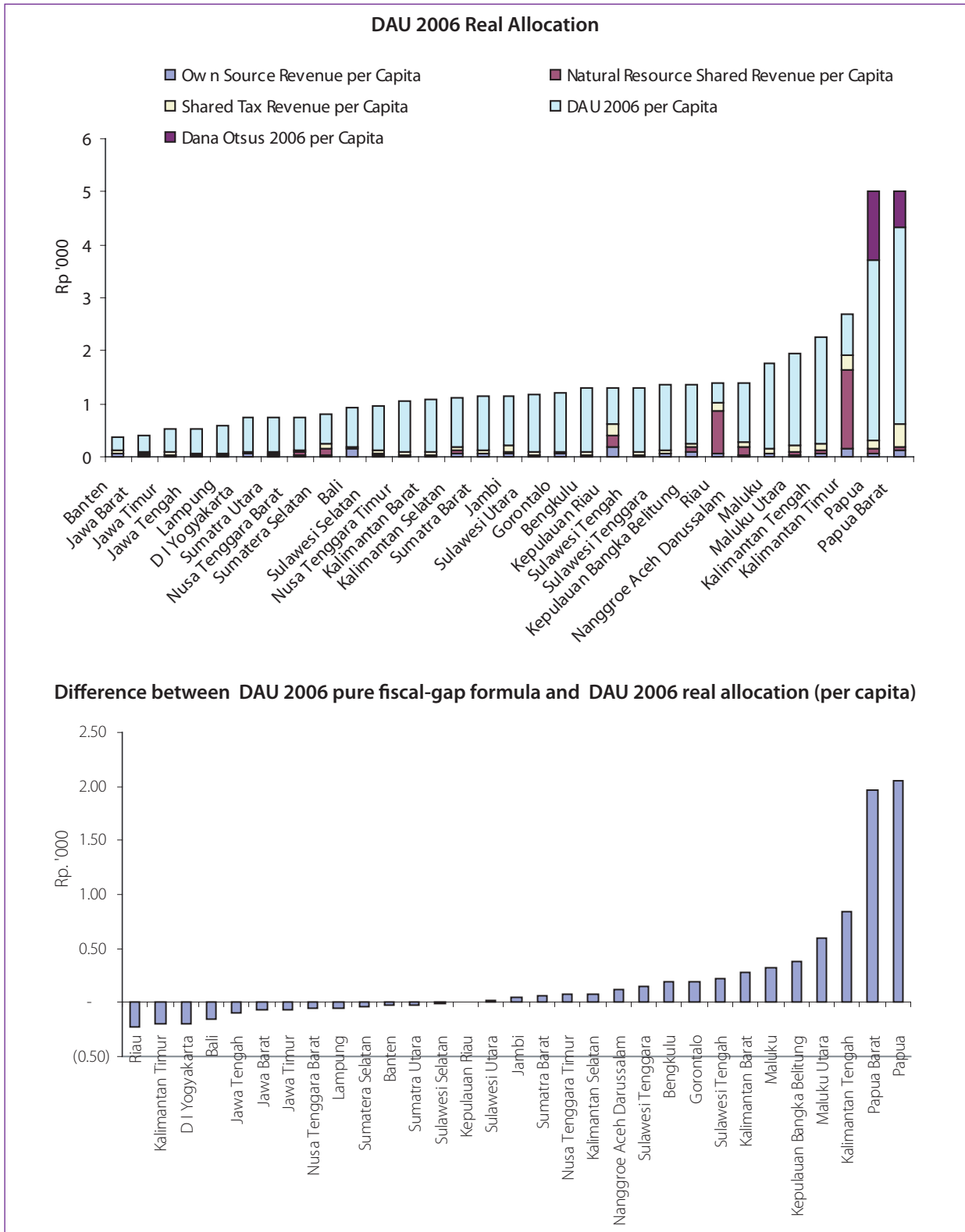
Non-resource rich districts would receive more DAU if it were distributed purely on the basis of a fiscal gap formula. We simulate the allocation of DAU in 2006 by using only the fiscal gap formula, disregarding the wage bill component, the hold harmless provision, and allowing for zero allocations in districts with a negative fiscal gap. Figure 7.7 summarizes the per capita fiscal revenues of local governments by province. The top chart uses the real DAU 2006 allocation and the bottom chart uses the pure fiscal-gap formula for the DAU 2006 allocation in the simulation. As a result, some oil rich districts such as North Aceh, Bengkalis in Riau and Kutai in East Kalimantan receive a zero allocation. Their total fiscal revenue decreases accordingly.⁹⁷ We can observe Riau and East Kalimantan would receive less DAU per capita if the DAU were distributed purely on the basis of the fiscal gap formula. Yet we are still unable to see any significant fiscal improvement in some lagging regions such as NTT and NTB.

⁹⁵ The Gini coefficient increases substantially when adding natural-resource revenues in the inequality simulations. The impact is particularly strong for the districts. The change in Gini coefficients is smaller the larger the revenue base is to which the SDA is added. For instance if SDA which is about 7 percent of total district revenue is added to own-source revenue (8 percent of total district budget), the effect is much larger than if it is added to all other revenue sources (see Table 4).

⁹⁶ See Chapter 6 on the impact of the oil price assumption on the budget.

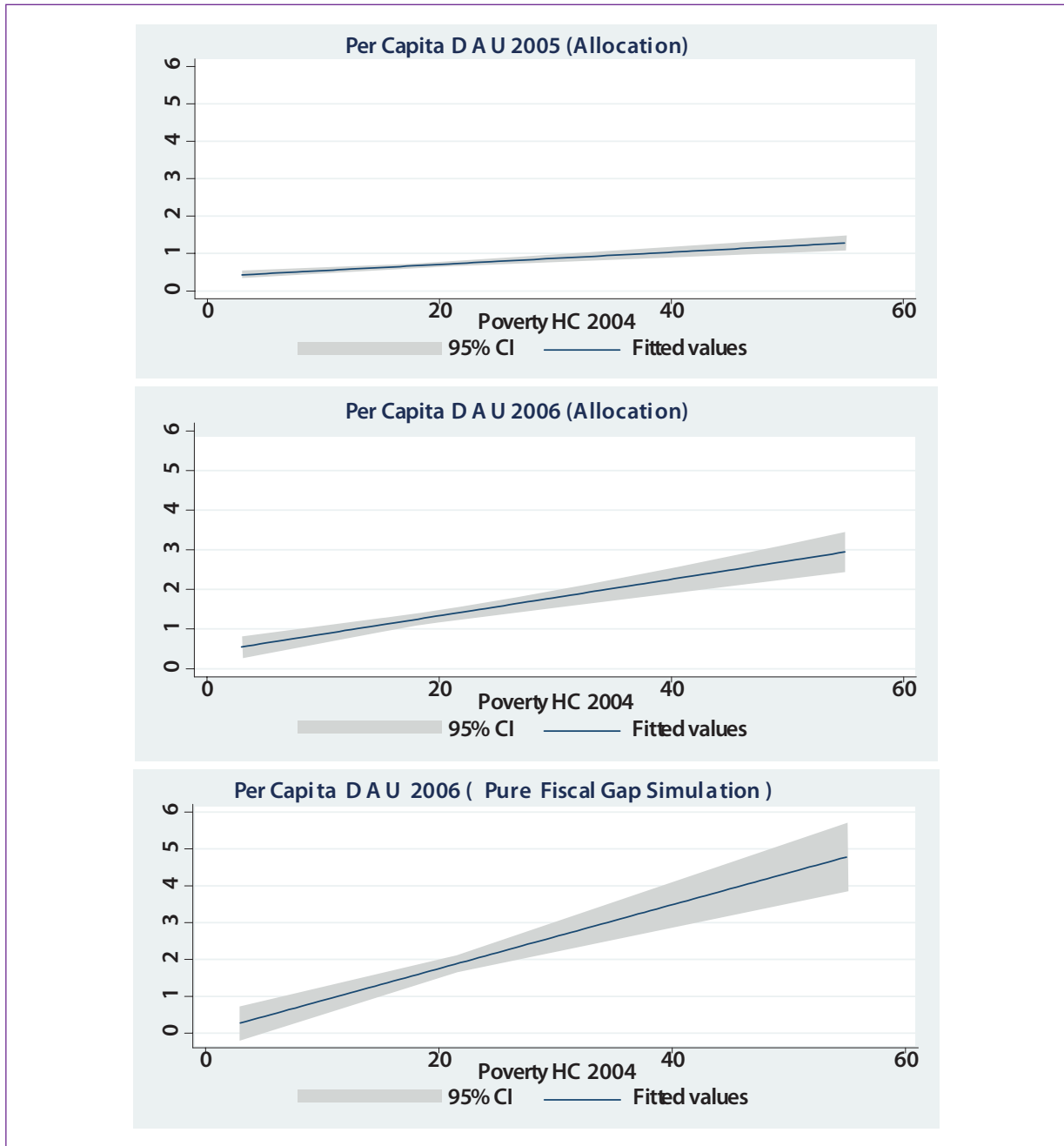
⁹⁷ There are 12 districts that receive zero allocations in the simulation. Four districts in Riau, four in East Kalimantan, one each in Aceh, South Sumatra and Bali.

Figure 7.7 Fiscal revenues of local governments using different DAU allocation



If the DAU were fully allocated on the basis of the fiscal gap formula, poor districts would receive even more resources. The DAU allocation is positively correlated with the district level poverty headcount, as the DAU formula contains variables such as regional GDP and (inverse of) HDI that are strongly correlated with poverty (Figure 7.8).⁹⁸ The coefficient of correlation of pure fiscal-gap formula DAU 2006 allocations with the poverty headcount is 0.29 and is significant at the 5 percent level. If we assume that poverty reflects the level of development, the pure formula is more equalizing through its unequal per capita distribution of fiscal revenue.⁹⁹

Figure 7.8 Using fiscal gap formula, the DAU could better benefit the poor



Source: World Bank staff estimates based on DAU 2006 basic data MoF.

⁹⁸ The replacement of poverty indicator with the (inverse of) HDI and the GRDP per capita did not have much effect on equalization.

⁹⁹ Hofman et al (2006) estimate the potential efficiency loss from the current DAU horizontal misallocation relative to the pure formula alternative as US\$3.9 billion, assuming that the current fiscal gap formula sufficiently captures expenditure needs.

Table 7.10 The correlation between poverty, regional income and fiscal revenues

	Poverty Head-count	GRDP PC	Total Revenue PC
GRDP	-0.16**		
Total Revenue PC	0.10	0.25*	
PAD PC	-0.21**	0.15**	0.37**

Source: World Bank staff calculations based on 2004 data from SIKD-MoF and DAU basic data from MoF and BPS.

Note: * and ** indicate statistically significant at 0.05 and 0.01 level

Richer districts have more fiscal resources per capita including larger own-source revenues. Their poverty headcount rates are also lower, although the correlation is not very strong (Table 7.10). Districts with higher poverty numbers have less own-source revenue, but tend to have more resources. This indicates that the DAU allocation has balancing effects.

However, the relationships between poverty, regional income and fiscal revenues are much weaker than expected. The characteristics of local governments are very heterogeneous. DKI Jakarta, the only non-resource-rich region in the group, has relatively low poverty with modest fiscal revenues. East Kalimantan has relatively

large fiscal revenues but the poverty headcount is only slightly better than the national average. The poorest province (in terms of poverty headcount), Papua, apparently is among the richest in terms of fiscal revenue. All of the outliers have relatively high per capita GRDP with different characteristics of fiscal revenue and poverty.

Almost half of Indonesia's districts are at the extreme. Districts can be grouped in eight clusters according to their poverty level, fiscal revenues and GRDP per capita (Table 7.11):

- One-fourth of the districts can be clustered as poor because they have a relatively high poverty and low GRDP. However, they still have limited fiscal resources to fight poverty. On average, central transfers make up to 87 percent of their fiscal revenues, most of them from the DAU. Revenue-sharing through tax and natural resource revenue is lowest across all clusters; own-source revenue is also relatively low. The regions that fall into this category are all *kabupaten*, not *kota*.
- The rich district, characterized by relatively low poverty, high GRDP and high fiscal revenues, make up more than one-fifth of the districts. On average, the amount of central transfers is 81 percent of their total revenues with shared revenue covering 22 percent of it. Regions in this cluster are dominated by the municipalities or *kota*.
- The other half of the districts is a combination of these indicators. The third-largest cluster is the regions with low poverty, high GRDP, but low fiscal revenue. On average the regions in this cluster receive relatively higher own-source revenue and relatively higher shared tax revenue than the other clusters. The cluster that has the second-highest DAU is the regions with high poverty, low GRDP and high fiscal. This cluster is dominated by districts in eastern Indonesia.

Table 7.11 District groupings

Poverty	GRDP	Fiscal Rev	No. of District	No. of City	Own Source Revenue (%)	Shared Tax (%)	Shared Natural Resource (%)	DAU (%)	DAK (%)	Other (%)
Low	Low	Low (23)	20	3	7	8	1	72	3	10
		High (37)	16	11	8	9	3	69	5	6
	High	Low (44)	23	21	13	14	2	60	2	9
		High (71)	31	40	8	12	10	59	4	6
High	Low	Low (83)	83	0	6	7	1	75	4	7
		High (32)	31	1	4	7	2	74	6	6
	High	Low (25)	15	0	6	10	4	69	2	9
		High (35)	31	4	4	15	14	55	4	8
National(330)			250	80	7	10	5	66	4	7

Source: World Bank staff calculations based on SIKD Realization 2004 data from MoF and 2004 BPS data. Total number of observations is 330 equaling the number of districts that have complete sets of data.

Note: Number in brackets are the number of districts in the respective cluster.

Effective development strategies need to take heterogeneity into account. Regions with low GRDP are benefiting from a relatively higher share of DAU independent of their poverty and fiscal revenues. On the other hand, regions with

high GRDP and high fiscal revenue receive higher level of revenue-sharing from the central government and relatively low DAU (Table 7.11). This district grouping analysis demonstrates the heterogeneity of situations that districts will find themselves in with respect to their poverty rates, economic conditions and fiscal capacities. This heterogeneity should be taken into consideration when designing sub-national development strategies.

Policy Recommendations

The DAU allocation mechanism should be changed by eliminating the full coverage of the sub-national wage bill. This earmarked transfer eliminates all incentives to reduce excessive staff and to find the optimal combination of inputs (workforce, capital, intermediate inputs, and outsourcing) for public service delivery. Eliminating the full wage bill coverage would contribute to increased efficiency in sub-national governments' spending.

In order to enhance the equalizing function of intergovernmental fiscal transfers, a larger part of the DAU should be allocated on the basis of the fiscal-gap formula. The elimination of the civil service wage bill coverage from the DAU would also contribute to this end.

The government should smooth out large fluctuations in the DAU pool in order to avoid these fluctuations impacting sub-national budgets. Large short-term fluctuations call for large adjustments in budgeting or a long-term expenditure smoothing strategy. However, these are difficult to formulate and implement at the local level given limited managerial capacities. There are a number of ways to smooth out the DAU pool, among them the use of long-term oil price assumptions, the creation of a stabilization fund at the national or sub-national level, and real incremental increases of the DAU annually.

The current level of sub-national government revenues is high; therefore the focus should shift towards an efficient use of government resources rather than the mobilization of additional resources. One key element in ensuring spending efficiency is local governments' performance measurements to allow comparisons across districts. Strong incentives for prudent use of local public revenues could be structured into the system of intergovernmental fiscal transfers.

Local governments need to shift expenditure away from administration towards public service delivery and pro-poor policies. The current level of expenditure on administration is excessively high and suggests significant waste of public resources. There is considerable room for improvement in the use of government resources. An administration share of 5 to 10 percent should be the target.

Capacity for planning and budgeting needs to be improved greatly at the local level. Budget approval processes need to be streamlined and off-budget spending needs to be incorporated. Only then will the budget reflect planning, thereby ensuring efficient government spending and preventing the occurrence of large surpluses.

Tax collection at the local level needs to be improved. This calls for decentralizing urban and rural property taxes and allowing regions to set their own tax rates and compete with each other (this is international best practice). This would also include improving tax collection itself, which on average eats up half of the collected revenue—an excessively high figure by all standards. Last but not least, the use of charges and other local taxes should be clearly regulated in order to limit the negative impact on the investment climate.

The regulatory framework for sub-national government financial management, in particular borrowing and the management of surpluses, needs to be strengthened. Sub-national creditworthiness will be enhanced by finalizing and implementing the regulatory framework on PDAM and Pemda work-outs. The MoF could develop guidelines for regions regarding sensible accumulation and use of reserves. If high levels of reserves start to become a prolonged feature of local government budgets, then at the very least they should be used to increase investment in public infrastructure and pay outstanding arrears.

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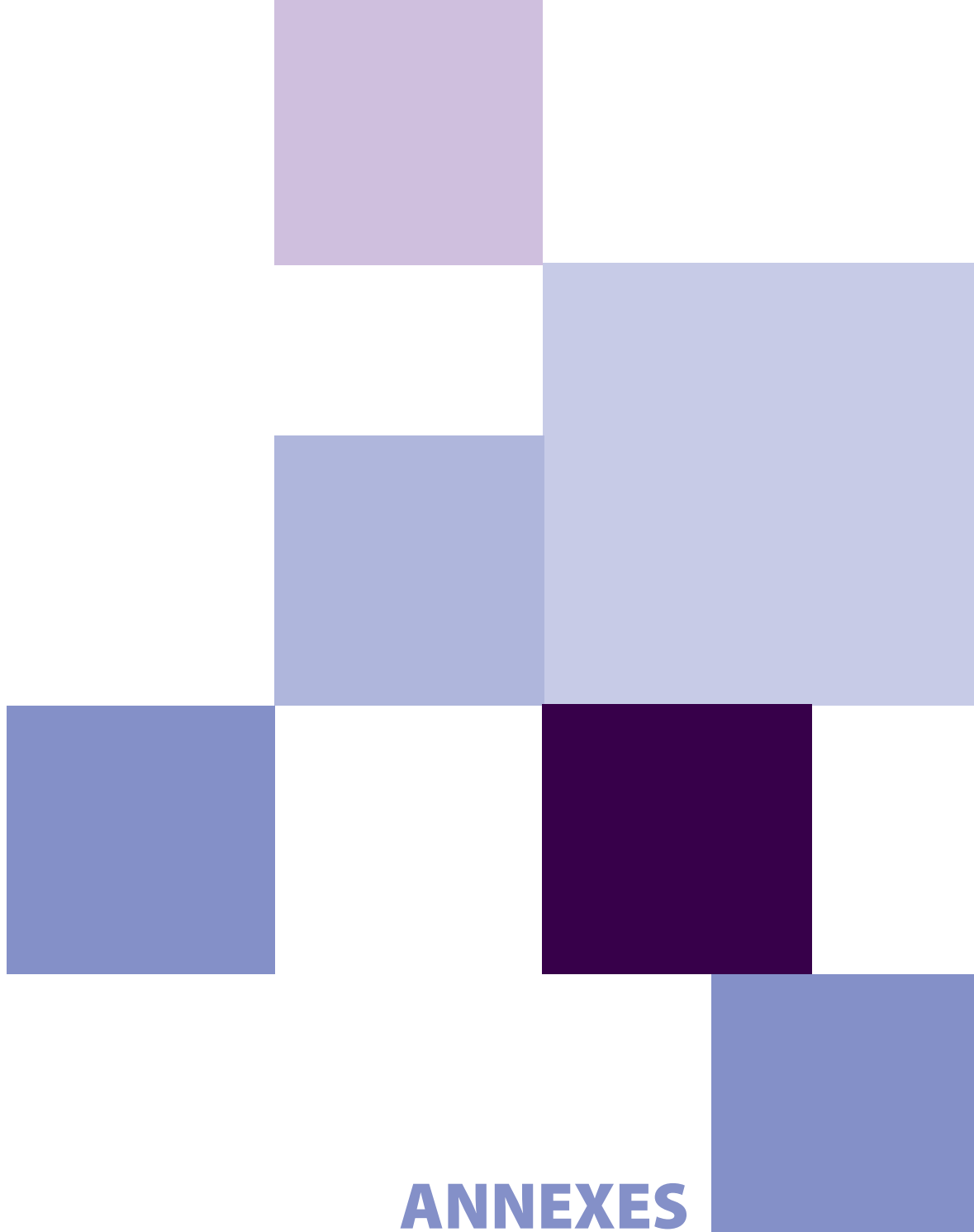
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Annex A. Policy recommendations and data sources

Section A.1. Summary of policy recommendations

Reform Area	Challenges	Specific Solutions	Time Frame	Impact-Importance
CHAPTER 1. FISCAL SPACE AND MANAGEMENT				
Improve debt management.	<ul style="list-style-type: none"> Lack of transparency and accountability in debt management. Government borrowing is regulated by different laws. 	<ol style="list-style-type: none"> Development of new tools (scenario analysis and risk models). Prepare regular reports on outstanding debt. Merge Government Security Law with Law on Government borrowing. 	ST/MT	<ul style="list-style-type: none"> Help quantify market risks and support analysis of cost/risk and improve transparency.
Ensure debt sustainability.	<ul style="list-style-type: none"> Contingent liabilities are not included in management framework. Different accounts are not integrated and off-budget transactions are not documented. 	<ol style="list-style-type: none"> Contingent liabilities must be included in debt management framework. Create a Treasury Single Account (TSA). 	ST/MT	<ul style="list-style-type: none"> Macroeconomic instability due to unsustainable debt will affect the budget and fiscal space.
Reallocate inefficient and pro-rich electricity subsidies (US\$3 billion).	<ul style="list-style-type: none"> Current electricity subsidies are inefficient, encouraging excessive consumption and providing support mainly for rich consumers. 	<ol style="list-style-type: none"> Subsidies should be reallocated from consumption (above 450VA) towards connection, in order to allow for an expansion of the electricity network. 	ST/MT	<ul style="list-style-type: none"> Increased electricity supply with lower costs. Improved efficiency and equity. Increased fiscal space for social spending.
Reduce inefficient and pro-rich subsidies (US\$5 billion).	<ul style="list-style-type: none"> Domestic fuel prices are still below international prices, and are inefficient and pro-rich. Moreover, they remain the largest spending item in the budget. 	<ol style="list-style-type: none"> Reduce inefficient and pro-rich fuel subsidies (US\$5 billion). Despite the 2005 fuel price increases, the fuel subsidy remains one of the largest spending items in the budget. 	ST/MT	<ul style="list-style-type: none"> Improved efficiency and equity. Increased fiscal space for social spending.
Create a comprehensive subsidy management framework and transfer payments more rapidly.	<ul style="list-style-type: none"> Subsidies are not assessed comprehensively due to weak regulatory framework, and this leads to delays in transfers. 	<ol style="list-style-type: none"> Comprehensive subsidy management needs to be assured. Stakeholders need to agree on a subsidy transfer mechanism (Gol and SOEs). 	ST	<ul style="list-style-type: none"> Improved timeliness of transfers and greater transparency.
CHAPTER 2. CROSS-SECTORAL TRENDS				
A larger share of future fiscal space should be allocated to infrastructure, at the national and the local levels.	<ul style="list-style-type: none"> Comparing public expenditures across sectors shows that infrastructure has been relatively under-funded. The sector appears to have never recovered from the post-crisis spending decline. 	<ol style="list-style-type: none"> A larger share of future fiscal space should be allocated to infrastructure, at the national and the local levels. 	MT	<ul style="list-style-type: none"> More infrastructure financing.
Redirect spending from administration towards additional funding for basic service delivery.	<ul style="list-style-type: none"> The current level of expenditures on administration is excessively high (30 percent at sub-national level) and suggests a significant waste of public resources. 	<ol style="list-style-type: none"> Minimize expenditures that do not directly benefit the public. For example, reduce government administrative expenditures and spend more on public services such as health and education. Align recurrent expenditures with capital investments in public service delivery. 	MT	<ul style="list-style-type: none"> Greater efficiency of public spending.

