

Mineral Wealth, Development, and Social Policy in Indonesia

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Revised June 2011

Acronyms

BAPPENAS Badan Perencanaan Pembangunan Nasional (Indonesia's National Development Planning Agency)

DPT Diphtheria Pertussis Tetanus (vaccination)

E&P Exploration and development

GDP Gross Domestic Product

PEMEX Petroleos Mexicanos (Mexico's state oil company)

Pertamina Perusahaan Pertambangan Minyak Dan Gas Bumi Negara (Indonesia's state oil company)

Summary

For the past four decades Indonesia has used its declining hydrocarbon exports to promote economic growth based on sound macroeconomic policy despite wasteful prestige projects and a dysfunctional state oil and gas company. Recently Indonesia's government has vigorously addressed poverty alleviation and human-resource development through conditional cash transfers by devoting budget resources freed up the reducing domestic fuel subsidies. Despite corruption, Indonesia has been a "developmental state", avoiding the stagnation predicted by the "resource curse" argument. Indonesia's current and future risks and opportunities for channeling hydrocarbon wealth into poverty-alleviating programs through decentralized administration are analyzed through a "leakage model" of flows from the initial stages of arranging exploration and production to the final stages of administering the programs.

A. Introduction

Indonesia has been moderately endowed with natural resources, most notably hydrocarbons, hard minerals, and forests. The export revenues have sometimes been channeled constructively into sound development projects and social programmes, though with serious problems arising on occasion. This paper assesses the checkered experience with hydrocarbons. After situating Indonesia's hydrocarbon wealth in comparison with that of other hydrocarbon-exporting countries, the paper outlines the approaches and problems that have marked Indonesia's general experience with converting natural-resource wealth into development, especially in making social services available and accessible, and then focuses on the patterns specific to hydrocarbon revenues. Despite leakages in converting hydrocarbon revenues into social programmes, reforms underboth the Suharto administration (1967-98) and subsequently have been impressive. In addition, though institutions directly involved with hydrocarbon exploitation have been weak, Indonesia has long benefited from strong institutions in the central management of economic policy, finance, and planning.

Although the relative contribution of Indonesia's hydrocarbon resources to both GDP and exports has declined—a healthy development in reducing resource dependence —hydrocarbon revenues still constitute a very important part of government revenues that can be devoted to social programmes. Sound pricing policies and export-promotion efforts could significantly increase hydrocarbon export revenues. Because hydrocarbon rents belong to the state, royalties provide a much larger share of revenues than the small hydrocarbon share of exports would seem to imply. Oil and gas revenues contribute roughly a quarter of central government revenues (World Bank 2007b: 15). Therefore the questions of how to maximize these revenues and channel them constructively are crucial for social programmes and human capital development.

Goals. This paper assumes that the following goals are desirable for Indonesia's development:

- Indonesia should follow the optimal time path of resource exploitation by producing and selling hydrocarbons and hard minerals when world prices are favorable; avoiding excessively rapid extraction; and avoiding wasteful domestic consumption in order to maximize export earnings. Market-based domestic prices would reduce over-consumption without discouraging productive domestic uses.
- More resources should be devoted to social programmes. As judged by comparisons with other nations, Indonesia is still a long way from meeting social needs and strengthening human capital.
- Resources devoted to social programmes should be better distributed among social sub-sectors (formal education at various levels; vocational training, nutrition, healthcare at preventive or curative levels; etc.) to provide what people really want and need. Decentralization, if its own risks of corruption, bias, and conflict can be minimized, has the potential to improve social programme allocation insofar as local policymakers are more accountable and in closer touch with the realities of local people.
- . The disparities in income, living conditions, and economic potential of Indonesians call for strong efforts to alleviate poverty, on both humanitarian and economic-growth grounds.

Problem Definition. It is important to point out that looking solely at the flow of hydrocarbon revenues into social programmes would be inadequate for defining the scope of the problem. The question is whether people are receiving, or have the choice to receive, adequate social services, whether or not these services are provided through government programmes. Social services can be purchased as well as simply provided *gratis*; they can be provided by non-

governmental institutions free or at lower than market prices as well. *The fundamental question is how well the Indonesian governments have improved the supply and affordability of social services*, whether or not directly provided by the government.

This broader problem definition opens up several very important questions beyond the degree and effectiveness of channeling governmental hydrocarbon revenues into governmental social service programmes. First, what the government does with hydrocarbon revenues, and what policies are adopted or neglected because these revenues flow to the government, will shape the economic environment in which people earn income to enable them to purchase social services. Whether or not one prefers the privatization and marketization of social services, it is a reality in Southeast Asia and many other regions. For example, although the provision of hospital care is dominated by the government¹, Ramesh (2002: 145-46) notes that less than one-third of health expenditures were covered by the public sector. He concludes that Indonesia, like Malaysia, Singapore, and Thailand, is remarkable in “the active role that governments play in providing but not financing health care.” Moreover, “the size of the public sector is shrinking whereas that of the private sector is correspondingly expanding... because of the ‘Unit Swadana’ (self-financing) policy the government has been following since 1991. The purpose of the policy is to decentralize the management of public hospitals and allow them greater autonomy with respect to raising revenues (including promoting private investment), staffing, and expenditure.” Ramesh (2002: 145)

With respect to education, household surveys of the late 1990s revealed that school fees for primary education in Indonesia took up 17% of household income (Kattan and Burnett 2004:

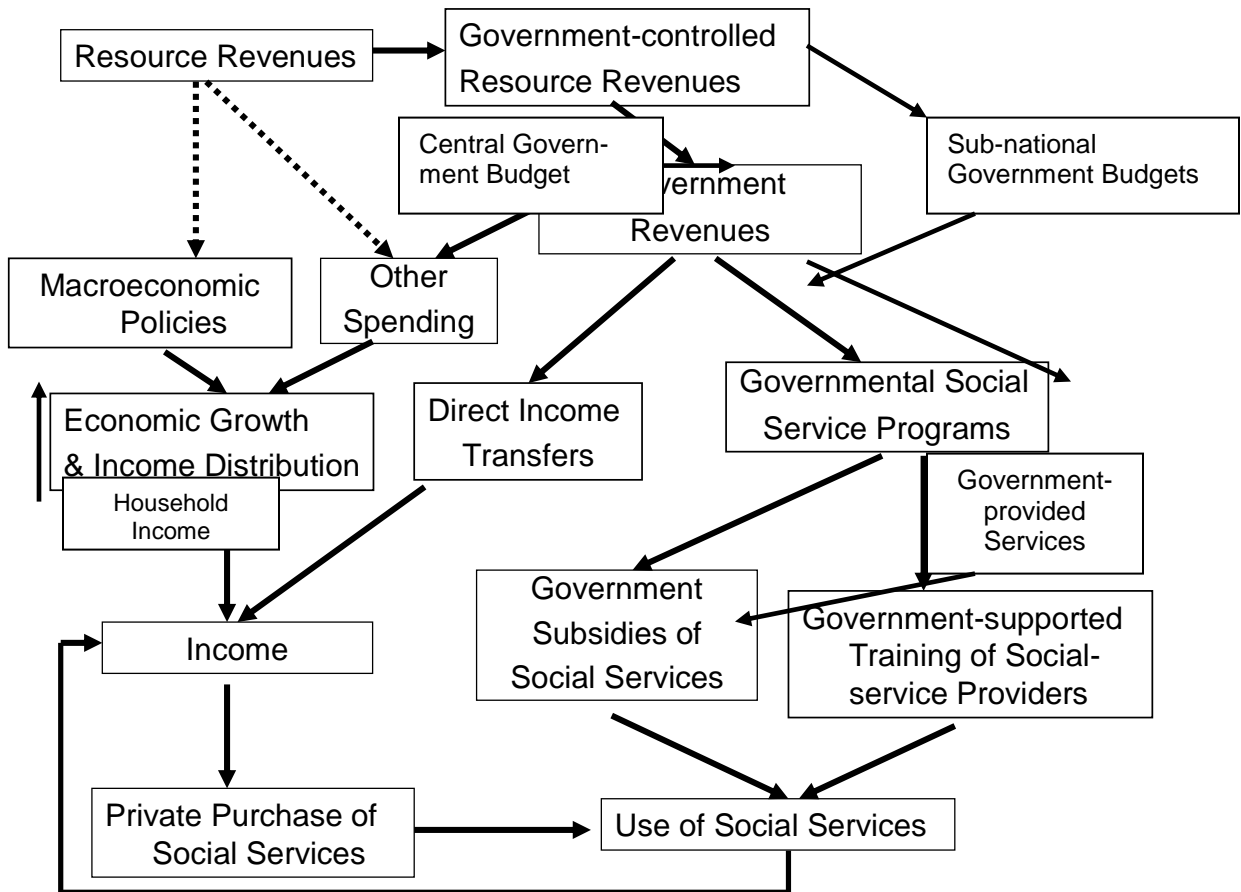
¹ . Gunwan et al. (1992) estimated that in the early 1990s, public hospitals had 69 percent of Indonesia’s hospital beds and treated 75-80 percent of inpatient cases.

