SUMMARY

Sub-national government capital spending is important for both public service delivery and economic development. Currently, Indonesian sub-national public capital spending appears barely sufficient to cover the annual depreciation of its fixed assets. A substantial proportion of local government investment spending goes to create relatively unproductive assets, such as administrative office buildings. Sub-national governments finance their capital acquisitions out of gross operating budgets and have thus far not used, to any great extent, either borrowed funds or their significant cash reserves for such purposes. Indonesian sub-nationals need to spend more on capital than they do now and also need to focus that spending on more useful types of infrastructure. The major constraints to increasing capital spending at the sub-national level are not related to a dearth of finance, but regulatory rigidities in budget preparation and implementation and, most importantly, a lack of capacity to plan, design and implement investment projects. Copyright © 2010 John Wiley & Sons, Ltd.

KEY WORDS — local government; decentralization; capital spending; Indonesia

INTRODUCTION

Transactions in capital assets are of special significance for governments around the world. This is at least partly because public spending on the acquisition of such assets requires comparatively large sums of money compared to recurrent expenditures (Bland and Clarke, 1999; Nice, 2002). In addition, the disposal of assets, especially land, may yield significant capital revenues in some countries.1

Capital assets are important because they support both public service delivery and economic growth. The delivery of most public services requires fixed assets. For example, the provision of health services needs health centers, clinics and hospitals, whereas the delivery of education services needs schools, among other assets. These facilities, in turn, need to be accessible to the public via a variety of transport and communication linkages (World Bank, 1994). Other capital assets such as roads and highways, water and sewerage systems, and power may be more important for economic development. Such assets can serve as: an ‘unpaid factor of production’, which directly encourages increased output; an ‘augmenting factor’, which enhances the general productivity of private capital and labor inputs; and in a more dynamic sense, an incentive for firm and household relocation and thus long-term economic growth (Eberts, 1986, 1990; Duffy-Deno and Eberts, 1991).2

1Blondal (2006) demonstrates that the sale of land by the Government of Singapore results in very significant public revenues.

2Other potential economic impacts of public infrastructure include those related to the multiplier effects of investment. In addition, social impacts derived from infrastructure’s ‘amenity value’ in improving the environment, for example, have been mentioned as important (Kessides, 1993).
The appropriate means of financing capital assets has been an important topic in the academic literature over many years. Here, the major distinction is whether to use ‘pay as you use’ or ‘pay as you go’ mechanisms.\(^3\) The former typically relates to borrowing of one type or another, which can be repaid with future tax revenues, while the latter refers to the use of reserve funds, which have been constructed with past tax revenues. It is widely accepted that governments should in most cases borrow to finance public infrastructure. Borrowing is typically more efficient, abstracting from possible crowding out effects and the creation of inefficiencies in the capital market, as well as more equitable, from either a benefits received or ability to pay point of view, assuming that future generations are economically better off than previous ones.

The above discussion applies in a general way to both national and sub-national governments. However, the issues may have significantly more relevance for sub-nationals. The acquisition of capital assets by sub-national governments typically constitutes a larger portion of their total budgets than is the case for central governments (Mikesell, 2007).\(^4\) In some countries that are especially decentralized, sub-national governments may even be responsible for more infrastructure than central governments. In the United States (US), for example, state and local governments own the vast bulk of the tangible public capital stock (Gramlich, 1994).

Most of the academic research on the topics outlined above at the sub-national level has been carried out for economically advanced countries. This is at least in part a function of the availability of data for such countries. Comprehensive data on sub-national government capital expenditure in developing countries are considerably less available.

In many developing countries, sub-national governments do not distinguish between recurrent and capital spending in budget preparation and execution. Even where sub-national governments do make such a distinction, budget out-turn information may not be reliable; operating statements and balance sheets (where they exist) are not regularly audited, for example. Where audited budgets and other financial data of reasonable quality are obtainable at the individual sub-national government level, there are often no national facilities for the central collection, compilation, systematization, storage and distribution of relevant information.