Reform Area	Challenges	Specific Solutions	Time Frame	Impact-Importance
CHAPTER 3. EDUCATION				
Increase spending to promote greater access to junior secondary education, while the main focus at the primary level should be on improved infrastructure and quality of instruction.	<ul style="list-style-type: none"> Enrollment rates, especially for lower income quintiles, are low at the junior secondary level, and many children do not transition from primary to junior secondary school. Primary level enrollment is close to 100 percent, yet infrastructure and quality are far from satisfactory. The current law requires education spending at both national and sub-national levels to reach 20 percent of overall spending <i>excluding staff salaries</i>. This is practically impossible to achieve and conflicts with decentralization and civil service reforms. Also, the net of salaries clause creates disincentives for proper civil service salary management. 	<p>13) Increase spending on junior secondary education—particularly ensuring the construction of new schools and programs that diminish drop-out rates and increase transition rates at this level.</p> <p>14) The spending mix across programs at the primary level should be directed towards instruction quality and infrastructure upgrading.</p> <p>15) A more appropriate definition of the 20 percent rule would: (i) include teacher salaries; and (ii) combine spending of all levels of government (central and regional government spending).</p>	ST/MT	<ul style="list-style-type: none"> Better targeted expenditures, on programs that have higher returns in terms of quality and effectiveness. Increased enrollment and improved education of population, which could translate into higher growth and lower poverty if skills-sets match employer demand. More reasonable allocation of education expenditures. Better intergovernmental balance.
Keep the 20 percent target for education expenditures but adjust the definition to include teacher salaries and combine central and regional government spending.	<ul style="list-style-type: none"> Poor children and those in remote regions have less access to, and receive lower quality instruction of, junior and senior secondary education than do other children. 	<p>16) Allocate additional funds to lagging districts and provinces. Use the DAK to increase the number of schools and so address supply-side constraints.</p> <p>17) Reduce out-of-pocket spending through cash transfer programs and the lowering of school fees via the BOS.</p>	ST/MT	<ul style="list-style-type: none"> More equal level of development (increased opportunities for the poor) and eventually improved living conditions and higher growth in lagging regions.
Reduce inequities in education access and quality.	<ul style="list-style-type: none"> There is an uneven distribution of teachers, with shortages in remote regions and an oversupply in urban and some rural areas. Teachers with higher qualifications are underpaid. The new teacher law implies that the education budget needs to be drastically increased—with additional incentives alone, approximating the size of the current national education budget in six years. 	<p>Distribution:</p> <p>18) Change entitlement formula from number of students to number of schools.</p> <p>19) Gol should enable transfers of staff across districts and improve employment in remote areas by providing financial incentives.</p> <p>20) Reduce the urban oversupply and use funds for other quality inputs (qualified teachers). Use pay-out option to promote attrition. Also reduce intake into training institutions.</p> <p>Quality:</p> <p>21) Implement the teacher law and simultaneously reduce the oversupply of teachers to reduce the financial impact of the teacher law on the education budget.</p>	ST/MT	<ul style="list-style-type: none"> More equitable distribution of teachers and thereby better quality of education. Fewer teachers – more funds for other quality inputs. More qualified teachers at higher levels of education. Lessened impact on education budget.
Promote more equitable distribution of, and higher quality of, teachers by providing financial incentives for teachers to teach in understaffed schools and improve their skills.				

Reform Area	Challenges	Specific Solutions	Time Frame	Impact-Importance
CHAPTER 4. HEALTH				
Increase public investments for health.	<ul style="list-style-type: none"> Current investments in health and health outcomes are significantly lower than those of other East Asian countries. 	<p>22) Gradually increase expenditures to about 2 percent of GDP.</p> <p>23) Spend available resources more efficiently and equally.</p>	LT	<ul style="list-style-type: none"> More resources for health. Improved health outcomes.
Increase access to health services for the poor by increasing supply and stimulating demand.	<ul style="list-style-type: none"> Low access in selected poor and remote districts. Poor have low utilization rates for secondary. 	<p>24) Demand side: invest in activities that improve utilization and quality of health services for the poor. Target vouchers that allow poor people to access quality services for free.</p> <p>25) Supply side: utilize the DAK to ensure that funds increase access for the poor.</p>	MT	<ul style="list-style-type: none"> Improved access, utilization and quality of health services for the poor.
Identify the right mix of investment to improve effectiveness of the health sector in dealing with the double burden of disease and emerging diseases.	<ul style="list-style-type: none"> Low performance on health outcomes indicators such as IMR and MMR. Increase in non-communicable diseases. Emerging diseases such as HIV/AIDS and avian influenza. 	<p>26) Intensify programs tackling communicable diseases.</p> <p>27) Strengthen surveillance systems and programs for prevention of emerging diseases</p>	MT	<ul style="list-style-type: none"> Prevention of communicable and non-communicable diseases. Improved capacity to prevent emerging diseases.
Public sector should more actively regulate, license and accredit private providers.	<ul style="list-style-type: none"> Limited quality control of private sector healthcare providers. 	<p>28) Regulate, license and accredit the private sector, to ensure quality and adequate control.</p>	ST/MT	<ul style="list-style-type: none"> Increased quality of private healthcare.
Identify the right combination of measures to ensure more equal distribution and more efficient investments in health workforce.	<ul style="list-style-type: none"> Reduce inequalities and inefficiencies that have led to deteriorating quality and low levels of service. 	<p>29) Identify the current health workforce and whether it is adequate to achieve the current priority outcomes.</p> <p>30) Identify measures that can motivate health providers to serve in remote areas.</p>	ST/MT	<ul style="list-style-type: none"> Improved quality of health workforce and services. Increased access in rural and under-served areas.
CHAPTER 5. INFRASTRUCTURE				
Expand electricity supply to meet increased future demands.	<ul style="list-style-type: none"> Huge investments are required to meet expanding electricity demand. Fuel mix decisions remain distorted by ongoing subsidies for oil and the remaining gap between prices for export and domestic gas. 	<p>31) Use a "least-cost expansion" approach. Subsidies should be reallocated from consumption (especially those benefiting consumers with voltage capacity above 450VA) towards connection subsidies, in order to allow for an expansion of the electricity network.</p>	ST/MT	<ul style="list-style-type: none"> Increased access to electricity and a more efficient targeting of subsidy benefits towards the poor.
Provide fiscal incentives to sub-national governments to promote adequate road maintenance.	<ul style="list-style-type: none"> The majority of roads are not adequately maintained and access to roads remains low. Central transfers for roads are not efficiently targeted to location with lower access. 	<p>32) National government co-financing of sub-national roads could be made conditional on adequate road maintenance within sub-national jurisdiction.</p> <p>33) A thorough assessment of the targeting efficiency of the DAK can shed light on the reforms required on the allocation mechanism.</p>	ST	<ul style="list-style-type: none"> Increased road access. Improved road quality and reduced transport costs.

Reform Area	Challenges	Specific Solutions	Time Frame	Impact-Importance
<p>Removal of current impediments to long-term borrowing by PDAMs.</p>	<ul style="list-style-type: none"> PDAMs have difficulty accessing long-term loans while districts claim dividends even when water utilities (PDAMs) are making losses. 	<p>34) Restructure loan arrears and provide incentives to improve PDAM credit-worthiness (increase tariffs and cut costs).</p> <p>35) Enable increased borrowing by separating PDAM finances with those of their LGs' budget performance.</p> <p>36) Enforce regulations that prevent districts from claiming dividends even when water utilities (PDAMs) are making losses.</p>	<p>ST</p> <p>LT</p>	<ul style="list-style-type: none"> Increased access to piped water through more transparent and easier long term borrowing. Enhanced corporate independence of PDAMs.
<p>Develop fiscal incentives that reward LGs that improve PDAM performance.</p>	<ul style="list-style-type: none"> Improve performance LGs in terms of PDAM reform and eventually increase household connections. 	<p>37) Public funds should be provided to LGs based on performance, ideally through the DAK, calculated with reference to investment needs of PDAMs.</p> <p>38) Make audited accounts and physical indicators of PDAMs available.</p>	<p>ST/MT</p>	<ul style="list-style-type: none"> Improved performance. Increased connections. Better information through audits and indicators will improve targeting.
CHAPTER 6. PUBLIC FINANCIAL MANAGEMENT				
<p>Gradually move from input to performance-based budgeting (PBB).</p>	<ul style="list-style-type: none"> Budget processes rely on tight input controls limiting flexibility needed to achieve better results. 	<p>39) Strengthen ex-post controls, performance auditing and reporting capabilities.</p> <p>40) Reduce the use of line-item budgeting and integrate planning and budgeting processes.</p>	<p>MT</p>	<ul style="list-style-type: none"> Reforms are critical to improve efficiency and effectiveness of public spending leading to better public service outcomes.
<p>Link budgetary processes to medium term policy objectives (Link RKP–RKKL–RKAKL).</p>	<ul style="list-style-type: none"> PFM processes are strictly annual impeding a long-term vision and sustainability of public expenditure policies. Five-Year Development Plans (RKP) set out national and sectoral objectives, policies and specific projects, but are insufficiently linked to the resource allocations. 	<p>41) Allow for a multi-year budgeting facility and simplify the carry-over facility.</p> <p>42) Implement a Medium-Term Expenditure Framework.</p>	<p>MT</p>	<ul style="list-style-type: none"> Enables effective translation of long political objectives into budget allocations and sustainable public investments.
<p>Underpin treasury reforms through reengineering of underlying business processes in budget execution.</p>	<ul style="list-style-type: none"> Budget execution, particularly of development projects is typically slow and skewed towards the end of the fiscal year. Government funds are disbursed across a large number of different accounts leading to inefficient and non-transparent cash management. 	<p>43) Reform treasury functions and budget execution processes through implementation of TSA.</p> <p>44) The level of details in spending warrants (DIPAs) should be reduced and the process for issuing them should be simplified as part of reforms to introduce PBB.</p>	<p>MT</p>	<ul style="list-style-type: none"> Improved operational efficiency, increased transparency and faster disbursements.
<p>Adjust the role of the legislature in the budget process.</p>	<ul style="list-style-type: none"> Legislative oversight in budget cycle not yet fully effective. The DPR is currently focused on details rather than outcomes and political priorities. 	<p>45) Develop institutional capacity in the DPR in all stages of budget formulation and auditing.</p> <p>46) Shift legislative role from focus on line items to overall allocations and political priorities.</p>	<p>ST/MT</p>	<ul style="list-style-type: none"> Improved governance, checks and balances, accountability and ensures budgets are responsive to citizens needs.

Reform Area	Challenges	Specific Solutions	Time Frame	Impact-Importance
Further enhance procurement reforms.	<ul style="list-style-type: none"> Limited capacity for timely completion of procurement processes compliant with the tightened procurement rules is holding up project implementation and budget disbursement. 	<p>47) Roll out of basic-level training and tests for the certification of procurement practitioners.</p> <p>48) Strengthen the independence of the National Procurement Office.</p> <p>49) Develop and implement a nation-wide strategy for e-procurement.</p>	MT	<ul style="list-style-type: none"> Lower input prices and reduced corruption.
Strengthen internal and external auditing functions.	<ul style="list-style-type: none"> Capacity, staffing and resources in BPK and BPKP do not correspond to their roles. Fragmented internal auditing institutions and lack of consistent internal auditing standards and procedures across government agencies. 	<p>50) The BPK should continue to increase its capacity and expand its presence in order to fulfill its new mandate, while the government internal audit agencies should be merged.</p> <p>51) The BPK should be more accountable to parliament.</p> <p>52) Main internal audit institution could be consolidated into one internal audit institution with clear obligation to work with BPK.</p>	MT	<ul style="list-style-type: none"> Effective auditing is critical to prevent misappropriation of public funds and mitigates the risks of misuse of the increased flexibility implied by PBB reforms.
CHAPTER 7. FISCAL DECENTRALIZATION AND REGIONAL INEQUALITY				
Make annual DAU transfer amounts more predictable, apply DAU in full, and create incentives for LGs to reform their civil service.	<ul style="list-style-type: none"> There are no incentives to reduce excessive numbers of civil servants as long as the DAU covers the complete wage bill. DAU does not equalize fiscal gaps among LGs effectively. Further long-term expenditure strategies are currently difficult to formulate and implement given unpredictable annual transfer amounts. 	<p>53) Eliminate the complete coverage of the civil service wage bill.</p> <p>54) Allocate the DAU based on previous years' allocation in order to avoid fluctuations in budgets.</p> <p>55) Enhance equalization by basing transfers more the on fiscal gap formula.</p>	ST/MT	<ul style="list-style-type: none"> Increased efficiency of sub-national governments spending. Increase equity. Improve of efficiency of spending.
Functions between the different levels of governments need to be delineated more clearly.	<ul style="list-style-type: none"> There is great uncertainty regarding responsibility for budgeting and implementation. 	<p>56) Delineate functions of among various levels of governments; national, provincial, districts, providers, and communities.</p>	LT	<ul style="list-style-type: none"> Enables rational planning processes at all levels of government, reduces uncertainty and improves the budgeting and implementation process.
Create incentives and build capacity for improved planning and budgeting at the local government level.	<ul style="list-style-type: none"> Budgets do not reflect planning and do not allow for efficient spending. Large surpluses occur at LG level. 	<p>57) Establish a performance measurement system with a selected number of indicators that can be easily monitored. Link performance of local governments to resource allocation.</p> <p>58) Reduce number of steps to approve sub-national budgets.</p> <p>59) Incorporate off-budget spending in sub-national budgets.</p>	MT	<ul style="list-style-type: none"> Improved budgeting—less surpluses—timeliness.

Reform Area	Challenges	Specific Solutions	Time Frame	Impact-Importance
<p>Improve the efficiency, equity, and effectiveness of tax collection by local governments.</p>	<ul style="list-style-type: none"> Currently, there is no regional property tax, discouraging local competition. Also, there are extremely low absolute levels of tax collection. Finally, there are still certain local taxes that create a poor investment climate. 	<p>60) Decentralization of property taxes, allowing regions to set their own rates and compete with each other. 61) The improvement of tax collection—on average half of collected revenue. 62) Use of charges and other local taxes needs to be regulated in order to limit negative effect on investment climate.</p>	<p>ST/MT</p> <ul style="list-style-type: none"> Improved revenues and investment climate. 	

Section A.2. Data sources, methodology and definitions

The main statistical and budgetary primary datasets used to process this report were extracted from the following sources:

- Central government expenditures: Ministry of Finance (MoF) data of audited realized expenditures for 1994 to 2005. Preliminary realization data were used for 2006 (first revision February 2007) and the 2007 budget (**APBN**) approved in October 2006.
- Province and district government public spending: data for 2000-05 are processed from the Ministry of Finance's Regional Fiscal Information System (Sistem Informasi Keuangan Daerah, or **SIKD**) dataset. World Bank staff computed estimates for sub-national spending for 2006-07 based on historical shares across sectors and aggregate transfers budgeted by the central government. Further detail on the characteristics of this dataset and the number of districts covered is available in Annex Table C.11.
- The Central Bureau of Statistics Annual National Socio-Economic Household Survey (**Susenas**) was the source of demographic and economic information from households for 2000-05.
- The National Labor Force Survey (Survei Tenaga Kerja Nasional, or **Sakernas**) for 2004 to February 2006 was the source for labor statistics.
- The Village Potential Statistics (Podes) for 2004-05 provided information on village infrastructure characteristics nationwide. This survey is conducted in the context of periodic censuses (agriculture, economy and population).
- The Governance and Decentralization Survey (**GDS**) 1+ provided data on indicators for governance and decentralization from households and non-households at the district and village level, as well as information collected at health and education delivery points (Puskesmas and schools).
- World Bank Development Indicators (**WDI**) were used for a series of international indicators of economic and budgetary variables for the period 1994-2005.

Several other primary datasets were drawn from statistical publications, studies by research and academic institutions, and reports from international organizations. All of these sources are listed in the reference section.

The economic composition of expenditures: In terms of the type, or the economic characteristics of the transactions on which resources are spent, public spending is classified as follows:

- **Routine expenditures** including: (i) personnel expenditures (wages and salaries), (ii) interest payments (domestic and external), (iii) subsidies, (vi) material expenditures in goods and services, and (v) other current expenditures.
- **Development expenditures** defined as "state expenditure aimed to finance development projects to achieve national development objectives, both material and non-material" (Law No. 2/2000 on the State Budget, or APBN). The amount reported as development spending also includes some salaries and materials, which technically should be regarded as routine spending. The development line budget was eliminated in 2004 with the introduction of a unified budget with a new budget line for capital expenditures.
- **Capital expenditures effective since 2005**, following Law No. 17/2003 on public finance. This category is defined as expenditures covering payments for the purchase or production of new or existing durable goods, or goods with a life of more than one year, to be used for productive purposes e.g., bridges, roads, school buildings, health clinics, etc. A mapping of the 2004 budget from the previous to the unified system reveals that capital expenditures accounted for about 56 percent of the amount reported previously as development expenditures, while the remainder was reclassified among several lines of routine expenditures and social assistance.
- **Transfers to regions** comprising revenue sharing, General Allocation Funds (DAU), Special Allocation Funds (DAK), and special autonomy and adjustment funds.

Technical notes on cross sectoral analysis. The figures presented in Chapter 2 of this report were aggregated based on national and sub-national data described previously. Annex Table C.14 presents a sectoral mapping of the sub-sectors that were aggregated under each sector and the sub-components reported under development and routine expenditures. Note that there is a slight difference between the spending numbers reported in Annex D and those reported in the education and health chapters. This is because the aggregate figures in these chapters were updated in January 2007 based on the most recent APBN sectoral details. The cross sectoral annex tables have not been updated in order to maintain consistency with the others sectors reported in the cross sectoral trends..

Technical notes on the health and education chapters. Background reports for the education sector reported estimations of education spending for 2007 based on aggregates of central government spending from the draft budget (R-APBN). Education expenditures reported in this report are based on the sectoral budget for 2007, which became available in December 2006. In order to implement Law No. 17/2003 on Public Finance, the government's public expenditure reporting format was changed at the start of fiscal year 2004. Among others reforms, this law modified expenditure classification by sectors into a classification by functions. Summary expenditure tables of the education and health chapters (Tables 3.2 and 4.3) are based on the sectoral classification. The functional classification was not used in these tables in order to maintain consistency with the years previous to 2004, for which some budget lines, such as expenditures on civil service training, are unavailable. However, full details of education expenditures based on the functional classification are presented in Figure 3.3.

In the Annex, the cross sectional data sets differ slightly from the sectoral aggregates because it was possible to update cross-sectoral trends based on the most current preliminary realization data from MoF (as of 8 January 2007). Details of expenditures by sector were unavailable at the time of writing this report. Consequently, the sectoral annexes are based on the previous data available (APBN).

Technical notes on the infrastructure chapter. The definition of infrastructure adopted in this report covers the following sectors and activities: energy (electricity and natural gas); transport (toll roads, national, provincial and district roads; seaports, airports, and rail); water and sanitation services (water-resource management budgets have been covered for activities that could be assumed to pertain to WSS); irrigation; and telecommunications (fixed and mobile).

- Economic actors considered: all government levels, as well as state-owned enterprises (SOEs) are considered. Government levels: central (CG), provincial (LG1) and kabupaten/kota (LG2). SOEs at the central government level: energy: PT PLN (electricity), PT PGN (natural gas); transport: PT Jasa Marga (toll roads), PT Angkasa Pura (airports), PT Pelindo (sea ports), PT KAI (railways); and telecoms: PT Telkom, PT Indosat. Local government-owned enterprises (BUMNs): WSS: PDAMs (urban water supply and sanitation), with limited coverage only due to insufficient data availability.
- Expenditure categories covered are: operational expenditure (opex), maintenance expenditure (opex and maintenance spending combined are referred to as O&M), rehabilitation (relevant for roads), limited (one-year) coverage only due to insufficient data availability, and investment or capital expenditure (capex). For the private sector, only investment commitments are covered, as no other spending categories are available and reported.
- Overall data reporting varies depending on the timeframe, as some expenditure trends have been tracked over the 1994-2004 period. But detailed spending patterns (spending categories and SOE expenditure) can only be established for the 2002-04 period.

Divergence with earlier work: regarding public investment figures, these have been approximated by the development budget of the relevant infrastructure related budget lines. It was possible to arrive at 'cleaner' investment figures for the years 2002-04 by excluding O&M spending, which is often recorded in the development budget. At the same time, investment figures related to infrastructure sectors, but not necessarily recorded in infrastructure related budget lines, have also been traced (e.g. investments in WSS recorded under housing activities) and included where appropriate. The difference between the 'cleaned' public investment figures and the 'rough' estimate is 0.2 to 0.4 percent of nominal GDP per year.

Annex B. What is the “Initiative for public expenditure analysis”?

1. Background of IPEA

In June 2004, the Indonesian government, local research institutions, and the international community (including the World Bank and the Netherlands Embassy) launched the Initiative for Public Expenditure Analysis (IPEA), which aims to meet the demands for analysis and capacity-building.

With macroeconomic stability regained, decentralization being implemented more smoothly than anticipated and increased budgetary flexibility expected in coming few years, this is an opportune time to explore options for the best possible use of Indonesia’s public resources. Demands for public expenditure analysis are likely to increase given (i) the increase in role of fiscal policy in supporting growth, and (ii) that decentralization has become a reality the making public expenditure analysis more challenging.

IPEA aims to formalize existing good practice and provide an umbrella, as well as effective dissemination of existing activities, in the field of public expenditures and public financial management. IPEA envisions (i) the creation of products that are tailor-made and flexible to respond to client needs (ii) the implementation of processes that receive buy in from key policy makers, and (iii) effective capacity-building; while maintaining a clear focus on results and impact.

2. Objectives of IPEA

Two main objectives of IPEA are:

- (i) **From good analytics to good policy.** IPEA seeks to provide a better understanding of actual government expenditures across administrative levels and sector, and to feed this analysis into policy dialogue to support movement towards a more accountable and service-oriented provision of public services.
- (ii) **Capacity-building for our clients.** IPEA intends to build capacity of Indonesian institutions to carry out expenditure analysis on a regular basis. The audience is central and local policy-makers in government and parliament, as well as local research centers and other key stakeholders.

In addition, IPEA aims to provide the following capacity-building support to our clients:

- (i) Targeted training and technical assistance for staff of ministries and research institutions.
- (ii) Twinning of local research institutions with reputable institutions in the field of public expenditure analysis.
- (iii) Secondments of staff from ministries and/or think-tanks to the World Bank for several months work to work on PER analysis.

