

Growing into trouble: Indonesia after 1966*

Jonathan Temple

Department of Economics, University of Bristol,
8 Woodland Road, Bristol BS8 1TN, UK and CEPR

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This paper analyzes the remarkable growth experience of Indonesia since 1966. Over a thirty year period, GDP per capita rose more than fourfold, despite unfavourable initial conditions, some weak institutions, and flawed microeconomic policies. The paper attributes this strong performance to a mutually reinforcing combination of political stability, competent macroeconomic policy, and some important instances of good fortune. It explores the origins of good policy and analyzes three of the main external shocks. The paper also argues that rapid growth interacted with weak institutions in a way that contributed to the severity of the crisis of 1997-98.

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1. Introduction

Few countries have experienced reversals in economic fortune and reputation as dramatic as those of Indonesia. In the early 1960s, one influential commentator described the country as a “chronic dropout” and “the number one failure among the major underdeveloped countries”.¹ By 1996, the picture looked very different: under Suharto, the country had grown rapidly for most of the previous thirty years, living standards had significantly improved, and the incidence of poverty had been sharply reduced. Although its record was by no means one of consistent success, Indonesia was increasingly regarded as yet another East Asian example of sound policy and strong growth.

Then in 1997-98 there was another sharp reversal in its fortunes. Of all the countries affected by the Asian financial crisis, Indonesia has fared much the worst. 1998 saw a fall in GDP of 13%. Political instability and institutional weaknesses, combined with internal tensions, have led to a swift reassessment of the country's prospects, and increasing gloom. As tensions increase, some are even predicting that the country will not survive in its current form.

There are many reasons to study this turbulent history. First and most obviously, Indonesia is home to more than 200 million people. Secondly, its record is of a kind that may offer important wider lessons. In sharp contrast to the genuine development “dropouts” of the last forty years, Indonesia's long period of success might tell us something about a set of sufficient conditions for fast growth. Yet there is also enough variation over time to offer some insight into the factors which initiate growth, and those that could bring it to an end.

In exploring these issues, this chapter will take a somewhat idiosyncratic approach. It provides a brief overview of Indonesian economic development and the recent crisis, but one that is far from comprehensive.² Several excellent accounts are already available, notably Bevan et al. (1999) and Hill (2000a). Rather than summarize their work, one aim of this chapter is to see where analysis of Indonesia's record might be informed by recent empirical and theoretical work on economic growth. A second aim is to contribute to our wider understanding of the growth process.

In thinking about wider implications, the case of Indonesia raises a number of interesting puzzles. The central open question is easily identified. How did Indonesia grow so quickly for so long, despite unfavorable initial conditions, some weak institutions, and flawed microeconomic policies? The answer lies in a number of mutually reinforcing factors, but especially political stability, unusually competent macroeconomic policy, and some important instances of good fortune.

One message of this chapter, and that of earlier observers like Bevan et al. (1999), is that Indonesia's achievements have been precarious ones. The risk of failure was probably never far away, and Indonesia's rapid growth was partly sustained by

¹ These quotations are from Benjamin Higgins, as cited in Hill (2000a). Much of the background material in this paper has been drawn from Hill's excellent book.

² Among the more important omissions are the regional dimension, the record on poverty and equity, and management of the environment. All these topics are discussed by Hill (2000a).

favorable external shocks. The chapter emphasizes and analyzes three. As a predominantly agricultural economy in the 1960s, the country stood much to gain from the introduction of new crop varieties and other agricultural innovations, often better suited to Indonesia than developing countries elsewhere. Secondly, as an oil exporter, Indonesia benefited greatly from the two oil shocks of the 1970s. Finally, and probably of lesser importance, Indonesia's geographic neighbors and trade partners are among the world's fastest growing countries. The emerging literature on international economic geography suggests that this should have hastened the process of industrialization.

These gifts were not returned unopened, and Indonesia made much of its new opportunities. This makes it essential to understand the origins of the superior policy outcomes. Why did Suharto promote economic development rather than simply ransacking the economy? Why was macroeconomic policy-making more adept than elsewhere? Why did the regime give a higher priority to the agricultural sector than other developing country governments? It has become a truism to say that the origins of economic success or failure can be traced to political factors, but the case of Indonesia has much to offer in thinking about these issues.