This article discusses the level of capital spending, the allocation of capital spending across infrastructure types, and the financing of capital spending by sub-national governments in Indonesia during the period 2004–2007. Indonesia is the third largest developing country in the world and a nation of growing political and economic importance. In addition, Indonesia has been engaged in one of the world’s most significant experiments in fiscal decentralization for the past 10 years (World Bank, 2003). Recently, good data in the form of audited budget out-turns and balance sheets have become available for a large sample of provinces and local governments and these data can be usefully employed to examine relevant fiscal and financial matters in those places. Indonesia’s size and importance, the extent and duration of its decentralization initiative, and the availability of reliable data on a sizeable number of sub-national governments make it an ideal case study.

The rest of the article is organized as follows. First, some background material on fiscal decentralization and sub-national government accounting and financial reporting in Indonesia is presented. Second, the level of provincial and local government gross capital spending is investigated for 2004–2007 and the magnitude of capital asset depreciation is estimated, under various assumptions about the economic life of assets. Third, the structure of sub-national capital spending is examined. Fourth, prevalent methods of financing capital expenditure are identified and reviewed. Finally, the article concludes with a summary and recommendations for improvements to decentralization policymaking in Indonesia.

**INDONESIAN DECENTRALIZATION AND SUB-NATIONAL GOVERNMENT ACCOUNTING AND FINANCIAL REPORTING**

**Decentralization in Indonesia**

Indonesia’s decentralization effort has its genesis in two laws, both promulgated in May of 1999, one on administrative matters (Law 22/99) and the other concerning fiscal and finance issues (Law 25/99). In

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\(^3\)See Fisher (1996) for the standard definitions and arguments.

\(^4\)Of course, the exact amount and type of sub-national capital spending depends, in the first instance, on the services that have been assigned to the sub-national level and to citizen demand for services (Burkhead and Miner, 2008), among other determinants.
December 2000, Law 34/00, an additional and essential piece of decentralization legislation on sub-national
government taxation was passed by the national parliament (DPR). In late 2004, Indonesia initiated a re-design of
its basic decentralization framework by issuing revisions to the two major pieces of legislation: Law 32/04 on
administration and Law 33/04 on fiscal matters. In addition, an amendment to Law 34/00 on sub-national taxes (i.e.
Law 28/09) has also just been finalized by DPR, completing the second-generation design (Lewis, 2010).

Significant responsibilities have been decentralized to sub-national governments. Sub-national expenditure
now makes up about 35 per cent of consolidated government spending. As in many developing countries,
Indonesian tax revenues are still very centralized, however. Provincial and local government own-source revenues
comprise only around 8 per cent of consolidated government revenues. Intergovernmental transfers dominate as
a source of revenue among sub-national governments in Indonesia. All together, intergovernmental transfers make up
at least two-thirds of sub-national revenues; while sub-national governments are very dependent on central grants, they
have almost complete discretion over the spending of those transfers. Decentralization legislation allows Indonesian
sub-nationals to borrow for infrastructure development from a variety of sources: government, private financial
institutions and capital markets. All things considered, Indonesia has arguably gone from one of the most fiscally
centralized countries in the world to one of the most decentralized ones (World Bank, 2003, 2007).

**Sub-national government accounting and reporting**

Sub-national governments in Indonesia consist of provinces and local governments. The latter comprise both rural and
urban local authorities (known as kabupaten and kota, respectively). Provinces and kabupaten/kota have been legally
obligated to employ an accruals-based accounting system since 2003. Because of an initial lack of clarity, many sub-
nationals did not immediately make the necessary transition from their cash-based systems. By 2005, however, all
provinces and nearly all kabupaten/kota had formally adopted accounting systems based on accrual methods.

Sub-national governments are required by law to produce a standard set of financial statements within 8 months
from the end of the fiscal year. The required reports include operating statements, balance sheets and cash flow
statements. By 2006, all provinces produced the requisite reports; all but a few local governments were able to generate
operating and cash statements, while over 90 per cent proved able to prepare at least rudimentary balance sheets.

In addition, government regulations require that sub-national annual financial reports be audited by external,
independent agencies. Provincial governments have largely been in compliance with auditing requirements since
2004. Local governments have been slower to abide by auditing obligations. However, by 2006 about 90 per cent of
kabupaten/kota had their financial statements externally audited as required. Till date, sub-national governments
have been audited only by the Indonesian Supreme Audit Agency (BPK).