3. Management structure of IPEA

An important outcome in the administrative arena of the program is the creation of a strong steering committee, which had its first meeting on 6 April 2005 and has had regular monthly meetings since. The steering committee is composed of a core group consisting of representatives from the Coordinating Ministry of the Economy (EKUIN), the Ministry of Finance, Bappenas, LPEM (University of Indonesia) and the World Bank. Ten steering committee meetings involving wide participation by government officials have been conducted from April 2005 to October 2006.

4. Outcomes and achievements of IPEA

Since its inception, IPEA has made significant achievements through delivering various diagnostic outputs as well as capacity-building. Its main achievements, next to this national public expenditure review, are summarized below:

A. Production of long-term policy advice and diagnostics

IPEA has delivered several outputs jointly with Indonesian partner institutions, which are additional aspect to the capacity-building dimension of this program. The IPEA long-term policy advice and diagnostics have generated continuous national debate and supported the implementation of government policies. IPEA provides analytical products and policy advice in five core areas:

- **Public investment, fiscal space and expenditure allocation**
- **Sectoral expenditure reviews**
- **Decentralization and intergovernmental fiscal relations**
- **Regional expenditure reviews**
- **Public financial management**

B. Capacity-building for our clients

IPEA has delivered several activities targeted at technical staff (typically Echelon 3) with the following objectives: (i) enhancing the practical skills that our counterparts need in their daily work; and (ii) reducing barriers between the different units and ministries. Outputs delivered include:

- **Financial Programming Course:** This course developed targeted technical skills for more effective planning and formulation of the government's working plan and national budget for 2007 and generating targeted output on financial management analysis that will later be used to support the budget preparation process. Delivery and follow-up activities:
 - o 3-11 December, 2005 Course in Financial Programming for government officials was delivered.
 - o 14 December, 2005 a course assessment and back-to-office report presented on IPEA steering committee.
 - o 2 February, 2006 A follow up working lunch with participant of the course aimed at coordinating future activities to strengthen the macroeconomic framework of the government's National budget for 2007.
 - o 16 April, 2006. Technical discussions for the preparation of the 2007 macroeconomic framework.
 - o June–July 2006. Secondment of Bappenas staff at the World Bank.
- **Course in Public Expenditure Analysis & Performance-Based Budgeting (PBB):** aimed at introducing participants to performance-based budgeting and management in order to support the implementation plan of PBB as mandated by Law No. 17/2003. Delivery and follow-up activities:
 - o 4-9 May, 2006. Delivery of the Course in Public Expenditure Analysis & Performance Based Budgeting (PBB), 'Managing Resources for Results'.
 - o 31 May, 2006. Back to office report, and facilitator's report was discussed with steering committee.
 - o 12 May, 2006. Discussion lunch with participant of the course.
 - o 20 July, 2006. Video Conference Lecture and Discussion Session 'Lessons Learned from International Experience with Performance Based Budgeting: The Case of South Africa' Mr. Mathew Andrews.
 - o 15 August, 2006. Video Conference Lecture & Discussion Session 'Do's and Don'ts in Performance Based Budgeting: A Road-Map for Indonesia. Mr. David Shand.
- **Regional Expenditure Reviews and local budget management** IPEA is supporting provinces and districts in their budget preparation and implementation. IPEA has been focusing on the following regions:
 - o Papua. Delivering of the Papua Public Expenditure Analysis (2005). Since then follow-up capacity building for province and local governments, together with regional universities.
 - o Aceh. Delivering of the Aceh Public Expenditure Analysis (2006). Technical assistance to BRR, local and provincial governments.
 - o Gorontalo. Supporting the 2007 budget preparation; Production of Expenditure Analysis and MDG report scheduled for 2007.

Annex C. Fiscal space and economic stability

Table C.1. Economic composition of national public expenditure

Rp trillion (current prices)

	2001	2002	2003	2004	2005	2006*	2007**
Personnel Expenditures	80.6	85.3	103.9	115.1	125.4	177.9	218.9
Material Expenditures	17.9	23.8	25.8	25.9	40.7	66.1	93.7
Interest Payments	87.1	81.1	65.4	62.5	65.2	78.9	85.1
Subsidy	77.4	43.6	43.9	91.6	120.8	107.5	103.0
Social Assistance	0.0	0.0	0.0	0.0	24.9	43.3	50.7
Others Routine	17.2	19.5	33.3	29.8	52.6	65.4	53.3
Development	72.5	83.1	133.1	120.4	71.1	100.9	114.3
Capital	0.0	0.0	0.0	0.0	32.9	59.6	76.8
Total	352.8	336.4	405.4	445.3	533.6	699.5	795.7

Source: World Bank staff estimates based on MoF and SIKD data.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table C. 2. Economic composition of national public expenditure

Percent

	2001	2002	2003	2004	2005	2006*	2007**	2001-05
Personnel Expenditures	22.8	25.4	25.6	25.9	23.5	25.4	27.5	24.6
Interest Payments	24.7	24.1	16.1	14.0	12.2	11.3	10.7	6.4
Subsidy	22.0	13.0	10.8	20.6	22.6	15.4	12.9	18.0
Material Expenditures	5.1	7.1	6.4	5.8	7.6	9.4	11.8	18.1
Others Routine	4.9	5.8	8.2	6.7	9.9	9.3	6.7	1.0
Social Assistance	-	-	-	-	4.7	6.2	6.4	7.2
Development	20.5	24.7	32.8	27.0	13.3	14.4	14.4	23.4
Capital	-	-	-	-	6.2	8.5	9.7	1.4
Total	100	100	100	100	100	100	100	100

Source: World Bank staff estimates based on MoF and SIKD data.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table C.3. Economic composition of national public expenditure*Percentage of GDP*

	2001	2002	2003	2004	2005	2006*	2007**
Personnel Expenditures	4.8	4.6	5.1	5.1	4.6	5.4	6.2
Material Expenditures	1.1	1.3	1.3	1.1	1.5	2.0	2.7
Interest Payments	5.2	4.4	3.2	2.7	2.4	2.4	2.4
Subsidy	4.6	2.3	2.1	4.0	4.4	3.2	2.9
Social Assistance	0.0	0.0	0.0	0.0	0.9	1.3	1.4
Others Routine	1.0	1.0	1.6	1.3	1.9	2.0	1.5
Development	4.3	4.5	6.5	5.3	2.6	3.0	3.2
Capital	0.0	0.0	0.0	0.0	1.2	1.8	2.2
Total	20.9	18.1	19.8	19.6	19.5	21.1	22.5

Source: World Bank staff estimates based on MoF and SIKD data.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table C.4. Composition of economic expenditures by level of government*Rp trillion*

	2001	2002	2003	2004	2005	2006*	2007**
Total Central	260,508	217,325	256,191	293,930	361,155	443,509	504,776
Personnel Expenditures	38,713	39,480	47,662	49,270	54,254	72,238	98,473
Material Expenditures	9,931	12,777	14,992	15,977	29,172	46,944	71,926
Interest Payments	87,142	81,122	65,351	62,485	65,200	78,910	85,087
Subsidy	77,443	43,628	43,899	91,617	120,765	107,463	102,954
Others Routine	5,694	3,099	15,042	13,602	33,972	35,095	18,838
Social Assistance					24,904	43,254	50,657
Development	41,585	37,220	69,247	60,979	0	0	0
Capital					32,889	59,605	76,842
Total Province	20,651	29,222	33,897	32,404	35,544	54,074	60,011
Personnel Expenditures	5,805	5,826	6,659	8,782	9,852	13,160	14,605
Material Expenditures	2,611	3,419	2,753	2,414	2,729	4,963	5,508
Others Routine	3,792	5,285	3,748	1,677	1,855	5,830	6,470
Development	8,443	14,693	20,738	19,531	21,108	30,121	33,428
Total District	71,625	89,888	115,279	118,959	136,862	201,911	230,885
Personnel Expenditures	36,091	39,986	49,585	57,095	61,339	92,536	105,815
Material Expenditures	5,402	7,600	8,059	7,547	8,807	14,184	16,219
Others Routine	7,678	11,151	14,485	14,472	16,730	24,457	27,967
Development	22,454	31,150	43,151	39,844	49,987	70,734	80,884
Total National	352,784	336,435	405,368	445,293	533,562	699,494	795,673

Source: World Bank estimate based on MoF and SIKD data.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table C.5. Economic composition of central government expenditures in indonesia*Percentage of GDP*

	2000	2001	2002	2003	2004	2005	2006*	2007**
I. Central Government Expenditure	20.8	15.5	11.7	12.6	12.9	13.0	14.4	14.3
1. Personnel Expenditures	2.8	2.3	2.1	2.3	2.3	1.9	2.4	2.9
2. Material Expenditures	0.9	0.6	0.7	0.7	0.7	1.0	1.5	2.0
3. Interest Payments	4.7	5.2	4.4	3.2	2.7	2.3	2.6	2.4
4. Subsidy	5.9	4.6	2.3	2.2	4.0	4.3	3.5	2.9
5. Social Assistance	--	--	--	--	--	0.9	1.4	1.5
6. Others	1.0	0.3	0.2	0.7	0.6	1.2	1.2	0.5
7. Transfers to Regions	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8. Development Expenditures	4.0	2.5	2.0	3.4	2.7	--	--	--
9. Capital Expenditures	--	--	--	--	--	1.2	1.9	2.1
II. Transfer to Regions	0.0	4.8	5.3	5.9	5.7	5.4	7.4	7.3
1. Balancing Funds	0.0	4.8	5.1	5.5	5.4	5.1	7.2	7.1
a. Revenue Sharing	--	1.2	1.3	1.5	1.6	1.8	2.1	1.9
b. General Allocation funds	--	3.6	3.7	3.8	3.6	3.2	4.7	4.7
c. Special allocation funds	--	0.0	0.0	0.1	0.2	0.2	0.4	0.5
2. Special Autonomy & Adjustment Fund	--	--	0.2	0.5	0.3	0.3	0.1	0.2
Total Central Government Expenditures and Transfers	20.8	20.3	16.9	18.5	18.6	18.3	21.8	21.6

Source: World Bank estimates based on data from MoF and SIKD.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table C.6. Central government budget*Rp billion*

	2001	2002	2003	2004	2005 (Audited)	2006	2007 (APBN)**
A. STATE REVENUES AND GRANTS	299,661	298,528	341,396	403,367	495,224	637,799	723,058
I. Domestic Revenues	299,183	298,528	340,928	403,105	493,919	635,942	720,389
1. Tax Revenues	184,124	210,088	242,048	280,559	347,031	409,058	509,462
a. Domestic Tax	174,557	199,512	230,934	267,817	331,792	395,822	494,592
i. Income Tax	94,576	101,873	115,016	119,515	175,541	208,834	261,698
- Non-Oil & Gas	71,474	84,404	96,053	96,568	140,398	165,644	220,457
- Oil & Gas	23,102	17,469	18,963	22,947	35,143	43,190	41,242
ii. Sales tax (VAT)	55,957	65,153	77,081	102,573	101,296	123,033	161,044
iii. Land and Building Tax	5,246	6,228	8,762	11,767	16,217	20,716	21,267
iv. Duties on Land & Building Transfer		1,600	2,144	2,918	3,432	3,179	5,390
v. Excises	17,394	23,189	26,277	29,172	33,256	37,772	42,035
vi. Other taxes	1,384	1,469	1,654	1,872	2,050	2,287	3,158
b. International Trade Tax	9,567	10,575	11,114	12,742	15,239	13,236	14,870
i. Import duties	9,026	10,344	10,885	12,444	14,921	12,142	14,418
ii. Export tax	541	231	230	298	318	1,094	453
2. Non Tax Receipts	115,059	88,440	98,880	122,546	146,888	226,885	210,927
a. Natural Resources Revenues	85,672	64,755	67,510	91,543	110,467	164,804	146,257
- Oil and Gas	81,041	60,011	61,502	85,259	103,762	158,087	139,893
i. Oil	58,950	47,686	42,969	63,060	72,822	125,146	105,361
ii. Gas	22,091	12,325	18,533	22,199	30,939	32,941	34,531
- Non-Oil and Gas	4,631	4,744	6,008	6,284	6,705	6,717	6,364

Rp billion

	2001	2002	2003	2004	2005 (Audited)	2006	2007 (APBN)**
iii. Public Mining	2,320	1,457	1,982	2,549	3,191	4,111	3,523
iv. Forestry	2,243	3,130	3,715	3,412	3,249	2,409	2,354
v. Fishery	68	157	312	324	265	198	487
b. Profits of Public Enterprises	8,837	9,760	12,617	9,818	12,835	22,973	19,100
c. Other Non-tax revenues (PNBP)	20,550	13,925	18,754	21,185	23,586	39,107	45,570
II. Grants	478	0	468	262	1,305	1,857	2,669
B. EXPENDITURES	341,563	315,634	376,505	426,715	509,632	670,591	763,571
I. Central Government Expenditure	260,508	217,430	256,191	296,992	361,155	444,197	504,776
1. Personnel Expenditures	38,713	39,480	47,662	52,743	54,254	72,873	101,202
2. Material Expenditures	9,931	12,777	14,992	15,518	29,172	47,066	72,186
3. Capital Expenditures					32,889	58,931	73,130
4. Interest Payments	87,142	81,122	65,351	62,485	65,200	79,026	85,087
a. Domestic	58,197	62,261	46,356	39,554	43,496	54,897	58,422
b. External	28,945	18,861	18,995	22,931	14,155	24,129	26,665
5. Subsidy	77,443	43,628	43,899	91,529	120,765	107,410	102,924
a. Fuel	68,381	31,162	30,038	69,025	95,661	64,212	61,838
b. Non-Fuel	9,063	12,466	13,861	22,592	25,047	43,198	41,086
6. Grants					0		0
7. Social Assistance					24,904	43,392	51,409
8. Others	5,694	3,099	15,042	13,738	33,972	35,500	18,838
9. Transfers to Regions							0
10. Development Expenditures	41,585	37,325	69,247	60,979	0		0
a. Rupiah Financing	21,371	25,608	50,345	47,987	0		0
Capital transfer to region							0
Central Government Budget	21,371	25,608	50,345	47,987			0
b. Project Financing with foreign loan	20,214	11,717	18,902	12,992			0
II. Transfer to Regions	81,054	98,204	120,314	129,723	150,464	226,394	258,795
1. Balancing Funds	81,054	94,657	111,070	122,868	143,221	222,348	250,343
a. Revenue Sharing	20,008	24,884	31,370	36,700	49,692	65,133	68,461
b. General Allocation funds	60,346	69,159	76,978	82,131	88,765	145,652	164,787
c. Special allocation funds	701	613	2,723	4,036	4,764	11,563	17,094
2. Special Autonomy & Adjustment Fund		3,548	9,244	6,855	7,243	4,047	8,452
C. PRIMARY BALANCE	45,241	64,015	30,241	39,136	50,791	46,234	44,574
D. SURPLUS / DEFICIT	-41,902	-17,107	-35,109	-23,349	-14,409	-32,792	-40,513
E. NET FINANCING	41,902	25,247	32,662	20,363	11,219	32,976	40,513
I. Domestic Financing, net	31,445	25,164	32,115	48,853	21,491	52,292	55,068
1. Domestic Banking	0	0	8,258	22,713	-2,453	15,223	12,962
2. Non-banking	31,445	25,164	23,857	26,141	23,943	37,069	42,106
a. Privatization	3,465	7,665	7,301	3,519	0	400	2,000
b. Banking Restructuring asset selling	27,980	19,439	19,661	15,751	6,564	2,684	1,500
c. Bond Selling	0	-1,939	-3,105	6,870	22,575	35,986	40,606
i. Gov' Bond Issues (incl. International bonds)	0	1,991	11,319	32,327	47,373	60,979	69,104
ii. Amortizations of domestic debts	0	-3,931	-6,166	-24,457	-19,692	-25,142	-28,498
iii. Buy back			-8,258	-1,000	-5,673		0
d. Mortgage Facility/capital participation					-5,195	-2,000	-2,000

Rp billion

	2001	2002	2003	2004	2005 (Audited)	2006	2007 (APBN)**
II. Foreign Financing, net	10,457	83	548	-28,490	-10,272	-19,316	-14,555
1. Foreign Loan Disbursement	26,342	18,887	20,360	18,001	26,840	33,409	40,275
a. Program Loan	6,416	7,170	1,792	5,059	12,265	13,580	16,275
b. Project Loan	19,926	11,717	18,568	12,942	14,576	19,829	24,000
2. Amortization	-15,885	-18,804	-19,812	-46,491	-37,112	-52,725	-54,830
F. GROSS FINANCING	57,786	39,841	69,345	95,296	76,886	110,659	123,841

Source: World Bank staff estimates base on data from SIKD and MoF.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table C.7. Realized central government budget

Percentage of GDP

	2001	2002	2003	2004	2005 (Audited)	2006	2007 (APBN)**
A. STATE REVENUES AND GRANTS	17.8	16.0	16.8	17.6	17.8	20.7	20.5
I. Domestic Revenues	17.8	16.0	16.7	17.6	17.7	20.7	20.4
1. Tax Revenues	10.9	11.3	11.9	12.2	12.5	13.3	14.4
a. Domestic Tax	10.4	10.7	11.3	11.7	11.9	12.9	14.0
i. Income Tax	5.6	5.5	5.6	5.2	6.3	6.8	7.4
- Non-Oil & Gas	4.2	4.5	4.7	4.2	5.0	5.4	6.2
- Oil & Gas	1.4	0.9	0.9	1.0	1.3	1.4	1.2
ii. Sales tax (VAT)	3.3	3.5	3.8	4.5	3.6	4.0	4.6
iii. Land and Building Tax	0.3	0.3	0.4	0.5	0.6	0.7	0.6
iv. Duties on Land & Building Transfer		0.1	0.1	0.1	0.1	0.1	0.2
v. Excises	1.0	1.2	1.3	1.3	1.2	1.2	1.2
vi. Other taxes	0.1	0.1	0.1	0.1	0.1	0.1	0.1
b. International Trade Tax	0.6	0.6	0.5	0.6	0.5	0.4	0.4
i. Import duties	0.5	0.6	0.5	0.5	0.5	0.4	0.4
ii. Export tax	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2. Non Tax Receipts	6.8	4.7	4.9	5.3	5.3	7.4	6.0
a. Natural Resources Revenues	5.1	3.5	3.3	4.0	4.0	5.4	4.1
- Oil and Gas	4.8	3.2	3.0	3.7	3.7	5.1	4.0
i. Oil	3.5	2.6	2.1	2.7	2.6	4.1	3.0
ii. Gas	1.3	0.7	0.9	1.0	1.1	1.1	1.0
- Non-Oil and Gas	0.3	0.3	0.3	0.3	0.2	0.2	0.2
iii. Public Mining	0.1	0.1	0.1	0.1	0.1	0.1	0.1
iv. Forestry	0.1	0.2	0.2	0.1	0.1	0.1	0.1
v. Fishery	0.0	0.0	0.0	0.0	0.0	0.0	0.0
b. Profits of Public Enterprises	0.5	0.5	0.6	0.4	0.5	0.7	0.5
c. Other Non-tax revenues (PNBP)	1.2	0.7	0.9	0.9	0.8	1.3	1.3
II. Grants	0.0	0.0	0.0	0.0	0.0	0.1	0.1
B. EXPENDITURES	20.3	16.9	18.5	18.6	18.3	21.8	21.6
I. Central Government Expenditure	15.5	11.7	12.6	12.9	13.0	14.4	14.3
1. Personnel Expenditures	2.3	2.1	2.3	2.3	1.9	2.4	2.9
2. Material Expenditures	0.6	0.7	0.7	0.7	1.0	1.5	2.0
3. Capital Expenditures					1.2	1.9	2.1
4. Interest Payments	5.2	4.4	3.2	2.7	2.3	2.6	2.4
a. Domestic	3.5	3.3	2.3	1.7	1.6	1.8	1.7

Percentage of GDP

	2001	2002	2003	2004	2005 (Audited)	2006	2007 (APBN)**
b. External	1.7	1.0	0.9	1.0	0.5	0.8	0.8
5. Subsidy	4.6	2.3	2.2	4.0	4.3	3.5	2.9
a. Fuel	4.1	1.7	1.5	3.0	3.4	2.1	1.8
b. Non-Fuel	0.5	0.7	0.7	1.0	0.9	1.4	1.2
6. Grants					0.0	-	0.0
7. Social Assistance					0.9	1.4	1.5
8. Others	0.3	0.2	0.7	0.6	1.2	1.2	0.5
9. Development Expenditures	2.5	2.0	3.4	2.7	0.0		0.0
a. Rupiah Financing	1.3	1.4	2.5	2.1	0.0		0.0
Capital transfer to region							0.0
Central Government Budget	1.3	1.4	2.5	2.1			0.0
b. Project Financing with foreign loan	1.2	0.6	0.9	0.6			0.0
II. Transfer to Regions	4.8	5.3	5.9	5.7	5.4	7.4	7.3
1. Balancing Funds	4.8	5.1	5.5	5.4	5.1	7.2	7.1
a. Revenue Sharing	1.2	1.3	1.5	1.6	1.8	2.1	1.9
b. General Allocation funds	3.6	3.7	3.8	3.6	3.2	4.7	4.7
c. Special allocation funds	0.0	0.0	0.1	0.2	0.2	0.4	0.5
2. Special Autonomy & Adjustment Fund	-	0.2	0.5	0.3	0.3	0.1	0.2
C. PRIMARY BALANCE	2.7	3.4	1.5	1.7	1.8	1.5	1.3
D. SURPLUS / DEFICIT	(2.5)	(0.9)	(1.7)	(1.0)	(0.5)	(1.1)	(1.1)
E. NET FINANCING	2.5	1.4	1.6	0.9	0.4	1.1	1.1
I. Domestic Financing, net	1.9	1.4	1.6	2.1	0.8	1.7	1.6
1. Domestic Banking	0.0	0.0	0.4	1.0	(0.1)	0.5	0.4
2. Non-banking	1.9	1.4	1.2	1.1	0.9	1.2	1.2
a. Privatization	0.2	0.4	0.4	0.2	0.0	0.0	0.1
b. Banking Restructuring asset selling	1.7	1.0	1.0	0.7	0.2	0.1	0.0
c. Bond Selling	0.0	(0.1)	(0.2)	0.3	0.8	1.2	1.1
i. Government Bond Issues (including International bonds)	0.0	0.1	0.6	1.4	1.7	2.0	2.0
ii. Amortizations of domestic debts	0.0	(0.2)	(0.3)	(1.1)	(0.7)	(0.8)	(0.8)
iii. Buy back			(0.4)	(0.0)	(0.2)		0.0
d. Mortgage Facility					(0.2)	(0.1)	(0.1)
II. Foreign Financing, net	0.6	0.0	0.0	(1.2)	(0.4)	(0.6)	(0.4)
1. Foreign Loan Disbursement	1.6	1.0	1.0	0.8	1.0	1.1	1.1
a. Program Loan	0.4	0.4	0.1	0.2	0.4	0.4	0.5
b. Project Loan	1.2	0.6	0.9	0.6	0.5	0.6	0.7
2. Amortization	(0.9)	(1.0)	(1.0)	(2.0)	(1.3)	(1.7)	(1.6)
F. GROSS FINANCING	3.4	2.1	3.4	4.2	2.8	3.6	3.5

Source: World Bank staff estimates base on data from SIKD and MoF.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table C.8. Central, province and district government budgets