Although growth was rapid, a dynamic manufacturing sector was slow to emerge, and Indonesia is often grouped with Malaysia and Thailand as one of the southeast Asian 'latecomers' to industrial transformation. With this in mind, the chapter will also investigate why Indonesia has lagged behind other East Asian countries in developing its manufacturing sector. Was this due to the flawed microeconomic policies of the Suharto era, and the initial lack of impetus behind reform? Or should it be related to other factors, such as unfavorable initial conditions and the abundance of natural resources?

A final question is more speculative, gives the chapter its title, and relates to the recent crisis. The events of 1997-98 have led to a sweeping reassessment of the underlying health of the Indonesian economy and its institutions, on the part of investors and economists alike. The chapter will not provide a complete account, but it will investigate whether rapid growth laid some of the foundations for the severity of the crisis. Olson (1963) argued that rapid growth could be a profoundly destabilizing force. The Indonesian case does not fit his arguments exactly, but perhaps offers some other ways in which a country could be said to "grow into trouble".

The chapter has the following structure. Section 2 gives a brief overview of Indonesian economic development, and particularly the New Order period from 1966 onwards. Section 3 will examine the nature and political economy of policy under Suharto, before discussing the complementary role of good luck. Section 4 considers the role of agriculture and structural change in Indonesia's growth. Sections 5 and 6 explore the effects of the 1970s oil boom and the regional growth take-off respectively. Section 7 draws on this discussion in order to analyze the microeconomic reforms of the 1980s. Finally, section 8 asks whether Indonesia grew into trouble, before section 9 concludes.

2. Indonesia's growth: an overview

In the mid-1960s, Indonesia was among the poorest economies in the world. Some evidence for this can be seen in Table 1. Its GDP per capita compared on a PPP basis was less than 60% of that in other East Asian countries, lower than for many sub-Saharan African countries, and much lower than in Latin America.

Indonesia was then led by Sukarno, a charismatic figure who had been central in the battles for independence from the Dutch. Throughout the 1950s he had been faced with difficult circumstances in attempting to build a stable government in the aftermath of colonial rule. Political instability and the lack of a coherent economic policy, together with a large adverse shock to the terms of trade, led to economic collapse in the early 1960s. By this time the attempts at expansion and central planning had failed, the government budget deficit escalated ever higher, and inflation reached almost 600% in 1965. By December of that year, the country could no longer meet its debt service obligations, and its economic future seemed bleak.

Table 1 about here

As Sukarno's popular support ebbed away, the military intervened. General Suharto assumed formal executive authority in March 1966, instituting the New Order and a grip on power that would last more than thirty years. This military regime was a repressive and at times murderous one, but here I concentrate on its economic record. The extent of the transformation in performance can be seen in Figure 1, which shows growth in GDP per capita between 1961 and the crisis years of 1997-98. In most years the economy grew rapidly, and over the whole period, GDP per capita rose more than fourfold. The incidence of poverty declined, and there has been undisputed improvement in other welfare indicators such as infant mortality rates (Booth 2000).

Figure 1 about here

The extent of the turnaround can be seen not only in the growth statistics, but also those for investment and structural change. Gross domestic investment as a proportion of GDP climbed throughout the period, rising particularly quickly in the late 1960s, as the quality of economic management improved (Figure 2). Structural change has seen agriculture's share of employment fall from about 75% to nearer 50%, still high by the standards of East Asia, but a striking development nevertheless. As one might expect, the structural change has been accompanied by rapid urbanization. In 1965, 16% of the population lived in urban areas on one definition. By 1996, this figure was around 40%.

Figure 2 about here

Another important aspect of Indonesia's development has been rising educational attainment, from inauspicious beginnings. In 1960, literacy rates and primary enrollment compared quite favorably with countries at a similar level of development, but were lower than elsewhere in East Asia (Rodrik 1996, Table 4). Since then, average years of schooling in the population have steadily increased for both men and women, from 1.5 years to five years. The greater extent of schooling is reflected in a rising literacy rate. By 1997, only 15% of the population were classified as illiterate, compared with more than 40% in 1970.

