

## Natural Resource Abundance and Economic Development: A Curse? Or A Blessing? – Lessons from Indonesia’s Experience

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1. The economy shall be organized as a common endeavor based upon the principles of the family system.
2. Sectors of production which are important for the country and affect the life of the people shall be controlled by the State.
3. The land, the waters and the natural riches contained therein shall be controlled by the State and exploited to the greatest benefit of the people.”

(Article 33 of the 1945 Constitution of the Republic of Indonesia)

### 1. Introduction

In this paper I would like to address the issue of natural resource abundance as a factor in economic development. The issue is of topical interest to policymakers as well as academics today, as the recent growth acceleration of many an African economy is thought to be driven by the on-going booms in primary commodities. There has also been growing literature on the so-called “resource curse” in recent years, which argue – or negate for that matter – that natural resource abundance does not foster sustained economic growth and rather retard it. Certainly, there does not seem to be a consensus among policymakers and economists on this point.

The purpose of this paper is two-fold. First, I will revisit the resource curse issue. Why a curse and not a blessing? Is it a destiny or just a pitfall many countries tend to fall in at various stages of economic (and political) development? Why don’t we deal with natural resources in a symmetrical ways – it can be a blessing or a curse? Why does only natural resource appear to have this onus, while other kinds of resources escape it? If it turns out that there is such a thing as the curse of natural resource abundance, then what are the ways of exorcising it? In considering the last question – which has a most important policy implication for policymakers – the channels through which the curse works to negatively affect an economy’s growth must be understood. If there is something lacking in the existing vast literature on the natural resource curse, it is the policy implications and suggestions to escape the curse. There aren’t many studies on this aspect on the basis of which policymakers could conceive and design appropriate policy and institutions to fight it.

Second, I would like to take up Indonesia’s case and attempt to derive lessons from its experience in handling the natural resource abundance. Many South-East Asian economies have rich natural resource endowment, and yet they seem to have escaped the natural resource curse. Indonesia, Malaysia, Thailand and, more recently, Vietnam succeeded in taking advantage of their natural resources as a blessing to further their economic development. Laos has vast water resources coming from the Mekong River running through it, and large hydro-power projects have been built or under construction. Cambodia will be a beneficiary of the recent oil and gas finds off-shore Sihanoukville, but we don’t know whether they will turn out to be curses or blessings now. Myanmar, also rich in natural resource endowment, is in its sorry state of affairs for a variety of

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reasons, but it would stretch one's imagination to call it the case of natural resource curse.

Indonesia is one country among them that came very close to being afflicted with the natural resource curse, and that is one of the reasons why I have chosen it for a case study. Indonesia with its oil and gas resources was almost a perfect candidate for the curse in the 1970's and 1980's, and its National Oil Company, Pertamina, nearly bankrupted the country in 1975. The other reason why I picked up this case is personal. The government of Indonesia – in fact, the so-called Technocrats – hired a group of investment bankers for assistance in international finance to deal with the aftermath of the “Pertamina crisis”, and I was a member of that group called the Advisory Group or the Troika for 1975-83. I was thus a close witness to the government policy to fight the curse. This is the reason why I thought back to the experience of Indonesia thirty or so years ago and attempted to draw lessons from it. I am well aware that a sample of one cannot prove or disprove anything, but I thought the Indonesian case may offer materials for considering the issue.

## 2. What Is Natural Resource Curse? What Can We Do About It?

### *Problems of the Natural Resource Curse*

The natural resource curse can be stated as: Natural resource abundance in a country has an adverse effect on its growth for a variety of reasons. Sachs and Warner, who have done a number of pioneering empirical studies on the issue, say that “a natural resource curse is a reasonably solid fact” (Sachs and Warner, 1999), while some others, Lederman and Maloney among others, maintain that “natural resource exports seem to have a positive rather than a negative effect on subsequent economic growth” based on an extensive empirical study of the relationship between various structural aspects of international trade, ranging from natural resource abundance to export diversification and subsequent economic growth (Lederman and Maloney, 2007, Chapter 1)

These studies are mostly based on cross-country analyses, and they suffer from the well-known problems of such. But, apart from it, the answer to the question may not be a simple yes or no. What kinds of natural resources are prone to the curse must first be clarified, and this is closely related to the mechanism or channels through which natural resource abundance affects a country's growth performance.