Our analysis below is based on the audited operating statements and balance sheets of 15 provinces and 113 local
governments for the period 2004–2007. Sub-national governments in the sample were not selected randomly but
chosen for the availability of data. The selected sub-nationals comprise all provinces and kabupaten/kota for which
we were able to access audited financial statements from BPK in each of the 4 years. Population in the selected
provinces and kabupaten/kota represents 56 and 40 per cent of the total, respectively.

### LEVEL OF SUB-NATIONAL PUBLIC CAPITAL SPENDING

**Gross capital spending**

Table 1 presents basic information on sub-national government operations, with a view to highlighting the
importance of capital spending. The table shows provincial and local government revenue, expense, gross
operating balance, capital spending (or acquisition of non-financial assets), disposal of non-financial assets and net

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5See Oosterman (2009) for a more detailed discussion of Indonesian sub-national government accounting and financial reporting.
6In this paper the term ‘sub-national governments’ refers to both provinces and local governments. The terms ‘local governments’ and
‘kabupaten/kota’ are used interchangeably.
7Unless otherwise noted, in this paper we follow the structure and standards that are suggested by the IMF’s Government Finance Statistics
Manual (2001) to present and analyze Indonesian sub-national government financial information.
lending/borrowing for 2004–2007. Revenue is that from all own-sources and transfers. Expense is recurrent expenditure and does not include consumption of fixed capital. Gross operating balance is the difference between revenue and expense. The acquisition and disposal of non-financial assets refers to transactions related to fixed assets, land and changes in inventories. Net lending/borrowing is equal to the gross operating balance minus the acquisition of non-financial assets net of (mostly insignificant) disposals.

At least three points from the table merit attention. First, operating balances exceed capital spending for sub-national governments across all years with the exception of for provinces in 2006. This implies that, in general, sub-national governments finance capital spending out of operating balances. Second, sub-national governments are net lenders to the rest of the economy (after accounting for the disposal of non-financial assets), again with the exception of provinces in 2006. As discussed elsewhere (Lewis and Oosterman, 2009), sub-nationals have built up significant cash deposits since decentralization was launched in 2001 and this is at least in part a manifestation of that fact. Third, as the last row of the table shows, capital spending for sub-national governments steadily increased as a proportion of total spending across the 4 years, ranging from 20.3 to 22.6 per cent for provinces and 16.8 and 26.7 per cent for kabupaten/kota.

We can also provide a broad estimate of total Indonesian sub-national government capital spending as a percentage of GDP. Applying the relevant capital spending shares from Table 1 to aggregate sub-national expenditure data from the Ministry of Finance (MOF) provides the estimates. We find that sub-national governments spent approximately 1.3, 1.2 and 1.7 per cent of GDP on the acquisition of capital assets in 2004, 2005 and 2006, respectively. MOF data indicate that central government capital expenditure amounted to 1.4, 1.2 and 1.6 per cent of GDP for those 3 years. In total, therefore, consolidated government capital spending was 2.7, 2.4 and 3.4 per cent of GDP for 2004, 2005 and 2006, respectively.

Recent analysis suggests that government-wide spending on infrastructure of at least 5 per cent of GDP would be necessary in order to secure economic growth of 6 per cent per year (World Bank, 2004). It appears that central and sub-national governments are not yet meeting that target. This is a first possible indication that sub-national governments do not spend enough on capital.

Depreciation of fixed assets

In theory, sub-national governments should account for consumption of capital assets by recording the estimated depreciation of fixed assets as an expense in their operating statements. Consequently, accumulated depreciation should be reflected in the valuation of fixed assets in the balance sheet. Central government suggests (but does not require) that sub-

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Table 1. Sub-national government operations and capital spending, 2004–2007 (Rp Blns)