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006*	2007**
<i>Rp billion</i>														
I. CENTRAL GOVERNMENT														
Revenues	64,412	70,852	87,630	112,275	146,872	204,422	205,335	299,661	298,528	341,396	400,589	495,224	637,799	723,058
Expenditures	62,501	65,341	82,220	109,301	172,670	201,943	188,391	341,563	315,529	376,505	423,975	509,632	669,880	763,571
Transfers to regions	20,295	20,926	24,698	28,436	40,225	42,387	50,139	81,054	98,204	120,314	130,045	150,464	226,371	258,795
Own expenditures	42,206	44,415	57,522	80,866	132,445	159,556	138,253	260,508	217,325	256,191	293,930	359,169	443,509	504,776
- Routine expenditures	19,683	22,989	30,625	53,079	90,878	114,369	112,438	218,923	180,106	186,944	232,951	298,258	340,650	377,277
- Development expenditures	22,523	21,426	26,897	27,787	41,567	45,187	25,815	41,585	37,220	69,247	60,979	60,911	102,860	127,499
Balance	1,911	5,511	5,410	2,974	(25,798)	2,479	16,944	(41,902)	(17,001)	(35,109)	(23,386)	(14,409)	(32,081)	(40,513)
II. PROVINCE														
Revenues	9,005	10,258	11,354	12,093	8,586	11,693	8,830	25,485	32,972	39,703	46,001	56,973	76,763	85,191
Transfers from center	6,000	6,409	7,043	7,445	5,492	7,324	5,863	14,447	16,607	18,843	19,823	24,699	34,506	39,448
Own revenues	3,005	3,849	4,311	4,648	3,094	4,369	2,967	11,038	16,365	20,861	26,178	32,274	42,257	45,743
Expenditures	8,986	10,600	12,384	12,895	8,003	11,562	7,739	23,109	32,252	39,751	43,335	49,369	72,314	80,254
Transfers to lower levels	0	0	0	0	0	0	0	2,458	3,029	5,854	10,930	13,825	0	0
Own expenditures	8,986	10,600	12,384	12,895	8,003	11,562	7,739	20,651	29,222	33,897	32,404	35,544	54,074	60,011
- Routine expenditures	5,938	6,760	7,581	8,044	4,779	6,739	3,748	12,208	14,530	13,160	12,873	28,261	21,482	23,841
- Development expenditures	3,048	3,840	4,803	4,851	3,224	4,823	3,991	8,443	14,693	20,738	19,531	21,108	32,592	36,170
Balance	19	(342)	(1,030)	(802)	583	130	1,091	2,375	720	(48)	2,666	7,603	4,449	4,938
III. KABUPATEN/KOTA														
Revenues	9,669	11,307	13,136	15,471	20,828	27,153	27,102	78,699	93,381	115,236	122,121	142,807	207,278	237,023
Transfers from center	8,388	9,718	11,260	13,374	18,404	24,082	24,118	70,609	81,217	97,153	101,935	117,080	177,440	202,855
Own revenues	1,280	1,589	1,876	2,097	2,423	3,071	2,984	8,089	12,164	18,083	20,186	25,726	29,838	34,168
Expenditures	9,701	11,432	13,295	15,649	20,233	27,203	29,581	71,625	89,888	115,279	118,959	136,862	201,911	230,885
- Routine expenditures	5,027	6,179	7,289	8,732	13,690	18,695	18,777	49,170	58,738	72,128	79,115	86,875	134,283	153,553
- Development expenditures	4,674	5,252	6,007	6,917	6,543	8,508	10,804	22,454	31,150	43,151	39,844	49,987	67,628	77,332
Balance	(32)	(124)	(159)	(178)	595	(50)	(2,479)	7,074	3,493	(44)	3,162	5,944	5,367	6,137
18,686	22,031	25,680	28,544	28,236	38,766	37,320	94,734	122,139	155,031	162,293	186,232	274,225	311,139	
IV. AGGREGATE BUDGET														
Revenues	68,697	76,290	93,818	119,020	152,389	211,862	211,285	318,788	327,057	380,339	446,953	553,224	709,895	802,969
Central government	64,412	70,852	87,630	112,275	146,872	204,422	205,335	299,661	298,528	341,396	400,589	495,224	637,799	723,058
Province	3,005	3,849	4,311	4,648	3,094	4,369	2,967	11,038	16,365	20,861	26,178	32,274	42,257	45,743
Kabupaten	1,280	1,589	1,876	2,097	2,423	3,071	2,984	8,089	12,164	18,083	20,186	25,726	29,838	34,168
Expenditures	60,893	66,446	83,201	109,409	160,681	198,322	175,572	352,784	336,435	405,368	445,293	531,575	699,494	795,673
Routine expenditures	30,647	35,928	45,494	69,854	109,347	139,804	134,962	280,302	253,373	272,232	324,939	413,394	496,415	554,671

Rp billion

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006*	2007**
Development expenditures	30,245	30,518	37,707	39,555	51,333	58,518	40,610	72,482	83,062	133,136	120,354	132,006	203,079	241,001
Central government	42,206	44,415	57,522	80,866	132,445	159,556	138,253	260,508	217,325	256,191	293,930	359,169	443,509	504,776
- Routine expenditures	19,683	22,989	30,625	53,079	90,878	114,369	112,438	218,923	180,106	186,944	232,951	298,258	340,650	377,277
- Development expenditures	22,523	21,426	26,897	27,787	41,567	45,187	25,815	41,585	37,220	69,247	60,979	60,911	102,860	127,499
Province	8,986	10,600	12,384	12,895	8,003	11,562	7,739	20,651	29,222	33,897	32,404	35,544	54,074	60,001
- Routine expenditures	5,938	6,760	7,581	8,044	4,779	6,739	3,748	12,208	14,530	13,160	12,873	28,261	21,482	23,841
- Development expenditures	3,048	3,840	4,803	4,851	3,224	4,823	3,991	8,443	14,693	20,738	19,531	21,108	32,592	36,170
Kabupaten	9,701	11,432	13,295	15,649	20,233	27,203	29,581	71,625	89,888	115,279	118,959	136,862	201,911	230,885
- Routine expenditures	5,027	6,179	7,289	8,732	13,690	18,695	18,777	49,170	58,738	72,128	79,115	86,875	134,283	153,553
- Development expenditures	4,674	5,252	6,007	6,917	6,543	8,508	10,804	22,454	31,150	43,151	39,844	49,987	67,628	77,332
Balance	7,805	9,844	10,616	9,611	(8,292)	13,540	35,713	(33,996)	(9,378)	(25,028)	3,162	5,944	5,367	6,137
Central government	22,206	26,438	30,109	31,410	14,427	44,866	67,082	39,153	81,203	85,205	106,659	136,055	194,290	218,282
Province	(5,981)	(6,751)	(8,073)	(8,247)	(4,909)	(7,194)	(4,772)	(9,613)	(12,858)	(13,037)	(6,226)	(3,270)	(11,817)	(14,268)
Kabupaten	(8,420)	(9,843)	(11,419)	13,552)	(17,810)	24,132)	(26,597)	(63,536)	(77,723)	(97,197)	(98,773)	(111,136)	(172,072)	(196,717)

Source: World Bank staff estimates based on MoF data.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table C.9. Central, province and district government budgets

Percent

Share	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006*	2007**
Revenues	100	100	100	100	100	100	100	100	100	100	100	100	100	100
- Central government	93.8	92.9	93.4	94.3	96.4	96.5	97.2	94	91.3	89.9	89.6	889.5	89.8	90
- Province	4.4	5	4.6	3.9	2	2.1	1.4	3.5	5	5.5	5.9	5.8	6	5.7
- Kabupaten	1.9	2.1	2	1.8	1.6	1.4	1.4	2.5	3.7	4.8	4.5	4.7	4.2	4.3
Expenditures	100	100	100	100	100	100	100	100	100	100	100	100	100	100
- Routine expenditures	50.3	54.1	54.7	63.8	68.1	70.5	76.9	79.5	75.3	67.2	73	77.8	71	69.7
- Development expenditures	49.7	45.9	45	36.2	31.9	29.5	23.1	20.5	24.7	32.8	27	24.8	29	30.3
Central government	69.3	66.8	69.1	73.9	82.4	80.5	78.7	73.8	64.6	63.2	66	67.6	63.4	63.4
- Routine expenditures	32.3	34.6	36.8	48.5	56.6	57.7	64	62.1	53.5	46.1	52.3	56.1	48.7	47.4
- Development expenditures	37	32.2	32.3	25.4	25.9	22.8	14.7	11.8	11.1	17.1	13.7	11.5	14.7	16
Province	14.8	16	14.9	11.8	5	5.8	4.4	5.9	8.7	8.4	7.3	6.7	7.7	7.5
- Routine expenditures	9.8	10.2	9.1	7.4	3	3.4	2.1	3.5	4.3	3.2	2.9	5.3	3.1	3
- Development expenditures	5	5.8	5.8	4.4	2	2.4	2.3	2.4	4.4	5.1	4.4	4	4.7	4.5

<i>Kabupaten</i>	15.9	17.2	16	14.3	12.6	13.7	16.8	20.3	26.7	28.4	26.7	25.7	28.9	29
- Routine expenditures	8.3	9.3	8.8	8	8.5	9.4	10.7	13.9	17.5	17.8	17.8	16.3	19.2	19.3
- Development expenditures	7.7	7.9	7.2	6.3	4.1	4.3	6.2	6.4	9.3	10.6	8.9	9.4	9.7	9.7
Balance as % of Nat. Exp.	100	100	100	100	100	100	100	100	100	100	100	100	100	100
- Central government	36.5	39.8	36.2	28.7	9	22.6	38.2	11.1	24.1	21	24	25	27.8	27.4
- Province	-9.8	-10.2	-9.7	-7.5	-3.1	-3.6	-2.7	-2.7	-3.8	-3.2	-1.4	-0.6	-1.7	-1.8
- <i>Kabupaten</i>	-13.8	-14.8	-13.7	-12.4	-11.1	-12.2	-15.1	-18	-23.1	-24	-22.2	-20.9	-24.6	-24.7

Source: World Bank staff estimates based on MoF data. Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table C.10. Central, province and district government budgets as share of GDP

Percentage of GDP

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006*	2007**
Revenues	16.9	15.7	16.2	16.2	13.9	17.4	19.8	22.9	19.4	20.4	21.8	24.3	26	24.2
- Central government	15.8	14.6	15.1	15.3	13.4	16.8	19.3	21.6	17.7	18.3	19.6	21.8	23.4	22.8
- Province	0.7	0.8	0.7	0.6	0.3	0.4	0.3	0.8	1.0	1.1	1.3	1.4	1.5	1.4
- <i>Kabupaten</i>	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.6	0.7	1	1	1.1	1.1	1
Expenditures	15	13.7	14.3	14.9	14.7	16.3	16.5	25.4	20	21.8	21.8	23.4	25.6	24
- Routine Expenditures	7.5	7.4	7.8	9.5	10	11.5	12.7	20.2	15	14.6	15.9	18.2	18.2	16.7
- Development expenditures	7.4	6.3	6.5	5.4	4.7	4.8	3.8	5.2	4.9	7.1	5.9	5.8	7.4	7.3
Central government	10.4	9.2	9.9	11	12.1	13.1	13	18.7	12.9	13.7	14.4	15.8	16.2	15.2
- Routine expenditures	4.8	4.7	5.3	7.2	8.3	9.4	10.6	15.8	10.7	10	11.4	13.1	12.5	11.4
- Development expenditures	5.5	4.4	4.6	3.8	3.8	3.7	2.4	3.0	2.2	3.7	3.0	2.7	3.8	3.8
Province	2.2	2.2	2.1	1.8	0.7	0.9	0.7	1.5	1.7	1.8	1.6	1.6	2.0	1.8
- Routine expenditures	1.5	1.4	1.3	1.1	0.4	0.6	0.4	0.9	0.9	0.7	0.6	1.2	0.8	0.7
- Development expenditures	0.7	0.8	0.8	0.7	0.3	0.4	0.4	0.6	0.9	1.1	1.0	0.9	1.2	1.1
<i>Kabupaten</i>	2.4	2.4	2.3	2.1	1.8	2.2	2.8	5.2	5.3	6.2	5.8	6.0	7.4	7.0
- Routine expenditures	1.2	1.3	1.3	1.2	1.2	1.5	1.8	3.5	3.5	3.9	3.9	3.8	4.9	4.6
- Development expenditures	1.1	1.1	1.0	0.9	0.6	0.7	1.0	1.6	1.8	2.3	1.9	2.2	2.5	2.3
Balance	1.9	2	1.8	1.3	-0.8	1.1	3.4	-2.4	-0.6	-1.3	0.2	0.3	0.2	0.2
- Central Govt	5.5	5.5	5.2	4.3	1.3	3.7	6.3	2.8	4.8	4.6	5.2	6.0	7.1	6.6
- Province	-1.5	-1.4	-1.4	-1.1	-0.4	-0.6	-0.4	-0.7	-0.8	-0.7	-0.3	-0.1	-0.4	-0.4
- <i>Kabupaten</i>	-2.1	-2.0	-2.0	-1.8	-1.6	-2	-2.5	-4.6	-4.6	-5.2	-4.8	-4.9	-6.3	-5.4
Nominal GDP (Rp trillion)	406.8	484.6	580.9	735.1	1,095.9	1,218.5	1,389.8	1,684.3	1,863.3	2,045.9	2,273.1	2,729.7	2,729.7	3,316.4

Source: World Bank staff estimates based on MoF data. Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table C.11. Number of sub-national governments that reported their budgets

	1994/95	1995/96	1996/97	1997/98	1998/99	1999-2000	2000	2001	2002	2003	2004	2005
Total number of provinces*	26	26	26	26	26	26	30	30	30	30	32	33
Total number of <i>kabupaten/kota</i> **	292	292	292	292	292	292	332	336	348	370	410	434
Number of provinces that submitted their APBD	26	26	26	26	26	26	25	29	30	28	28	32
Old format												
Revenue								29	30	14	1	
Routine								29	30	14	1	
Expenditure								28	30	14	1	
New Format												
Revenue								29	-	14	27	32
Expenditure								29	-	14	27	32
Financing								28	-	13	27	32
Number of <i>kabupaten/kota</i> that submitted their APBD	284	285	285	290	291	298	313	330	327	332	346	255
Old format												
Revenue								330	327	137	32	
Routine								328	326	137	32	
Expenditure								327	320	134	32	
New Format												
Revenue								-	-	198	314	252
Expenditure								-	-	197	314	255
Financing								-	-	190	302	247

Source: World Bank staff estimates based on MoF data.

Note: * Excluding Timor Timur (1994-97)

**The total number excludes 13 *kabupaten/kota* in Timor Timur (1994-97) and Kota DKI Jakarta. Based on World Bank Jakarta decentralization database, the official number of *kabupaten/kota* before decentralization (1994-99) in accordance with the Law is 292. However, *kabupaten/kota* that appear in the budget data (from BPS) vary across years. In 2000, the total number of *kabupaten/kota* was not clear since most of new *kabupaten/kota* were formed during this period. The total numbers of *kabupaten/kota* after decentralization derived from number of *kabupaten/kota* that receives DAU each year.

Table C.12. Provincial government budget

	1994/95	1995/96	1996/97	1997/98	1998/99	1999 - 2000	2000	2001	2002	2003	2004	2005
<i>Rp trillion</i>												
Revenue												
- Own-Source Revenue	2,977	3,808	4,280	4,606	3,074	4,364	2,965	10,005	14,232	17,798	22,696	28,104
- Balancing Fund	6,000	6,409	7,043	7,445	5,492	7,324	5,863	14,447	16,607	18,843	19,823	24,699
- Shared Taxes	475	572	731	773	1,071	1,277	530	4,348	5,119	6,546	8,759	9,312
- Shared Natural Resources Revenue	275	412	454	501	811	896	747	3,366	3,972	3,608	2,833	6,190
- Autonomous Region Subsidy/SDO	4,003	4,128	4,436	4,555	1,791	2,218	1,578	0	0	0	0	-
- Development) Presidential Grants/Inpres	1,246	1,298	1,421	1,616	1,819	2,933	3,008	0	0	0	0	-
-DAU	0	0	0	0	0	0	0	6,575	7,354	8,345	8,217	9,181
-DAK	0	0	0	0	0	0	0	158	162	344	13	16
- Other Revenue	28	41	31	42	20	5	2	1,033	2,133	3,062	3,482	4,260
Total Revenue	9,005	10,258	11,354	12,093	8,586	11,693	8,830	25,485	32,972	39,703	46,001	56,973
Routine Expenditure												
- Government General Administration Section	-	-	-	-	-	-	-	6,759	6,974	6,506	7,342	8,324
- Public Works Section	-	-	-	-	-	-	-	984	1,071	643	787	958
- Transportation Section	-	-	-	-	-	-	-	218	291	289	270	301
- Public Health Section	-	-	-	-	-	-	-	1,177	1,448	1,359	1,248	1,524
- Education and Culture Section	-	-	-	-	-	-	-	580	1,353	785	797	876
- Housing, Labor and Social Affairs Section	-	-	-	-	-	-	-	388	544	776	721	789
- Agriculture, Forestry, State Crops, Livestock, Fishery, and Cooperative Section	-	-	-	-	-	-	-	677	802	914	968	1,024
- Industry, Trade, and Mining Section	-	-	-	-	-	-	-	155	271	336	266	299
- Pension and Assurances	-	-	-	-	-	-	-	82	27	229	0	-
- Subsidy to Subsidiary Regions	-	-	-	-	-	-	-	2,458	3,029	5,854	10,930	13,825
- Other Routine Expenditures	-	-	-	-	-	-	-	1,188	1,748	1,322	475	341
Total Routine Expenditure	-	-	-	-	-	-	-	14,667	17,559	19,014	23,804	28,261
Routine Expenditure (Economic Classification)												
- Personnel Expenditures	3,985	4,216	4,537	4,711	1,931	2,395	1,532	5,805	5,826	6,659	8,782	9,852
- Good Expenditures	633	702	839	915	897	1,284	791	2,611	3,419	2,753	2,414	2,729
- Operation & Maintenance Expenditures	349	465	499	501	332	495	155	1,110	1,352	781	615	901
- Traveling Expenditures	73	90	103	113	113	144	129	197	287	413	539	613

	1994/95	1995/96	1996/97	1997/98	1998/99	1999 -2000	2000	2001	2002	2003	2004	2005
<i>Rp trillion</i>												
- Miscellaneous Expenditures	413	561	668	747	540	642	517	1,216	1,871	1,002	49	-
- Other Expenditures	191	259	363	411	414	1,087	623	1,188	1,748	1,322	475	341
- Pension, Assistancess and subsidy	292	467	573	646	552	693	0	82	0	0	0	-
- Pension, and Assistancess	0	0	0	0	0	0	0	0	27	229	0	-
- Subsidy to Subsidiary Regions	0	0	0	0	0	0	0	2,458	3,029	5,854	10,930	13,825
Total	5,938	6,760	7,581	8,044	4,779	6,739	3,748	14,667	17,559	19,014	23,804	28,261
Development Expenditure (12 Sectors)												
- Government Apparatus Sector	1,003	1,411	1,833	1,830	1,154	1,095	733	1,587	3,585	6,980	5,039	5,419
- Agriculture and Forestry Sector	109	124	154	151	161	258	293	551	686	799	855	1,013
- Mining and Energy Sector	21	26	24	21	10	22	19	36	98	241	176	177
- Industry, Trade, Local Business Development, and Finance Sector	217	169	211	263	130	386	290	787	1,190	670	453	469
- Labor Sector	14	17	22	24	19	25	19	62	91	113	173	197
- Health, Social Welfare, Woman Empowerment, Children and Youth Sector	108	141	178	152	111	367	519	767	1,166	1,717	1,987	2,073
- Education, Culture, and Religion Sector	277	367	536	446	215	561	499	1,363	2,646	3,137	3,018	3,100
- Environment and Spatial Planning Sector	50	62	75	102	81	133	134	286	411	698	566	690
- Regional Development, Housing, and Settlement Sector	380	425	559	557	265	506	291	718	1,135	1,306	1,117	1,306
- Water Resources, Irrigation and Transportation Sector	821	1,037	1,150	1,245	1,045	1,424	1,156	2,184	3,469	4,841	5,893	6,411
- Population and Family Planning Sector	5	4	5	6	5	4	5	19	52	60	83	61
- Tourism and Telecommunication Sector	44	57	58	53	28	42	32	83	163	175	171	193
Total Development	3,048	3,840	4,803	4,851	3,224	4,823	3,991	8,443	14,693	20,738	19,531	21,108
Development Expenditure (8 Sectors)												
- Government General Administration Section	1,096	1,530	1,965	1,986	1,263	1,270	0	1,955	4,160	7,939	5,957	6,452
- Public Works Section	129	197	236	241	278	387	0	408	640	2,387	5,104	5,646
- Transportation Section	692	840	914	1,005	767	1,037	0	1,776	2,830	2,454	789	765
- Public Health Section	71	97	116	104	66	298	0	568	924	1,462	1,752	1,792
- Education and Culture Section	277	367	536	446	215	561	0	1,363	2,646	3,137	3,018	3,100
- Housing, Labor and Social Affairs Section	435	491	648	635	334	604	0	998	1,520	1,683	1,525	1,784
- Agriculture, Forestry, State Crops, Livestock, Fishery, and Cooperative Section	140	140	172	175	172	280	0	662	823	944	949	1,135

	1994/95	1995/96	1996/97	1997/98	1998/99	1999	2000	2001	2002	2003	2004	2005
<i>Rp trillion</i>						-2000						
- Industry, Trade, and Mining Section	208	179	217	260	129	387	0	713	1,151	731	436	434
Total	3,048	3,840	4,803	4,851	3,224	4,823	0	8,443	14,693	20,738	19,531	21,108
Surplus	19	(342)	(1,030)	(802)	583	130	1,091	2,375	720	(48)	2,666	7,603

Source: World Bank staff estimates based on MoF data.