14, 38).² Low-income Indonesians pay part of the costs of sanitation, and, of course, food. Thus the conversion of hydrocarbon revenues into widely-shared income growth is highly relevant to the acquisition of social services. If poor governmental management of hydrocarbon exploitation leads to economic stagnation, then social-service access would be limited by this failure as well as by inadequate governmental programmes.

Second, governments may choose to make direct cash transfers to families so that they may purchase (among other things) social services, whether provided by private sources or the government. Figure 8.1 depicts these paths from resource revenues to the access to social services.

Figure 8.1 Paths from Natural Resource Exploitation to Access to Social Services

² See also King (1997). More recent official estimates of parental contributions are: 4% for primary education, 13% for junior secondary, and 17% for senior secondary (World Bank 2007b: 36).



Source: Author

This figure tries to capture the diversity of flows of financial resources and policy influences that natural resources generate. The value of resource assets that the national government does control are necessarily shared with the international companies. Yet they are also increasingly shared with sub-national governments directly through the contract terms (some provinces receive up to 15% of oil revenues [Arnold 2004: 2]), and through fiscal decentralization, which in Indonesia has been much more important since the fall of the Suharto government. Fiscal decentralization has largely been accomplished through transfers from the central to the provincial governments, rather than by increasing sub-national taxing capacity. Therefore the

magnitude of natural-resource revenues captured by the central government is crucial for sub-national budgets.

The central and sub-national governments' programmes include the direct provision of social services (e.g., public schools and government hospitals). They also include the training of social-service providers (e.g., teachers and physicians). . Finally, government programmes can subsidize the purchase of social services (e.g., by transfers to schools or private hospitals that permit reductions in fees).

The “human capital development” premise is captured by the connection between the use of social services and the increase in productivity and therefore both household income and national economic growth. Insofar as additional social services are targeted to the poor, this connection would also contribute to greater income equity.

The diagram's dashed lines connecting resource revenues to macroeconomic policies and to spending other than direct cash transfers and governmental social service programmes indicate an influence, rather than a true flow. Resource revenues may motivate government officials to adopt particular macroeconomic policies—which may be positive or negative for economic growth and income distribution. Resource revenues can also influence overall spending strategies—for example, in financing money-losing prestige projects that impede economic growth. However, some government spending that does not go into social-service programmes can have a positive impact on economic growth if it is well allocated (e.g., on needed physical infrastructure).

Situating the Indonesian Case through Cross-national Comparisons. To avoid drawing faulty conclusions from cross-national comparisons, it is important to clarify Indonesia's status as a producer of hydrocarbons, and the degree of dependence on these resources. Indonesia has

never been wealthy in per capita sub-soil assets compared to other nations. Indonesia has strong but largely still unrealized potential in exporting natural gas and coal. Most importantly, as a significant oil exporter, Indonesia had a significant budgetary dependence on oil revenues. Yet as a populous country which periodically heavily subsidized domestic fuel prices, Indonesia has lost its oil-exporting advantage, although this is potentially reversible if the recent unattractiveness to investment in exploration and production can be reversed.

This resource profile puts Indonesia in a strikingly similar situation to Mexico and Nigeria when declining domestic production levels intersect with rising domestic consumption. These three countries are populous developing countries sharing similar policy histories and consequences: 1) large, vertically integrated state oil and gas companies, with retail monopolies; 2) requirements that international companies partner with the state companies; 3) serious problems of inefficiency and corruption of these companies; 4) disincentives for foreign investment to bolster oil production, due to government policies and political disruptions; 5) efforts to privatize the state oil and gas company, or at least reduce the centrality of the state company in E&P operations (taken much further in Indonesia than in Mexico or Nigeria); 6) periods of drastically low domestic fuel prices, countered by readjustment efforts (most successful in Mexico; least successful in Nigeria).

Indonesia and Mexico have also shared the policy of direct cash transfers to low-income families as a response to difficult economic adjustments, and Indonesia has recently followed Mexico in using conditional cash transfers to steer people to health services, education, improved nutrition, etc. They have also shared efforts of fiscal decentralization.

Compared to these two countries, Indonesia is less subsoil-resource dependent in terms of government revenues. We shall see that the most balanced term to describe Indonesia's

current situation is that it is subsoil-resource *reliant* rather than resource rich or resource dependent. Comparisons between Indonesian patterns and those of relatively low-population, high resource-asset countries like Chile, Norway, Saudi Arabia, or Venezuela could be quite misleading.

B. Indonesia's Mineral Wealth and Development

Indonesia has roughly 4 billion barrels of proven oil reserves (28th largest in the world), 3 trillion cubic meters of proven natural gas reserves in 2010 (14th largest in the world and the largest in Asia-Pacific region) (Central Intelligence Agency 2011), and 5.5 billion metric tons of coal (the 14th largest in the world) (World Energy Council 2010: 11)). Indonesia ranks 22nd in oil production, with an output of just over one million barrels per day. Yet with a population of over 220 million people, Indonesia does not enjoy the exportable surplus of many oil-producing developing countries. In 2010 Indonesia imported over 100 thousand barrels of oil per day (Tan 2010), as demand increased and production fell. However, Indonesia could again be a net exporter in the future. Exploration has stalled for many years because of instability and difficulties of reaching agreements with the state oil and gas company Pertamina and the Indonesian government; contract disputes with international oil companies had stalled production from existing discoveries. Recent reforms have reduced these obstacles, as reviewed later. Also, the high world price of oil has already stimulated greater international interest in Indonesia (U.S. Energy Information Administration 2007: 2). In terms of reducing consumption so that surplus oil could be exported, crucial pricing reforms to reduce fuel subsidies should have an impact on energy conservation, as could the current efforts to substitute natural gas and coal for oil.

However, rising world oil prices have made it difficult to make full and lasting inroads into eliminating the subsidies.

The outlook for other hydrocarbon coal exports is much more positive, in that natural gas exports have recently averaged US\$10 billion annually, although low domestic prices limit the available supply for export (Bowden 2011). Three-quarters of Indonesia's rapidly increasing coal production (229 million metric tons in 2008) is exported (World Energy Council 2010, 16). Chinese demand has already exceeded its domestic supply, raising the international price of coal and placing Indonesia in a very advantageous position because of its proximity to China. Thus, although the government has been trying to promote the domestic use of gas and coal to conserve petroleum, Indonesia has been earning US\$16 billion in net gas and coal exports, and will continue to earn comparably high revenues in the future.

Hard minerals have shown similarly positive trends. The export value of hard mineral ores increased dramatically to US\$8.15 billion in 2010, up from US\$1.8 billion in 2001 (International Trade Centre 2010). The minerals and hydrocarbons sectors account for nearly 30% of Indonesia's merchandise exports; primary commodities account for 60% as of 2009 (UN Conference on Trade and Development 2011). *The Obstacles to Optimal Use of Hydrocarbon Wealth*. The most significant current obstacle to taking advantage of Indonesia's favorable hydrocarbon export potential has been the policy of fuel subsidies for domestic consumption. With rising international oil prices, and memories of the riots that toppled the Suharto government in 1998, Suharto's successors increased the fuel subsidies, to the point where in 2005 they accounted for nearly one fifth of the central government's expenditures (World Bank 2007e: 12). To keep Pertamina from bankruptcy, the Indonesian government transfers funds to offset Pertamina's downstream losses, and subsidizes the fuel purchases of the state electricity

company PLN as well. While the government has been trying to reduce the subsidies, social and political considerations, as well as continued rises in world oil prices, have hindered progress of these efforts.