<table>
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<tr>
<th>Item</th>
<th>Provinces</th>
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</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>25 975</td>
<td>30 652</td>
<td>34 686</td>
<td>40 508</td>
<td>37 377</td>
<td>41 392</td>
<td>58 616</td>
<td>68 631</td>
</tr>
<tr>
<td>Expense</td>
<td>19 567</td>
<td>21 702</td>
<td>27 704</td>
<td>29 811</td>
<td>30 365</td>
<td>31 790</td>
<td>40 963</td>
<td>48 493</td>
</tr>
<tr>
<td>Gross operating balance</td>
<td>64 074</td>
<td>89 590</td>
<td>69 822</td>
<td>10 697</td>
<td>70 117</td>
<td>96 027</td>
<td>17 653</td>
<td>20 138</td>
</tr>
<tr>
<td>Capital spending</td>
<td>49 848</td>
<td>56 700</td>
<td>74 811</td>
<td>87 159</td>
<td>64 148</td>
<td>57 591</td>
<td>12 762</td>
<td>17 649</td>
</tr>
<tr>
<td>Disposal of non-financial assets</td>
<td>4</td>
<td>23</td>
<td>8</td>
<td>20</td>
<td>16</td>
<td>30</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>Net lending/borrowing</td>
<td>14 277</td>
<td>33 229</td>
<td>47 719</td>
<td>19 900</td>
<td>8 83</td>
<td>28 278</td>
<td>49 211</td>
<td>25 034</td>
</tr>
<tr>
<td>Capital spending (% of total spending)</td>
<td>20.3</td>
<td>20.7</td>
<td>21.3</td>
<td>22.6</td>
<td>16.8</td>
<td>17.6</td>
<td>23.8</td>
<td>26.7</td>
</tr>
</tbody>
</table>

Source: Authors’ own calculations are based on audited operating statements of sub-national governments.

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8Despite the use of an accruals-based system not many sub-nationals account for depreciation of fixed assets. We will return to this point later in the paper.
9Our estimates are based on a large but non-random sample of provinces and kabupaten/kota, as previously noted, and as such should be used with care.
10World Bank (2007) estimates that off-budget state owned enterprises and private companies together spent an amount equivalent to about 1.5 per cent of GDP on capital acquisitions in 2004. More recent data are not available.
nationals depreciate assets and has offered as set of guidelines regarding how to do so. In the event, few sub-national governments in Indonesia account for depreciation in their financial statements; as of 2007, only 12 sub-nationals (all of them kabupaten/kota) had accounted for the depreciation of fixed assets in their operating statements and balance sheets. When Indonesian sub-nationals constructed their first balance sheets they were instructed by the central government to value their fixed assets at book value (i.e. net of accumulated depreciation) and most apparently attempted to do. Since then, however, the vast majority of sub-nationals have not written down the original estimated values.

A variety of methods exists to depreciate fixed assets. The Indonesian central government suggests that sub-nationals use one of three common methods: straight line, double declining balance and unit of production. Of the 12 sub-national governments that depreciated assets in 2007, all employed straight-line methods. Given an estimate of the current book value of an asset and its remaining economic life, it is a simple matter to calculate the annual depreciation of the asset using the straight-line methodology. Depreciation is simply the asset’s current book value divided by its remaining economic life in years. The most difficult aspect of estimating asset depreciation is determining the (remaining) economic life of fixed assets in the first instance.

In this section of the article, we provide estimates of asset depreciation for the sub-national governments in our sample over the period 2005–2007. A description of the approach used follows. For the acquisition of fixed assets during 2005–2007, we use the cost of the asset as its book value; estimate the life of the asset, based on typical values used by the 12 sub-nationals that have depreciated assets; and employ simple straight line methods to determine annual depreciation over the remaining period.

For assets that were already on sub-national balance sheets in 2004, the methods are slightly more complicated. We know the estimated book value of those assets in 2004 (or at least the values as estimated by sub-nationals) and we can reasonably assume that the economic life of the asset when it was acquired is the one that is typical of those used by sub-nationals that depreciate assets, as before. However, since we cannot identify when the assets were actually acquired, we do not know the current ages of those assets (i.e. the length of their remaining economic lives). We, therefore, estimate depreciation of those assets under different assumptions about asset age. More specifically, we estimate depreciation under separate assumptions that the assets are 25, 50 and 75 per cent of the way through their economic lives.