Table C.13. Local government budget

	1995/96	1996/97	1997/98	1998/99	1999	2000	2001	2002	2003	2004	2005	
<i>Rp trillion</i>					-2000							
Revenue												
- Own Source Revenue	1,219	1,513	1,757	1,962	2,362	2,791	2,640	5,267	7,439	8,707	10,131	12,530
- Balancing Fund	8,388	9,718	11,260	13,374	18,404	24,082	24,118	70,609	81,217	97,153	101,935	117,080
- Shared Taxes	1,349	1,541	1,940	2,123	2,459	2,874	2,731	5,849	7,551	10,228	13,706	15,122
- Shared Natural Resources Revenue	176	267	305	330	389	534	535	8,575	9,566	11,060	8,773	17,488
- Autonomous Region Subsidy/SDO	3,372	4,197	4,888	5,987	10,519	14,118	13,648	0	0	0	0	0
- Development) Presidential Grants/Inpres	3,490	3,713	4,127	4,935	5,037	6,555	7,138	0	0	0	0	0
- DAU	0	0	0	0	0	0	55,301	63,377	72,416	75,794	79,843	
- DAK	0	0	0	0	0	0	885	723	3,449	3,661	4,628	
- Other Revenue	61	76	119	134	62	280	344	2,822	4,725	9,376	10,055	13,196
Total Revenue	9,669	11,307	13,136	15,471	20,828	27,153	27,102	78,699	93,381	115,236	122,121	142,807

	1995/96	1996/97	1997/98	1998/99	1999	2000	2001	2002	2003	2004	2005
Routine Expenditure											
- Government General Administration Section	-	-	-	-	-	-	16,434	17,615	21,176	23,170	25,871
- Public Works Section	-	-	-	-	-	-	1,424	2,015	1,586	1,357	1,479
- Transportation Section	-	-	-	-	-	-	302	449	555	583	656
- Public Health Section	-	-	-	-	-	-	3,150	4,238	4,584	4,976	5,970
- Education and Culture Section	-	-	-	-	-	-	23,225	27,977	33,017	35,204	36,783
- Housing, Labor and Social Affairs Section	-	-	-	-	-	-	398	607	825	871	870
- Agriculture, Forestry, State Crops, Livestock, Fishery, and Cooperative Section	-	-	-	-	-	-	1,095	1,759	2,114	2,263	2,435

	1995/96	1996/97	1997/98	1998/99	1999 - 2000	2000	2001	2002	2003	2004	2005
<i>Rp trillion</i>											
- Industry, Trade, and Mining Section	-	-	-	-	-	-	258	391	555	533	601
- Pension and Assurances	-	-	-	-	-	-	87	71	166	0	0
- Subsidy to Subsidiary Regions	-	-	-	-	-	-	827	952	4,943	8,476	11,296
- Other Routine Expenditures	-	-	-	-	-	-	1,970	2,662	2,607	1,682	917
Total Routine Expenditure	5,027	6,179	7,289	8,732	13,690	18,695	49,170	58,738	72,128	79,115	86,875
Routine Expenditure (Economic Classification)											
- Personnel Expenditures	3,337	4,019	4,677	5,748	10,161	14,091	13,762	36,091	39,986	49,585	61,339
- Good Expenditures	558	751	928	1,056	1,328	1,727	1,823	5,402	7,600	8,059	8,807
- Operation & Maintenance Expenditures	158	190	226	249	287	358	341	1,081	1,596	1,805	2,175
- Traveling Expenditures	95	121	135	144	158	203	879	553	912	1,387	2,288
- Miscellaneous Expenditures	530	685	796	895	984	1,181	850	3,160	4,959	3,576	55
- Other Expenditures	255	300	377	427	519	775	657	1,970	2,662	2,607	917
- Pension, Assurances and subsidy	93	114	149	213	252	361	465	0	0	0	0
- Pension, and Assurances	0	0	0	0	0	0	0	87	71	166	0
- Subsidy to Subsidiary Regions	0	0	0	0	0	0	0	827	952	4,943	11,296
Total	5,027	6,179	7,289	8,732	13,690	18,695	49,170	58,738	72,128	79,115	86,875
Development Expenditure (12 Sectors)											
- Government Apparatus Sector	653	771	989	1,059	831	1,234	1,250	3,855	5,148	10,724	15,766
- Agriculture and Forestry Sector	106	122	170	205	250	398	406	1,145	1,489	1,815	2,411
- Mining and Energy Sector	20	25	24	30	28	33	45	188	312	524	283
- Industry, Trade, Local Business Development, and Finance Sector	205	212	243	242	273	471	1,995	1,421	2,158	1,710	567
- Labor Sector	8	8	8	9	36	28	19	64	159	218	216
- Health, Social Welfare, Woman Empowerment, Children and Youth Sector	237	262	314	393	377	424	451	1,454	1,869	3,291	4,339
- Education, Culture, and Religion Sector	727	770	839	1,014	1,042	1,166	1,060	3,017	4,600	5,328	5,059
- Environment and Spatial Planning Sector	187	205	223	257	228	464	408	672	1,266	1,253	1,252
- Regional Development, Housing, and Settlement Sector	683	787	869	1,260	1,461	1,740	2,306	3,424	4,546	4,386	1,243
- Water Resources, Irrigation and Transportation Sector	1,743	2,030	2,255	2,354	1,924	2,354	2,694	6,810	9,094	13,315	18,208
- Population and Family Planning Sector	13	15	16	31	36	44	30	61	122	186	357

<i>Rp trillion</i>	1995/96	1996/97	1997/98	1998/99	1999 - 2000	2000	2001	2002	2003	2004	2005
- Tourism and Telecommunication Sector	91	45	62	58	152	141	344	388	401	258	288
Total Development	4,674	5,252	6,917	6,543	8,508	10,804	22,454	31,150	43,151	39,844	49,987
Development Expenditure (8 Sectors)											
- Government General Administration Section	932	1,021	1,378	1,117	1,850	0	4,871	6,801	12,519	14,148	17,751
- Public Works Section	46	66	89	76	136	0	755	1,115	7,488	10,669	17,523
- Transportation Section	1,697	1,964	2,265	1,848	2,218	0	6,056	7,979	5,827	1,601	685
- Public Health Section	206	229	323	278	272	0	1,237	1,487	2,889	3,132	3,978
- Education and Culture Section	727	770	1,014	1,042	1,166	0	3,017	4,600	5,328	4,601	5,059
- Housing, Labor and Social Affairs Section	735	843	1,370	1,632	1,964	0	3,765	5,209	5,071	2,924	1,820
- Agriculture, Forestry, State Crops, Livestock, Fishery, and Cooperative Section	141	134	216	265	423	0	1,259	1,765	2,022	2,078	2,540
- Industry, Trade, and Mining Section	191	225	261	285	479	0	1,494	2,194	2,008	690	631
Total	932	1,021	1,378	1,117	1,850	0	4,871	6,801	12,519	14,148	49,987
Surplus	0	0	0	0	0	0	7,074	3,493	(44)	3,162	5,944

Source: World Bank staff estimates based on MoF data.

Table C.14 PER sectoral mapping for development and routine expenditures

PER Sector Category	Sector in Sub National Development Expenditure (Based on 12 Sector Classification, unless stated otherwise)	Sector in Sub-national Routine Expenditure (Based on 8 Sector Classification unless stated otherwise)
Agriculture	Agriculture and Forestry Sector (sector code 02).	Agriculture, Forestry, State Crops, Livestock, Fishery, and Cooperative Section (section code 208).
Education	Education, Culture, and Religion Sector (sector code 07).	Education and Culture Section (section code 206).
Health	Public Health Section (Based on 8 Sector Classification) (sector code 205).	Public Health Section (section code 205).
Mining	Mining Sub Sector of Mining and Energy Sector (sector code 03), the 2004 figure is estimated using share of mining sub sector in 2003.	Mining Sub Section (section code 20903), figure for 2004 is estimated using the share of mining in Industry, Trade, and Mining Section (section code 209) in 2002.
Trade, National Business Development, Finance and Cooperative Sector	Industry, Trade, Local Business Development, and Finance Sector (sector code 04).	Industry (section code 20901); Trade (section code 20902). Figure for 2004 is estimated using the share of the sub-sectors in 2002.
Government Apparatus and Supervision Sector	Government Apparatus Sector (sector code 01).	Government General Administration Section (section code 202) (minus Environment component as defined by its share in 2002).
Manpower Sector	Labor Sector (sector code 05).	Manpower sub-sector (section code 20703).
Defense and Security Sector	Non existent.	Non existent.
Environment and Spatial Planning	Environment and Spatial Planning Sector (sector code 08).	Environmental Section (section code 20211), figure for 2004 is estimated using share of the sub-section in 2002.
Infrastructure	Regional Development, Housing, and Settlement Sector (sector code 09); Water Resources, Irrigation and Transportation Sector (sector code 10); Telecommunication sub sector (sector code 082); Energy sub sector of Mining and Energy Sector (the 2004 figure is estimated using share of energy sub sector in 2003).	Public Works Section (section code 203), Transportation Section (section code 204), Human Settlement (section code 20704).
Others	Residual of Health Sector (sector code 06 minus code 205); Tourism sub sector (sector code 11).	Social Affairs (section code 20701), Subsidy to Subsidiary Regions (section code 309), Other Routine Expenditures (section code 399), Pension and Assurances (section code 308).

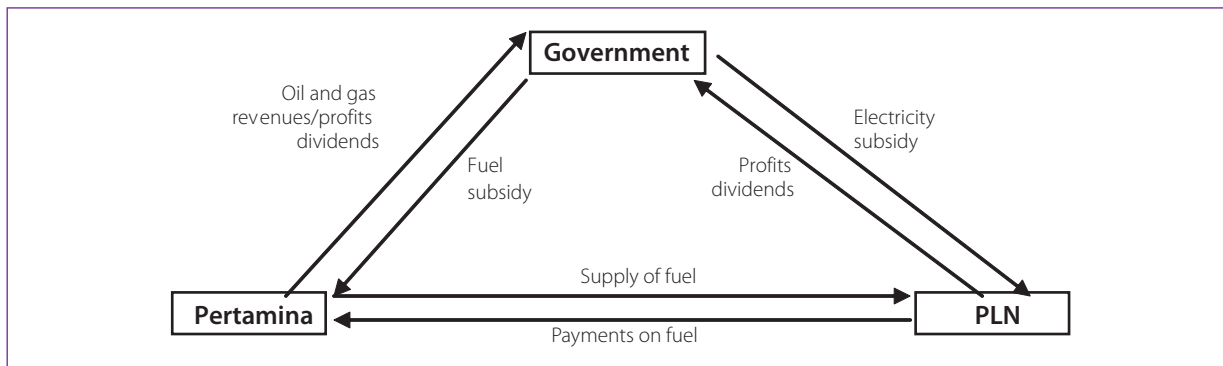
Section C.15. Managing off-budget accounts & budgetary arrangements

Financial transfers between government, Pertamina and PLN show inefficiencies in budget execution.

According to a government regulation, the central government has to transfer fuel subsidy to Pertamina every month. The current system is expected to improve Pertamina's cash flow situation, since Pertamina received 70 percent of budgeted subsidy every quarter under the old system. However, as of late August 2006, only Rp 4.7 trillion (9 percent of budgeted fuel subsidy) of fuel subsidies had been transferred to Pertamina. The following reasons contributed to the slow disbursements:

- **Pertamina's arrears to the government:** Pertamina's debt reached a substantial amount as of end-2005 including unpaid dividends, non-tax oil and gas revenues. In light of this, the government is reluctant to pay fuel subsidy on time.
- **Complicated settlement system between government, Pertamina and PLN (Figure G.1):** The government has to pay electricity subsidy to PLN, while PLN owes to Pertamina. The relationships between 3 stakeholders make the settlements of subsidies complicated.
- **Delayed issuance of decree:** The decree of the Minister of Energy and Mineral Resources on 'benchmark prices of certain types of oil fuels for 2006 budget' was issued on 18 July. As this decree is necessary for the MOF to calculate fuel subsidies, its delay also delayed payments.

Figure C.15.1. Financial transactions between government, Pertamina and PLN



Annex D. Cross sectoral

Table D.1. Distribution of national public expenditure by sector

Rp billion (current prices)

	2001	2002	2003	2004	2005	2006*	2007**
Agriculture	6,276	7,613	10,701	10,992	12,100	18,350	21,859
Education	40,451	48,167	64,788	61,804	73,972	118,399	135,685
Health	9,252	11,004	16,014	17,727	22,189	31,787	38,963
Mining	618	708	878	987	1,279	1,262	1,752
Trade, National Business Development, Finance and Cooperative Sector	192,773	148,813	150,580	191,435	233,876	277,611	294,924
Government Apparatus and Supervision Sector	31,678	35,064	50,876	53,922	63,321	104,985	105,732
Manpower Sector	606	957	1,499	1,481	1,517	2,435	2,582
Defense and Security Sector	16,521	21,419	28,835	31,218	34,682	48,241	58,420
Environment and Spatial Planning	2,043	2,567	3,331	3,073	3,983	7,573	8,722
Infrastructure	32,412	35,258	51,678	41,436	54,254	78,109	85,088
Others	20,932	26,055	26,221	27,768	28,777	37,393	39,449
Total	353,561	337,625	405,339	441,844	529,950	726,146	793,176

Source: World Bank staff estimates based on MoF and SIKD data.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table D.2. Distribution of national public expenditures by sector

Percent

	2001	2002	2003	2004	2005	2006*	2007**
Agriculture	1.8	2.3	2.6	2.5	2.3	2.5	2.8
Education	11.4	14.3	16.0	14.0	14.0	16.3	17.1
Health	2.6	3.3	4.0	4.0	4.2	4.4	4.9
Mining	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Trade, NBD, FCS (includes debt service and subsidies)	54.5	44.1	37.1	43.3	44.1	38.2	37.2
Government Apparatus & Supervisory Sectors	9.0	10.4	12.5	12.2	11.9	14.5	13.3
Manpower Sector	0.2	0.3	0.4	0.3	0.3	0.3	0.3
Defense & Security	4.7	6.3	7.1	7.1	6.5	6.6	7.4
Environment and Spatial Planning	0.6	0.8	0.8	0.7	0.8	1.0	1.1
Infrastructure	9.2	10.4	12.7	9.4	10.2	10.8	10.7
Others	5.9	7.7	6.5	6.3	5.4	5.1	5.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: World Bank staff estimates based on MoF and SIKD data.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table D.3. Distribution of national public expenditures (annual growth rate) by sector*Percent*

	2002	2003	2004	2005	2006*	2007**	2002-05	2005-07
Agriculture	8.4	31.9	-3.3	-0.3	34.4	12.1	27.1	50.7
Education	6.4	26.2	-10.2	8.4	41.9	7.9	22.8	53.0
Health	6.3	36.5	-4.2	13.3	27.0	15.4	61.2	46.5
Mining	2.5	16.2	5.9	17.3	-12.5	30.6	44.4	14.3
Trade, NBD, FCS (includes debt service and subsidies)	-31.0	-5.1	19.7	10.6	5.2	0.0	25.7	5.2
Government Apparatus & Supervisory Sectors	-1.1	36.1	-0.2	6.3	47.0	-5.2	44.4	39.3
Manpower Sector	41.1	47.0	-7.0	-7.2	42.3	-0.2	26.8	42.0
Defense & Security	15.9	26.3	1.9	0.6	23.3	14.0	29.5	40.5
Environment and Spatial Planning	12.3	21.7	-13.1	17.3	68.5	8.4	24.1	82.7
Infrastructure	-2.8	37.5	-24.5	18.5	27.6	2.5	23.1	30.8
Others	11.3	-5.6	-0.3	-6.2	15.2	-0.7	-11.7	14.4
Total	-14.6	12.7	2.6	8.9	16.6	5.9	26.4	23.0

Source: World Bank staff estimates based on MoF and SIKD data.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Table D.4. Distribution of annual percentage changes by sector*Percent*

	2001-02	2002-03	2003-04	2004-05	2005-06*	2006-07**
Agriculture	0.1	0.7	-0.1	0.0	0.8	0.3
Education	0.7	3.7	-1.6	1.2	5.8	1.3
Health	0.2	1.2	0.2	0.5	1.1	0.7
Mining	0.0	0.0	0.0	0.0	0.0	0.1
Trade, NBD, FCS (includes debt service and subsidies)	-16.9	-2.2	7.3	4.6	2.3	0.0
Government Apparatus & Supervisor	-0.1	3.8	0.0	0.8	5.6	-0.8
Manpower Sector	0.1	0.1	0.0	0.0	0.1	0.0
Defense & Security	0.7	1.7	0.1	0.0	1.5	1.0
Environment and Spatial Planning	0.1	0.2	-0.1	0.1	0.5	0.1
Infrastructure	-0.3	3.9	-3.1	1.7	2.8	0.3
Others	0.7	-0.4	0.0	-0.4	0.8	0.0
Total	-14.6	12.7	2.6	8.6	21.4	2.9

Source: World Bank staff estimates based on MoF and SIKD data.

Note: Annual change weighted by the sector's share in the total on the each initial year.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures

Table D.5. Intergovernmental shares in national sector spending

Percent

Sectors by level of government	2001	2002	2003	2004	2005	2006*	2007**
Agriculture	6.3	7.6	10.7	11.0	12.1	18.4	21.9
Central	3.0	3.1	5.1	5.0	5.0	8.3	10.5
Province	1.2	1.4	1.7	1.8	2.2	2.9	3.2
District	2.1	3.1	3.9	4.2	5.0	7.1	8.2
Education	40.5	48.2	64.8	61.8	74.0	118.4	135.7
Central	14.1	14.7	22.5	19.4	28.3	46.8	54.1
Province	1.3	2.7	3.9	2.6	3.8	6.3	7.0
District	25.1	30.7	38.3	39.8	41.8	65.3	74.7
Health	9.3	11.0	16.0	17.7	22.2	31.8	39.0
Central	3.1	2.9	5.7	5.6	8.9	12.8	17.5
Province	1.7	2.4	2.8	4.0	3.3	5.1	5.6
District	4.4	5.7	7.5	8.1	9.9	13.9	15.9
Mining	0.6	0.7	0.9	1.0	1.3	1.3	1.8
Central	0.4	0.4	0.5	0.7	0.7	0.7	1.1
Province	0.1	0.1	0.3	0.2	0.4	0.4	0.4
District	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Trade, National Business Development, Finance and Cooperative Sector	192.8	148.8	150.6	191.4	233.9	277.6	294.9
Central	192.0	147.6	148.2	190.3	232.8	274.9	291.9
Province	0.8	1.2	0.7	0.5	0.3	1.0	1.1
District	0.0	0.0	1.7	0.7	0.8	1.7	2.0
Government Apparatus and Supervision Sector	31.7	35.1	50.7	53.9	63.3	105.0	105.7
Central	4.0	4.3	7.5	7.7	11.2	28.2	18.5
Province	7.8	8.5	11.6	10.7	11.6	18.2	20.1
District	19.9	22.3	31.8	35.5	40.5	58.7	67.1
Manpower Sector	0.6	1.0	1.5	1.5	1.5	2.4	2.6
Central	0.2	0.3	0.8	0.6	0.5	1.1	1.1
Province	0.2	0.3	0.3	0.4	0.5	0.6	0.6
District	0.2	0.3	0.4	0.5	0.6	0.8	0.9
Defense and Security Sector	15.8	19.4	27.0	29.5	32.4	45.1	54.9
Central	15.8	19.4	27.0	29.5	32.4	45.1	54.9
Province	.	.	.	.	.	.	.
District	.	.	.	.	.	.	.
Environment and Spatial Planning	2.0	2.6	3.3	3.1	4.0	7.6	8.7
Central	1.0	0.8	1.2	1.2	1.0	4.0	4.6
Province	0.3	0.5	0.7	0.6	1.0	1.1	1.2
District	0.7	1.3	1.3	1.2	2.0	2.5	2.9
Infrastructure	32.4	35.3	51.7	41.4	54.3	78.1	85.1
Central	17.4	14.5	23.8	16.0	23.0	32.9	33.8
Province	3.7	5.5	7.4	8.3	9.0	12.8	14.2
District	11.3	15.2	20.5	17.1	22.0	32.5	37.1

Source: World Bank staff estimates based on MoF and SIKD data.

Note: * 2006 Preliminary realization of central government expenditures plus estimates of sub-national expenditures, ** 2007 central government budget (APBN) plus estimates for sub-national expenditures.

Annex E. Education

Section E.1. Estimating education expenditures

The estimation reported is based on panel data of 46 developing and developed countries from 1972–2000. Budget data is drawn from the International Monetary Fund's (IMF) Government Financial Statistics. The source of other control variables is the World Bank's World Development Indicators. Unobserved country characteristics were not controlled for, because the objective of the exercise was to compute the expected value of education spending given a set of economic and geographical characteristics. Control for unobserved country specifics would generate expectations given the historical (and other unobserved relevant dimensions) country-specific levels of education spending. A fixed-effects specification that controls for a country's specific unobserved characteristics generates lower predictions (expected education spending of approximately 12 percent of the consolidated budget).

The specification used can be written as:

$$Comp_{i,t} = G(\alpha_0 + \alpha_1 Dec_{i,t} + \alpha_2 X_{i,t} + \alpha_3 dev_i + \alpha_4 Re\ gion_i + u_{i,t})$$

$$\widehat{Comp}_{i,t} = G(\alpha_0 + \alpha_1 Dec_{i,t} + \alpha_2 X_{i,t} + \alpha_3 dev_i + \alpha_4 Re\ gion_i)$$

Where:

G(): Denotes the transformation function applied to the model due to special characteristics of our dependent variable ($G(x) = \log(x/1-x)$).

Comp: Is the ratio of education expenditures to the total amount of public expenditures.

X: Is a set of control variables, which include population, population density, GDP per capita, a measure of fiscal decentralization (sub-national expenditure share), and budget balance.

Dev: Slope dummy defined as (DEC * Industrialized Dummy) is introduced in the model to account for possible different impact of decentralization depending on the level of economic development.

Region: Regional dummies (LAC, MENA, NA, EASA, Sub-Saharan, relative to ECA)

Note: This methodology draws upon Arze, Martinez-Vazquez, and McNab 2005.

Section E.2. Computing social rates of return to investments in education

Table E.2.1 Mean annual earnings at different age groups (Rp '000)

Level of Education	Age Groups						
	<14 (1)	Level of Education	<14 (1)	Level of Education	<14 (1)	Level of Education	<14 (1)
Number of school	2,665	Number of school	2,665	Number of school	2,665	Number of school	2,665
Primary	4,211	Primary	4,211	Primary	4,211	Primary	4,211
Junior High School General	4,346	Junior High School General	4,346	Junior High School General	4,346	Junior High School General	4,346
Senior High School General	---	Senior High School General	---	Senior High School General	---	Senior High School General	---

Source: National Labor Survey (Sakernas) 2006.

Data on wages per level of education and age group was computed based on the National Labor Survey (Sakernas) released in February 2006. These data covers 178,228 individuals who received salaries and wages in monetary terms or in kind. The net wage differentials for each age group is defined as the difference between average wages at each level of education and the average wages at a lower level of education. That is, for example, that the net differential for primary education, equals the difference between the average wage level of a person with primary education and that of a person with no education (or Rp 4,211 – Rp 2,665 = Rp 1,546). The summation of net wage differentials over an expected time of work of 50 years into the future (from years 15 to 65) constitutes the social benefits in the cost benefit analysis of the returns to education. Foregone wage and salary earnings are equal to 75 percent of the average earnings of individuals at a lower level education.¹⁰⁰ The 75 percent is used to adjust for the percent of time that children attend school each year (technically student could work full time for the remaining 25 percent of the year).

Table E.2.2 Investment costs: direct and indirect costs of education

	Foregone Earnings (1)	Direct Costs (2)	Annual Total Costs (3)	Total Costs Over Full Period (4)
Primary	3,246	2,880	6,126	36,754
Junior High School General	3,593	4,301	7,894	22,682
Senior High School General	4,106	5,143	9,250	27,749

Source: World Bank staff estimates.

The direct costs of providing education at each level is the aggregate of the unit costs incurred at the school level and at each level of government in all administrative functions entailed in the provision of that level of education. The units costs used in this computation are reported in Table E2.3. These figures were drawn from a survey study of 2016 schools covering Primary Schools, Madrasah Ibtidaiyah (Islamic Primary Schools), Junior High School, Madrasah Tsanawiyah (Islamic Junior High School, Senior High School, Madrasah Aliyah (Islamic Senior High School) and SMK (Technical Senior High Schools) within 56 districts and 15 provinces in Indonesia.¹⁰¹ The unit cost at the school level covers costs such as teacher's salary; purchasing of classroom materials; school building development for classrooms as well as costs incurred to fund activities not directly related to the learning process but support this operation of the school, such as: principal and administration staff's salary; purchasing of schools equipment and peripheral for the principal and administration staff; and development and maintenance of buildings for the principal and administration staff.