The first school argues that the curse is associated with all primary commodities, agricultural, fuel and minerals all included, and that, when an economy has a large, and profitable primary commodity sector, it tends to crowd out the development of manufacturing and other industrial activities (Sachs and Warner, 1995). This is a generalized case of the “Dutch disease” in which foreign exchange revenues from primary commodity exports would cause real appreciation of the exchange rate, which then would adversely affect the international competitiveness of manufacturing and other tradable goods production. Under the circumstances, entrepreneurs and investors would not have incentives to invest in manufacturing activities, which would stifle its growth. According to this school's view, there is a basic difference between the primary commodity and manufacturing sectors, in that the production of primary commodities does not hold out the possibility of future productivity growth as does the latter. There are technological limits to productivity increase in agricultural activities. In case of oil and gas and other mineral extraction, capital intensive methods of production may be used but these activities tend to become often “enclave” operations by multinational corporations (read non-national) and to generate local employment only to a minimum extent. There are no significant spillovers expected from them to the rest of the economy either through technological diffusion or human capital accumulation. Manufacturing activities, on the other hand, tend to have the scale economy effect and the productivity increase expected of the learning-by-doing technological advance inherent in the nature of technology used.

This argument echoes, as Lederman and Maloney pointed out, the Prebisch-Singer thesis that the natural resource-led growth strategy is bound to fail, as attested by economic stagnation of Latin-American economies before they had adopted the strategy of import-substitution industrialization (Lederman and Maloney, 2007, Chapter1). Prebisch-Singer maintained that demand for primary commodities by industrial economies would not be strong enough so as to make the production for export of primary commodities an effective engine of growth for developing countries. As a result, developing countries would suffer chronic deterioration in their terms-of-trade, which then would lead to slow growth unless manufacturing industry were developed for domestic markets.

According to the second school, the nature of the natural resource curse is different. The extraction activities of oil, gas and other minerals generate rent revenue accruing to the state, which is normally the ultimate owner of the country's subterranean resources. Agricultural commodities such as coffee, rubber, palm oil, cocoa etc., while using natural resources as important factor inputs, are less likely to create sizeable rent.<sup>2</sup> Wherever there is rent, there are rent-seeking activities. The second school maintains that it is these rent-seeking activities that have the political economy effect on the behavior of the government. Revenue abundance, especially if it comes about in the form of a windfall, tends to make it easy for politicians and bureaucratic policymakers to waste it on uneconomic investments and conspicuous expenditures. Often times, it induces corruption. This may be called the "voracity effect" that causes the retardation of growth through misuse and abuse of public funds (Collier, 2007, Chapter 3 and Collier and Goderis, 2007). It has a far reaching and long-term impact on the development of the country: that the government can tap abundant revenue without making taxation efforts – in other words, the availability of "easy money" – may also deter its effort in building public sector institutions that manage public finance. As taxation requires the democratic representation of those taxed, it also deters the development of democratic institutions. Moreover, it may give rise to internal political and military conflicts among those groups vying for the control of rent revenue. The argument of the second school is thus couched in the logic of institutional economics. In fact, one empirical analysis concluded that natural resource abundance has no effect on growth if the variable of institutional development is controlled for (Sala-i-Martin and Subramanian, 2003). The basic logic of the second school is well described by Bates who stated that "[b]ecause of this rich endowment of natural resources, many governments in Africa are tempted to abandon their role a guardian and to embrace the role of predator, employing the powers of the state to extract wealth from the Continent's natural resources (Bates, 2008).

There is yet another factor that may make natural resource abundance a curse. The country with rich natural resource endowments come to depend on them for production and exports. And yet the international prices of primary commodities – not limited to fuel and minerals but also including agricultural commodities – are notorious for their volatility in the process of business cycles, in response to anticipated supply difficulties due to natural disasters and, often, to political disturbances in supplier countries. From time to time, we experience primary commodity booms and subsequent busts of enormous magnitudes, as at the time of the Great Depression, and during and after the Korean War, the two oil shocks in the 1970' and the general commodity booms we are experiencing now.

To van der Ploeg, "volatility is the quintessential feature of the natural resource curse" (van der Ploeg, 2007). The price volatility of the country's major production and export makes the

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<sup>2</sup> There are exceptions even in case of agricultural commodities, however. Marketing Boards with monopoly and monopsony power over inputs and outputs, e.g. Ghana's Cocoa Marketing Board, can generate large rents.

management of the economy difficult. Investment planning – both in the public and private sector – would become well-nigh impossible for all practical purposes. During the boom times, public expenditures would increase, often, under political pressures, while, once such booms are busted, the government would find it difficult to contain public expenditures, out of inertia but also because of the need to compensate for the ensuing economic slowdowns. These political economy pressures on expansionary fiscal policy both through the boom as well as the bust period, may jeopardize the fiscal and balance-of-payments sustainability. The booms and busts are also often accompanied by excessive borrowing by the government. During the boom time, many public investment projects are undertaken, the finance of which is met by willing international lenders. At the time of economic down-turns, the government attempt to fill the deficits by borrowing even at high costs.

