

## IV. How Should Low-Income Resource-Rich Countries in Asia Respond to Recent Commodity Price Booms?

Like oil-exporting countries in other regions, the boom in commodity prices over the past few years has resulted in substantial windfall gains for many resource-rich countries in Asia. Balance of payments and fiscal balances have strengthened in many cases. Particularly for low-income countries, the windfall provides an opportunity to address pressing developmental needs as well as to improve living standards and reduce poverty.

However, the volatile and unpredictable nature of commodity prices presents policymakers with several challenges. Boom and bust cycles in commodity prices subject countries to large macroeconomic fluctuations. Resources will also eventually be exhausted, implying that governments may need to formulate a forward-looking strategy to manage resource revenues in a way that ensures long-term development and intergenerational equity. In formulating macroeconomic policy, policymakers need to consider how much they should spend (or save for the future) and how best to spend.

This chapter discusses the macroeconomic policy response of low-income resource-rich countries in Asia that have faced a commodity price boom. It reviews recent terms of trade movements and macroeconomic policy responses to higher commodity-related inflows of foreign exchange and discusses the typical policy challenges. The focus is on nonrenewable resources, including oil and gas, gold, and copper, which are the most important commodities for the resource-rich countries analyzed in this chapter.<sup>40</sup>

Note: The main authors of this chapter are Kotaro Ishi, Masahiko Takeda, and Theo Thomas.

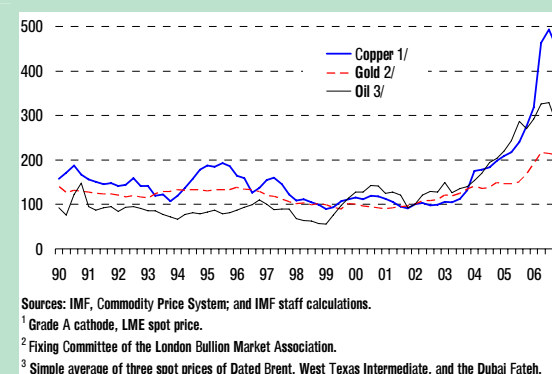
<sup>40</sup> The countries are Lao PDR, Mongolia, Papua New Guinea, Timor-Leste, and Vietnam. Resource-rich countries are defined  
(continued)

### Terms-of-Trade Developments and Their Macroeconomic Impact

#### Developments

Commodity prices have risen sharply since 2002. Between 2002 and 2006, oil prices (annual average) increased by more than 150 percent, mainly reflecting buoyant demand, little spare capacity, and geopolitical uncertainties. During the same period, copper prices increased by more than 330 percent, while gold prices nearly doubled.

**Figure 4.1. Commodity Prices**  
(2002 Q1 = 100)

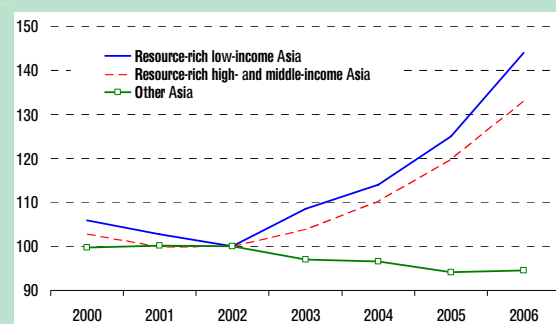


Largely reflecting high commodity prices, the terms of trade of Asian low-income resource-rich countries improved significantly. The improvement in the terms of trade amounted to 45 percent between 2002 and 2006, in sharp contrast to the other non-resource Asian countries, which faced a

as those with at least 25 percent of total fiscal revenue or exports receipts from nonrenewable commodities, IMF (2005b). Low-income countries are those with a GNI per capita below \$875 in 2005, according to the World Bank classification. The main nonrenewable exports by country are shown in Table 4.2.

5 percent loss. The overall gains in the terms of trade in the resource-rich countries was comparable to those for oil exporting countries in the Middle East and Central Asia, with Timor-Leste, Papua New Guinea and Lao P.D.R. recording improvements in excess of 75 percent.

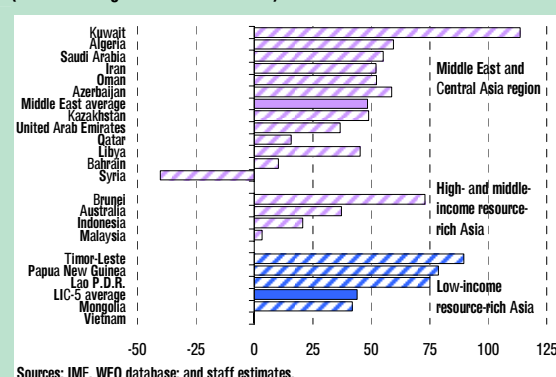
**Figure 4.2. Asia: Terms of Trade of Goods and Services<sup>1</sup>**  
(2002=100)



Source: IMF, World Economic Outlook database.

<sup>1</sup> Simple averages.