¹⁰⁰ This is an admittedly narrow definition of benefits. Other methodologies entail broader definitions of benefits by including non-market benefits of education; such as benefits to civic institutions, to private and public health, and to fertility rates and /or the feedback of indirect earnings in the economy; for example, as firms are attracted to community seeking skilled labor in good environment. effect on growth (for a further discussion of these type of estimations see McMahon and Appiah, 2001)

¹⁰¹ This survey was conducted for the Ministry of Education, financed by UNESCO, and lead by Abbas Ghozali. See Ghozali 2005.

The per-pupil annual cost of providing education is equal to the sum of foregone earning costs (column 1 in Table E.2.2) and direct costs (column 2 in Table E.2.2). In order to find the complete investment costs of educating one individual, the total costs are multiplied by the number of years required to complete each level of education; namely: primary education (6 years), junior secondary (3 years), and senior secondary (3 years).

Table E.2.3 Unit Costs of education by education level and spending unit (Rp '000)

	Primary	Junior High	Senior High
School	1,864	2,771	3,612
Sub-district	57	0	0
District	170	153	125
Province	159	141	117
Central Government	54	376	261
Total	2,304	3,441	4,115

Source: Ghozali 2005 *Bab 5 Hasil dan Pembahasan*, p. 83. Inflation rate 2005=10.5 percent 2006= 12.8 percent.

Limitations and Future Research

It is important to note that several other studies in education social rates of return report rates of return of significantly different magnitudes. A recent study UNESCO (2007), for example, reports returns for primary education in the range of 27 percent in rural areas, and 5 percent, in urban areas. Several studies report rates of return that include only the private market returns to education in the form of "increased earnings". These estimations involve the fitting of a semi-log ordinary least squares regression using the natural logarithm of earnings as the dependent variable, and years of schooling and potential years of labor market experience and its square as independent variables. Authors often label these coefficients "returns to education," whereas these are "marginal wage effects", not rates of return to investment in education. "The "returns" notion necessitates taking into account the cost of education, both private and public, and relating this cost to the wage effect (Psacharopoulos 1994, p. 1326).

The figures reported in this estimation do not include non-market benefits (effects on health, life expectancy, population growth, etc) or externality feedback effects (the additional economic benefits from the initial education outcomes, such as the effects of education on the economy through democratization, political stability, etc.). Both of these are without doubt part of the social benefits. As pointed out by Mc Mahon (2006) "the value of additional non-market benefits is estimated by Wolfe and Zuvekas (1997) to be about equal in value to the market returns based on the cost of producing the same outcomes by alternative means." This means that the rates of return estimated in this report could be considerably lower than the true total returns to economic development from investment in education. An additional point to note is that, the National Labor Survey reports earnings of organized labor markets. Some studies reveal the need to use real output (bushels of rice produced) to measure real income of farmers, as opposed to urban wages. Jamison, for example, concludes that farm productivity increases in average by 7.4 percent as a result of a farmer completing elementary education which could considerably increase the rates of return.

Taking some of the considerations discussed above into account would scale up the education rates of return reported by a percentage dependant on the numbers of effects incorporated, the methodology employed, and the assumptions made. The estimations presented herein result from a methodology that includes private and public costs of education, following the "elaborated" methodology described in Psacharopoulos (1994), and employed by McMahan and Boediono (1992). The team that conducted this report did not extend the scope of the basic methodology, but have marked such type of exercises as part of an agenda for future research.

Section E.3. Determinants of net enrollment rate in Indonesia

The following specification is aimed to examine demand and supply side factors in the determination of education outcomes.

$$R_i = \alpha + \beta_1 E_1 + \beta_2 E_2 + \beta_3 S + \beta_4 GRDP + \beta_5 \theta + \beta_6 R + \beta_7 A + \beta_8 \delta + \beta_9 D + \beta_{10} K + \beta_{11} L + u_i$$

Where:

- i = District i = 1...N, N=409
- R = Net enrollment rates
- E1 = Log of education spending per population in school age (total education spending per number of children aged between 7 and 18 years).¹⁰²
- E2 = Log average district education spending (per population in school age) from 2001 to 2003
- S = Education personnel spending as share of total education spending (ratio of personnel spending to total education spending)
- GRDP = Log of Gross Regional Product per capita
- Po = Poverty head count
- R = Remote area (Geometric average of the distance from village to the closer adjacent district)
- A = Road Access (% of villages with access to paved roads)
- Sc = No of primary and secondary schools per square kilometer
- D = Disaster (0-1) variable indicating whether the district has been hit by any kind of disaster during last year
- K = Dummy for urban/rural districts (=1 for urban)
- L = Percent of population in school age working

Sources

Net enrollment and percent of population in school age that work were computed based on the National Socio- Economic Survey (Susenas) 2005. Education spending and the share of salaries in total education spending are taken from the SIKD (sub-national budgets) dataset, and from the distribution of central government spending on DAK and Dekonsentrasi as reported by the MoF. Gross domestic product per district is drawn from figures released by the National Statistics Bureau (BPS). The remaining variables are computed based in Podes 2005.

Econometric Models

Models 1, 2 and 3 estimate the specification linearly by ordinary least squares; whereas model 4 estimates a logit model. The latter is due to the fractional nature of the dependent variable. Model 3 and 4 control for province-level unobserved effects by including province dummies (fixed-effects). The province level coefficients are not reported for exposition simplicity.

Regression results confirm the role of public spending as a determinant of enrollment rates. The coefficient for public education spending is positive and statistically significant in all of the estimated models and specifications. Given the linear-log functional form used in the estimation, a one percent increase in education spending would increase the net enrollment rate by 0.02 percentage points, with a point elasticity of .02 * (1/Net enrollment of district i). The elasticity of education expenditures resulting from the Logit model (column 4) is on the same range as the linear models (approximately .03). There are lags built into all models with spending in education (per potential student) preceding the impact on enrollment by 1 year and the average of district spending by lag from 2 to 4 years (2001-03). Yet, the average district spending (per population in school age) from 2001-03 is not statistically significant in any of the estimated models.

The results do not provide evidence of the existence of differences between districts in remote and non-remote areas, but does provide evidence of differences between urban and rural districts. Models 1 and 2 differ only on that model one includes a dummy variable to control for differences between urban and rural districts. This variable is statistically significant in model 1 and has the expected sign (positive). Yet when the variables labor and number of schools are included, the sign of the urban dummy turns negative and non-statistically significant. This is likely because the underlying reasons for an expected difference between rural and urban districts are precisely driven by a expectedly larger number of schools and lower incidence of student labor in urban districts. When the number of schools and labor are controlled for independently, in addition to the urban dummy, the urban dummy becomes

¹⁰² Population in school age is used to proxy for per capita spending (as opposed to the number of actual students) in order to avoid endogeneity (i.e. an increase in net enrollment, reflecting a higher number of actual students, would also increase the denominator of a spending "per student" variable).

Table E.3.1 Determinants of education net enrollment*Dependent variable: Net enrollment rates*

Variable	OLS (1)	OLS (2)	Fixed effects (3)	Logit-fixed effects (4)
Log education spending (per population in school age)	0.02** (2.67)	0.02** (2.61)	0.02** (3.11)	0.14** [.028] (4.03)
Log average district education spending (per population in school age) from 2001 to 2003	6.9 e-3 (0.8)	0.01 (1.32)	3.2 e-3 (0.43)	0.018 [0.003] (0.43)
Log gross regional product	1.1 e-2** (2.86)	7.3 e-3* (1.76)	2.4 e-3 (.64)	0.02 [.003] (1.01)
Share of education personnel spending in total education spending	-0.015 (-.92)	-0.01 (-0.8)	-3.2 e-4 (-0.20)	-2.2 e-2 [-7.3 e-4] (-.03)
Poverty head count	-0.08 (-2.03)	-0.06* (-1.46)	-0.11* (-2.32)	-0.62* [-.11] (-2.39)
Remote area	-9.91 e-5 (-.71)	-2.3 e-5 (-.16)	-2.0 e-5 (-.14)	1.8 e-4 [-3.34 e-5] (-0.26)
Road Access	1.5 e-4** (2.75)	1.3 e-4** (2.56)	4.01 e-5 (0.8)	2.0 e-4 [3.72 e-5] (.74)
Disaster	-3.02 e-4** (-3.65)	-3.0 e-4** (-3.68)	-1.1 e-4 (-1.55)	5.9 e-4 [1.1 e-4] (-1.62)
Dummy for urban/rural districts	0.02* (2.21)			
Labor		-0.30** (-5.59)	-0.31** (-6.24)	-1.6** [-.30] (-4.79)
No. of primary and secondary schools per square kilometer		4.5 e-3 (1.72)	1.9 e-3 (.76)	1.7 e-2 [3.1 e-2] (1.22)
Constant	0.04 (.27)	0.15 (1.0)	0.30 (1.97)	-0.73 (-0.92)
Adjusted R-square	.29	.36	.56	---
No. Obs.	303	299	299	299

Source: World Bank staff estimates.

Note: t-statistics reported in parentheses **, *, + denote significance at the 1 percent, 5 percent and 10 percent level, respectively. Column 4 reports the elasticity at mean values of the explanatory variables in brackets.

Gross regional product, road access, and natural disaster variables are significant in the first and second models but turn not significant when the unobserved characteristics at the province level are controlled for. This may reflect the fact that these characteristics are commonly shared by all districts in determined provinces and thus captured by the province dummies.

Demand side factors such as poverty and the percent of population in school age that work, have an impact in net enrollment. The coefficients for poverty head count and student labor are negative and statistically significant in all models and specifications, reflecting the importance of the demand side factors in determining education outcomes. Attaining a higher level of education is costly not only to the school but also to households, and so, socio-economic characteristics of the population are important determinants of enrollment. Households in poor districts may not enroll their children, even when they have access to schools, and so it is important to implement policies aimed not only to reduce fees but to reduce poverty. Lower income families require support mechanisms that enable them to afford having their children attending school, such as compensation for foregone earnings (loss in monetary contributions) or household.

Section E.4. Estimating the financial implications of the new Teacher Law

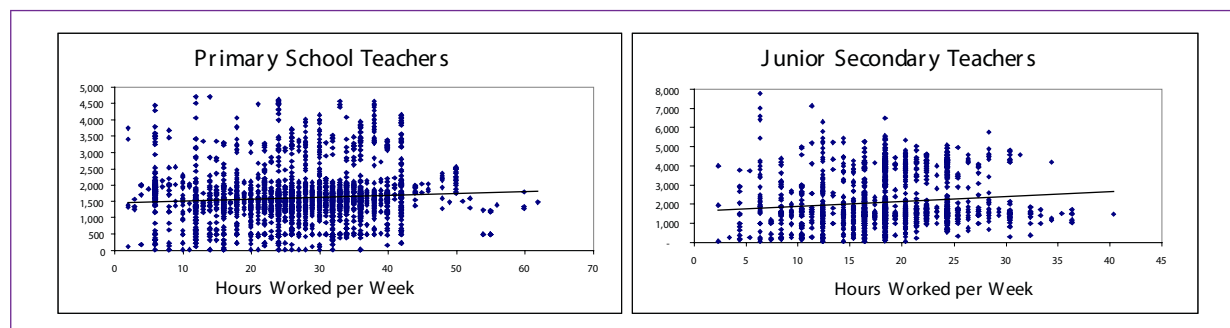
The new 2005 Teacher Law states that teachers will receive functional, special area, and professional incentives.

This section attempts to demonstrate the impact of these incentives on the education budget. Calculations in this figure are based on the following assumptions:

- **The special area allowance will be equal to the teacher's base salary (Teacher Law No. 14/2005).** It is assumed that the average salary is Rp 18 million per year and that, for the first two years, 5 percent of teachers will receive this allowance. Ten percent of teachers will receive the incentive by 2009, and this percentage will remain through 2016. (Some within MoNE argue that it should be 15 percent) The reason for a staggered increase is that the government most likely will phase in the designation of special area schools.
- **The professional allowance will be given to teachers who pass a certification examination and will be equal to the teacher's base salary (Teacher Law No.14/2005).** The calculation of the professional allowance is complex and requires many assumptions (including the number of teachers who will pass the certification examination, the average base salary of teachers who receive certification, and the rate of increase of teachers in the workforce). The estimate of teachers receiving the incentive for the first three years is based on MoNE targets: 5 percent of teachers will receive the allowance in 2007, 12 percent in 2008, and 20 percent in 2009. The incentive then is assumed to increase by 10 percent through 2016, so that by then 90 percent of teachers will receive the incentive. This target is optimistic. A more conservative estimate is 70 percent, which would reduce the overall expenditure on the professional incentive.
- **The functional incentive was specified in an October 2006 version of the draft regulations was to be 50 percent of base salary and to be given to certified teachers.** This has since been changed in a November 2006 version of the draft to not specify an amount, but to still be given to teachers who are certified. Still, there is debate on whether it should be given to all teachers or possibly be used as additional performance incentives for teachers. If the incentive is given to all teachers, it will have a significant immediate impact on the budget. If it is given to only certified teachers and only to those that meet certain performance requirements, then it will have a gradual effect (because no teachers are certified yet), but it will be much larger in the long-term.
- **The number of teachers is estimated to stay constant.** Although Indonesia's teaching workforce has increased steadily in the past, there is now a large oversupply of teachers. The new incentives will push MoNE to be more efficient in its supply and distribution of teachers. The 2006 teacher regulations (RPP Guru) demonstrate that MoNE is serious about attempting to control the supply of teachers. There is also a slight bulge of teachers aged 50 to 60. The retirement of these teachers will help by not keeping the number of teachers constant or reducing the workforce. If the steady trend of increasing the number of teachers continues, it will increase the expenditure that goes toward teacher salaries and incentives.

- **The forecast calculations are in real (rather than nominal) terms.** Salaries and incentives are assumed to increase with the rate of inflation.

Figure E.4.1. Primary and junior secondary school teacher earnings vs. hours worked¹⁰³



Source: Employment and Deployment Survey 2005.

Note: the earnings scales for primary and junior secondary teacher are different in the graphs above. Junior secondary teachers earn more on average.

Section E.5. Methodological note on the computation of unit costs of education

McMahon's estimates, developed on a per-pupil basis, are based on the following assumptions among others:

- A recently conducted survey of schools provides data on what schools are actually spending. These data provided information on the current or base cost of schools.
- "Best practice" schools are defined as those that have experienced increases in their test scores. These schools have more books and teaching materials for every pupil, and salary supplements for teachers are larger. For example, in expenditure terms, the average school is estimated to spend Rp 15,000 per pupil on teaching aids while the "best practice schools" spend an average of Rp 21,745 per pupil.
- The corresponding cost estimate for junior secondary education is 1.5 times the cost estimate for primary education.
- To increase the enrollment rate of the poor and disadvantaged population requires additional resources, largely to eliminate fees. Currently, fees are charged for entrance, examinations; procurement of textbooks, notebooks, and school bags; and transport. At the primary level, eliminating fees means foregone revenues of an average of Rp 13,000 per pupil in 2004 (2003 prices), increasing to Rp 38,000 per pupil in 2008. At the junior secondary level, the amount is approximately Rp 57,000 per pupil.
- In addition, a student grant of Rp. 290,000 per pupil per year for 18.2 percent of all primary school students, which is more than doubling the current grant by the government, will cover the opportunity costs borne by parents and for teacher supplements. The corresponding grant allocated to the school level is Rp 93,000 per pupil per year. The BOS program has started to cover part of these costs in 2005.

¹⁰³ Headmasters have been kept in the graphs because they are considered to be part of the teacher workforce, but it is important to note that they are supposed to work only 6 hours a week in class, particularly in larger schools. Sports and religion teachers tend to be assigned 12 hours per week.

Section E.6. Estimating the financial implications of teacher oversupply

The teacher oversupply issue in Indonesia presents a system inefficiency and addressing the supply issue represents significant potential savings. The table below shows an estimate of the potential savings. The calculations are based on the following method and assumptions:

- Only public school teachers are included, since this is the area government is financing and has control over. Student data used in the calculations is also only for public schools.
- Because 22 percent of public junior secondary teachers and 25 percent of public senior secondary teachers are part-time, an adjustment is made so that two part-time teachers is equivalent to be one full-time teacher. (The number of part-time teachers in private schools is much higher, at 55 percent and 63 percent for junior and senior respectively).
- It is assumed that the average teacher salary is Rp 17 million per year for primary teachers and Rp 18 million for junior and senior secondary teachers.
- The proposed policy was applied on a school-by-school basis on a survey sample so that a realistic estimate of the number of required teachers and level of teacher oversupply by school is determined. The resulting figures were then applied nationally, with weighting applied to schools by size.
- The effective STR is used in the calculations. There is a difference between proposed STR and effective STR. For example, the primary STR used is 30:1, but when applying the formula of each school getting at least 4 teachers for each school and a target STR of 30:1, the effective STR is actually 26:1. This is because (1) a school with, say, 40 students, will still get 4 teachers and have an STR of 10:1 and (2) the additional teacher allocation is rounded up, so a school with, say, 160 students will get 6 teachers, for an STR of 27:1.

The formula for junior secondary and senior secondary teachers is complex because it currently requires that teachers be assigned to classes for specific subjects. For the purposes of analysis, an STR is applied with what would be more in line with other countries than Indonesia's currently low STRs of 17:1 for Junior Secondary and 14:1 for senior secondary.

Column A shows what the actual supply is. Column B shows what the STR would be if the proposed new entitlement formula is followed. In this scenario B, 22.8 percent fewer teachers are required (or 19.4 percent taking part-time into account). This would amount to a salary savings of about Rp 6.7 trillion. Taking part-time teachers into account (assuming 2 part-time = 1 full-time), the amount is reduced to Rp 5.6 trillion, which is still about 10 percent of the total education budget. This represents significant potential savings and would become even more significant with the impact of the new teacher law, where teachers who become certified will receive an allowance equivalent to their base salary. (See Section on Teacher Salaries, Incentives and Education Quality in Chapter 3)

Table E.6.1 Comparative costs based on current situation and proposed option

	A: STR – Actual	B: STR – Proposed
Primary STR	20:1	30:1 (effective 26:1)
Teachers required	1,177,929	937,332
Total salary cost (Rp '000)	20,024,793	15,934,644
Positions saved (B to A)		240,597
Junior secondary STR	17:1	24:1 (effective 22:1)
Teachers required	364,098	274,354
Salary cost (Rp '000)	6,553,764	4,938,372
Positions saved (B to A)		89,744
Taking part-time into account (B to A)		49,693
Senior secondary STR	14:1	24:1 (effective 22:1)
Teachers required	144,604	90,088
Salary cost (Rp '000)	2,602,872	1,621,584
Positions saved (B to A)		54,516
Taking part-time into account (B to A)		36,441
Total		
Total teachers	1,686,631	1,301,774
Total salary cost (Rp '000)	29,181,429	22,494,600
Total positions saved (B to A)		330,340
Salary savings (Rp million) (B to A)		6,686,829
Total positions saved with part-time taken into account (B to A)		326,731
Salary savings with part-time taken into account (Rp million) (B to A)		5,640,556

Source: Teacher Employment and Deployment Study 2005, based on MoNE 2003/2004 data on teachers, salary.

Section E.7. Characteristics of education personnel

Table E.7.1 Number and percent of part-time and full-time teachers in secondary education

	Headmasters	%	Full-time Teachers	%	Part-time Teachers	%	Total
Junior Secondary	22,240	4	343,575	63	176,776	33	542,591
Public	12,037	3	274,668	75	78,925	22	365,630
Private	10,203	6	68,907	39	97,851	55	176,961
Senior Secondary	14,366	3	220,133	51	200,967	46	435,466
Public	4,673	2	140,582	73	47,269	25	192,524
Private	9,693	4	79,551	33	153,698	63	242,942

Source: MoNE 2005.

Table E.7.2 Number and percent of primary teachers per responsibility

	Teacher Responsibility					
	Primary level	Headmasters	Primary level	Headmasters	Primary level	Headmasters
Number of teachers	146,045	Number of teachers	146,045	Number of teachers	146,045	
Percent of total	11	Percent of total	11	Percent of total	11	

Source: MoNE 2005.

Section E.8. Teacher earnings in Indonesia: econometric analysis

Table E.8.1. Average monthly earnings and hours worked by teachers and non-teachers by level of Education

Teacher's Level of Education	Average monthly earnings (Rp '000)			Average hours worked per week				
	Not teacher	Teacher not primary		Not teacher	Teacher not primary	Not teacher	Teacher not primary	
Less than primary	445.5 (294.4)		Less than primary	445.5 (294.4)		Less than primary	445.5 (294.4)	
Primary	528.4 (381)		Primary	528.4 (381)		Less than primary	528.4 (381)	
Junior secondary	643.4 (401)		Junior secondary	643.4 (401)		Junior secondary	643.4 (401)	
Senior secondary	920.0 (671)	621.6 (519)	Senior secondary	920.0 (671)	621.6 (519)	Senior secondary	920.0 (671)	621.6 (519)
Diploma I and II	1,147.7 (1,250)	1,070.1 (1,206)	Diploma I & II	1,147.7 (1,250)	1,070.1 (1,206)	Diploma I & II	1,147.7 (1,250)	1,070.1 (1,206)
Academy/Dipl III	1,441.7 (1,131)	1,298.1 (1,867)	Academy/Dipl III	1,441.7 (1,131)	1,298.1 (1,867)	Academy/Dipl III	1,441.7 (1,131)	1,298.1 (1,867)
University/ Dipl IV	1,772.1 (1,856)	1,1432.7 (645.2)	University/ Dipl IV	1,772.1 (1,856)	1,1432.7 (645.2)	University/ Dipl IV	1,772.1 (1,856)	1,1432.7 (645.2)
Total	816.5 (796.7)	1,033.2 (953.8)	Total	816.5 (796.7)	1,033.2 (953.8)	Total	816.5 (796.7)	1,033.2 (953.8)
Observations	35,252	1,804	Observations	35,252	1,804	Observations	35,252	1,804

Source: World Bank staff calculations based on data from Sakernas 2004.

Note: Standard deviation in parentheses. Blank spaces indicate that there are no teachers with less than senior secondary education.