### *Possible Solutions to the Curse*

Supposing that the natural resource curse does exist and that it impacts negatively on the natural resource abundant developing country through the “Dutch disease” effect, the “voracity effect”, the “volatility effect” or any combination of them, what are the possible policy solutions to it? The possible solutions to the natural resource curse have been discussed less widely than the phenomenon itself, and the paucity of effective and workable ideas probably reflects the difficulties associated with formulating such. Among many proposed ideas, there is even a desperate and ultimately defeatist proposal to distribute natural resource revenue to all the population in cash! (Sala-i-Martin and Subramanian, 2003)

Of course, the solution depends largely on which of the three effects is thought to be dominant. The macroeconomic problems associated with the Dutch disease can be handled by the government’s appropriate macroeconomic policy. The country’s exchange rate can be managed in such a way that the real exchange rate should not appreciate in the face of natural resource revenue inflows (Humphreys, Sachs and Stiglitz, 2007, Chapter 7). At the same time, the government can provide subsidies – and perhaps some protection to investments in non-natural resource tradable sector (Van der Ploeg, 2007). Sachs further suggests that natural resources revenue should be used primarily for investment in the programs and projects that would induce growth of non-natural resource sectors and would contribute to poverty reduction. For that purpose, a long-term development strategy of diversifying the economy away from heavy dependence on natural resources should be devised and guide the investment directions.

Formulating an effective “exit strategy”, however, is not easy. Moreover, the Dutch disease effect and the volatility effect of natural resources have been used in the past as “intellectual justifications” [for import-substitution industrialization strategy and] for trade barriers and exchange restrictions (Lederman and Maloney, 2007, Chapter 1). As the same authors say, “the period of inward-looking industrialization discouraged innovation and created a sector whose growth depended on artificial monopoly rents rather than on the quasi-rents arising from the technological adoption, and at the same time, it undermined natural resource sectors that had the potential for dynamic growth”. In other words, by following the policy advice pointing in the direction of import-substitution industrialization, we may just end up in replacing rent-generation in the natural resources sector by rent creation in the protected industrial sector.

Because of its political economy nature, the voracity effect is even more difficult to handle. Many oil and gas producing countries have established the fund, variously called a Stabilization Fund, a Revenue Equalization Fund, or a National Wealth Fund for saving natural resources revenue for future use. Since the fund receives the country’s excess revenue over and above that needed for the current period and invests it in earning assets overseas, it also works as a solution to the Dutch disease as well as the volatility problem. The records of many such stabilization funds are mixed, and the reasons for such hit-and miss performance can be easily understood. Keeping under control

political pressures to spend as much as possible of available revenue is a difficult task that requires the resolve of the political leadership at the highest level. Besides, a robust institutional framework and professional management would be required for making the fund a truly independent professional body free from political influences, so that its portfolio should not be mismanaged or misused for purposes other than savings for the country – which is politically no mean task.

Another solution proposed for dealing with the voracity effect is to increase transparency in the financial flows arising from natural resources, including the terms of concessions to multinational corporations for the exploration, development and exploitation rights, the records of payments to the national agency responsible for natural resource exploitation, and the uses to which natural resources revenue are put. Transparency will serve as a basis of the accountability of those involved in the process, although whether transparency will indeed lead to accountability depends very much on whether the media, civil society – and international stakeholders in the country's development – have strong “voices” to influence the government's behavior. Nevertheless, even an authoritarian government cannot totally ignore the public opinion, and transparent accounting of financial flows will be of great help in moderating the voracity effect.

Many empirical studies have shown that there is no natural resource curse in a country with good institutions and, in a wider sense, a good governance structure. Therefore, strengthening governance can, of course, moderate the voracity effect. However, the country's institutional development – including the development of a well-functioning governance structure – takes place apace with economic development in a kind of mutually reinforcing way. In other words, we have a thorny “endogeneity” issue, and we have to find specific key areas of institutions or governance to focus on if we are to find useful and operative policy solutions.

### 3. Indonesia's Experience: the Pertamina Crisis

#### *Background: Indonesian Economy in the Early 1970's*

In the beginning of the 1970s, Indonesia was a perfect candidate for the natural resource curse. Despite the “fabulous riches of the East Indies”, Indonesia was a poor country, and almost 60% of the population lived under the national poverty line (quoted by the World Bank's *The East Asian Miracle*, 1993). The economy has almost collapsed in the later years of the so-called Old Order Regime under President Sukarno and his government due largely to gross mismanagement. The new government, under the banner of the New Order implemented the stabilization policy and structural reforms, and the hyper-inflation of over 600% was brought under control and the economy restored its steady growth path, aided in no small part by the sweeping external debt rescheduling and inflows of fresh aid funds.