**Figure 4.3. Terms of Trade Gains by Country**  
(Percent change from 2002 to 2006)

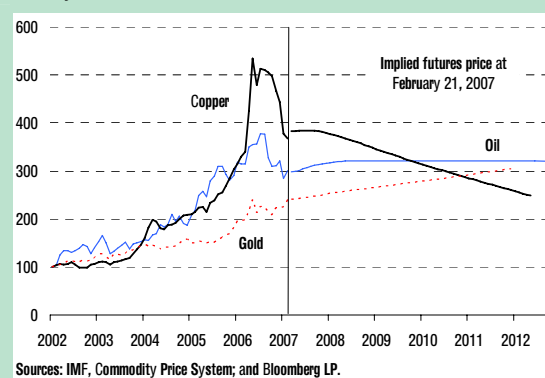


Sources: IMF, WEO database; and staff estimates.

Although uncertainties remain, markets expect that some portion of the increase in commodity prices is long-lasting. Oil prices fell sharply in the second half of 2006 on account of the mild weather in the United States. However, global demand for oil is projected to remain robust and, with supply constraints expected to continue, futures markets suggest that oil prices will remain in the range of \$55–\$60, still substantially above the historical average. Gold prices are also projected to remain strong. Copper prices have fallen sharply since the beginning of this year, but are not expected to fall

back to earlier levels, in part because higher energy prices have increased production costs.<sup>41</sup>

**Figure 4.4. Commodity Prices on Futures Markets**  
(January 2002=100)



Sources: IMF, Commodity Price System; and Bloomberg LP.

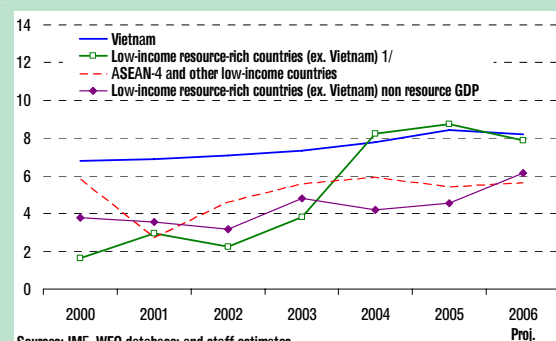
## Macroeconomic Impact

Growth in the low-income resource-rich countries in Asia has risen since 2002. Overall GDP growth rates in Lao PDR, Mongolia, Papua New Guinea, Timor-Leste, and Vietnam outpaced ASEAN and other developing countries in Asia, supported by an increase in production and investment in the resource sector.<sup>42</sup>

<sup>41</sup> In the long run, copper prices are expected to fall back to production costs (IMF, 2006b).

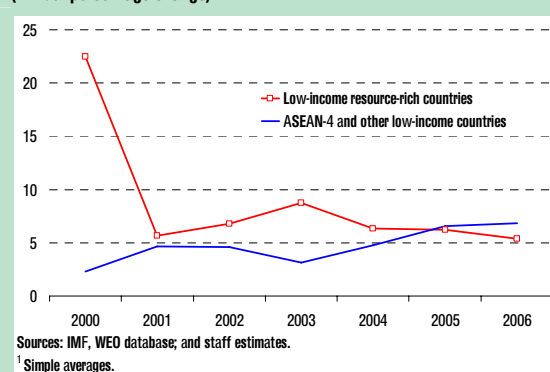
<sup>42</sup> ASEAN includes Indonesia, Malaysia, Philippines, and Thailand. Other developing countries in Asia include Bangladesh, Bhutan, Nepal, Sri Lanka, and Cambodia.

**Figure 4.5. Low-Income Countries: Real GDP Growth**  
(Annual percentage change)



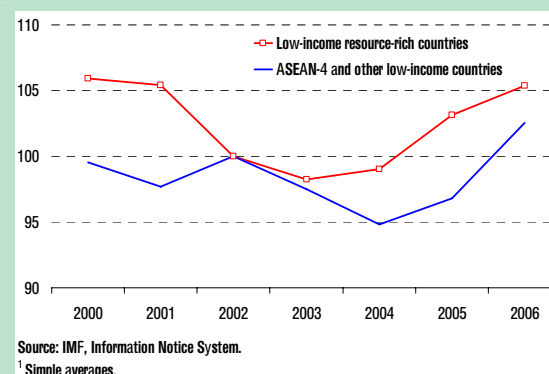
Inflation rates have been moderate in the resource-rich countries, with real effective exchange rates appreciating only modestly. The strong pick-up in overall growth rates has had limited spillover effects to domestic demand with nonresource GDP generally below the average in ASEAN and other developing countries in Asia. Accordingly, with governments broadly maintaining prudent macroeconomic policy, average inflation in these countries was around 6 percent in 2006, below the average inflation rate in ASEAN and other low-income countries.<sup>43</sup>

**Figure 4.6. CPI Inflation<sup>1</sup>**  
(Annual percentage change)



<sup>43</sup> However, inflation rates vary widely across the countries, from 3.5 percent (y/y) in Papua New Guinea to 7.5 percent (y/y) in Vietnam in 2006.