So far, this overview suggests that Indonesia has followed a course familiar from other East Asian countries, namely strong growth driven by capital accumulation and rising educational attainment. As for other countries in the region, there is some debate about the relative importance of growth in total factor productivity (TFP). Although measured TFP growth is often found to have been low for Indonesia, the counterfactual simulations of Robertson (2000) suggest that it played a key role.

It is also interesting to look at ways in which the experience of Indonesia differs from other countries in the region, and especially South Korea and Taiwan. Some of the most interesting differences are found in the initial conditions that faced the respective countries. Indeed, the transformation under Suharto looks all the more impressive when one considers that some of Indonesia's initial conditions did not augur well. In the mid-1960s, the country was a predominantly rural, agricultural society, in which life expectancy was lower than elsewhere in East Asia. As noted previously, educational provision lagged behind some of the other countries in the region (see Table 2, and Booth 1999).

Table 2 about here

The empirical growth literature has drawn attention to several other aspects of initial conditions. In a widely-cited paper, Easterly and Levine (1997) argued that high levels of ethnolinguistic diversity may have adverse effects on growth. Indonesia's extent of diversity is high compared to that of South Korea and Taiwan (see Table 2) and ethnic tensions have been a recurring theme of recent Indonesian history. This has included discontent with the prominent role of ethnic Chinese in business, particularly in boom periods such as the mid-1970s and early 1990s.

Some recent work on growth has also emphasized the extent of socioeconomic development. Arguably the most useful summary measure is that compiled by Adelman and Morris (1967), and subsequently highlighted by Rodrik (1995) and Temple and Johnson (1998). The measure provides a snapshot of social arrangements for the early 1960s, derived from a factor analysis of a number of components, based on survey evidence and interviews with country experts.

As Table 2 shows, again Indonesia compares somewhat unfavorably with East Asian neighbors. The reasons for Indonesia's low score on the index, relative to other East Asian countries, can be inferred from the individual components listed in Adelman and Morris (1967). The low score is driven by the extent of dualism; the limited role for an indigenous middle class; low social mobility; a low adult literacy rate; the limited spread of mass communications; and a lack of 'modernization of outlook'.³ We can use the results in Temple and Johnson (1998) to illustrate the potential consequences. Conditional on initial income, the difference between Indonesia's Adelman-Morris index (-0.40) and Thailand's (0.50) implies an annual growth rate 1.6 percentage points higher in Thailand, over twenty-five years.

Five more features of Indonesia are central to an understanding of its development, and important to discussion later in the chapter. First, Indonesia is unusual among

³ Some of these variables are clearly endogenous to the level of income per capita, and it should therefore be acknowledged that Indonesia's low score for the Adelman-Morris index is partly explained by Indonesia's economic underdevelopment at the time of the study.

East Asian countries in its relative abundance of natural resources. The most obvious and important manifestation of this is the country's role as an oil exporter, sometimes accounting for around 7% of OPEC output (Warr 1986). The fluctuations in oil prices of the 1970s and 1980s, including the huge windfall gains associated with the 1973 oil shock, faced Indonesia with particular challenges.

A second and related feature of the country's development is that a large industrial sector has been much slower to emerge than in South Korea and Taiwan. As noted earlier, even by the mid-1990s, agriculture still accounted for nearly half of total employment. The structure of exports is also revealing. In the early 1980s, manufactured goods were less than 5% of total merchandise exports, in sharp contrast to the early specialization in manufacturing of the tiger economies further north.

A third difference lies in the economic role of the state. One legacy of the Sukarno era and its nationalization programs, never quite shaken off, has been a major role for state enterprise, and ambivalence towards capitalism. It was only in the 1980s that Indonesia began to see the rise of a large independent capitalist class, the "rise of capital" identified by Robison (1986). Although ownership definitions are often blurred, Hill (2000a) estimates that even by the late 1980s government entities accounted for about 30% of GDP, and almost 40% of non-agricultural GDP.