We follow the above procedures for asset classes, not for individual assets, since we only have information on the former. We assume that the economic lives of equipment and machinery; buildings and structures; roads, irrigation and canals; and other assets are 10, 25, 20 and 5 years, respectively. We do not depreciate land, of course (or ‘other’ assets, including work in progress).

Table 2 provides the results of implementing the above approach. The table shows the value of provincial and local government acquisition of non-financial assets for 2005–2007 in both absolute monetary terms (top panel) and as a per cent of total spending (bottom panel). These base case figures are drawn from Table 1 and are simply repeated here for convenience. In addition, the table supplies estimates of the acquisition of non-financial assets net of depreciation charges, as calculated under the three different assumptions regarding the remaining economic lives of the assets, as described in the previous paragraph, again both in absolute and percentage terms.

<table>
<thead>
<tr>
<th>Item</th>
<th>Provinces</th>
<th>Local Governments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition of non-financial assets (Rp Blns)</td>
<td>5670</td>
<td>7481</td>
</tr>
<tr>
<td>Net of depreciation (25% through economic life)</td>
<td>1871</td>
<td>3965</td>
</tr>
<tr>
<td>Net of depreciation (50% through economic life)</td>
<td>57</td>
<td>3441</td>
</tr>
<tr>
<td>Net of depreciation (75% through economic life)</td>
<td>−5500</td>
<td>−374</td>
</tr>
<tr>
<td>Acquisition of non-financial assets (% of total spending)</td>
<td>20.7</td>
<td>21.3</td>
</tr>
<tr>
<td>Net of depreciation (25% through economic life)</td>
<td>6.8</td>
<td>11.3</td>
</tr>
<tr>
<td>Net of depreciation (50% through economic life)</td>
<td>0.2</td>
<td>9.8</td>
</tr>
<tr>
<td>Net of depreciation (75% through economic life)</td>
<td>−20.1</td>
<td>−1.1</td>
</tr>
</tbody>
</table>

Source: Author’s own calculations are based on audited operating statements and balance sheets of sub-national governments.

As the table shows, even under the most optimistic of assumptions, that is whereby (consolidated) infrastructure is taken to be only one-quarter of the way through its economic life, at the time opening balances were prepared, the significance of net investment decreases considerably, on average. Provincial and local government investment net of depreciation is estimated to be only around 10 and 12 per cent of total spending, respectively, over the 3 years in question. At the other extreme, assuming that infrastructure, in general, is three quarters of the way through its economic life, estimated investment net of depreciation is negligible or even negative for both provinces and local governments during the period 2005–2007.

Unfortunately, it is difficult to be much more specific about the extent of net investment and the induced changes to capital stock at the sub-national level. Being more precise would require reasonable estimates of the capital stock under the authority of sub-national governments at different points in time over the relevant period. The production of such estimates is clearly beyond the scope of this article.11

Other research, however, supports the view that the quality of sub-national infrastructure has not changed much or perhaps even deteriorated slightly over the recent past. Chowdhury et al. (2009) examine sub-national roads, education and health infrastructure from 2000 to 2006, using data from the Village Potential Statistics (PODES) survey. They find the quality of the public capital in those three sectors not to have changed substantially over the years. World Bank (2007) concurs that the quality of sub-national roads has not changed much since decentralization. The latter study also concludes that infrastructure in the water sector has recently deteriorated—access to piped water, water quality and the regularity of water service delivery—since 2001.

It seems reasonable to conclude that the amount of sub-national capital spending is insufficient to do much more than keep up with depreciation of relevant assets, if even that. This is a second clear indication of the deficiency of sub-national investment in infrastructure.

STRUCTURE OF CAPITAL SPENDING

As noted in the introduction, since the implementation of decentralization, sub-national governments have become responsible for the provision and financing of a vast range of public services. Specific allocation of government functions across central, provincial and district governments is stipulated in Government Regulation 38/07, which distinguishes among 31 different categories, such as education, public health and public works. At present, accounting regulations require sub-national governments to record capital spending by asset class (such as land or buildings), however, and not by functional category (such as education or health).