**Figure 4.7. Real Effective Exchange Rates<sup>1</sup>**  
(2002=100)



Nominal exchange rates are fixed or managed to smooth volatility. Timor-Leste adopted the U.S. dollar as legal tender, and Vietnam has maintained a de facto currency peg during a good part of the period under review. Lao P.D.R., Mongolia, and Papua New Guinea have managed floating exchange rate regimes with interventions aimed at reducing volatility. The recent increase in resource exports has not resulted in significant upward pressures on nominal exchange rates or inflation, partly owing to the enclave nature of the resource sector—i.e., a large portion of exports receipts are repatriated by foreign operators while governments (the recipients of taxes and royalties) generally have not fully spent the resource windfall (see next section).<sup>44</sup> Nonetheless, to varying degrees a portion of the foreign direct investment in the booming resource sector may spill over into the domestic economy.

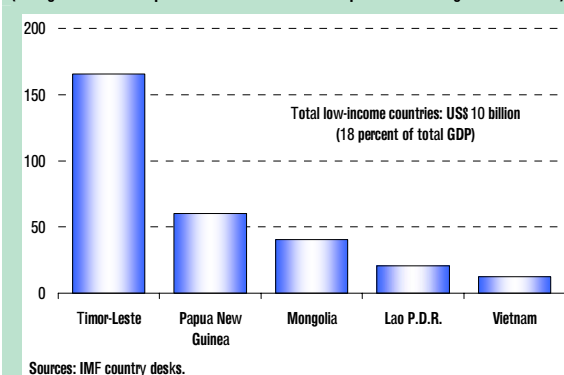
With higher commodity prices, the increase in total receipts from resource exports from 2002 to 2006 amounted to 18 percent of these countries' GDP. There are wide variations among countries, from just over 10 percent of GDP in Vietnam to 60 percent of GDP in Papua New Guinea and over 160 percent of GDP in Timor-Leste.<sup>45</sup>

<sup>44</sup> Papua New Guinea is an exception with a 25 percent appreciation in the real effective exchange rate in 2002–06.

<sup>45</sup> Vietnam is also an oil product importer. Hence, some of resource exports windfall have been offset by an increase in oil product imports.

**Figure 4.8. Resource Exports Windfall**

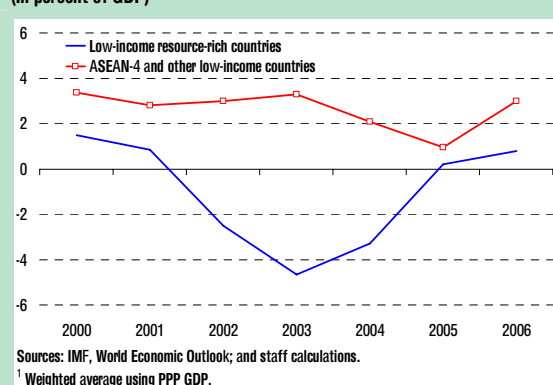
(Change in resource exports from 2002 to 2006 as a percent of average 2002-06 GDP)



However, the improvement in the overall current account balance has been much less than the size of windfall receipts. The current account balance of low-income resource-rich countries has turned into surplus since 2005, but remains below the level of ASEAN and other low-income countries in Asia. In many countries, foreign direct investment in the mining sector has soared, owing to the expansion of existing mines or new exploration, resulting in a surge in imports, offsetting the resource exports windfall.

**Figure 4.9. Current Account Balance<sup>1</sup>**

(In percent of GDP)



development. The challenge arises mainly from the high volatility and unpredictability of commodity prices, the exhaustibility of resource revenues, and (in some countries) the relatively high concentration of resource flows (which could invite rent-seeking behavior). Discussion below focuses on the policy issues faced by resource-rich governments, based on recent bilateral IMF surveillance (Article IV Consultations).

### The Importance of Fiscal Policy

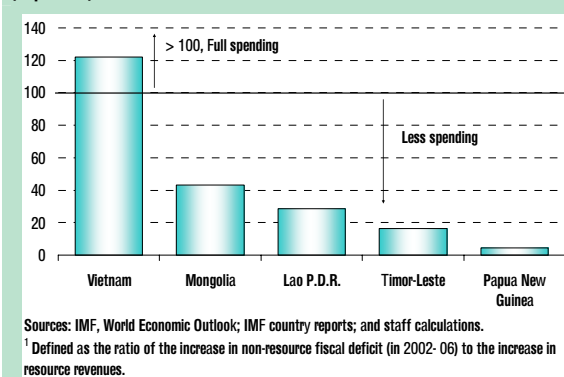
Fiscal policy plays an important role in the transmission of resource revenue volatility to the rest of the economy. Two important characteristics of macroeconomic management in these countries can be underscored. First, while local employment and purchases of goods and services by the resource sector may be significant, the government is the main domestic recipient of resource income, directly through equity participation in the resource sector and/or through taxation and royalties. The resource sector often acts like an enclave, with private profits of foreign operators immediately repatriated. Second, financial markets are rather thin, further limiting options for monetary policy, which highlights the important role of fiscal and structural policies.