Fourth, Indonesia has been unusual in the concentration of political power in its President. A key feature of the Suharto regime was that, despite the nominal presence of an electoral process, organized interest groups, a legislature and a judiciary, these institutions were all arranged in such a way that Suharto effectively wielded something very close to absolute power (MacIntyre 1999a).

The fifth and final aspect of Indonesia under Suharto is perhaps the best known: the unusually pervasive extent of corruption, associated with state involvement in the economy and the centralization of political power. To gauge the extent of the problem, the indices reported in Wei (2000) allow formal comparisons with other countries. Those indices suggest that Indonesia under Suharto was rather more corrupt than the median countries of sub-Saharan Africa and Latin America, more so than South Korea and Taiwan, but roughly on a par with Thailand and the Philippines.

3. The origins of good policy

Perhaps the most important lesson to be drawn from the Indonesian record is also the most obvious, namely the critical role of macroeconomic stability. It is surely no coincidence that the rapid growth achieved under Suharto coincided with relatively tight control of inflation and budget deficits, and a generally cautious approach to macroeconomic management.

The contrast with the previous regime and the benefits of the new approach became clear early on, nowhere more so than in the response to inflation. In the aftermath of Sukarno's rule, inflation peaked at an annual rate of almost 1500% in mid-1966. In what is sometimes regarded as one of the most successful instances of inflation control in the twentieth century, the new government ensured that inflation was stabilized and brought down to a rate of 15% by 1969, without any sustained contraction in output.

The introduction of greater stability was not a fleeting achievement. Although the economy sometimes ran into difficulties, notably with the fading of the second oil boom in the early 1980s, the Suharto regime often responded quickly and effectively when needed. For the most part, macroeconomic stability was maintained. As in other East Asian countries, it appears to have played a key role in enabling Indonesia's rapid growth.

For the broader picture, it is worth quoting Hill (2000a, p. 9-10) at length:

Much of the Indonesian record since 1966 is a confirmation of the principles of orthodoxy...the recipe of success is no great secret. A new, orthodox and pragmatic regime of economic management after 1966 signalled a decisive change in direction. The government provided a stable economic and political environment, property rights were respected, Indonesia re-entered the international community, prices - especially the exchange rate - reflected conditions of demand and supply, and the provision of public goods such as physical and social infrastructure began to increase substantially.

Hill's emphasis on the contribution of orthodox policies is unlikely to be controversial. The remaining challenge is to identify the reasons why these policies were chosen, and why the economic outcomes were so much better than elsewhere.

The simplest answer is to argue that the Suharto government was an example of a 'strong state' insulated from democratic pressures and organized interests, in a way that allowed tough and decisive action when necessary. Yet we know from the records of autocracies elsewhere that economic success is by no means a foregone conclusion, and that leaders of such regimes have often chosen to ransack their economies rather than promote development. A satisfactory explanation of Indonesia's growth ultimately needs to explain why Suharto appears to have sought rapid growth as well as personal gain.

Suharto's choices look all the more remarkable given the context in which he came to power. Political stability appeared unlikely, as the experience under Sukarno had shown. Indonesia had all four of the characteristics that Robinson (2000) identifies as risk factors for predatory behavior by the state, namely large benefits to holding power, an abundance of natural resources, low endowments of factors complementary to public investment, and intrinsic instability.

Why did Indonesia take a different course? Muller (1998) draws attention to the role of the army, which saw itself as acting in the interests of the country as a whole. The military government not only ensured political stability, but also redefined the country's goals, with economic growth seen as a priority, and foreign policy redirected towards economic needs. Economic policy was increasingly driven by pragmatism rather than ideology. As Muller acknowledges, however, it is hard to explain why the New Order gave rise to better economic outcomes than military rule in other countries, although it is possible that the drive for economic development was given greater urgency by the threat of a communist uprising.