The current situation of net imports reflects the prior failure to come to terms with international oil companies to explore and develop fields in time to take advantage of today's very favorable world oil prices. The privatization of the oil sector and the demotion of the role of Pertamina have the potential to reduce these failures, but this is uncertain.

C. General Patterns of Economic and Social Development

Economic Development. In many respects, Indonesia has enjoyed impressive economic growth over the past three decades. From 1981 to 2010, Indonesia's GDP grew at an annual rate of 5.8% in constant U.S dollars. The half-decade annual growth rates were:

Table 8.1 Indonesia's GDP Growth Rates, 1970-2005

1981-1985	4.7%
1986-1990	6.2%
1991-1995	7.2%
1996-2000	1.1%
2001-2005	4.7%
2006-2010	5.7%

Calculated from International Monetary Fund 2011a and International Monetary Fund 2011b.

Indonesia has been famously the subject of "green accounting" efforts to adjust national accounts by taking into account the depletion of natural resources. Repetto et al. (1987, 1989) calculate that Indonesia's *depletion-adjusted* domestic product for the 1971-84 period was 4.0% in contrast to the official GDP estimate of 7.1%.

Yet even discounting the impact of resource depletion, these growth rates are very high compared to other developing countries, and the anomalous 1995-2000 stagnation was due to the

East Asian financial crisis rather than chronic weaknesses in the Indonesian economy. Indonesia has benefited from the general East Asian growth boom, its own open economy, and the domestic and foreign capital attracted by both of these. Despite the squandering of resources on high-profile nationalist projects, generally sound economic management has kept Indonesia on a path that has maintained agricultural production, expanded world-competitive manufacturing, and thereby decreased the dependence on raw material exports.

This record has led many observers to judge the Indonesian case as a demonstration of how the so-called “resource curse” can be avoided. After noting the problems that many other resource-exporting countries have had in maintaining economic growth, Andrew Rosser (2007: 39) concludes that Indonesia’s growth

seems remarkable. The oil and gas sector accounted for as much as 80% of the country’s total annual exports and 70% of the central government’s annual revenues during these [1970s and 1980s] decades... But, despite this massive natural resource wealth, the country’s economy grew strongly during the 1970s and 1980s...So strong was Indonesia’s economic growth during the 1970s and 1980s that by the early 1990s, the country had become widely regarded as one of East Asia’s so-called “miracle” economies.

To be sure, this is not a universally accepted view. Winters (2008) asserts that “Suharto is mistakenly seen as a father of development, when in fact he destroyed the country’s foundation to move forward,” and that Suharto’s corruption denied “Indonesia of some of the most golden decades, and its best opportunity to move from a poor to a middle class country.” In light of the facts that Indonesia’s per capita income when Suharto came to power was around US\$50 (still less than US\$380 at today’s prices), and Indonesia sustained seven percent growth

over most of Suharto's regime, this assertion seems very far-fetched. However, it is important to keep in mind that corruption is seen in some quarters as a main feature of the Suharto era.

It is also important to note that although Indonesia had been mineral-resource-*dependent* in securing foreign reserves and central budget funds; it has never been especially mineral-resource abundant or rich in any meaningful sense. Table 8.2 provides comparisons among Indonesia, other Southeast Asian nations, and other countries that have been truly resource rich, resource dependent, or both.

Table 8.2 Indonesia's Natural Subsoil Capital Values: Comparisons with Selected Countries

	Per capita value of "natural capital" – 1994 US\$ (% of total capital)	Per capita value of subsoil assets (% total capital)	Ratio of sub-soil assets per capita to GDP per capita
Bolivia	6,000 (17%)	640 (2%)	.78
Botswana	6,000 (6%)	570 (0.6%)	.21
Chile	14,000 (10%)	5,580 (4%)	1.43
Congo	4,000 (14%)	960 (3%)	1.53
Indonesia	7,000 (12%)	670 (3%)	.73
Malaysia	12,000 (9%)	3,230 (2.4%)	.86
Mexico	7,000 (6%)	3,860 (3.5%)	.83
Norway	30,000 (10%)	20,090 (6.6%)	.70
Philippines	3,000 (6%)	80 (0.2%)	.08
Saudi Arabia	72,000 (42%)	67,910 (39%)	9.21
Thailand	8,000 (6%)	80 (0.1%)	.03
United States	17,000 (4%)	3,180 (0.8%)	.12
Venezuela	21,000 (19%)	14,960 (14%)	5.72
Vietnam	4,000 (22%)	70 (0.4%)	.31
Zambia	5,000 (38%)	360 (3%)	1.0

Calculated from Kunte et al. 1997.

According to World Bank estimates, Indonesia's natural-resource assets in the mid-1990s were equivalent to \$7,000 per capita (in 1994 U.S. dollars), constituting 12% of total assets. Yet most of this wealth is in cropland, pastureland, and forests; sub-soil assets per capita were valued at only \$670, or 3% of total assets. These are low compared to other hydrocarbon or mineral

exporting nations: with Chile at \$5,580 and 4%; Norway at \$20,090 and 6.6%; Saudi Arabia at \$67,910 and 39%; and Venezuela at \$14,960 and 14% (Kunte et al. 1997). Nor could one say that Indonesia's subsoil assets are large relative to Indonesia's per capita income: the ratios of subsoil-per-capita-asset-value to per capita GDP for many of the countries listed above are higher.

Even so, Indonesia had been dependent on oil and gas exports for government revenues. In 1980/81, nearly 70% of government revenues (and 80% of foreign exchange earnings) came from these exports. Yet the rise in manufacturing and a much stronger domestic tax effort reduced the dependence on oil and gas revenues to the range of 20-25 percent of government revenues, and the net balance of foreign exchange from oil and gas is minimal.

Historically, some growth opportunities were wasted under the Suharto administration because of diversions of state-controlled resources into failed initiatives such as the Krakatau Steel Complex, the N-250 airplane, and the heavily-subsidized plywood industry.³ These projects were demanded by "nationalist" factions within the government and Suharto's Golkar party, locked in a struggle with the "technocrats" within the government and business sectors, who supported orthodox economic policies.

In addition, natural-resource wealth that should have gone into the central treasury was diverted into private hands (e.g., logging concessions in state-owned forests charged a small fraction of the appropriate fees [Gillis 1988]). Pertamina was heavily implicated in the nationalist project, financing the initiatives mentioned above, in addition to owning an airline and funding the armed forces (Bresnan 1993: 168-83; McDonald 1981: 157), spending not only export revenues but also huge international loans. Following its 1975 bankruptcy, Pertamina

³ These failures are documented in Ascher 1998; Ascher 1999: Chapter 3; Schwarz 1994.

was reformed (Royaards and Hui 1977: 37); its borrowing and investments required Bank of Indonesia approval and its governance came under inter-ministerial oversight to reduce the likelihood that any governmental actor could use Pertamina revenues to bypass the jurisdictions and awareness of other officials.

Although Pertamina was “tamed” for a while, the problems of non-transparency and corruption crept back. Arnold (2004: 2) reports that an audit of Pertamina books ordered by the International Monetary Fund for 1997 and 1998 “found that corruption and other ‘inefficiencies’ cost Pertamina at least \$4 billion.” This corruption was one factor leading to the conversion of Pertamina into a standard (though still fully government-owned) corporation, without regulatory authority, and the opening up of the oil and gas sectors directly to private corporations.

Overall, however, Indonesia prospered since the mid-1970s through a combination of liberalization reforms in trade and tax policy, openness to export and foreign investment, promotion of domestic savings, and very large volumes of foreign assistance. The inefficient and inequitable tax system was reformed in the 1980s, just in time to weather the decline in world oil prices (Gillis 1989: 91-105). Non-oil domestic tax receipts in 1986-87 exceeded the revenues from oil—for the first time since 1974 (Gillis 1989: 82). In addition, the contracting with foreign oil companies was revamped, enabling the government to capture more revenues.