## Policy Issues<sup>46</sup>

The key challenge for resource-rich countries is how best to use the windfall revenue for sustainable

<sup>46</sup> Main policy recommendations in this section are based on IMF (2005a and 2007).

**Figure 4.10. Resource Revenue Spending From 2002 to 2006<sup>1</sup>**  
(In percent)

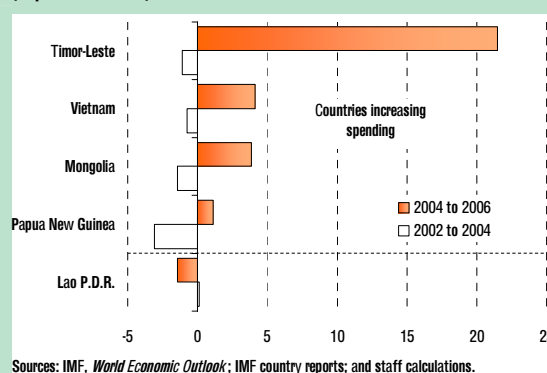


For the 2002–06 period as a whole, most countries have not fully spent the resource revenue windfall. Mongolia, Lao P.D.R., and Papua New Guinea spent (as measured by the cumulative increase in nonresource fiscal deficits<sup>47</sup>) less than half the fiscal windfall. All these countries used part of the windfall for continued fiscal consolidation, including debt retirement, arrears clearance, or building up government deposits. Timor-Leste also saved a large portion of the windfall, owing to a long-term sustainable income policy and limited implementation capacity. In contrast, Vietnam fully spent the windfall revenue, mainly reflecting the increased cost of petroleum price subsidies, public sector wage rises, and an expansion in public investment.

However, many governments have recently begun to spend more of the windfall (with the exception of Lao P.D.R.). For example, Mongolia and Vietnam have increased public sector wages and subsidies, as well as spending for investment. Mongolia has also reduced nonresource revenue collection efforts. Timor-Leste has increased wage and nonwage recurrent spending, as it tries to improve service delivery and address the impact of civil unrest in 2006.

<sup>47</sup> The nonresource fiscal deficit is defined as overall balance net of resource revenues. By defining “spending” as an increase in the nonresource fiscal deficit, this captures the extent to which the government uses resource revenues to finance an increase in expenditures or a reduction in non-resource revenues.

**Figure 4.11. Change in Nonresource Fiscal Deficit**  
(In percent of GDP)

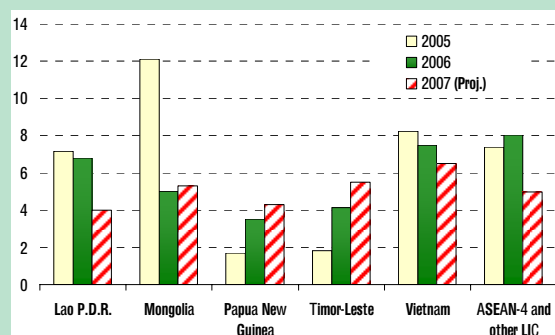


### To Spend or Save?

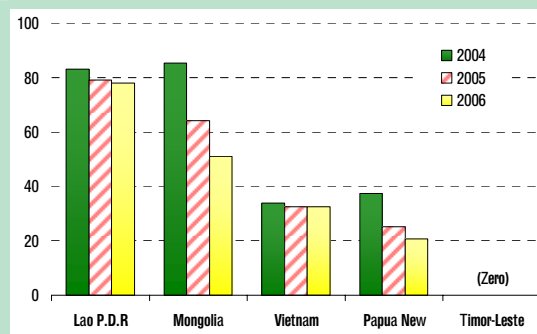
The proportion of the windfall that can be prudently spent should take account of the country-specific circumstances and reflect the following objectives:

- Maintain macroeconomic stability. Unless there is sufficient spare capacity and flexibility in product markets, the demand stimulus resulting from a fiscal expansion (as measured by an increase in the non-resource fiscal deficit) could put upward pressure on inflation and the real exchange rate. Thus, if there is concern about inflation risks, governments should carefully consider the inflationary impact from fiscal expansion, and central banks should also be ready for monetary tightening. Besides, the appropriate fiscal stance, and monetary and exchange rate policy response, must consider the long-term competitiveness of the whole economy, while in the long run, factor and product markets should be made more open and flexible to increase supply response.<sup>48</sup>

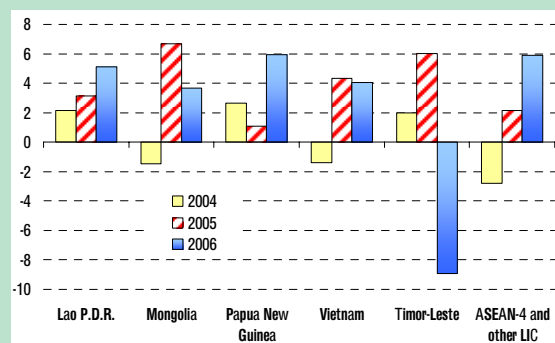
<sup>48</sup> See Barnett and Ossowski (2003) for a full discussion of these effects, often termed “Dutch disease.”