Table E.8.2. Difference in earnings: sample of paid workers with secondary schooling or more education (%)*Dependent variable log of monthly earnings wages*

	2000 (Filmer 2002)		2004 (World Bank 2006)		
	Sample: All paid workers (public and private sectors)		Sample: All paid workers (public and private sectors)		Sample: teachers and other civil servants
Teacher	-0.18 (9.25)**		Teacher	-0.18 (9.25)**	Teacher
Teacher primary school		-0.025 (1.14)	Teacher primary school		-0.025 (1.14) Teacher primary school
Teacher not primary school		-0.34 (13.19)**	Teacher not primary school		-0.34 (13.19)** Teacher not primary school
Civil servants (excluding teachers)			Civil servants (excluding teachers)		Civil servants (excluding teachers)
Age	.06 (15.49)**	0.061 (15.47)**	Age	.06 (15.49)**	0.061 (15.47)** Age
Age square	-0.00 (7.98)**	-0.00 (8.11)**	Age square	-0.00 (7.98)**	-0.00 (8.11)** Age square
Male	0.14 (12.32)**	0.15 (13.03)**	Male	0.14 (12.32)**	0.15 (13.03)** Male
Urban	0.12 (7.10)**	0.14 (7.88)**	Urban	0.12 (7.10)**	0.14 (7.88)** Urban
Educ. Diploma I & II	0.32 (15.26)**	0.27 (12.86)**	Educ. Diploma I & II	0.32 (15.26)**	0.27 (12.86)** Educ. Diploma I & II
Educ. Akademi Diploma III	0.33 (15.92)**	0.36 (16.96)**	Educ. Akademi Diploma III	0.33 (15.92)**	0.36 (16.96)** Educ. Akademi Diploma III
Educ. University Diploma IV	0.37 (18.71)**	0.42 (20.58)**	Educ. University Diploma IV	0.37 (18.71)**	0.42 (20.58)** Educ. University Diploma IV
Constant	11.67 (164.24)	11.67 (165.46)	Constant	11.67 (164.24)	11.67 (165.46) Constant
Observations	18,612	18,612	Observations	18,612	18,612 Observations
R squared	0.30	0.31	R squared	0.30	0.31 R squared

Source: World Bank staff estimates.

Note: Robust t-statistics reported in parentheses. ** denotes significance at the 1 percent level. Earnings are defined as wage salary in cash plus wage salary in kind.

Table E.8.3. Determinants of hourly earnings

	Dependent variable log of hourly earnings				
	Sample: All paid workers (public and private sectors)			Sample: Teachers and other civil servants (public sector)	
Teacher	23.42 (16.66)**			-18.70 (-4.64)**	
Teacher primary school		46.94 (23.13)**			-12.58 (-2.91)**
Teacher not primary school		4.98 (3.01)**			-23.47 (-5.86)**
Civil servants (excluding teachers)			46.72 (9.34)**		
Age	7.43 (44.43)**	7.33 (43.95)**	7.59 (45.31)**	14.26 (18.6)**	13.53 (17.58)**
Age square	-0.08 (-36.05)**	-0.08 (-35.7)**	-0.08 (-36.58)**	-0.12 (-13.91)**	-0.11 (-13.07)**
Male	34.18 (41.84)**	34.40 (42.2)**	31.82 (39.57)**	6.52 (2.94)**	6.76 (3.06)**
Urban	20.46 (27.27)**	20.91 (27.89)**	18.99 (25.56)**	3.02 (1.38)	4.39 (1.98)
Educ. Diploma I and II	80.73 (30.01)**	71.92 (27.23)**	104.22 (39.08)**	29.27 (8.82)**	28.02 (8.51)**
Educ. Academy/Diploma III	93.56 (39.04)**	95.36 (40.06)**	101.04 (42.02)**	23.90 (5.6)**	27.65 (6.35)**
Educ. University/Diploma IV	101.09 (59.18)**	107.40 (61.19)**	113.19 (68.03)**	31.30 (10.7)**	37.26 (11.95)**
Constant	6.30 (221.31)**	0.03 (222.45)**	6.30 (220.57)**	5.52 (36.26)**	5.63 (36.84)**
Observations	38,431	38,431	38,431	3,616	3,616
R squared	.31	.32	.32	.30	.31

Source: World Bank staff estimates.

Note: Robust t-statistics reported in parentheses. ** denotes significance at the 1 percent level. Earnings are defined as wage salary in cash plus wage salary in kind. Hourly earnings are calculated on the basis of average monthly earnings, divided by hours reported in the main job in the past week x 4.

Table E.8.4. Differences in monthly earnings: after controlling for individual characteristics (relative to West Java)*Percent*

Province	Teachers	Other paid workers	Difference
DI Aceh	3.3	-8.3**	-11.6
North Sumatra	10.2+	-7.0**	-17.2
West Sumatra	8.7	-6.7**	-15.4
Riau	5.2	20.9**	15.7
Jambi	4.2	-8.6**	-12.8
South Sumatra	17.3*	-3.7**	-21.1
Bengkulu	-1.6	-23.3**	-21.7
Lampung	-2.8	-17.6**	-14.8
Bangka Belitung	-13.8	-0.2**	13.6
DKI Jakarta	11.9+	21.6**	9.6
Central Java	-14.7**	-22.8**	-8.1
DI Yogyakarta	-4.0	-29.1**	-25.0
East Java	-23.0**	-16.5	6.5
Banten	-10.9+	16.0**	26.8
Bali	2.3	-6.3**	-8.6
West Nusa Tenggara	-14.1*	-29.8	-15.7
East Nusa Tenggara	13.3+	-20.3**	-33.6
West Kalimantan	25.0	17.3**	-17.2
Central Kalimantan	-9.4	1.5**	-7.7
South Kalimantan	16.1+	23.5**	10.9
East Kalimantan	30.0**	4.5**	7.4
North Sulawesi	8.0	-9.6**	-25.6
Central Sulawesi	-5.7	-5.7**	-17.6
South Sulawesi	-0.8	-13.4	0.0
Southeast Sulawesi	7.8	-22.4**	-12.7
Gorontalo	34.6**	-0.3	-30.2
North Maluku	21.3	22.7**	-35.0
Papua	88.1**	53.2	1.4

Source: Analysis of Sakernas 2004.

Note: Conditional differentials are derived from the coefficients on the dummy variables for provinces in the multivariate regression of earnings (that is, $100 \cdot (\exp(b) - 1)$, where b is the province-specific dummy coefficient estimate. Sample of workers with secondary schooling or more. +, *, ** denote significance at the 10 percent, 5 percent and 1 percent levels.

Section E.9. Interpretations of the “20 Percent Rule”

Table E.9.1 Alternative interpretations of how to compute the education spending ratio**

Numerator		Denominator	Ratio
Central government spending on education programs <i>including salaries</i>	(1)	Total central government spending <i>(excluding transfers to regions)</i>	(1) 9.4
Central government spending on education programs <i>excluding salaries</i>	(2)	Total central government spending <i>(excluding transfers to regions)</i>	(1) 7.4
Central government spending on education programs <i>excluding salaries</i>	(2)	Total central government spending <i>(excluding transfers to regions and salaries of all other sectors)</i>	(2) 10.1
Central government spending on education programs including education related budget <i>from all line ministries and institutions* including salaries</i>	(3)	Total central government spending <i>(excluding transfers to regions)</i>	(1) 11.8
Central government spending on education programs including other education related budget for all line ministries and institutions <i>excluding salaries</i>	(4)	Total central government spending <i>(excluding transfers to regions)</i>	(1) 9.6
Central government spending on education programs including other education related budget for all line ministries and institutions <i>excluding salaries</i>	(4)	Total central government spending	
<i>(excluding transfers to regions and salaries of all other sectors)</i>	(2)	11.75	
Central government spending on education programs including other education related budget for all line ministries <i>and an estimate of the amount of transfers to regions that is allocated to education</i>	(5)	Total central government spending <i>(including transfers to regions)</i>	(3) 19.3 *
Central government spending on education programs including other education related budget for all line ministries and an estimate of the amount of transfers to regions that is allocated to education <i>excluding salaries</i>	(6)	Total central government spending <i>(including transfers to regions)</i>	(3) 7.6
Central government spending on education programs including other education related budget for all line ministries and an estimate of the amount of transfers to regions that is allocated to education <i>excluding salaries</i>	(6)	Total central government spending <i>(including transfers to regions, excluding salaries of all other sectors)</i>	(4) 8.65
Total spending in education from central government, provinces and districts (including salaries)	(7)	Total national spending: Central (APBN minus transfers) + Province (APBD I) + District (APBD II)	(5) 16.5

Source: Computed by World Bank staff based on MoF and SIKD data.

Note: Numbers in parentheses denote all the different figures in denominator and numerator. Changes in the definition relative to a previously used definition are highlighted and in italics. For example, other education-related expenditures by line ministries are capacity development efforts for civil society to join the military and police academy, training for heads of sub-district

* This estimation was presented on the Constitutional Court on February 7 2006, by MoF and MoNE. It includes education and training allowances for 16 ministries beside MoNE, as well as an estimation of the education expenditures by sub-national governments from the (DAU) and (DAK)

**There is a slight difference between the spending numbers reported in the tables in this annex and those reported in the education and health chapters. This is because the aggregate figures in these chapters were updated in January 2007 based on the most recent APBN sectoral details. The cross sectoral annex tables have not been updated in order to maintain consistency with the others sectors reported in the trend.

Annex F. Health

Section F.1. Central government programs—budget 2006

The Government explains the contents of the main development programs in its Medium-Term Development Strategy, RPJM, 2004-09. The two largest programs, 'Community Health' and 'Personal Health' are described summarized as follows:

The Program for the Provision of Community/Public Health:

This program is aimed at increasing the quantity, equity and quality of health services through the public health centers and their networks, encompassing supplementary public health centers, mobile public health centers and village midwives.

The main activities that will be carried out in this program cover the following:

1. To provide health services to the poor population and public health centers and their networks;
2. To build, improve, and rehabilitate the facilities of public health centers and their networks;
3. To provide medical instruments and supplies, including essential generic medicines;
4. To improve primary health services, encompassing at least efforts for promoting health, the health of mother and child, family planning, nutritional improvement, environmental health, primary medical care, and the eradication of communicable diseases; and
5. To provide operation and maintenance funding

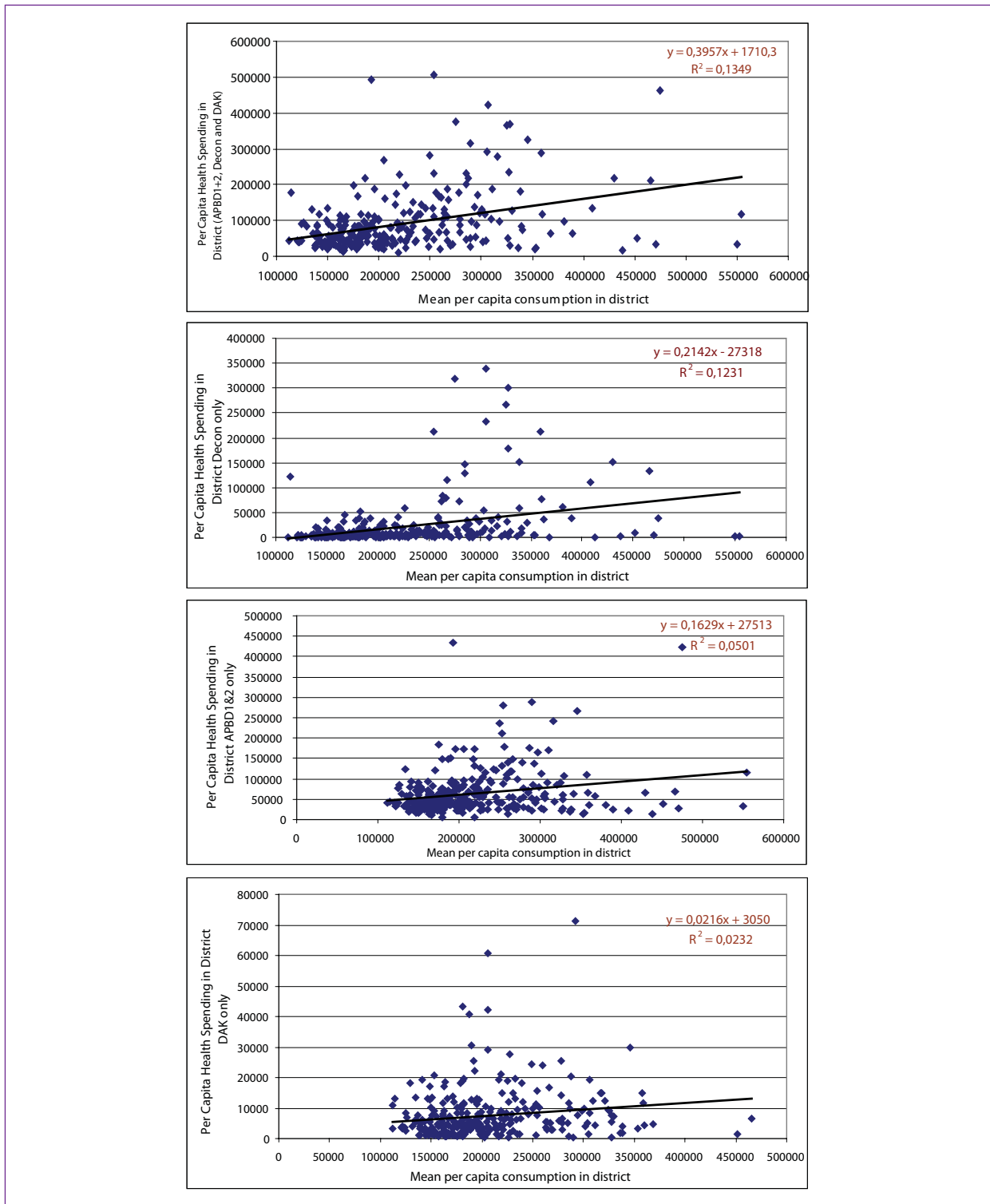
Program for Providing Personal Health Services

This program is aimed at increasing access, affordability and quality of personal health services. The main activities that will be carried out in the program cover the following:

1. To provide health services to the poor population at class three hospitals;
2. To construct facilities and infrastructure of hospitals in selected marginalized areas;
3. To repair hospital facilities and infrastructure;
4. To provide hospital medicines and supplies
5. To improve referral health services;
6. To promote family doctor services;
7. To provide operation and maintenance funding; and
8. To increase the participation of private entities in the efforts to improve personal health.

Source: GoI, RPJM, 2004-09.

Figure F.2. Equity of public health expenditure allocations—aggregated, deconcentrated, sub-national and DAK



Source: World Bank staff estimates, based on data from MoF, 2006.

Table F.3. Differences in monthly & hourly earnings—after controlling for individual characteristics

	Dependent Variable Log of Monthly Earnings Wages	Dependent Variable Log of Hourly Earnings ¹⁰⁴
	Percentage Difference	Percentage Difference
Doctors	64 (6.2)	50 (5.0)
Nurses	23 (3.9)	25 (4.1)
Midwives	38 (4.2)	36 (4.0)
Other Health Staff	19 (4.5)	29 (6.2)
Age	7 (42.2)	8 (45.2)
Age square	0 (-35.4)	0 (-36.4)
Male	40 (49.5)	33 (40.5)
Rural	-21 (-36.3)	-16 (-25.5)
Educ. Diploma I & II	65 (28.0)	103 (38.7)
Educ. Akademi Diploma III	79 (35.1)	97 (40.2)
Educ. University Diploma IV	82 (55.2)	114 (68.5)
Constant	12 (55.2)	6 (227)
Observations	38,671	38,431
R squared	0.27	0.31

Source: World Bank staff estimates based on data from BPS, 2006.

Note: Conditional differentials are derived from the coefficients on the dummy variables for provinces in the multivariate regression of earnings (i.e. $100 \cdot (\exp[b]-1)$), where b is the province-specific dummy coefficient estimate. Robust t-statistics reported in parenthesis.

** denotes significance at the 1 percent level.

Earnings are defined as wage salary in cash plus wage salary in kind.

Annex G. Decentralization

Table G.1. Regional GDP per capita and poverty headcount after decentralization

Quintile		2000	2001	2002	2003	2004
1 – Least Poor	GRDP	9.0	9.1	9.2	9.4	9.8
	Growth		4.4	4.1	5.0	5.5
	Poverty	12.6	9.5	6.6	6.7	6.1
2	GRDP	7.3	7.4	7.5	7.6	7.8
	Growth		3.4	3.5	3.8	4.4
	Poverty	17.2	14.8	12.5	12.0	11.3
3	GRDP	4.2	4.3	4.4	4.4	4.6
	Growth		3.0	4.5	3.4	4.8
	Poverty	26.7	22.4	18.3	17.3	16.3
4	GRDP	3.6	3.7	3.9	4.1	4.2
	Growth		4.3	5.3	5.8	4.6
	Poverty	27.8	26.2	24.6	23.3	22.7
5 – Most Poor	GRDP	3.9	3.8	4.1	4.1	4.2
	Growth		(0.4)	7.8	4.0	2.0
	Poverty	37.7	35.6	33.6	31.7	31.3
National	GRDP	5.5	5.5	5.7	5.8	6.0
	Growth		3.3	4.6	4.4	4.5
	Poverty	24.4	21.6	18.8	17.9	17.2
GRDP	CoV	2.70	2.70	2.50	2.20	2.10
	Gini	0.54	0.53	0.52	0.49	0.48
Poverty	CoV	0.62	0.54	0.58	0.52	0.55
	Gini	0.33	0.29	0.30	0.29	0.31

Source: World Bank staff estimates, based on BPS data. The data is at the district level and excluded DKI Jakarta.

Note: Growth: GRDP: Real GRDP Per Capita (Rp million); Real GRDP growth (%); Poverty: Poverty Headcount (%).

Table G.2. Correlation of poverty and economic structure, 2000-04

	POVHC		2000		2001		2002		2003		2004	
	Rich	Poor	Rich	Poor	Rich	Poor	Rich	Poor	Rich	Poor	Rich	Poor
Share of total (%)												
Agriculture	0.2678**	0.2051**	22	46	15	46	15	47	15	47	15	45
Oil and Gas	0.0233	-0.1087	3	3	4	2	5	3	5	3	3	4
Manufacture	-0.0353	-0.1576**	19	7	20	6	20	6	20	6	19	6
Service	-0.1923**	-0.1195	55	41	59	42	58	41	58	41	60	41
Non oil and gas	-0.0233	0.1087	97	97	96	98	95	97	95	97	97	96
KOTA	-0.2842**	-0.0203	-	-	-	-	-	-	-	-	-	-

Source: World Bank staff estimates, based on BPS data.

Note: The data is at the district level and excluding DKI Jakarta. Rich (poor) refers to the highest (lowest) quintile in terms of poverty headcount per population.

* and ** indicate statistically significant at 0.05 and 0.01 level.

Section G.3. Decentralization and service delivery

Indonesia is experiencing improvement in service delivery. In education, the central government's drive to build school in every region has resulted in significant increase in enrollment rate since the 1970s. Currently, primary school net enrollment rate is nearly universal compared to the 72 percent level in 1975. In 2004, net enrollment rate for primary school was 94 percent and gross enrollment rate even exceeded 100 percent. Junior secondary net enrollment rate also rose significantly from 18 percent in 1970s to 65 percent in 2004.

In the health sector, various indicators have shown improvements over the years. Public spending from 2001 to 2004 has increased more than half in real terms. However, distribution and coverage need more improvement. Disparities between urban and rural areas are still apparent.

However, whether quality comes along with service delivery is still questionable. Evidence regarding the quality of sub-national public service delivery is also somewhat ambiguous. Citizens' perceptions seem to be that the quality of some local public services has improved marginally since decentralization. A recent survey (World Bank, 2004a) indicates that about 60 percent of households interviewed perceived that local government health, education, and administrative services had improved, albeit slightly, since 2001.¹⁰⁴ At the same time, many private firms complain about the present quality of local public services (von Luebke, 2005). Among the most important local public services according to businesses are water, and (local) roads (KPPOD, 2004; LPEM-UI, 2005b). LPEM-UI (2005b) suggests that water services have deteriorated in quality over the past two years. While issues related to local roads were not formally included in the LPEM survey, researchers found that the majority of businesses interviewed declared the quality of roads to be problematic.

Table G.3.1 Did decentralization improve service delivery? results from recent surveys

Studies	Summary of methodology	Findings (related to service delivery)
Governance and Decentralization Survey (2004) Kaiser, Pattinasarany and Schulze (2006)	Focus on health, education, administration and police. Small sample of 32 districts in 8 provinces.	Health, education and administration services are perceived to have improved
Papua Public Expenditure Analysis and Capacity Harmonization (2005)	Participatory approach to Public Expenditure Review	Service delivery is consistently below national average due to the remote nature of Papua. However, improvements have been made due to increasing development spending boosted by Dana Otsus.
Rural Investment Climate Assessment (2006)	Qualitative case studies in 5 kabupaten focusing on factors affecting rural investment climate.	Micro and small enterprises at kabupaten level are concerned over demand constraint, access to credit, poor roads and electricity infrastructure
Making Services Work for the Poor (2006)	Cross sectors assessment of Indonesia's experience with service delivery, using secondary data sources.	Service delivery is widely perceived to have deteriorated after decentralization in 2001; the issues are low efficiency of public spending, low quality of services, and remaining inequalities in access and outcomes.
Aceh and Nias Public Expenditure Analysis (2006)	Participatory approach to Public Expenditure Review, with contribution from GDS survey and PFM Measurement Framework.	Extreme increase in fiscal resource will have positive impact on Aceh's future fiscal position. Government spending on core sectors is low and need improvements.

¹⁰⁴ Care must be taken in using the results of this study to generalize about Indonesia as a whole. The sample of interviewed households was very small and covered just eight provinces.

Table G.4. The DAU formula, 2001-06

	2001	2002	2003	2004	2005	2006
Basic Allocation ^a						
- SDO/Inpres	80%	50%	45%	40%	40%	50%
- Proportional Wage Bill						
- 100% Wage Bill	1.50%	10%	5%	5%	5%	50%
- Lump Sum						
Formula-Based Allocation ^a						
- Fiscal Gap Formula	18.50%	40%	50%	55%	55%	50%
	Ave (OSRt + PBBt + BPHtB) * Ave (IGRDP_SD + IGRDP_nonSDA + IWorking_Age)	OSRt* + STXi + 0.75*SDAI	OSRt* + STXi + 0.75*SDAI	0.5*OSRt* + STXi + SDAI	0.5*OSRt* + STXi + SDAI	OSRt + STX + SDA
Expenditure Needs Formula ^b	(0.25*IPOPI + 0.25*POV GAPI+0.25*IAREAI+0.25*ICOSTRELI)*Ave_Exp	(0.4*IPOPI + 0.1*IPOV GAPI+0.1*IAREAI + 0.4*ICOSTRELI)*Ave_Exp	(0.4*IPOPI + 0.1*POV GAPI+0.1*IAREAI+0.4*ICOSTRELI)*Ave_Exp	(0.4*IPOPI + 0.1*POV GAPI+0.1*IAREAI+0.4*ICOSTRELI)*Ave_Exp	(0.4*IPOPI + 0.1*POV GAPI+0.1*IAREAI + 0.4*ICOSTRELI)*Ave_Exp	(0.3*POPI + 0.1*HDI+0.15*IAREAI+ 0.3*ICOSTRELI*Cost + 0.15*IGRDPCCI)*Ave_Exp
Hold-harmless	Yes	Yes	Yes	Yes	Yes	Yes
- % of districts benefited from HH Amount	[...]	[...]	[...]	[...]	11%	3%
- Nominal Amount (in Bln Rp)	[...]	[...]	76,978	83,139	88,766	145,644
- % of Central Expenditures	[...]	[...]			22%	23%

Note:

^a : Share of Total DAU Pool (Province & Districts)

^b : OSR is imputed revenue based on a regression of actual OSR against regional income measured by GRDP

PBB : Shared property tax

BPHtB : Shared change of property title tax income

STX : Shared Tax Revenue

SDA : Shared Natural Resource Revenue

The Subscript "t" indicates total and the subscript "i" indicates the respective kabupaten/kota.