The wasteful projects championed by the “nationalists” were also balanced by a rejection of protectionism to shelter industry. Under President Sukarno (1945-66), import-substitution industrialization had been attempted through multiple exchange rates and restrictive import licensing to shelter state enterprises and a wide range of small and large businesses (Hossain 2006: 29-30). Given the shortage of skilled private-sector managers, many of the burgeoning state-sector companies were managed by army officers (Hossain 2006: 34). Under Suharto, in

contrast, a market-based strategy with a strong outward orientation was adopted with an “open door policy” for foreign investment. In 1968 the Suharto government also provided access of private domestic firms to the state banks, and eased the return of the flight capital of the Sino-Indonesians (Hossain 2006: 40-44). Yet the state sector had access not only to the state banks, but also to various manipulations of off-budget revenues, as when the state aerospace industry received the funds from the so-called “Reforestation Fund” for financially questionable projects (Richardson 1996).

The policy of neglecting or even draining resources from agriculture was replaced with policies to promote food production. With the opening up of foreign investment, the return of private investment, and huge foreign-assistance transfers (in 1970, Indonesia was the second-largest recipient of official development assistance; it became the largest recipient in 1990), the need to raid capital from agriculture to finance manufacturing disappeared.

By the mid-1970s the fiascoes of Pertamina, Krakatau Steel and other misadventures strengthened the hand of technically sound officials to press economic orthodoxy even further.⁴ Harvard Institute of International Development tax experts spent years in the early 1980s helping Indonesian experts to develop and enact important tax reforms, lowering fiscal dependence on

⁴ A World Bank (2007a: 3) overview notes:

The country was also “helped” by Pertamina’s financial scandal of 1975. Pertamina... failed to repay its loans in 1975 after making extensive and diverse business investments and accumulating some US\$10.5 billion in debt, equivalent to almost 30 percent of Indonesia’s GDP. This scandal greatly diminished Pertamina’s reputation and political influence, delayed overly ambitious and risky investments in the oil sector...and strengthened the hand of reformers.

hydrocarbon exports. The largely Western-trained officials in the Finance Ministry and the planning agency Badan Perencanaan Pembangunan Nasional (BAPPENAS) were able to take advantage of the legacy of the instability of the Sukarno era and the 1975 financial crisis. On the expenditure side of fiscal policy, BAPPENAS, recently given ministerial status, has played a major role in fending off many if not all wasteful projects.

Equally important, significant proportions of the oil and gas revenues captured during the post-1975 boom years were channeled into agriculture, infrastructure, and social services (Hossain 2006). Agricultural investment is particularly important, in light of the decline in agriculture in so many other mineral-exporting countries. One fifth of governmental investment during the 1970s oil boom went into agriculture—compared to 2% for Nigeria (World Bank 2007a: 3). Labor-intensive agriculture was promoted by expanding the irrigation system, funding research in rice cultivation, and subsidizing fertilizer. The government mitigated Dutch Disease effects by devaluing the *rupiah* when oil prices were high, protecting domestic agriculture from cheap imports, and maintaining the export potential of agricultural products such as palm oil. Agricultural promotion had crucial impacts on human capital and social services. By the mid-1980s, 85% of rice farmers were using Green Revolution high-yield varieties (compared to 50% in 1975 [Australian Department of Foreign Affairs and Trade 2000: 170]). By the mid-1980s Indonesia became self-sufficient in food, whereas in some prior years Indonesia had to purchase a third of the world's traded rice supply (World Bank 2007a). Agricultural promotion increased the incomes of the rural population, who were better able to pay for healthcare, school fees, and food.. Slowing the decline of agriculture in GDP made the overall economy and the government's budget less vulnerable to world oil price fluctuations. It also slowed the urbanization that has swamped social service efforts in many other countries.

Agriculture's share of GDP declined only slowly, with agricultural employment declining even more slowly (Hossain 2006: 26).

The Indonesian government also largely contained inflation and profligate consumption by saving much of the windfall revenues abroad, resulting in a very impressive domestic savings rate of 30% by 1980, which has been maintained roughly at that level to the present, and adopting a balanced-budget commitment (Hossain 2006: 40). The 1967 Balanced Budget Law, a legacy of the hyperinflation brought Suharto to power but threatened to unravel his regime, prohibited covering budget deficits through domestic financing.. Sumitro Djojohadikusomo, a prominent Suharto advisor, argues that this policy was an explicit disciplinary instrument directed at political leaders.⁵ However, the Law would also insulate the leaders from pressure to spend above available revenues. Any direct effort to eliminate the balanced-budget commitment would be seen as blatant fiscal irresponsibility. That did not preclude efforts to circumvent the restriction through state-enterprise borrowing, but this was curtailed, if not fully eliminated, after the 1975 Pertamina financial collapse. Although the balanced-budget commitment has been criticized as limiting the government's capacity to address poverty (McKinley. 2003), it has had remarkable persistence despite the pressures that various economic crises placed on Indonesia. The feasibility of a balanced budget was also strongly reinforced by massive foreign assistance prompted by Suharto's strong disavowal of Sukarno's anti-Western economic and political stances.

Bappenas played the key gatekeeper role to discipline spending. Rudner (1976: 255) notes that Bappenas "was responsible for getting annual departmental budgetary proposals, and, in close collaboration with the Finance Ministry, reducing and aggregating these into the state

⁵ Cited in Hossain (2006), 63.

development budget... The Planning Board coordinated project aid finance and even conducted the negotiations with foreign governments and multilateral and international organizations.”

In short, the Indonesian case is widely regarded as a success in terms of avoiding the “resource curse.”⁶ Non-boom sectors such as agriculture and especially manufacturing were strengthened, and governance, though still marked by authoritarian practices, improved in terms of institutional capacity.

What this assessment does not cover is the failure to develop democratic institutions during the Suharto period, and the corruption, political oppression, and climate of fear that prevailed during much of this long period. Social and political relationships in Indonesia still reflect the mistrust that marked the Suharto era. The Economist Intelligence Unit’s “index of democracy” still ranks Indonesia fairly low even among the “flawed democracies” because of low levels of political participation and civil liberties (Economist Intelligence Unit 2010). According to the “Global Peace Index” (2011), Indonesia’s levels of distrust of other citizens, violent crime, threats of terrorism and persistence of corruption place it relatively low among formally democratic nations.

D. Gauging Indonesia’s Social Development

Assessing Indonesia’s social development in comparative perspective requires taking into account its relative level of prosperity, and the fact that Indonesia’s rapid economic growth has

⁶ Stevens (2003:4) uses Indonesia as one of four cases (with Botswana, Chile, and Malaysia) that largely escaped the resource curse.

been fairly recent, while some aspects of social development are resistant to change.⁷ With a 2010 per capita GDP of US\$3,015 Indonesia is 1.5 times wealthier than the Philippines; 2.4 times wealthier than India; 2.6 times wealthier than Vietnam; and 3.7 times wealthier than Cambodia. Yet China is 1.5 times wealthier than Indonesia; Thailand is 1.7 times wealthier; and Malaysia is 2.8 times wealthier (International Monetary Fund 2011).

Health. Table 8.3 shows that Indonesian life expectancy (at 68) is shorter than China, Malaysia, the Philippines, Thailand, and Vietnam. Indonesia’s infant mortality rate (17 per 1,000) compares unfavorably with these nations as well. Maternal mortality is even higher than for much poorer India. Malnutrition remains a problem that has not seen the progress anticipated in the Millennium Goals targets (World Bank 2007b: 20; 2007e: 53).

Table 8.3 Comparative Health Outcomes: Indonesia and Selected Asian Countries, 2009

	Life Expectancy	Infant Mortality rate per 1000	Maternal mortality Rate per 100,000
Cambodia	61	30	290
Vietnam	72	12	86
India	65	34	230
Indonesia	68	17	240
Philippines	70	15	94
China	74	11	38
Thailand	70	8	48
Malaysia	73	3	31

World Health Organization 2011

The reasons why progress in physical wellbeing has lagged are not difficult to identify: Indonesia’s child vaccination rates lag behind all of the comparison nations, with the exception

⁷ For example, malnutrition and disease 20 or 30 years ago are likely to suppress aggregate life expectancy, and willingness to keep children in school is less likely if parents did not attend.

of India; and the density of physicians is the lowest of all the comparison nations except Cambodia.