But the structure of the real economy reflected Indonesia's colonial vestiges. In the early years of the 1970's, 70% of its exports were primary commodities, such as oil, rubber, coffee, tin and palm oil (Statistical Appendix, Table 1-1). The government's revenue depended heavily on two big items, namely taxes on oil companies and import duties (Statistical Appendix, Table 2-2). Indonesia's oil industry goes back to 1885 when an oil well was discovered by a Dutch planter in Sumatra, and by the 1930's three big international oil companies had already been operating in Sumatra and Java. In fact it was this oil wealth that motivated the Japanese invasion into Indonesia at the outbreak of the Second World War to keep its war machine going in the face of the U.S. oil embargo imposed on Japan.

In spite of the Constitutional provision (Article 33) that natural riches of the country should be controlled by the State, these international oil companies had been “let alone” to continue their operations after Indonesia's independence. But in 1960, President Sukarno enacted Law No.44 that

provided that, in accordance with the constitutional provision, “the mining of oil and gas shall only be undertaken by the State” and that “mining undertakings of oil and gas shall be exclusively carried out by State Enterprises”. At that time, Indonesia’s state enterprises engaged in oil and gas businesses did not have the needed managerial and technical expertise for undertaking production from existing oil fields, not to speak of exploration and development. Therefore, the law had a further provision to take account of that, namely, that “ the Minister of Oil and Gas may appoint other parties as contractors for the state enterprises, if required for the execution of operations which cannot or cannot yet be executed by the state enterprises involved as holders of the authority to mine operations”<sup>3</sup> Thus the concept of “contracts of work” was born, and the three majors operating in Indonesia, namely, Royal Dutch Shell, Caltex and Standard Vacuum, relinquished their concessions and became contractors and sold their refineries and marketing and distribution facilities in Indonesia.

#### *Indonesia’s National Oil and Gas Company: the Rise of Pertamina*<sup>4</sup>

In the early years of President Suharto’s New Order Regime, Indonesia’s oil and gas industry underwent further changes. From three state enterprises engaged in oil and gas operations, a single national oil and gas company, called Pertamina, was created. General Ibnu Sutowo – a medical doctor-turned independence fighter, the head of the “army company”, Permina, one of the state oil enterprises, and the former oil and gas minister – was made President-Director of the newly-established Pertamina, which now held monopoly in exploration, development, production, processing, marketing and distribution on behalf of the state. General Sutowo devised a new concept of “production-sharing contracts” with international oil companies, in lieu of the contracts of work, and attracted non-major international oil companies – so-called “Independents” – to explore, develop and produce oil and gas in new fields. As a result, the production level increased from 150,000 barrels per day in the late 1950’s tenfold to the peak production of 1.5 million barrels per day in the 1980’s.

The first oil shock of 1973 brought about a big change in Indonesia’s oil and gas industry scene. Pertamina, as Indonesia’s oil and gas monopoly, became rich, but the country also became rich. Oil and gas exports came to account for 70% of Indonesia’s total exports in 1974, the full year in which the oil price jump was reflected, and their dominance further increased to over 80% after the second oil shock in 1979. Likewise, the government’s revenue came to depend on oil and gas revenue (oil companies ‘corporation tax plus other oil and gas revenue) to the extent of over 60% (Statistical Appendix, Table 2-2).

General Sutowo originally made himself famous for logistical talents in Indonesia’s army, and it was his entrepreneurial and managerial talents and his business acumen that brought him into the government as head of state enterprises and later the oil and gas minister. He had established a special relationship with President Suharto as his right-hand “can do” man who could be relied on for getting things done, for example, a number of development projects of President Suharto’s special interest. President Suharto entrusted in General Sutowo not only the development of Indonesia’s oil industry but also the use of oil revenue for Indonesia’s industrial development. He made investments in many areas outside the remit of Pertamina as Indonesia’s oil and gas monopoly, and often transgressing his authority as President Director of Pertamina and without approval of the Minister of Mining to whom he was obligated to report.

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<sup>3</sup> These legal provisions are cited by Bresnan, 1993, p.169. Bresnan, 1993 provides one of the best discussions of the “Pertamina crisis” among very few writings on it.

<sup>4</sup> The sections on the rise and fall of Pertamina are based largely on my own personal recollections as well as on Asanuma, 1997, Bresnan, 1993, McDonald, 1980, Prawiro, 1998 and Woo et al, 1994.