**Figure 4.12. Low-Income Asia: Consumer Price Inflation (In percent)**

Sources: IMF, WEO database; and staff estimates.

**Figure 4.14. External Public Debt (In percent of GDP)**

Source: IMF country reports.

**Figure 4.13. Real Effective Exchange Rates (Annual percentage change)**

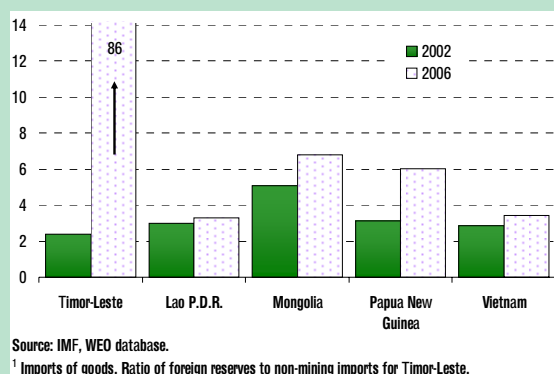
Source: IMF, Information Notice System.

- Ensure sustainability of public debt. Countries with large fiscal debts can use the windfall to strengthen their financial positions, thereby keeping public debt on a sustainable path. This would help reduce vulnerabilities.

- Manage liquidity risks, supporting the build-up of prudential reserves. Governments need to ensure that fiscal policies can adjust to revenue shocks in an orderly and efficient manner. Liquidity constraints are particularly important for low-income countries, as they have limited access to international capital markets (particularly during downturns) and their financial markets are shallow. In this context, the build-up of foreign reserves during the recent windfall provides some self-insurance against potential shocks. In addition, budgets need to be flexible enough to cope with shocks, and large increases in recurrent costs, such as wages and pensions, or entitlement programs, should be avoided. Currently, none of the low-income resource-rich countries in Asia explicitly quantifies these short- and medium-term fiscal vulnerabilities or targets a level of prudential reserves.<sup>49</sup>

<sup>49</sup> See Heller and others (2006) for a discussion of liquidity measures for aid dependent countries, which face similar problems to many resource producers. Aizenman and Lee (2005) and Rodrik (2006) also look at the rationale for holding enough precautionary international reserves to ensure smooth and orderly fiscal adjustment in the face of potentially large resource revenue shocks.

**Figure 4.15. Ratio of Foreign Reserves to Imports<sup>1</sup>**  
(In months of imports)



- Increase spending for enhancing productivity, but only if the resources can be used effectively. For countries where the initial physical and human capital stock is low, a gradual increase in spending for infrastructure, education, and health may be the most appropriate response to higher oil revenues, because the return from investment could exceed a financial return from saving. The low-income resource-rich countries in Asia have significant human and physical capital needs. However, as these countries also face institutional constraints, any increase in spending

should be focused on the provision of high-priority public goods and be accompanied by efforts to develop and strengthen public financial management (PFM) systems.

- Consider intergenerational equity, given that the resources will eventually be exhausted. Many countries are expected to enjoy reasonable levels of production over the next 10–15 years. However, production of a nonrenewable resource can be viewed as transforming a country's physical assets into financial assets, rather than as revenue. Many methods have been proposed for addressing this issue, and Timor-Leste has developed a fiscal framework that explicitly considers the balance between consuming exhaustible resources today versus investing and/or saving for future generations (Box 4.1).<sup>50</sup> Notwithstanding the degree to which a government can choose to accumulate financial or physical and human assets, a key consideration for both sustainability and equity is the government's ability to sustain the nonresource fiscal balance when the resource depletes.

**Table 4.1. Indicators for Spending Consideration**

	High- and Middle-Income Countries			Low-Income Countries					
						Papua			
	Brunei	Indonesia	Malaysia	Lao P.D.R	Mongolia	New Guinea	Timor-Leste	Vietnam	Asia average
Indicators of human and physical capital									
Public infrastructure quality (most recent year)									
Paved roads (percent of total roads)	34.7	58.0	77.9	14.1	3.5	3.5	Poor	25.1	58.4
Water quality (percent of population with access)	...	55.0	94.0	30.0	59.0	44.0	36.0	61.0	58.3
Human capital quality Index									
Adult literacy rate (percent of ages 15 and over)	92.7	90.4	88.7	68.7	97.8	57.3	58.6	90.3	87.9
Life expectancy at birth (years)	76.6	67.2	73.4	55.1	64.5	55.7	56.0	70.8	72.1
Indicators of country capacity to spend <sup>2</sup>									
Country Policy and Institutional Assessment (CPIA)	...	2.5	...	3.5	2.5	1.5	...	3.5	...
Government effectiveness	0.6	-0.5	1.0	-1.1	-0.4	-1.0	-1.0	-0.3	0.6
Rule of law	0.5	-0.9	0.6	-1.1	-0.3	-0.9	-0.5	-0.4	0.3
Political stability	1.1	-1.4	0.5	-0.3	0.9	-0.8	-0.7	0.3	-0.2

Sources: World Bank, *World Development Indicators*; and Kaufmann, Kraay and Mastruzzi (2005).