Table 8.4 Comparative Health Inputs: Indonesia and Selected Asian Countries

	DPT vaccination Rate (% of children) 2009	Doctors per 10,000 2010	Nurses & Midwives per 10,000 2010
Cambodia	92	2.3	7.9
Vietnam	96	12.2	101.
India	66	6.0	13.0
Indonesia	82	2.9	20.4
Philippines	87	11.5	60.0
China	97	14.2	13.8
Thailand	99	12.2	10.1
Malaysia	95	9.4	27.3

World Health Organization 2011.

Clearly, Indonesia has not made the “big push” to expand healthcare inputs, lagging behind other Asian countries, even discounting possible exaggeration in the statistics of other nations.

Education. Indonesia has been successful in enrolling elementary-school children (World Bank 2007e: xviii), achieved to a significant extent through funds reaped from the 1980s oil export windfalls. Hossain (2006: 27) also points out that success rested on the effective family planning programme that reduced the number of school children to be served by primary education.

Secondary education lags behind Asian nations of similar income levels, especially for lower-income students (World Bank 2007e: 30). However, this reflects the very low starting point prior to the 1970s growth periods. The increase in junior secondary enrollments to over 66% in 2009 from only 17% in the 1970s (World Bank 2011a) is a significant accomplishment.

However, as with health care, governmental efforts to escalate educational levels have not been backed by high budgetary commitments. The proportion of government spending for

education in general (estimated at 20% in 2009 [World Bank 2009]), and education spending as a proportion of GDP (at roughly 3% in 2008) are below those of the Philippines, China, Thailand and Malaysia (World Bank 2011b).

Social Insurance Programmes. Despite current efforts to expand social insurance, Indonesia's coverage for retirement, disability, unemployment, and other income-maintenance is extremely limited. A 2002 survey by Ramesh (2002: 149-50) concludes that "in Indonesia, there is no income maintenance scheme for most people, as the existing schemes are tied to formal employment, which covers only a small share of the population. Even more striking is the vast difference in the income maintenance benefits accorded private and public sector workers." Public-sector employees and military personnel receive much greater social-insurance benefits than others. Although the constitution was amended in 2002 to make social security protection a right of all Indonesians, and a 2004 law was to establish a comprehensive social security system, little has been accomplished to create the institutions or establish the financing for this initiative. Central and sub-national expenditures for social assistance amounted to only 1.5% of GDP in 2007 (World Bank 2007e). The major limitation is the narrowness of coverage: as of 2005, pension plans covered only 12% of the population.

Poverty and Income Distribution. A comparison with other Southeast Asian countries reveals that Indonesia has made notable progress in reducing severe poverty, with the proportion of the population below the national poverty line to 7% in 2007 from 40% in 1976; those living on less than one dollar a day dropped to 7.5% in 2006 from 20.6% in 1990 (Indonesia National Development Planning Agency 2007, 11-12). It is also impressive that the bottom quintile's share of GDP did not decline, which is very unusual for modernizing nations in which the industrial sector is growing. Despite the well-known corruption endemic in Indonesia, the poor

have enjoyed rising incomes, either by entering into the “modern sector” in the expanding manufacturing sector or by taking advantage of improved agricultural productivity. Inequality did not worsen; the bottom quintile received roughly the same 8% of national income in 1990-96 to 1997-2006, whereas the bottom quintile lost ground as the economies grew in Laos, Malaysia, and the Philippines.⁸

D. Governmental Strategies to Channel Resource Wealth to Social Services

The Indonesian central government has used all of the channels displayed in Figure 8.1 to finance social services. Yet the most distinctive development in the post-Suharto era has been the decentralization that transferred both large portions of centrally-collected fiscal resources and social-service responsibilities directly to the district level. Programmes such as the “National Community Empowerment Programme” reduced the role of both the central government and the provincial governments, with the latter largely confined to administering programmes covering multiple districts—a rather small portion of social service operations. Community block grants and direct household grants are to cover all sub-districts.

Decentralization had strong political rationales. Suharto-loyalist governors and other high-level officials were key actors in capturing resource rents, taxes, fees, state-enterprise revenues, etc., their deployment to the Golkar Party political machine, allocations to favored areas, and the enrichment of officials in what was considered to be a thoroughly corrupt system (World Bank 2003: ii). The post-Suharto *reformasi* disrupted this pattern by transferring more than two million civil servants to sub-national governments, along with more than one-third of the central government’s budget. By 2006, the fiscal transfers to sub-national governments were

⁸ Based on figures from UN Economic Commission on Asia and the Pacific 2007

twice as great as the central government's expenditures (World Bank 2007e: xiv). (Rieffel (2007: 1) highlights the dramatic scope of this change: "The decentralization of power from the central government at the beginning of 2001, bypassing the provinces...was possibly the most far-reaching decentralization of power seen in the modern world. As much as any other reform, this great leap broke the Suharto machine."

It is too early to assess the overall impact of the decentralization in terms of efficiency, corruption, or equity of distribution. A 2007 World Bank assessment asserted, "How well are [the local governments] performing six years after decentralization? In the absence of systematic monitoring, evaluation and performance-measurement systems, this crucial question cannot be answered accurately. Therefore, the broader policy implications of decentralization in Indonesia remain unclear. (World Bank 2007c).

The ultimate fiscal decentralization is the direct cash transfer to the household, which the Indonesian governments now have made a central feature of safety net policy. In 2005 *unconditional* cash transfers went to 19.1 million poor households, permitting a doubling in domestic fuel prices without major disturbances. Buffering low-income people from the rising price of fuel had both a humanitarian and political rationale—avoiding a repeat of the sudden collapse of legitimacy and riots that brought down the Suharto government. The fuel subsidy suffered from a large leakage problem—the subsidy was regressive, in that wealthier individuals consume far more fuel than the poor.⁹ A limited effort to target fuel subsidies through means tests (Cook and Kwon 2007: 5) quickly gave way to the combination of cash transfers and higher fuel prices, though kerosene remained cheap. The shift to cash transfers to low-income

⁹ Widiyanto (2007: 2) reports that the richest 40% of the population was capturing 70% of the subsidy around 2005.

households has made discernible progress in poverty alleviation as measured in income terms (World Bank 2007b: 21) and the *potential* capacity of low-income Indonesians to pay for social services. Yet concern as to whether the increased disposable income would be devoted to health and education. With loans and grants from the Asian Development Bank and the World Bank, Indonesia adopted a conditional cash transfer (CCT) programme, on both the household and community levels:

The household CCT is modeled after similar programs in Latin America,: poor households receive an average transfer of about US\$140 per year, conditional upon keeping children in school and providing them healthcare. The community CCT, provides grants to increase utilization rates of the same basic services targeted by the household CCT (World Bank 2007b: 21).

Growth of Social Service Expenditures. Social service spending has grown impressively in education and health care (Table 8.5). At constant prices, both education and health spending more than doubled from 2001 to 2009.. These increases outstrip the overall growth in spending of roughly one third, which was greatly moderated by the reduction in debt service. Government spending in agriculture also increased impressively. The government restructuring created major increases in administrative spending. The major swings in subsidies largely reflect fuel pricing, influenced by the world price and the government’s willingness to reduce the subsidies.

Table 8.5 Indonesia: Social Service and Other Government Expenditures, 2001-2009 (trillion rupiah at constant 2000 prices)

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Agriculture	8.2	10.5	13.4	12.5	13.1	15.3	16.9	21.9	22.5
Education	35.0	41.6	50.5	44.5	46.9	57.1	64.8	64.2	77.7
Health	8.2	9.9	14.1	12.5	11.7	16.6	19.6	17.4	18.5
Subsidies	64.5	32.5	30.2	61.9	71.6	55.0	68.7	102.2	36.1

Government Administration	28.1	31.3	42.1	40.4	45.2	54.0	57.2	58.5	59.6
Defense	13.9	16.2	21.6	21.3	21.3	23.3	19.9	17.2	20.2
Infrastructure	21.6	20.9	31.2	25.4	24.8	37.1	37.2	39.2	41.2
Interest payments	76.1	73.2	52.3	45.3	41.8	44.0	40.0	36.7	43.5
Other	52.5	50.4	68.7	61.5	62.5	71.8	81.9	71.1	94.2
Total	308.2	286.4	324.1	325.2	339.1	374.1	406.0	429.3	413.4

Calculated from World Bank 2009, 123.