As oil revenue grew, so did his Pertamina Empire. Pertamina established international joint ventures for natural gas liquefaction, but this might still be regarded as part of its gas operations. But it also established a number of joint ventures for engineering and consulting services for oil and gas explorations, tanker operations and management, development and production of manufacturing input materials for the oil and gas sector, such as steel structures, pipes and so forth. It built and managed hotels, operated an air line and managed one of the best hospitals in Indonesia. Marketing of crude oil in Japan was also done by Pertamina's international joint venture company established in Japan. In other words, Pertamina tried to build up all the necessary infrastructure to attract international oil and gas companies and related engineering companies to come to Indonesia. Pertamina also made investments in areas far outside the oil and gas industry. Good examples include a large scale rice estate in Sumatra, the production of chemical products, the packaging of fertilizer and other chemicals, frozen food and dry foodstuff, insurance business, either in the form of Pertamina's subsidiary or international joint venture with international partners. There were in addition a number of highly ambitious, large-scale projects in the planning pipeline, including petro-chemical projects to manufacture Olefin and Aromatics, a major refining and transshipment center on the island of Batam near Singapore, etc.

Among many ventures and projects Pertamina undertook, there are three notorious ones which came to symbolize the nature of its investments. The first was the Krakatau Steel Mill project, which had first been initiated during the Sukarno period by Soviet aid but then had been abandoned to rust. Pertamina tried to rehabilitate this at great costs. This project, as planned by Pertamina, turned out to be totally uneconomic. The second was the so-called floating fertilizer project. There are many natural gas deposits scattered throughout the Indonesian archipelago that were too small to warrant the building of pipelines, LNG or LPG plants to tap them. The idea of the project was to put a fertilizer plant aboard a ship and to go where these small gas deposits were and tap them as long as they lasted. After the deposits had been exhausted, the ship would be moved to the next site. Having this sort of a movable fertilizer plant would have theoretically made it possible to exploit these small gas deposits while saving investment costs. Pertamina purchased for this project a second hand ice-breaker from Germany to be deployed as a "gypsy ship" in tropical waters! Later it turned out that there was no proven safe technology for fertilizer production aboard a ship, and the project had to be aborted at great costs to Indonesia.

The third was the most notorious of all and the one that had eventually brought General Sutowo's ambition of empire building to an end. Pertamina was engaged in the shipping business for oil distribution and in the process built up a large fleet of tankers, of which total tonnage amounted to almost 3 million tons exceeding that of Indonesia's navy. In the early 1970's, Pertamina, or rather General Sutowo, appears to have entered into a series of tanker deals in the form of hire purchase agreements, with the business interests controlled by a certain Bruce Rappaport of InterMaritime Bank of Switzerland in the anticipation – which turned out to be wrong – of rising charter rates in the international shipping markets. These deals were financed by short-term borrowings by Pertamina in the Singapore banking markets, and in the end these short-term loans could not be rolled over. The difficulty of Pertamina's finance thus showed up as a severe liquidity problem.

At one point, Pertamina became the parallel development agency of the country by virtue of its investments in industry as well as in agriculture. The government was making efforts in stabilizing the economy and it had to make developmental efforts within the framework of macroeconomic prudence. Furthermore, it had just gone through a sweeping debt rescheduling with donor governments, and was not in a position to undertake a "big push" industrialization program. After the first oil shock, Pertamina was regarded as a better credit in the international banking market, and it was able to borrow internationally and to invest in many industrial projects and ventures. There were two different "developmental" visions in Indonesia, the one held by policymakers in the

government, or more accurately the “Technocrats”, in the planning agency, the ministry of finance and the central bank. It is interesting to note that their guiding policy principles looked almost like the latter day “Washington Consensus” *minus* the privatization of state-owned enterprises. In a sharp contrast, General Sutowo’s vision was based on a near-blind faith in technology. He seemed to have thought that the building up of many “high-tech” projects could jump start Indonesia’s industrialization. Bothering about the comparative advantages and the rates of returns on investments were the small thinking of bean counters, which would deter the development of industries in Indonesia and which would consign Indonesia to the status of a low income country with a colonial economy structure for a long time.

A state within a state was thus created, and there did not exist any checks and balances on Pertamina’s expansion. The public opinion led by the media and student activists raised concerns about this, and President Suharto made a concession to them by setting up the Committee of Four, an independent Presidential commission of enquiry, to look into Pertamina’s conduct and in particular into the allegations of corruption. The Commission returned a report highly critical of Pertamina’s management, which contravened on many occasions the regulations laid down by the Minister of Mining to whom Pertamina was to report and who was supposed to supervise its management. Specifically, Pertamina was found to have appropriated a large part of its revenue for its own purposes and not to have paid taxes due. The end result of the enquiry was Law No. 8 of 1971 which provided for the establishment of a Board of Directors which would supervise Pertamina’s management. The newly established Board included the Minister of Mining as Chairman and the Ministers of National Planning and Finance as members. Clearly this was an attempt to create a channel of influences of the technocratic policymakers of the government over General Sutowo’s empire, but General Sutowo continued to ignore the Board, and he did so with impunity because of his special relationship with President Suharto.