Source: Ministry of Finance data.

IPOP : Population Index

IPOVGAP : Poverty Index

IAREA : Area Index

ICOSTREL : Cost Index

HDI : Human Development Index

IGRDPCC : GRDP Per Capita Index

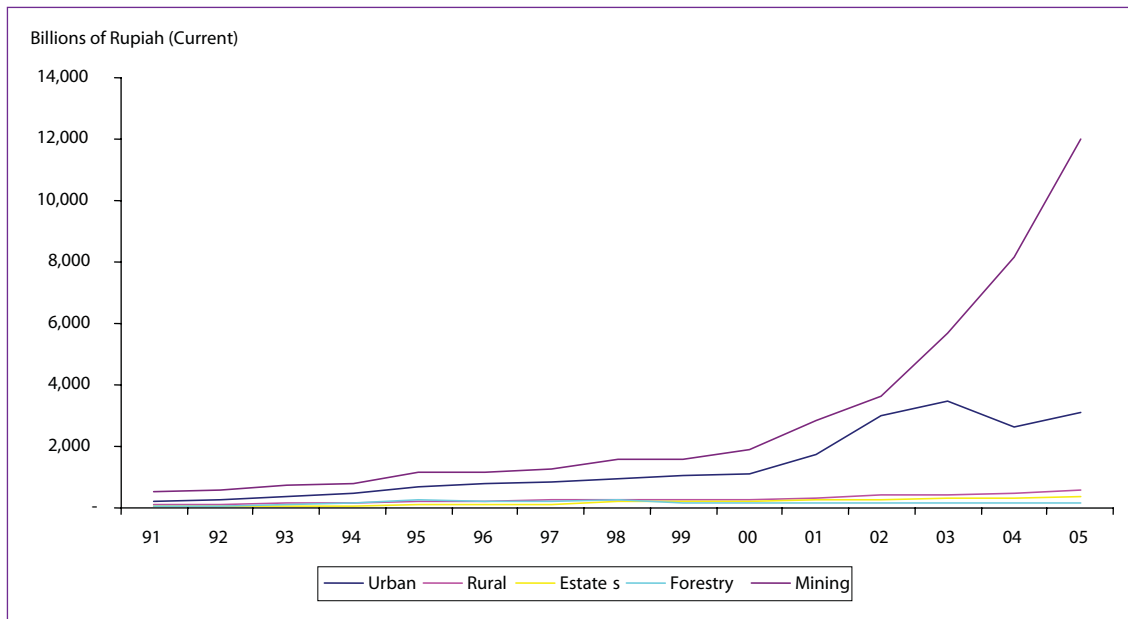
Table G.5. Revenue sharing scheme

	Share (%)	Producing Province (%)	Producing Kabupaten/Kota (%)	Others (%)	Additional Note for Others
Property Tax (PBB)					
- Central	10			6.50	Distributed evenly to all <i>kabupaten/kota</i>
				3.50	Distributed on a incentive basis
- Sub-National	90	16.20	64.80	9	Collection fee
BPHTB					
- Central	20			20	Distributed evenly to all <i>kabupaten/kota</i>
- Sub-National	80	16	64		
Income Tax					
- Central	80				
- Sub-National	20	8	8.4	3.60	Distributed evenly to all <i>kabupaten/kota</i> in the province

Natural Resource	Sub-National (%)	Province (%)	Producing kabupaten/kota (%)	Other kabupaten/kota in the province (%)	Other kabupaten/kota (%)
Forestry					
Utilization fee (IUUPH)	20	80	16	64	
<i>Provisi sumber daya hutan</i>	20	80	16	32	32
Deforestation fund	60	40		40	
General Mining					
Land rent from <i>kabupaten/kota</i>	20	80	16	64	
Royalty from <i>kabupaten/kota</i>	20	80	16	32	32
Land rent from province	20	80	80		
Royalty from province	20	80	26		54
Fisheries					
Revenue from fisheries related businesses	20	80			80
Revenue from fisheries products	20	80			80
Oil					
From <i>kabupaten/kota</i>	85	15.5	3.1	6.2	6.2
From province	85	15.5	5.17		10.33
Gas					
From <i>kabupaten/kota</i>	69.5	30.5	6.1	12.2	12.2
From province	69.5	30.5	10,17		20,33
Geothermal					
Government share	20	80	16	32	32
Fixed fee and production fee	20	80	16	32	32

Source : Law No. 33/2004 and PP No. 55/2005.

Figure G.6. Property tax by sector, 1991-2005

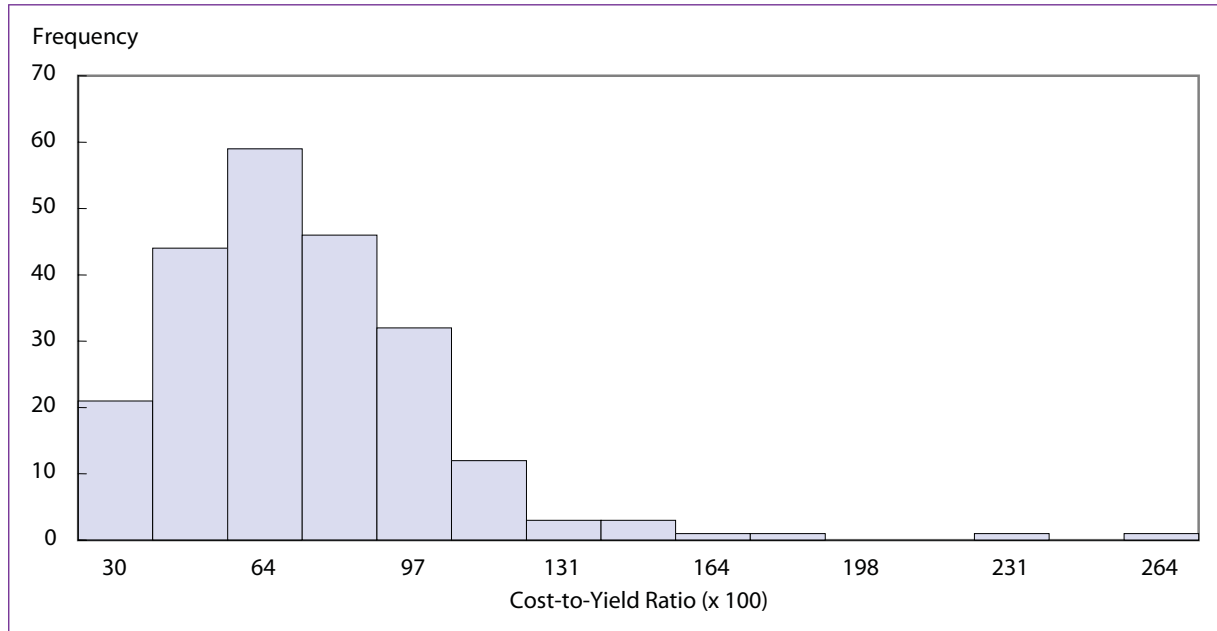


Source: World Bank staff estimates based on DG Tax – MoF data.

Section G.7. The cost of local tax collection

The cost-to-yield ratio ranges from a low of 15 percent to a high of 264 percent! Tax administration costs actually exceed revenues in about 10 percent of all local governments. Empirical studies suggest that administrative cost inefficiency increases as transfers from the central government increase (Lewis, 2006a).

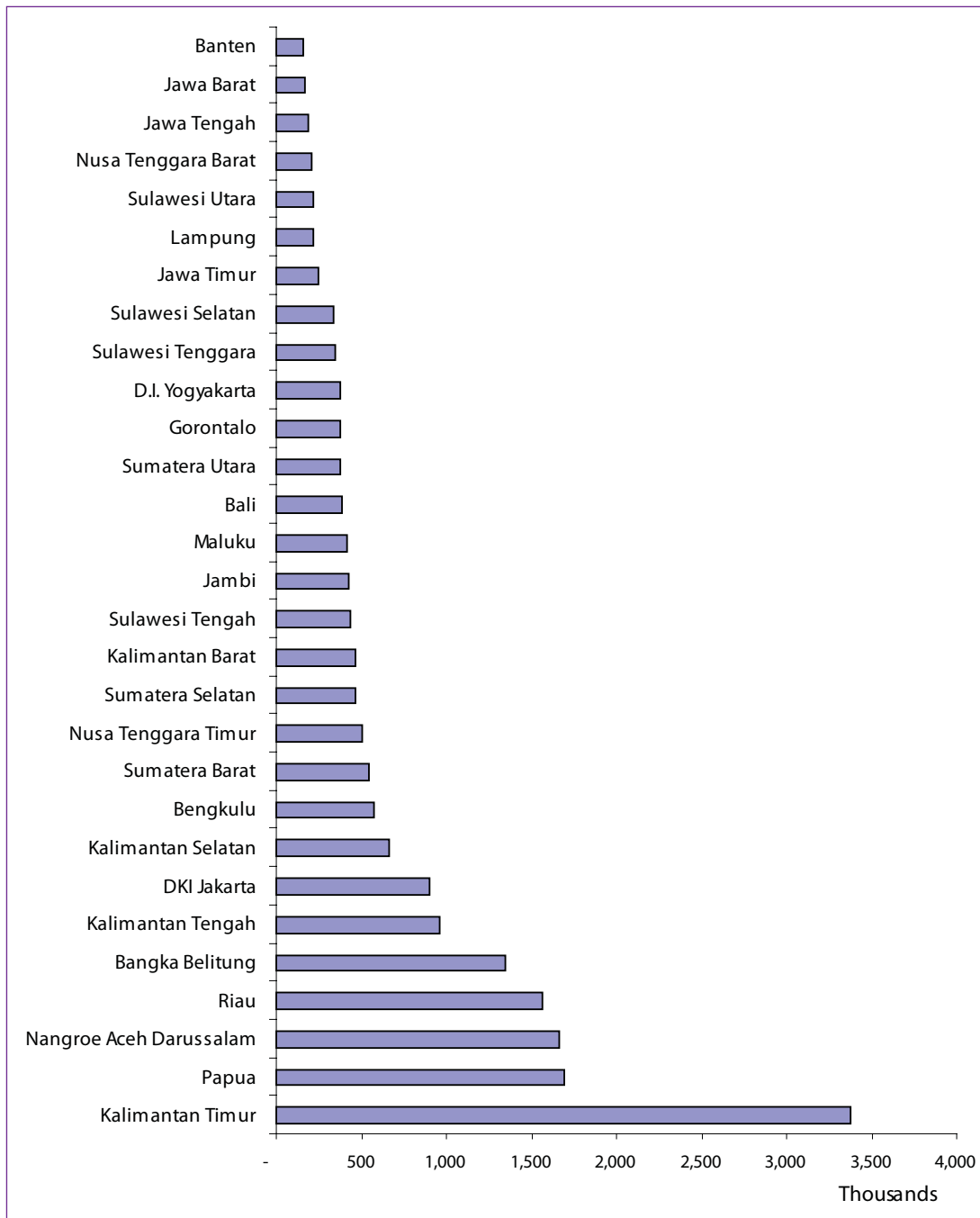
Figure G.7.1 Local government cost of tax administration to revenue yield (cost-to-yield ratio), 2003



Source: World Bank staff estimates based on DG Tax – MoF data.

Local government tax administration is very labor intensive. The number of Dipenda (local revenue office) employees varies quite considerably across local governments. While small districts governments may employ only around 50 civil servants, large cities, such as Medan and Surabaya, may count as many as several hundred full time staff. Only a few Dipenda have made use of information technologies in the administration of taxes. A computerized tax administration system was established by the Ministry of Home Affairs in some of the larger local governments in the early 1990s, but it is no longer used anywhere (Oosterman, 2004).

Figure G.8. Per capita sub-national government reserves, by province, October 2006



Source: World bank staff estimates based on Bank Indonesia data.

Table G.9. Districts groupings based on poverty, grdp, and fiscal revenue

Low Poverty Headcount				
Low Fiscal Revenue Per Capita		High Fiscal Revenue Per Capita		
Low GRDP Per Capita	High GRDP Per Capita	Low GRDP Per Capita	High GRDP Per Capita	
Kab. Banjar	Kab. Agam	Kab. Badung	Kab. Bangka	Kota Bitung
Kab. Buleleng	Kab. Asahan	Kab. Bangli	Kab. Barito Selatan	Kota Bontang
Kab. Bulukumba	Kab. Bandung	Kab. Bantaeng	Kab. Barito Timur	Kota Bukittinggi
Kab. Ciamis	Kab. Barito Kuala	Kab. Barru	Kab. Barito Utara	Kota Cilegon
Kab. Garut	Kab. Bekasi	Kab. Bengkayang	Kab. Belitung	Kota Cirebon
Kab. Jepara	Kab. Bogor	Kab. Bungo	Kab. Bengkulu	Kota Dumai
Kab. Karangasem	Kab. Deli Serdang	Kab. Hulu Sungai Selatan	Kab. Gunung Mas	Kota Kediri
Kab. Lebak	Kab. Gianyar	Kab. Hulu Sungai Tengah	Kab. Hulu Sungai Utara	Kota Kendari
Kab. Pandeglang	Kab. Karawang	Kab. Maluku Utara	Kab. Jembrana	Kota Kupang
Kab. Pesisir Selatan	Kab. Kudus	Kab. Muaro Jambi	Kab. Kampar	Kota Langsa
Kab. Sambas	Kab. Labuhan Batu	Kab. Sangihe Talaud	Kab. Kapuas	Kota Lhokseumawe
Kab. Sanggau	Kab. Limapuluh Kota	Kab. Sidenreng Rappang	Kab. Karimun	Kota Madiun
Kab. Semarang	Kab. Luwu Utara	Kab. Sinjai	Kab. Katingan	Kota Magelang
Kab. Serang	Kab. Minahasa	Kab. Soppeng	Kab. Kepulauan Riau	Kota Mojokerto
Kab. Solok	Kab. Padang Pariaman	Kab. Takalar	Kab. Klungkung	Kota Padang Panjang
Kab. Sukabumi	Kab. Pasaman	Kab. Tebo	Kab. Kota Baru	Kota Palangkaraya
Kab. Sukoharjo	Kab. Pontianak	Kota Banjar Baru	Kab. Kotawaringin Barat	Kota Palopo
Kab. Sumedang	Kab. Purwakarta	Kota Batu	Kab. Kotawaringin Timur	Kota Palu
Kab. Temanggung	Kab. Sawahlunto Sijunjung	Kota Bima	Kab. Kutai Barat	Kota Pangkal Pinang
Kab. Wajo	Kab. Sidoarjo	Kota Blitar	Kab. Lamandau	Kota Pariaman
Kota Bogor	Kab. Subang	Kota Gorontalo	Kab. Murung Raya	Kota Pasuruan
Kota Depok	Kab. Tanah Datar	Kota Metro	Kab. Natuna	Kota Payakumbuh
Kota Mataram	Kab. Tangerang	Kota Pagar Alam	Kab. Pulang Pisau	Kota Pekanbaru
	Kota Bandar Lampung	Kota Pare-pare	Kab. Rokan Hilir	Kota Prabumulih
	Kota Bandung	Kota Salatiga	Kab. Seruyan	Kota Samarinda
	Kota Banjarmasin	Kota Tegal	Kab. Sukamara	Kota Sawahlunto
	Kota Batam	Kota Ternate	Kab. Tabalong	Kota Sibolga
	Kota Bekasi		Kab. Tabanan	Kota Singkawang
	Kota Cimahi		Kab. Tanah Laut	Kota Solok
	Kota Denpasar		Kab. Tanjung Jabung Timur	Kota Sukabumi
	Kota Jambi		Kab. Tapin	Kota Tanjung Balai
	Kota Makassar		Kota Ambon	Kota Tanjung Pinang
	Kota Malang		Kota Balikpapan	Kota Tarakan
	Kota Manado		Kota Banda Aceh	Kota Tebing Tinggi
	Kota Medan		Kota Bengkulu	Kota Yogyakarta
	Kota Padang		Kota Binjai	
	Kota Palembang			
	Kota Pekalongan			
	Kota Pontianak			
	Kota Semarang			
	Kota Surabaya			
	Kota Surakarta			
	Kota Tangerang			
	Kota Tasikmalaya			

High Poverty Headcount			
Low Fiscal Revenue Per Capita		High Fiscal Revenue Per Capita	
Low GRDP Per Capita	High GRDP Per Capita	Low GRDP Per Capita	High GRDP Per Capita
Kab. Bangkalan	Kab. Lumajang	Kab. Aceh Tenggara	Kab. Aceh Barat Daya
Kab. Banjarnegara	Kab. Luwu	Kab. Alor	Kab. Aceh Besar
Kab. Bantul	Kab. Madiun	Kab. Banggai	Kab. Aceh Selatan
Kab. Banyumas	Kab. Magelang	Kab. Banggai Kepulauan	Kab. Aceh Tamiang
Kab. Banyuwangi	Kab. Magetan	Kab. Bengkulu Selatan	Kab. Aceh Utara
Kab. Batang	Kab. Majalengka	Kab. Boalemo	Kab. Batanghari
Kab. Belu	Kab. Malang	Kab. Dompu	Kab. Bireuen
Kab. Bengkulu Utara	Kab. Manggarai	Kab. Ende	Kab. Dairi
Kab. Bima	Kab. Mojokerto	Kab. Enrekang	Kab. Fak Fak
Kab. Blitar	Kab. Nganjuk	Kab. Gorontalo	Kab. Indragiri Hilir
Kab. Blora	Kab. Ngawi	Kab. Halmahera Tengah	Kab. Indragiri Hulu
Kab. Bojonegoro	Kab. Ogan Komering Ilir	Kab. Kapuas Hulu	Kab. Kolaka
Kab. Bondowoso	Kab. Pacitan	Kab. Kulon Progo	Kab. Kuantan Singingi
Kab. Bone	Kab. Pamekasan	Kab. Kupang	Kab. Malinau
Kab. Boyolali	Kab. Pasuruan	Kab. Majene	Kab. Manokwari
Kab. Brebes	Kab. Pati	Kab. Maluku Tengah	Kab. Merauke
Kab. Buton	Kab. Pekalongan	Kab. Maluku Tenggara	Kab. Morowali
Kab. Cianjur	Kab. Pemalang	Kab. Maluku Tenggara Barat	Kab. Musi Banyuasin
Kab. Cirebon	Kab. Polewali Mamasa	Kab. Mamuju	Kab. Musi Rawas
Kab. Demak	Kab. Ponorogo	Kab. Maros	Kab. Nagan Raya
Kab. G. Kidul	Kab. Probolinggo	Kab. Nabire	Kab. Pangkajene Kepulauan
Kab. Gowa	Kab. Purbalingga	Kab. Ngada	Kab. Pasir
Kab. Grobogan	Kab. Purworejo	Kab. Paniai	Kab. Pelalawan
Kab. Jember	Kab. Rembang	Kab. Poso	Kab. Penajam Paser Utara
Kab. Jenepono	Kab. Sampang	Kab. Pulau Buru	Kab. Rokan Hulu
Kab. Jombang	Kab. Sikka	Kab. Puncak Jaya	Kab. Sarolangun
Kab. Karanganyar	Kab. Sintang	Kab. Rote Ndao	Kab. Sorong
Kab. Kebumen	Kab. Situbondo	Kab. Selayar	Kab. Tanah Karo
Kab. Kediri	Kab. Sragen	Kab. Sumba Timur	Kab. Tanjung Jabung Barat
Kab. Kendari	Kab. Sumba Barat	Kab. Timor Tengah Utara	Kab. Toba Samosir
Kab. Ketapang	Kab. Tana Toraja	Kab. Yapen Waropen	Kab. Toli Toli
Kab. Klaten	Kab. Tanggamus	Kota Lubuk Linggau	Kota Bau-bau
Kab. Lahat	Kab. Tapanuli Selatan		Kota Jayapura
Kab. Lamongan	Kab. Tapanuli Tengah		Kota Probolinggo
Kab. Lampung Barat	Kab. Tasikmalaya		Kota Sorong
Kab. Lampung Selatan	Kab. Tegal		
Kab. Lampung Tengah	Kab. Timor Tengah Selatan		
Kab. Lampung Utara	Kab. Trenggalek		
Kab. Landak	Kab. Tuban		
Kab. Lombok Barat	Kab. Wonogiri		
Kab. Lombok Tengah	Kab. Wonosobo		
Kab. Lombok Timur			

Source: World Bank staff estimates based on MoF and BPS data.

After almost a decade of successful macroeconomic management and several bold policy decisions, Indonesia is finally in a position of fiscal strength. Since 2006, Indonesia has freed up "fiscal space" of about US\$15 billion. Equivalent to around 7 percent of GDP, this is the largest increase in additional fiscal resources since the 1973-74 oil revenue wind fall, providing a tremendous window of opportunity for Indonesia to upgrade its public services.

"Spending for Development - Making the Most of Indonesia's New Opportunities" is the first Public Expenditure Review to cover national and sub-national spending in Indonesia. It sheds light on the impact of the country's transition towards decentralization and the new ways in which public resources are now administered and allocated. An essential source of analysis for all stakeholders in public finance in Indonesia, some of the most important findings include:

- Thanks to the fuel subsidies cuts in 2005, Indonesia freed up US\$10 billion in 2006 to spend on development programs. An additional US\$5 billion also came available from increasing revenues and declining debt service.
- Despite the 2005 domestic fuel price adjustments, Indonesia still spends US\$12 billion on subsidies annually, mainly on fuel and electricity.
- 36 percent of all public spending is now made by sub-national governments.
- While spending on education since the crisis has nearly doubled and spending on health has increased almost 70 percent, spending on infrastructure investment remains significantly less than pre-crisis levels (below 3.4 percent of GDP).
- Indonesia spends about 50 percent of its total annual capital expenditure in the final quarter of the year.

"Indonesia's public spending has changed dramatically thanks to decentralization and a new legal framework. *Spending for Development* is an indispensable guide through the details of a major transformation in a nation's budget. It analyzes and presents key trends in a readily accessible fashion, documenting how a new democratically elected government has put its policy priorities into practice."

Dr Homi Kharas ? Visiting Fellow, The Brookings Institution, and Former World Bank Chief Economist for East Asia and Pacific

"Indonesia has now entered a new era in which more fiscal resources are available for the first time since before the economic crisis. We are now facing problems of success and we need to use the new opportunities to upgrade our infrastructure, education and health systems. While there are no easy answers, this report provides valuable assistance in assessing the best ways forward if Indonesia is to achieve its national development goals in the next few years."

Prof Ali Wardhana ? Former Minister of Finance and Coordinating Minister for Economics, Finance, Industry and Development

"This is one of the best public expenditure reviews I have seen and fills an important gap in the international literature on fiscal decentralization. The central question addressed in *Spending for Development* is how to make the most of the fiscal space that the good performance of the Indonesian economy has generated. It focuses attention on the spending side of government budgets and, in particular, on expenditure choices, performance monitoring, and the challenges of efficiently managing public funds. This comprehensive policy analysis offers new and innovative thinking about how economic development and poverty alleviation might be addressed in a system where more than one-third of government expenditures are managed by sub-national governments."

Prof Roy Bahl ? Dean, Andrew Young School of Policy Studies, Georgia State University