Sub-national government financial statements allow for a breakdown of public investment into five broad categories: land; equipment and machinery; buildings and other structures; roads, irrigation and canals and other (including work in progress). Table 3 provides the basic information. It shows provincial and local government capital acquisitions (net of capital disposals, which were negligible across all years) in each of the five classes as a per cent of total investment, for 2005–2007.12

The table provides a reasonably clear picture of the capital spending priorities of provinces and kabupaten/kota. Provinces focus their capital spending on roads, irrigation and canals, devoting about one-third of their capital budgets to these types of infrastructure. A second area of attention for provinces is the acquisition of land; provincial governments spend approximately one-quarter of their capital budgets on the purchase of land. Capital spending on buildings and structures and equipment and machinery are of lesser priority, each making up less than 20 per cent of the total over the years. Local governments on the other hand prioritize capital spending on buildings and structures and roads, irrigation and canals to an approximately equal extent; kabupaten/kota devote more than one-third of their capital budgets to each of infrastructure types. Local governments spend less than one fifth of their budgets on land on average and less than 15 per cent on equipment and machinery.

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11Van der Eng et al. (2009) has recently produced aggregate estimates of the private and public capital stock in Indonesia over the period 1950–2008. The sectoral breakdown of those estimates does not permit more detailed examination of changes to the capital stock under the authority of sub-national governments.

12Data were inadequate to make similar estimates for 2004.
Local government spending on buildings and other structures is striking in its relative importance. The conventional wisdom in Indonesia is that most of such spending goes to the construction of government office buildings and this point of view has been borne out in recent research (World Bank, 2007). A considerable portion of kabupaten/kota infrastructure investment is likely, therefore, to be relatively unproductive.

FINANCING CAPITAL SPENDING

Ideally, reporting on capital financing would distinguish between the net acquisition of financial assets (acquisition of financial assets minus disposal of financial assets) and the net incurrence of liabilities (incurrence of liabilities minus liquidation of liabilities). In this framework, capital financing is equal to net acquisition of financial assets minus net incurrence of liabilities. The difference between the two is also equal to net lending/borrowing.

Indonesian sub-national governments do not report precisely in this fashion. Provinces and local governments generally only report net financial ‘outflows’ (pengeluaran) and net financial ‘inflows’ (penerimaan). Financial outflows are equal to the acquisition of financial assets net of incurred liabilities and financial inflows are equal to the disposal of financial assets net of liquidated liabilities. In most cases, a more detailed breakdown of flows cannot be made. The one exception to this general rule concerns cash reserves; that is, net increases in cash balances may, in fact, be identified separately from sub-national government financial statements. In sum, therefore, in the Indonesian financial reporting scheme capital financing is equal to net increases in cash reserves plus net financial outflows (other than those related to cash) minus net financial inflows (other than those related to cash). Clearly, all other things being equal, this method of calculating financing yields the same result as that detailed in the ‘ideal’ case described above paragraph.

Table 4 provides information on sub-national government financing. It shows the net increase in cash reserves, net financial outflows, net financial inflows and (resultant) capital financing for both provinces and local governments.

Table 4. Sub-national government financing, 2004–2007 (Rp Blns)

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</thead>
<tbody>
<tr>
<td>Net increase in cash reserves</td>
<td>962</td>
<td>2806</td>
<td>-1454</td>
<td>1049</td>
<td>784</td>
<td>2363</td>
<td>3819</td>
<td>1601</td>
</tr>
<tr>
<td>Net financial outflows</td>
<td>641</td>
<td>930</td>
<td>1437</td>
<td>1126</td>
<td>619</td>
<td>894</td>
<td>1423</td>
<td>1868</td>
</tr>
<tr>
<td>Net financial inflows</td>
<td>175</td>
<td>406</td>
<td>460</td>
<td>184</td>
<td>519</td>
<td>430</td>
<td>321</td>
<td>966</td>
</tr>
<tr>
<td>Capital financing</td>
<td>1427</td>
<td>3329</td>
<td>-477</td>
<td>1990</td>
<td>883</td>
<td>2827</td>
<td>4921</td>
<td>2503</td>
</tr>
</tbody>
</table>

Source: Authors’ own calculations are based on audited operating statements and balance sheets of sub-national governments.

governments during the period 2004–2007. All terms are as defined in the preceding paragraph and we will examine them in turn.