<sup>1</sup> Coverage varies depending on data availability.

<sup>2</sup> The World Bank Country Policy and Institutional Assessment rates eligible countries against 16 criteria grouped in four clusters: (a) economic management; (b) structural policies; (c) policies for social inclusion and equity; and (d) public sector management and institutions. Scores range from 1-6, with higher scores reflecting better performance. Other indicators range between  $\pm 2.5$ , with higher positive outcomes reflecting better outcomes. See [www.worldbank.org](http://www.worldbank.org).

<sup>50</sup> See Davis and others (2003) for a review of the different approaches used.

## Institutional Framework for Resource Revenue Management

Few countries explicitly design their fiscal policy to smooth the impact of revenue windfalls on public expenditure. Table 4.3 summarizes the fiscal framework for resource revenue management in Asia. Key policy considerations include:

- Using the non-resource (primary) fiscal balance to help set fiscal policy.<sup>51</sup> Most countries frame their budget in terms of an overall deficit target. If implemented, this would transmit resource revenue volatility to the rest of the economy, resulting in procyclical expenditure patterns. Furthermore, the overall balance may improve due to a temporary windfall, while masking increases in government spending that may create large fiscal vulnerabilities if resource revenues recede.<sup>52</sup> Accordingly, the non-resource (primary) fiscal balance would better reflect the impact of fiscal policy on domestic demand, or the government's discretionary policies.
- Formulating fiscal policy within a medium-term policy framework (MTF). An MTF can help governments plan gradual adjustments in the nonresource fiscal balance and avoid large swings in policy. It can also help countries justify the accumulation of net financial assets during periods of high commodity prices to mitigate the fiscal risks posed by reliance on volatile and uncertain revenues. While many countries in Asia produce some sort of multiyear plan, in many cases there is a need to more fully integrate this with the annual budget, make the plans rolling, and

incorporate long-term sustainability considerations.

- Establishing a sustainable long-term fiscal framework. This is particularly important with an exhaustible resource. The development of institutions that promote a long-term perspective is warranted given the inability of future generations to voice preferences on the use of the nonrenewable resource.<sup>53</sup> However, such long-term planning is subject to considerable uncertainty and measures of sustainable spending may vary over time, while budgets also need to be flexible enough to respond to short-term policy considerations.

Resource funds may support fiscal policies that promote intergenerational saving, macro economic stabilization, and transparency, but are not a prerequisite. A well-designed fund can help enhance transparency and strengthen the management of nonrenewable resource revenues, mainly for political economy and asset management reasons.<sup>54</sup> However, a poorly designed fund may complicate fiscal policy and hamper asset management, while even a well designed fund is unlikely to be effective in the face of weak political commitment to prudent policies. In general, a well-designed fund should (i) be integrated with medium-term fiscal policy, based on the government's net wealth; (ii) not allow spending outside the budget process; and (iii) have stringent mechanisms to ensure transparency, good governance, and accountability in the use of resource revenues.

<sup>51</sup> See Barnett and Ossowski (2003) for an explanation of this approach.

<sup>52</sup> For examples in oil producing countries, see Bartsch and others (2004), Eifert, Gelb, and Tallroth (2003), and Askari, Nowshirvani, and Jaber (1997).

<sup>53</sup> See Barnett and Ossowski (2003) for an explanation of various approaches to assessing sustainability for resource producers.

<sup>54</sup> See IMF (2007) for a discussion of oil funds and other special fiscal institutions for managing oil wealth.

Strengthening public financial management is particularly important in poor countries, to improve the effectiveness of fiscal spending. In some low-income resource-rich countries, development spending has often underperformed the budget plan, partially owing to procurement and PFM problems. An increase in spending associated with higher resource revenues is likely to place additional pressures on the PFM systems, and strengthening PFM systems would be a key to increase spending while avoiding wasteful or nonpriority spending.

Transparency in the management of the natural resources varies considerably between countries. To avoid squandering the large revenue windfall, many countries place emphasis on improving transparency and establishing clear and widely understood policies on management of the resource assets and revenue flows. Timor-Leste and Mongolia have committed to the global Extractive Industries Transparency Initiative (EITI) to improve transparency in the sector.<sup>55</sup> Papua New Guinea and Mongolia have also undertaken, with the IMF, a fiscal transparency Report on the Observance of Standards and Codes (ROSC) that includes resource revenue transparency.