Impact of Decentralization. As Table 8.6 demonstrates, districts had spent up to twice as much on education as the central government, even though the central government dominates higher education funding, and both dwarf provincial spending. The major educational contribution the central government can make is in teacher training, in that the very high primary enrollments rate and rising secondary enrollment rate leave the *quality* of education as the major remaining challenge. Except at the tertiary level, the central government's spending has been largely devoted to "development", focusing largely to social assistance and secondarily to capital spending (World Bank 2007e: 33). Nevertheless, the central government's share of education spending has increased, perhaps a harbinger of re-centralization.

Table 8.6 Expenditure on key sectors by level of government 2001-2008 (% of total)

Functions/Sectors	2001	2002	2003	2004	2005	2006	2007	2008
Education								
Central	29.7	26.6	33.1	28.9	40.0	44.2	39.4	42.4
Province	4.8	8.0	6.2	6.2	5.2	5.3	5.2	4.5
District	65.4	65.4	60.7	64.9	54.7	50.5	55.5	53.1
Health								
Central	34.7	31.6	41.5	35.7	31.9	40.7	41.0	38.2
Province	18.6	20.0	16.0	17.4	17.8	13.1	13.5	13.1
District	46.7	48.3	42.4	46.9	50.3	46.2	45.5	48.6
Infrastructure								
Central	55.6	39.3	46.9	41.7	40.4	37.3	35.1	43.0
Province	11.9	17.2	14.3	19.1	17.1	15.4	16.2	13.3
District	32.5	43.5	38.8	39.2	42.5	47.3	48.6	43.7
Agriculture								
Central	63.3	62.3	66.4	64.9	68.4	62.0	62.3	73.1
Province	13.0	11.8	10.2	10.6	9.8	9.8	10.2	6.8
District	23.7	25.8	23.4	24.5	21.8	28.2	27.6	20.1
Government								

Administration								
Central	11.4	11.4	14.1	13.9	20.6	25.8	13.7	21.6
Province	25.8	28.0	25.5	22.2	19.7	19.9	21.1	17.8
District	62.8	60.5	60.4	63.8	59.6	54.3	65.2	60.6

Adapted from World Bank 2009, 129.

A shift to community-level conditional transfers was effected through the 2005 diversion of family-targeted scholarship funding to school-aid funding. Low-income families had been eligible for direct cash transfers on the basis of number of school-aged children, acknowledging that school fees were an obstacle to enrollment. In 2005 these household-targeted scholarships were much reduced, reallocating the funds largely to the “Operational Aid to Schools Program” to *all* schools on a per-student basis—to qualify, a school must agree to waive the most important fees and costs. By 2006, this transfer constituted a quarter of the central government’s expenditures on education (World Bank 2007e: 36). Insofar as the central government sets the criteria and determines compliance, this also constitutes a partial re-centralization.

Nearly half of health care spending is allocated by the district governments, and more than half of government administration is as well. The central and district governments have far more control over the provincial governments. For these sectors, there is no indication of a re-centralization.

E. Challenges to Converting Hydrocarbon Wealth into Social Programmes: A “Leakage” Model

Although Indonesia’s per capita income growth *per se* has contributed greatly to the capacity of its citizens to secure social services, the government’s direct role remains very important. In resource-dependent countries, this role can be undermined by a number of

problems; Indonesia has wrestled with many of them. This section explores these problems through a taxonomy of the potential leakages of resources coming from hydrocarbon exports that could be channeled to social programmes. To be as comprehensive as possible, the analysis uses a functional framework that separates out the phases of resource exploitation, its conversion into revenues, and its channeling to the provision and use of social services. It should be noted that this taxonomy does not imply that the Indonesian policies are deficient in each respect, but rather that the Indonesian case is helpful in elaborating the *potential* pitfalls in channeling resource wealth into social programmes. Moreover, it must be acknowledged that complex tradeoffs are involved in designing the nature and coverage of social programmes, often requiring contested decisions to extend benefits to the less needy in order to meet the state’s general obligations to the public good and to ensure the political sustainability of the programmes. Thus what constitutes “excessive” diversion of benefits to the less needy is unavoidably controversial..

Table 8.7. “Leakage” Model of Challenges in Channeling Hydrocarbon Revenues to Social Services

Function or Flow	Nature of Potential Leakages
1. Contracting for exploration & production	<ul style="list-style-type: none"> a. Under-investment in E&P b. Greater international company revenue capture due to high risk cushions c. Greater international company revenue capture secured through payoffs to government officials or national resource company officials
2. Exploration & production	<ul style="list-style-type: none"> a. Inefficient production b. Community opposition to exploration &/or production
3. Export earnings	<ul style="list-style-type: none"> a. Diversion of E&P resources by the resource company to unsound spending b. Diversion of E&P resources to inefficient social programmes operated by national or international resource companies c. Fuel subsidies for domestic consumers that reduce export volume
4. Transfers from resource exploiters to government	Corruption in the transfer to the central treasury

- | | |
|---|--|
| 5. Government policies prompted by resource revenues | a. Lower income opportunities due to poor macroeconomic policies
b. Lower income opportunities due to poor investments |
| 6. General transfers to sub-national governments | a. Lower efficiency of sub-national service provision
b. Sub-national corruption |
| 7. Allocations to social programmes | a. Targeting that under-serves the most needy
b. Cutbacks due to fluctuations in export earnings |
| 8. Unconditional cash transfers to communities &/or low-income families | a. Excessive diversion of cash transfers to less needy recipients
b. Possibility of mis-spent family income |
| 9. Conditional cash transfers | a. Diversion of cash transfers to less needy recipients
b. Costs of administering conditions
c. Corruption in administering the conditions |

Source: Author

Of these nine aspects of the exploitation of hydrocarbons and the flows to or away from income and services for the poor, the first four involve actions by the resource-producing companies, but government policies and oversight are involved in every stage. The last five are more exclusively in the hands of government policymakers. Each of these stages or flows is potentially vulnerable to one or more problems seen in a number of resource-exporting countries (Auty 1990; 2001; Ascher 1999). It is important to keep in mind that the possibility of leakage does not mean that a transfer is, on balance, counterproductive.

The following analysis assesses the risks facing Indonesia:

1a. Under-investment in E&P. Pursuing the optimal time path of resource extraction and sale requires adequate investment and operation to take advantage of world prices when they are high. International investment in Indonesian hydrocarbons has been a problem because of fears of government policy changes, risks of contract renegeing, and political disruption. The timing of extraction has sometimes been disrupted by delays in contracting with international resource companies to export when world prices are high. Especially when both Pertamina and the

Indonesian government were involved in negotiating with international resource companies over oil E&P concessions, the confrontations and other sources of delay left Indonesia with far less production capacity just when world oil prices were rising to very advantageous export opportunities (Arnold 2004). Some of these conflicts have now been resolved, especially regarding the key Exxon fields, possibly because of the demotion of Pertamina as a party in these negotiations. Yet the possibility of impasses arising in the future is still present. Furthermore, the decentralization to the provincial governments has complicated the negotiation. Arnold (2004: 2) notes that this decentralization “added a whole new and unpredictable layer to investment negotiations.”

Ib. Greater international company revenue capture due to high risk cushion. Because of these risks, international resource companies add a risk cushion in their bidding on Indonesian concessions. This problem is also likely to diminish with the demotion of Pertamina. However, the 2001 decision to give production rights to Pertamina and a provincial government for a field long operated by Caltex overturned a long-standing convention of renewing lease-holders’ access (Arnold 2004:2). This has raised concerns that nationalism and politically-motivated decisions still call for a high risk cushion. As long as all international companies face similar risks, even a completely competitive bidding process cannot eliminate the cushion, which will result in lower initial exploration fees and higher production shares for the companies.