Net increase in cash reserves
As mentioned earlier, sub-national governments mostly finance their capital spending out of operating balances. The sole exception to the general rule concerns provinces in 2006. During that year, provincial government operating surplus was less than the (net) acquisition of non-financial assets, suggesting that they drew down on their reserves to make infrastructure investments. Generally speaking, therefore, sub-national governments in Indonesia finance capital spending out of cash, either from operating balances or by drawing down on reserves. As such, sub-national governments rely on relatively inefficient and inequitable methods of financing investment in infrastructure.

While some sub-national governments have drawn down on their reserves to finance capital spending, subnationals have still managed, on a net basis, to accumulate substantial cash reserves in recent years. At the end of 2000, provinces and kabupaten/kota held just over Rp 7.4 trillion in reserves. By the end of fiscal year 2008, sub-national government reserves had grown by nearly an order of magnitude to approximately Rp 71.2 trillion, or about 1.5 per cent of GDP. The build-up of sub-national reserves appears to have been largely inadvertent. That is, sub-nationals have not accumulated cash balances with the intent of using them to finance capital projects, although they may do so on an as-needed basis (Lewis and Oosterman, 2009).

Net financial outflows
Net financial outflows are the difference between acquisition of financial assets and the incurrence of liabilities. The acquisition of financial assets refers for the most part to sub-national governments’ purchase of shares in regional development banks (BPD). Incurrence of liabilities is mainly sub-national borrowing.

During 2004–2007, sub-national governments mainly invested in so-called ‘permanent’ financial assets, which consist of equity participations in enterprises in which sub-national governments have a controlling interest. At the end of 2007, there were 812 sub-national government-owned enterprises, including 322 water utilities (PDAM), 30 micro-finance institutions (BPR), 25 regional development banks (BPD) and 435 miscellaneous enterprises that we classify as ‘other’. In that year, permanent investments by our sample of provincial governments accounted for 89 per cent of total acquisition of financial assets. These permanent investments, in turn, mainly comprised increased equity participations in BPD (48%) and enterprises other than PDAM or BPR (43%). In 2007, the permanent investments by district governments exhibited a similar pattern. Both provincial and district government investments in permanent financial assets largely consist of automatic reinvestments of dividends, and are not the result of an active investment strategy.

More importantly, most sub-national governments acquire financial assets in enterprises not aimed at public service delivery. BPDs invest most of their funds in treasury notes and government bonds, whereas many of the 435 ‘other’ enterprises—the second largest groups of recipients of sub-national government investment in financial assets—seek to provide a commercial service in competition with the private sector counterparts. Examples of such enterprises are: airlines, hotels, football teams, insurance companies and graphic design bureaus. In contrast, in 2007 only two provinces and fewer than 10 districts invested in water utilities, of which there are currently more than 300 (Oosterman, 2009).

Indonesian sub-nationals have a long history of borrowing. Amounts borrowed have been generally low, however. From 1975 through 2004, total sub-national borrowing amounted to only 0.2 per cent of (2004) GDP in nominal terms or 0.9 per cent in real terms. Borrowing has been especially insignificant in recent years. At the end of 2008 only 10 local governments (and no provinces) had taken out long-term loans (from the Ministry of Finance on-lending channel) to finance infrastructure since decentralization began in 2001.\(^\text{13}\)

\(^{13}\)Another five sub-nationals have borrowed but not yet drawn down on principal. They may or may not eventually do so. Among those sub-nationals that have borrowed and to whom some finance has been released include three local governments in our sample.

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One reason for the lack of recent borrowing relates to poor repayment on earlier loans. Sub-national
governments with arrears on the repayment of past loans are not allowed to borrow according to law. Out of 423
sub-national government (and sub-national government-owned water utility—PDAM) borrowers, 325 are in arrears.
Another reason is that many sub-national governments appear to have little interest in incurring such long-term
liabilities in the first instance. Over 300 sub-national government entities have never borrowed (Lewis, 2007; Lewis
and Woodward, 2010). Thus, for various reasons Indonesian sub-nationals have not followed efficient and equitable
practices of using borrowed funds to finance capital spending to any large extent.