#### *The Fall of Pertamina*

In the meantime, as Pertamina went on extending its activities from oil and gas related businesses to industrial and agricultural projects and even to welfare-oriented and semi-political programs, its debt, mostly owed to international suppliers and banks, snowballed. Pertamina was now the largest corporation in East Asia outside Japan, and its credit standing in international financial markets was far better than the Government of Indonesia. Besides, Pertamina took advantage of the fact that the Euro-currency markets were awash with the recycled petro-dollars and that Euro-banks were eager lenders. Pertamina in those days did not have the properly audited financial statements, and, in fact, not even unaudited ones that might have shed light on its activities and its liabilities. In lending to Pertamina on faith and without proper due diligence, international banks did not work properly as market agents for efficient resource allocation at all. But these were the days of almost “Wild West”-type Euro-banking, and many international banks located in their outposts in Singapore or London scrambled to lend. Pertamina itself was the most imprudent of all, and its management had lost control of its own finance. To cover extensive activities in and outside the oil and gas business, Pertamina established six accounting departments covering different areas but there was no overall controller for the group. As a result, even General Sutowo and his top management did not know the financial state in which Pertamina stood.

The Technocrats – the economic managers of the economy – were alarmed, and they looked to IMF for help. IMF was also alarmed at the developments of the situation, and Indonesia and IMF went into a stand-by agreement, although IMF’ financial assistance was not anticipated to be needed at that point. The stand-by agreement provided, among other things, a ceiling on external borrowing by the government and its state-owned enterprises. For technical reasons, a standard IMF stand-by agreement limited external borrowings of medium-term maturity, i.e. maturity longer than one year but less than 15 years. Short-term borrowings were thought to be needed for the country’s trading

activities, and a ceiling on its volume was thought to be restrictive and should not be imposed. Credits of longer maturity such as 15 years or over were most likely related to development projects, such as World Bank loans, and it would not help the country's development if their volume were limited. To put the IMF agreement into effect, a presidential decree was subsequently issued proving that all state-owned enterprises should seek the approval of the Minister of Finance for medium-term finance from external sources.

However, the technocrats' efforts to get control of Pertamina, in particular, its borrowings from international sources, did not yield the hoped-for results. Pertamina and international banks found loopholes in the IMF agreement, and used them extensively. Pertamina obtained credits with maturity of 15 years or over, which, however, were structured in such a way that the portion maturing beyond the fifteen year maturity was very small and the bulk would mature well before that. Technically these loans were long-term loans. Pertamina borrowed short-term loans for long-gestation projects, which it rolled-over at maturity.

In this way, Pertamina went on its financial imprudence until late 1974, when the sentiment in international financial markets abruptly changed. The first oil chock brought about a slowdown in the world economy, and oil demand became subdued. In the midst of it, Franklin National Bank, not an insignificant American bank bordering on the "too-big-to-fail" divide, failed, quickly followed by the failure of Herstatt Bank in Germany. Now, Pertamina found itself in the situation where it had to roll over a large volume of its short-term loans, while its maturity had been increasingly shortened. In February and March 1975, Pertamina, in a liquidity squeeze, missed repayments of the order of tens of million dollars due to the Republic National bank of Dallas and the Toronto Dominion Bank. All these bank loans taken out by Pertamina were linked to each other by a standard "cross-default clause" in their loan agreements, and, as these two loans were declared in default, all others also became in default. And thus General Sutowo's Pertamina, which boasted of revenue half as large as the country's budget, collapsed. It appeared as if Indonesia was inflicted with the natural resource curse. Together with it, the parallel development agency and the rival development ideology championed by General Sutowo were gone.

### *The Aftermath*

Ever since coming to power, President Suharto put a strong, strategic emphasis on the stabilization and development of the economy. Learning from the negative lessons of the economic mismanagement and its consequences in the Sukarno period, he made the betterment of Indonesian farmers' lives one of the top priorities of his political agenda. The task of formulating a strategy and policy for achieving this objective fell on a group of university economists-turned policymakers who had earlier established a good relationship with President Suharto. His early cabinets included this group, headed by Professor Wijojo Nitisastro and supported by Profs. Ali Wardhana, Mohamed Sadli, Emil Salim, and Subroto, entrusted with all the important macroeconomic portfolios such as overall economic policy coordination and national development planning, finance, mining and energy, and so forth. This group, called the "Technocrats" or the "Economic Team", was credited for restoring the country's economic stability and for substantial aid inflows from the international development community such as IMF, the World Bank, ADB, US, Japan and other European donors.