Ic. Greater international company revenue capture secured through payoffs to government or national resource company officials. Pertamina corruption may have been reduced by the changes in oversight arrangements, the restriction in Pertamina authority, and general governmental efforts to rein in corruption. However, the first two reforms do not address the potential for corruption in the government’s own interactions with resource companies.

2a. Inefficient production. Insofar as Pertamina remains active in hydrocarbon E&P, its inefficiency compared to international companies detracts from net revenues, due to technical deficiencies, under-capitalization, and cash-flow difficulties¹⁰, compounded by possible corruption. The efficiency of international companies' operations has also been compromised by delays and disruptions.

2b. Community opposition to exploration and/or production. Some current or prospective regions for hydrocarbon or hard-mineral extraction face the risk of community opposition, due to both environmental concerns and disputes over the distribution of gains. Chevron, Indonesia's leading producer, has experienced arson against its vehicles and wells (Arnold 2004: 3). In this respect, the fiscal decentralization may have a salutary effect.

3a. Diversion of E&P resources to unsound spending. The early legacy of high-profile, wasteful projects by Pertamina has been at least partially overcome by Pertamina's demotion to the status of a standard corporation and the greater oversight of its operations. However, as long as the Indonesian government maintains a controlling share of Pertamina, the risk is not completely eliminated.

¹⁰ A 2007 World Bank assessment notes that:

Between 2001 and 2005, oil and gas revenues should have increased by roughly 120 percent...Nevertheless, actual oil and gas revenue increased by 93 percent...One of the explanations for the gap is cash flow problems at Pertamina... These cash flow problems prevented Pertamina from transferring financial resources to the budget, including arrears, dividends and transfers from sales of oil and gas" (World Bank 2007d: 15).

3b. Diversion of E&P resources to inefficient social programmes operated by national or international companies. Pertamina and the international resource companies offer social services of varying magnitudes and scales.¹¹ When the recipients of these services live in isolated areas or otherwise present challenges for government agencies to provide social services, provision of these services by the companies may be the only feasible approach. In general, however, resource companies lack comparative and competitive advantages in providing social services. Yet, as in many other hydrocarbon- and hard-mineral-producing countries, these companies are called upon to provide such services. With respect to the international companies, this requirement may have the political motivation of reducing any resentment of “foreigners

¹¹ Pertamina’s official commitment to providing social services covers both employees and families, and local communities:

Pertamina helps the improvement of integrated health services to support government's program on health to create the community's self-supporting effort to improve mothers' and children's health level. Pertamina donates equipments for the integrated health services, provides health and nutrition elucidation, also gives additional nutritious food...[The] Social Health Program provides free health check and free medication for the community around Pertamina's business activities. The program includes simple medical check up, free curative program, mouth and dental check, also harelip surgery (Pertamina Website 2008).

taking our resources.” Nevertheless, the requirement diverts company resources from maximizing efficient production, and runs the risk of providing poor social-service provision.

3c. Fuel subsidies for domestic consumers that reduce the export volume. Fuel subsidies, whether in holding fuel prices artificially low or in subsidizing electricity prices, constitute the major threat to net government revenues. A 2002 effort to reduce fuel subsidies tried to institutionalize automatic adjustments to changes in world oil prices. Pertamina was to reset domestic oil product prices equivalent to 75% of the world price, with the exception of kerosene, to be set at 63% (World Bank 2004). However, prior to the domestic oil pricing reform of October 2005, Indonesian kerosene was only 11% of the world price, diesel was 32%, and gasoline was 37%. The 2005 energy subsidies reached 24% of central government expenditures (World Bank 2007e: 12), constituting 3.7% of GDP. The major 2005 reform raised the kerosene, diesel, and gasoline prices to 32%, 69%, and 77% respectively (World Bank 2007e: 14)—impressive increases, but obviously still falling short of complete elimination. Rather than covering losses through international borrowing (an alternative that Mexico’s PEMEX and other state companies have been forced to follow), the government makes direct transfers to Pertamina, as well as to the National Electricity Company. This is a less risky financial strategy, but it means that the fuel subsidies directly deplete the budget resources available for social programmes, physical infrastructure, and so on. US\$10 billion was freed up in 2005 by reducing these subsidies, with comparable amounts in the subsequent two years (World Bank 2007e: xiv). Yet in 2007 the fuel subsidies, reflecting the hesitancy to cut them in the face of rising oil prices, still constituted roughly 3% of GDP, and escalated to 4.5% in 2008¹² While “good progress has been made...in reallocating inefficient spending (most notably, fuel subsidies) towards pro-poor

¹² Calculated from World Bank 2009, 107.

programs” (World Bank 2007b: 15), increases in world oil prices have made it difficult for the government to transfer enough cash to vulnerable households to reduce both the hardship of higher market prices and the potential for disruptions. In raising fuel and electricity prices, some degree of dampening of domestic fuel demand has been accomplished. Electricity generation is moving from oil to coal and natural gas (World Bank 2007e: 76); higher vehicle-fuel prices have stemmed the increases in transportation-fuel consumption (Indonesia Ministry of Energy and Mineral Resources 2011: 36).

It should also be noted that raising vehicle-fuel prices has an additional environmental benefit of dampening the polluting effects of hydrocarbon burning both by discouraging travel and by encouraging the retirement of older, less efficient and more polluting vehicles. The Indonesian government has invoked the problems of pollution and traffic congestion to justify travel-limiting measures, yet pricing is still likely to have the greatest conservation impact.

4. Corruption in the transfer to the central treasury. The IMF-ordered audit demonstrating high levels of Pertamina corruption demonstrated that the earlier oversight structures were not sufficient to prevent corruption. Even with Pertamina now transformed into a standard corporation, and oversight largely transferred to the new regulatory agency PBMIGAS, many questions remain. Will Pertamina still play a larger role than a private corporation; will the government’s anti-corruption efforts and the replacement of key Pertamina officials be effective; will PBMigas itself escape corruption; will the remaining ambiguities in the Pertamina and PB Migas roles leave room for both to be vulnerable to corruption?

5a. Lower income opportunities due to growth-suppressing macroeconomic policies Indonesia’s excellent contemporary record in avoiding the resource curse is largely due to the high caliber of the economic-policy units within the government, particularly the Finance

Ministry and the planning agency BAPPENAS. These institutions have often won in the bureaucratic political battles with spending ministries. However, the usefulness of having competent economic-management institutions depends on whether the top political leaders allow these institutions to manage the macroeconomic parameters.

5b. Lower income opportunities due to poor investments. As we have seen, under Suharto a mix of unsound and sound projects were undertaken through central treasury financing or through the state enterprises. The exacerbating problem of unsound projects is that because they are typically selected because they are high profile, they tend to be very large and long term, making it difficult to determine that the resources are being wasted and often even more difficult to terminate the projects even after they are known to be unsound (as the Krakatau Steel and the N-250 airplane initiatives demonstrate).

6a. Lower efficiency of sub-national service provision. Sub-national social service providers are *sometimes* less efficient than central-government providers. In Indonesia, education at the primary and secondary levels has long been administered at the district and provincial levels; therefore transferring more revenues to the sub-national governments for education would have little impact on efficiency. For other social services such as health care, family planning, nutritional supplements, etc., one side of the tradeoff is the possibility of lower administrative or professional expertise at the sub-national levels. The drastic 1999 fiscal and administrative decentralization, which nearly doubled the sub-national jurisdictions' share of government spending and transferred two-thirds of the national services to the regions (World Bank 2007e: 113), put significant strains on sub-national administrative capacity. The counterpoint is the greater allocative efficiency of having local decisionmakers reflect community needs more faithfully than more remote central decisionmakers, although gauging

the magnitude of this advantage is far more difficult than asserting it in principle. According to very preliminary and partial evidence, the quality of health care and education services have improved, in contrast to decentralized water and electricity (World Bank 2007e: 116).