*Net financial inflows*

Net financial inflows are the difference between the disposal of financial assets and the liquidation of liabilities. The
disposal of financial assets relates mainly to sub-national government utilization of contingency funds. The
liquidation of liabilities is for the most part repayment of principal on loans taken out from government. Given
the limited magnitude of borrowing and the problems with loan repayment mentioned above, it is not unexpected
that the disposal of financial assets is greater than the liquidation of financial assets.

**SUMMARY AND CONCLUSIONS**

In recent years, provinces and *kabupaten/kota* governments in Indonesia have spent between 20 and 23 per cent
and 17 and 27 per cent of their respective expenditure budgets on the acquisition of non-financial assets.
Sub-national government capital spending makes up approximately 1.7 per cent of GDP, about the same as that of
the central government. In total, public infrastructure spending falls far short, however, of amounts required to
sustain economic growth at a reasonable pace.

At present, very few Indonesian sub-nationals account for depreciation of their fixed assets. If sub-national
governments were to account for fixed asset depreciation, the significance of their capital spending would be much
reduced. Under plausible assumptions about the remaining economic lives of various types of assets, Indonesian
sub-national government investment adjusted for depreciation is currently negligible and may even be negative.

It seems that Indonesian sub-national governments need to spend more on capital than they do now in order to
compensate for possible asset depreciation and stimulate growth. If this is the case, three important questions
present themselves: how much more should sub-nationals spend on capital, on what types of infrastructure should
they spend it and how should such spending be financed?

Assuming central spending on infrastructure remains at current levels and a target of 5 per cent of GDP for total
capital spending is adopted (as recent research suggests), then sub-national governments might need to increase
their spending on assets by at least 1.5 per cent of GDP. This would constitute an effective doubling of current levels
of sub-national public investment.

Indonesian provinces currently focus their capital spending on roads, irrigation canal infrastructure and land
acquisition. Capital expenditure of *kabupaten/kota* governments is allocated mostly to relatively unproductive
assets such as government office buildings. It can be safely argued that sub-nationals (especially *kabupaten/kota*)
should spend much less on government office space and more on infrastructure directly related to service delivery.
Furthermore, it seems very likely that the water infrastructure services merit special attention, although health and
education sector capital assets are also in a state of disrepair.

Sub-national governments have financed their capital spending out of gross operating budgets, for the most part,
and by drawing down on cash reserves, to a much more limited degree. Indonesian sub-national governments have
borrowed only negligible amounts to finance infrastructure since decentralization began in 2001, contrary to best
practices. Presently, many sub-national governments maintain significant cash reserves and these could easily be
used to finance infrastructure. In any case, those sub-nationals without substantial reserves will have to borrow to
finance increased needed levels of investment. It is implausible to continue the current reliance on operating
revenues if infrastructure investment is to be increased.

A number of factors constrain increased sub-national capital spending in Indonesia, however (Lewis and
Oosterman, 2009). First, the sub-national government capital planning and budgeting process often focuses on
relatively small investments that can be carried out during the course of 1 year. This is at least in part because sub-nationals are not permitted to rollover tendered construction contracts from 1 year to the next. This could easily be changed by revising current regulations.

Second, sub-nationals prepare expenditure budgets at a very detailed level of classification (i.e. at the ‘activity’ level). Virements are not allowed during budget execution and, as a result, the only way to revise expenditure plans (as is often called for during implementation) is via a formal amendment to the budget. Budget amendments require approval of the local parliament; the revision process is fractious and time-consuming and one that ultimately causes significant delays in the implementation of capital projects. Again, an amendment to regulations would be sufficient to solve the problems related to virements.

Third, and most importantly, human resources at the sub-national government level are severely constraints. The general level of education is low and technical skills in capital project planning, design, implementation and management are in very short supply and this lack of capacity further constrains appropriate investment outcomes. The existence of weak capacity is not particularly surprising in and of itself; such is the case throughout much of the developing world. It does suggest, however, that central government should redouble its efforts in assisting sub-nationals to better plan, design and implement capital projects aimed at providing public service delivery. This will not be easy or quick, of course, but it is vital if sub-nationals are to improve the quality of public service delivery and promote economic development.

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