President Suharto looked to the Technocrats for managing the crisis brought on by Pertamina, and, as the crisis unfolded, General Sutowo was relieved of the President Director of Pertamina, although his responsibility was pursued no further than his dismissal. It was then somewhat surprising that the Technocrats decided to hire a group of international investment bankers as advisors rather than asking IMF or the World Bank. Presumably, they might have thought that, since the problem was related to Pertamina's debt to international financial institutions and

suppliers, it would be better not to involve multilateral or bilateral government agencies. Negotiations and financing might be made through the private sector, which might be less complicated than if multilateral and/or governmental organizations were involved.

Pertamina was not only imprudent in its debt management, but also extremely negligent so much so that there was no adequate record of its debt obligations. It became clear soon that, in order to tackle the problem, the government would first have to compile Pertamina's debt data, painstakingly, contract by contract, and check them against lenders' records. As accounting work progressed, the overall picture of Pertamina's debt emerged: its total external liabilities amounted to US\$10.5 billion, consisting of bank loans, suppliers' credits, trade credits and other purchase contract obligations. This was an enormously large amount, considering that Indonesia's total exports in 1975 were just over US\$7 billion (before payments of costs and production shares to oil companies).

The Technocrats then formulated and implemented a three-pronged strategy. First, they decided to have Bank Indonesia, its central bank, to assume Pertamina's debt and to act as vehicle for refinancing it. Of course, Pertamina's debt was not sovereign debt, and it was possible to let Pertamina be bankrupt and liquidated. But then the government itself would lose any credit standing it had internationally and would not be able to borrow in international markets for a long time to come. The Technocrats therefore decided on debt assumption, in spite of the danger of having on its hands a balance of payments crisis of its own. In the event, Indonesia's refinancing operations in the Euro-bank market was successful, and in fact they had successfully established the government's credit internationally in the process.

The second part of the strategy dealt with suppliers' credits without any official guarantees, and other trade credits. The Technocrats had the underlying contracts thoroughly scrutinized by lawyers for any irregularities or corruptive practices, and renegotiated purchase terms as well as payment terms with suppliers. As a result, in most cases, the face amount of purchase was reduced and the payments obligations were spread over a number of years.

The third part of the prong was also important. In order to minimize any additional debt undertaking to arise from the on-going investment projects and purchase contracts in progress, the government team undertook a comprehensive review of these projects, and cancelled those deemed not economically viable at the time (e.g. Pertamina's petrochemical projects such as the Olefin and Aromatics projects). Those others thought to be of lesser priority were postponed (e.g. the former floating fertilizer project, which became the ASEAN Fertilizer project later), and yet those others judged having high strategic value to the economy were kept and implemented (e.g. two LNG production facilities for exports).

The refinancing of bank debt and renegotiation of suppliers' and trade credits were successful, and Indonesia narrowly escaped a balance-of-payments and debt crisis. There was another important outcome from the successful handling of the crisis. The Technocrats were successful also in establishing a well-articulated system of external debt management. The triumvirate of the planning agency, the Ministry of Finance, and the central bank would now be primarily responsible for external borrowing and management. While the planning agency would have a reviewing and approving responsibility for ODA finance, the Ministry of Finance would be responsible for export and suppliers' credits, and the central bank for all borrowings from international financial markets. All borrowings by the state owned enterprises would be subject to the approval of the Minister of Finance. Also the precedent of the project "reprogramming" exercise undertaken of Pertamina's investment projects, albeit at cost (i.e. cancellation fees, penalty payments and sunk cost), had the effect of introducing the discipline of rigorous project selection based on financial and economic

criteria into the state owned enterprises.