#### Box 4.1. Managing Oil Revenues in Timor-Leste

##### Policy Features

- Timor-Leste has adopted a long-term expenditure and saving policy, with the objective of ensuring that oil revenues are used consistent with intergenerational equity. Annual ‘sustainable’ fiscal spending is equal to the sum of the estimated permanent (interest) income from the oil-and-gas wealth and domestic non-oil revenue. While oil production and price assumptions impact the calculation of sustainable income, the guideline should help to minimize the potential for procyclical fiscal policy.
- A petroleum fund was established in 2005. The fund receives all the petroleum income and finances the central government budget deficit, ensuring that it is fully integrated into the budget process and transparently managed. Annual transfer ceilings are set on the basis of the fiscal sustainability policy, although parliament can approve additional withdrawals as long as they are transparently justified. Designated oversight bodies monitor operations and internationally recognized accounting firms conduct annual audits.
- To promote efficient and well targeted public spending, the government has developed sector investment programs (SIPs) that fit within an overall National Development Plan, which underpins the medium-term fiscal framework.
- Fund assets are invested abroad to limit risk and minimize real exchange rate appreciation.

<sup>55</sup> See <http://eititransparency.org>.

## Making Resource Abundance a Blessing

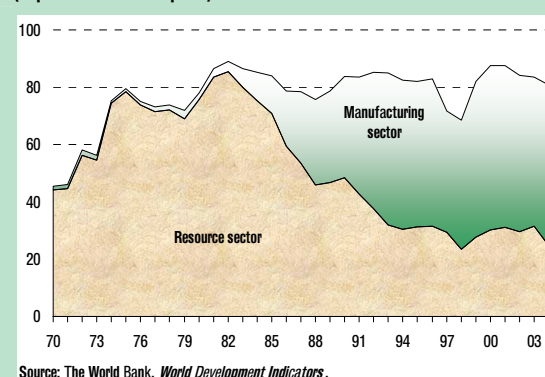
For low-income countries, the key challenge is how best to transmit the resource boom to long-run economic development. A large body of literature discusses whether natural resources contribute to growth. Auty (1997) and Sachs and Warner (1995 and 2001) argue that countries rich in natural resources have tended to grow at a slower pace than those without (“the natural resource curse”). This reflects first, that large foreign exchange inflows may cause “Dutch disease,” whereby nontradable goods prices increase and the real exchange rate appreciates, thereby undermining the competitiveness of the non-resource tradable sector. Second, easy access to natural resource wealth could encourage rent-seeking behavior that affects the quality of institutions and governance.

However, there is evidence that the resource curse is avoidable.<sup>56</sup> In the region, Malaysia and Indonesia, once highly dependent on the resource sector, appear to have avoided resource curse problem, and achieved economic diversification.

- There is a broad consensus that Indonesia managed two oil shocks, in the 1970s and 1980s, relatively successfully (Gelb, 1988). The government maintained broadly prudent macroeconomic policies, which aimed to support the agriculture and manufacturing sectors, and used its windfall gains to increase spending on public infrastructure, health services, and education. This combination of measures is generally regarded as successful, notwithstanding somewhat weak governance. For example, the share of non-oil exports increased markedly between the early 1980s and 1990s; social conditions improved significantly with

near universal primary education enrollment by the mid-1980s, and poverty declined (World Bank, 1993).

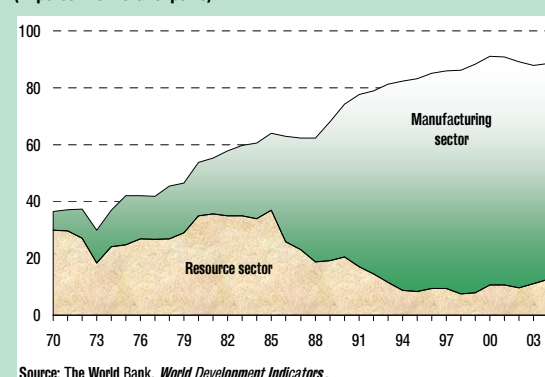
**Figure 4.16. Indonesia: Exports Composition**  
(In percent of total exports)



Source: The World Bank, *World Development Indicators*.

- Malaysia has achieved rapid economic diversification (Barbier, 2005, and Gylfason, 2001).<sup>57</sup> The government invested a large portion of resource revenues in public infrastructure and human capital development, which was vital to the development of the export-oriented manufacturing sector and led to the diversification of production.

**Figure 4.17. Malaysia: Exports Composition**  
(In percent of total exports)



Source: The World Bank, *World Development Indicators*.

<sup>56</sup> See Lederman and Maloney (2006).

<sup>57</sup> Other success cases, commonly cited in the literature, include Botswana and Chile.

Successful country experiences suggest the important role of economic policies and institutions in overcoming the challenges of natural resources. Resource-rich low-income countries in Asia are broadly pursuing outward-oriented and market-based policies, including trade liberalization, the '*right-sizing*' of government, and the promotion of foreign direct investment. However, these countries may need intensified efforts to improve weak institutional capacity, which is critical for effective resource management, and in particular, for spending resource windfalls at an appropriate pace for productive purposes.