Probably the most important improvement in allocative efficiency in combating poverty has been achieved through the decentralization initiative, insofar as it has placed more resources in the hands of provincial and district governments in the lower-income regions of Indonesia. The fiscal decentralization formula incorporated a “balancing fund” that favored the poorest areas as well as the oil- and gas-rich areas (World Bank 2007e: 113). Yet while the decentralization initiative provided the opportunity to incorporate a redistributive mechanism, this could have been accomplished without decentralizing if the central government had changed the formula guiding the allocation of centrally-provided resources.¹³

6b. Sub-national corruption. In principle, with both national and sub-national officials involved in the decentralization and disbursement of decentralized fiscal resources, there are more opportunities for corruption in the more complicated flow of decentralized resources. In the specific case of Indonesia, however, the rationales of the decentralization worked in an opposite direction. The decentralization was a vehicle for uprooting the Suharto political machine that presided over the various patterns of bribes, favoritism, and extortion. It has provided the new leaders the opportunity to set new norms and safeguards. Yet some of the same political

¹³ For example, Vietnam, still a highly centralized country at least in formal structure, uses allocative formulae that strongly favor more remote, lower-income provinces. See Litvack and Rondinelli 1999.

pressures to channel resources into political party machines remains¹⁴, and it also remains to be seen whether the lower-level corruption relevant to access to social services will re-emerge.

7a. Mis-targeting that fails to benefit the neediest. The application of eligibility criteria is vulnerable to inadvertent and deliberate biases that lead to leakages of benefits away from the most needy. It is impossible to specify criteria that are fully objective and monitorable to ensure that the criteria are applied as the policy intends. In addition, one of the rationales of decentralization is to empower sub-national governance, which implies that local officials take over accountability, and monitoring becomes more difficult when the decisionmakers do not report directly to national officials.

7b. Cutbacks due to fluctuations in export earnings. Without a hydrocarbon revenue stabilization fund, Indonesian social-programme financing faces the risk that *if* social-programme financing levels are closely tied to hydrocarbon revenues, the fluctuations in those revenues will lead to shortfalls in the social programme financing when export prices decline.

There are several possible approaches to address this risk. One is to earmark a specified level of funding for social programmes, with appropriate adjustments for cost-of-living increases. The government has attempted to do this for

¹⁴ One particularly bleak assessment concludes:

During the New Order, Suharto, his family and his cronies effected state capture through the pervasive control of state and economy. In post-Suharto Indonesia, state capture has not disappeared but has evolved into multiple oligarchies with their ramifying networks of dependents...Meanwhile, state institutions remain dysfunctional, leading to public cynicism that such institutions continue to function not as impartial public bodies, but as agencies for the consolidation of elite power (Wee 2002: 4)

Another approach is to stabilize government budgets through a hydrocarbons stabilization fund, akin to those of other hydrocarbon- or hard-mineral-exporting countries. These funds have had mixed success (Fasano 2000; Davis et al. 2003; Moreen 2006). It is understandable that Indonesian governments, with flagging net hydrocarbon exports, did not embrace the stabilization fund approach since it became popular in the 1990s, and the success of such funds depends on government discipline to resist fund-raiding when under pressure to spend beyond the fund formula. Nevertheless, if Indonesian natural gas and coal exports experience a significant boom, a stabilization fund should be given serious consideration.

8a. Diversion of cash transfers to less needy recipients. The same problem seen in targeting social services to the most needy can arise in targeting cash transfers. Are the criteria clear; is the information available to determine eligibility available; are officials willing and able to apply these criteria? However, in the poorest villages and neighborhoods of Indonesia, the income differentials are not so great that these decisions would be difficult. It is striking that the transfers of cash to 2 million out of perhaps 40 to 50 million families have not created an uproar.. Perhaps status issues have restrained the scramble for eligibility.

8b. Mis-spent family income. Direct cash transfers, despite some leakage to families that do not meet the low-income eligibility criterion, did increase the disposable income of poor Indonesians. However, the experience in many countries has shown that nutrition, health care, and education spending are often neglected, especially by male heads of household. It is not possible to gauge the magnitude of leakage to other spending in the Indonesian case, but international experience (Mexico, Turkey, and Brazil) shows that significant gains in health and education can be secured (Widianto 2007: 2).

9a. Diversion of conditional cash transfers to less needy recipients. As with unconditional cash transfers, eligibility criteria may not be followed faithfully. An additional source of discretion on the part of decisionmakers is whether individual families are conforming to the conditions. On the other hand, interactions between these decisionmakers and recipients provide an opportunity to check on eligibility as well as compliance. Conditional cash transfer programmes at both the community and household levels must be monitored, at least on a selective basis, to determine how much diversion is occurring.

9b. Costs of administering conditional cash transfers. Some costs are inevitably involved in determining whether conditions are met sufficiently to continue the transfer. The tradeoff is between the advantage of inducing family-supportive expenditures and the costs of doing so. Policymakers must decide whether to devote more resources to this administration, or to let non-compliers continue with their privilege. It is too early to determine the administrative costs and effectiveness of conditional cash transfers.

9c. Corruption in administering conditional cash transfers. The corruption risk of conditional cash transfers is also heightened by the addition of the level of decisionmakers determining whether compliance is sufficient to warrant continued eligibility. Efforts to provide transparency in how these decisions are made could reduce the scope for corruption, but the risk remains.

G. Conclusions

Several conclusions can be drawn from Indonesia's experience and prospects, relevant for both Indonesia and other hydrocarbon-extracting countries.

1. Indonesia's status as a hydrocarbon exporting or importing nation depends more on policies and conditions for foreign investment than on the actual hydrocarbon asset base.

Indonesia could once again become a net exporter, depending on the level of business risk in Indonesia and the government's capacity to rein in domestic demand.

2. The Indonesian case demonstrates that solid macroeconomic management can largely overcome wasteful investments in terms of overall economic growth of a resource-reliant nation.

3. Although notorious for its corruption, Indonesia under Suharto developed impressively, in economic if not political terms, converting a significant portion of its subsoil assets into sustained economic growth. Indonesia under Suharto was a relatively rare case of a corrupt "developmentalist" state. Despite caveats, including massive foreign assistance and the possibility that Indonesia could have advanced even more, the Indonesian experience reveals a crucial difference between rent-seeking corruption leading to growth-suppressing macro policies (protectionism, over-valued exchange rates, distorted interest rates), and the corruption that gave the Suharto machine a cut of the profits of economic activities that were profitable because the macro-policy context was relatively sound. After initially flirting with import-substitution industrialization, Suharto, relying on strong economic management institutions, provided enough rewards to the business sector without having to protect it through the growth-suppressing policy distortions.

4. In the transition to dependence on oil imports, post-Suharto governments have had to wrestle with domestic demands for cheap fuel. What was a rather hidden opportunity cost of less oil to export has become a highly politically-charged challenge of reducing the hardship—and the potential for disruption—of fuel-price increases. The subsidies have been the major obstacle to freeing up fiscal resources for social services, infrastructure (including sanitation), transfers to sub-national governments, and other purposes.

5. Indonesia has made progress in addressing the potential leakages that can reduce the subsoil revenues available to promote greater social-service quality and affordability. From the “top” of the process (contracting, extraction, and sale) through the avoidance of growth-suppressing macro-policies, both the Suharto and post-Suharto governments have been quite successful. In the benefit flows “downstream” in the conversion of subsoil assets into social services, the importance of potential leakages in targeting remains to be seen.

6. Better management of hydrocarbon pricing policy, by reducing the domestic subsidies, has enabled the post-Suharto governments to finance greatly expanded social-service programmes. Impressive increases in social service spending have occurred over the decade. Yet the funding of social services remains vulnerable because the central government still collects the bulk of taxes and royalties (although royalty sharing has begun to offset this dominance); and the central government is likely to remain vulnerable to pressures to subsidize fuel prices.

7. Better management of hydrocarbon pricing policy also enabled the post-Suharto reformers to strengthen district-level administration, the crucial institution for the bold decentralization initiative.

8. The Indonesian government, like governments in other countries engaging in cash transfers, has traded one risk—that families will mis-use the cash—for another—that conditional cash transfers will create more bureaucracy and opportunities for corruption. The adoption of conditional cash transfers illustrates the power of development agencies to disseminate development strategies. Conditional cash transfers also reflect a re-assertion of central control compared to unconditional transfers, possibly a step in the re-centralization of social services.

Although targeted programmes are ultimately *administered* at lower governmental levels, the conditions are being *formulated* at the national level.

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