Of course, the most important outcome of the Pertamina crisis was the fact that the government has secured the effective control of the country's oil and gas revenue and of the management of its national oil and gas monopoly. The Technocrats had their own strategy for the country's development, and they began implementing that strategy in earnest now, once the Pertamina crisis was over, now that there was no rival development strategy using up windfall gains from the oil shocks. The green revolution was largely over in Java, Bali and parts of Sumatra. The Technocrats now undertook to reduce the country's dependence on oil and gas by promoting foreign and domestic investments in manufacturing industries for domestic markets as well as for exports. In the early 1980's through the early 1990's, a series of reforms were undertaken, first in taxation, to reduce dependence on oil and gas revenue and on import duties, and then by deregulating the investment and trade regime, to attract investment and reduce trade protection. Finally, a series of financial sector reforms to go with it. The exchange rate of Rupiah, Indonesia's currency, had in the meantime been kept competitive, first by a devaluation of 38% in 1983 as an anticipatory policy measure to cope with the slowdown of the world economy after the second oil shock, and secondly by a devaluation of 45% and by the change in the foreign exchange rate system from that of a crawling but near fixed one to a managed but more flexible floating system. The Technocrats' strategy of reducing dependence on oil and gas for export and government revenue and diversifying the economy yielded the expected results already by the end of 1980's, and, together with the decline of oil production from the peak of 1.5 million barrels per day to less than three quarters of a million and the increased domestic demand, the oil and gas sector does not have the kind of economic weight in the economy as it had in the 1970' and 1980's.<sup>5</sup>

#### 4. Conclusion: Lessons from the Pertamina Episode

What lessons should we derive from the Pertamina Episode? Some aspects of the episode bear on the peculiarities of Indonesia's specific political and economic circumstances at the time, and they may not give us any lessons of universal relevance. However, there are certain lessons of general nature that can inform the debates on the natural resource curse, although they depend very much on the perspective and subjective judgments of the one who draws such lessons. What follows then are my lessons.

First, this Indonesian episode shows that the natural resource curse is not certainly a destiny and can be turned into a blessing. It is a pitfall a developing country may fall in if its policy management framework is not robust enough. The under-development of such a framework may be also called the absence of good governance or the institutional weakness, although such general concepts are not much of a help to policymakers who must think of policy or institutional reforms that could be worked on. Pertamina certainly wasted valuable resources of the country on uneconomic and inefficient investments based on an unworkable industrialization strategy and by corruption just when these resources were greatly needed for the economic recovery and development. The Pertamina crisis was perhaps a blessing in disguise in that all that had been brought to an end, and a proto-typical natural resource curse was averted by the Technocrats who regained the control of the oil and gas resources.

Second, the Indonesian episode appears to point to a number of "necessary conditions" for turning the curse into a blessing. One of them may be the effectively working system of public financial management. By a system of public financial management, I mean a good public sector budgeting and accounting system that would control the natural resource revenue flows into the government's

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<sup>5</sup> For more on these reforms, see Woo, 1994 and Prawiro, 1998.

treasury and control also their uses. And here I am not talking about sophisticated budgeting and accounting systems such as performance budgeting, outcome-based expenditure allocations and so forth. All the decisions made in the public sector are basically and by nature political. But politicians are known for their short-sightedness as well as for no scruples and avarice and worse, and this is where technocracy within the government bureaucracy or some institutional setups is needed to inform and guide policy decisions of politicians. The budgeting and accounting is the central core of public financial management and therefore also of the governance structure of the government. Of course such system should also cover the state-owned enterprises and other governmental institutions so that the whole of the consolidated public sector could be covered. It is not too much of an exaggeration to say that the moment the Technocrats succeeded in securing the control of the oil and gas revenue flows, Indonesia's natural resource curse had turned into a blessing.

Third, the episode seems to underscore the importance of the development strategy and the medium- and long-term policy planning for using the blessing effectively. Judgments on the sustainability of policies and feasibility of investment plans must be informed and guided by the results of such planning. After the Pertamina crisis was over, it took more than a decade for the Technocrats to carry out a series of reforms, fiscal, trade and investment, currency and financial, to diversify the economy away from the country's once heavy dependence on natural resource revenue. In the meantime, the strategy they had earlier formulated served well as guides for allocation and expenditure decisions of such resources.

Fourth, the legal framework for the governance structure for controlling revenue flows of natural resources exploitation was greatly helpful for Indonesia to have successfully averted the curse. Indonesia had the Constitutional provision and the Law establishing Pertamina, both of which provided the basis of the state monopoly in oil and gas and of the modus operandi of international oil companies, i.e. as contractors under production sharing agreements. Moreover, Law No. 8 of 1971 imposed the management board as supervisory body. Given the political situation in which Indonesia found itself, these laws, however, were in fact overridden by the politically powerful. In the end it was the political leadership that was a decisive factor in settling the struggle for control of Pertamina between General Sutowo and the Technocrats. Indonesia's political leadership, President Suharto, had built the legitimacy to govern the country on his performance in political stability and economic development, and his decision to entrust the control of Pertamina – with the responsibility of crisis management – in the hands of the Technocrats followed his desire to avoid a major performance failure that could have impaired his ability to govern.

## STATISTICAL APPENDIX

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