**Table 4.2. Country Sample and Size of the Resource Sector**  
(Average 2004-06)

Country	Resource exports		Resource fiscal revenues			Reserves <sup>1</sup>		Commodity <sup>2</sup>
	In percent of total exports of goods and services	In percent of GDP	In percent of total fiscal revenue	In percent of GDP	Per capita GDP (in U.S. dollar)	Oil (in billions of barrels)	Natural gas (in trillions of cubic feet)	
Low-income countries								
Lao P.D.R.	37.5	9.1	3.7	0.4	501	...	...	Copper and gold
Mongolia	61.5	35.8	20.8	8.4	847	...	...	Copper and gold
Papua New Guinea	75.3	66.2	31.3	8.8	666	0.2	12.2	Oil, gas, copper, and gold
Timor-Leste	...	109.2	79.8	72.4	353	0.8	11.7	Oil and gas
Vietnam	22.5	14.5	33.3	9.0	639	0.6	6.8	Oil and gas
High- and middle-income countries								
Australia	46.2	9.0	...	...	34,381	1.6	30.4	...
Brunei	85.3	62.0	91.6	45.2	25,976	1.1	13.8	...
Indonesia	23.1	6.8	28.0	5.2	1,353	4.3	97.8	...
Malaysia	8.1	8.8	29.7	6.5	5,126	3.0	75.0	...
Total regional average	18.5	7.3	29.4	6.3	2,054	1.7	30.7	...
Low-income country average	22.9	14.7	32.0	9.0	608	1.7	30.7	...
Memorandum item:								
Oil exporters in Middle East and Central Asia region <sup>3</sup>	76.4	38.7	...	...	8,671	827.5	2,992.0	Oil and gas

Sources: IMF, World Economic Outlook database; and staff calculations.

<sup>1</sup> Data for oil and natural gas are from PennWell Corporation, Oil & Gas Journal, Vol. 104.47 (December 18, 2006).<sup>2</sup> Commodities subject to analysis in this chapter.<sup>3</sup> Comprising Algeria, Azerbaijan, Bahrain, Iran, Iraq, Kazakhstan, Kuwait, Libya, Oman, Qatar, Saudi Arabia, Syria, Turkmenistan, and the United Arab Emirates.

**Table 4.3. Summary Institutional Frameworks for Resource Management**

Country	Does the budget refer to a non-resource fiscal balance?	Is the budget presented within a medium-term policy framework or set of fiscal rules?	Does the fiscal goal consider long-term sustainability?	Is there a fund to manage resource flows?	Are resources managed transparently?
Lao P.D.R.	No.	No.	Yes. The government's 5 year plan emphasizes the importance of fiscal consolidation in the medium-term.	No.	Transparency is generally weak.
Mongolia	No.	Yes. The government develops a rolling three year budget framework statement.	There is no statement of fiscal sustainability in the budget.	Yes. The Development Fund (DF) was created in 2006 to ensure that revenues from a new "windfall" tax are earmarked equally between: (i) saving; (ii) capital expenditure; and (iii) children and family allowances. DF spending is not consolidated with the national budget.	Mongolia has committed to implement the Extractive Industries Transparency Initiative (EITI) principles, but is at an early stage. A Report on the Observance of Standards and Codes (ROSC) in fiscal transparency was published in 2005.
Papua New Guinea	No.	Yes. The central government budget is formulated within a medium term macroeconomic framework.	Yes. Budget documents do include a discussion of fiscal sustainability. A Fiscal Responsibility Act was approved in 2006 with a commitment to firstly, not raise the overall level of debt during each Government's term.	No. Mineral Resource Stabilization Fund (MRSF) created in the 1970s held deposits in domestic currency. Abolished in 2000 after government study concluded that the stabilization objective had not been met, largely because any saving in the MRSF was more than offset by government borrowing.	ROSC in fiscal transparency was published in 2000.
Timor-Leste	Yes.	Yes. Multi-year investment programs are aggregated in to 3-year expenditure projections that are presented in the annual budget documents. However, planning and budget execution capacity is low and projections for the outer years are at best indicative of spending priorities.	Yes. A long-term fiscal expenditure and saving policy has been adopted, with the objective of ensuring that oil revenues are used in sustainable manner, consistent with intergenerational equity. Annual 'sustainable' fiscal spending is equal to the sum of the estimated permanent (interest) income from the oil- and gas-wealth and domestic non-oil revenue.	Yes. The fund (created in 2005) receives all oil and gas income, which is held overseas, and is used to finance the non-oil budget deficit. There is currently no government debt.	All resource flows are audited and petroleum fund performance reports are published quarterly. Timor-Leste subscribes to the EITI principles.
Vietnam	No.	No.	There is no statement of fiscal sustainability in the budget.	No.	There are no special arrangements to promote the transparency of the resource sector.

Sources: IMF country reports.