Another explanation would be to follow Overland et al. (2000) in arguing that a dictator's hold on power is likely to depend on the state of the economy - more specifically, in their model, on the capital stock. For example, other things equal, a dictator in an economy with a larger capital stock will find it easier to buy off potential opponents. This means that rapid growth is potentially in the interests of a dictator or elite group: not only does it provide the regime with a degree of legitimacy, but it may also help to secure its grip on power through less innocent means. Conversely, if the regime presides over an economy that begins with a low capital stock, political stability will also be low. This encourages the regime to ransack the economy, leading to a vicious circle of corruption, poor economic performance and increasing political instability.

The overall story does not fit Indonesia exactly, since the country was relatively poor and unstable when Suharto took control, suggesting that a vicious circle was the most likely outcome. Yet Suharto quickly established an unusually secure grip on power, and may have calculated that economic growth would help to maintain it. Later in the paper, I will discuss the ways in which Suharto was able to use his control of a rapidly growing economy to eliminate political competition, consistent with some of the ideas of Overland et al. (2000).

Macroeconomic stability and growth may have contributed to political stability, but it is also possible to point to reinforcing effects in the other direction. For those developing countries where political stability is absent, the risk of losing power may be an important reason that governments sometimes act myopically and choose bad policies. In contrast, Suharto's secure grip on power enabled a long-term view and an unusual degree of continuity in policy-making.

This by itself would not guarantee success, but in seeking growth, Suharto's early decisions often turned out well. On taking power, he appointed a team of economic advisers drawn from the Faculty of Economics of the University of Indonesia. Three of the five academics appointed were fairly recent Berkeley PhDs, and they became known as the "Berkeley Mafia" or "technocrats", broadly in favor of markets and foreign capital. Their influence, and that of later advisers, appears to have been a major factor behind the generally high quality of macroeconomic policy for more than two decades.

The early influence of the Berkeley Mafia is perhaps not surprising, because the state of the economy in the mid-1960s was such that the new government had little choice but to accept the prescriptions of the IMF and World Bank. Perhaps more of a puzzle is why subsequent macroeconomic policies followed orthodoxy so closely. In this respect, discussions of Indonesian economic policy often draw attention to the open capital account. Unusually, the account was almost completely open as early as 1970, and this is said to have provided useful discipline for economic policy, in particular guarding against exchange rate overvaluation.⁴ This is an important claim, and one area of Indonesia's macroeconomic policies that would repay detailed study.

In discussing economic policy, it is also worth noting that Indonesia did not get everything right, in the sense of adhering to textbook prescriptions. The technocrats

⁴ See for example Bevan et al. (1999, p. 421) and Hill (2000a).

appear to have had little influence on microeconomic policy, and could not halt a shift towards import substitution, and ever more widespread state intervention, in the 1970s. This approach was eventually reversed in the mid-1980s, but it should be emphasized that Indonesia's record has not been a uniformly straightforward application of orthodoxy.

Given the failings of microeconomic policy and the unfavorable initial conditions, a common reading of Indonesia's success is that it also owed much to good fortune. This idea has especial interest in the light of Easterly et al. (1993). They pointed out that relatively few countries have achieved sustained growth, suggesting that the differences between 'economic disasters' and 'economic miracles' may be partly a matter of luck. This argument is similar to the idea that Rabin (2000) has called 'fictitious variation', namely the common tendency for observers of relative performance to exaggerate the role played by fundamentals, and underestimate the role of chance. In the growth context, this view acquired greater resonance with the Asian crisis of 1997, a dramatic interruption to growth of the kind common elsewhere in the world, but previously rare in East Asia.

In the case of Indonesia, the role of historical accident can be seen in the fluctuating influence of the technocrats. Memories of the high inflation of the mid-1960s, and its highly successful stabilization, seem to have strengthened the hand of those committed to orthodox macroeconomic policies, as later did the scale of the financial problems associated with the giant state-owned energy company Pertamina in the mid-1970s.⁵

To develop the 'good luck' story further requires one to identify favorable external shocks, or other events that can plausibly be attributed to historical accident. The next sections of the chapter will analyze three important and favorable shocks which have aided Indonesia's growth at different times, and complemented good macroeconomic policy. These shocks, in roughly the order that they occurred, are the Green Revolution in agriculture, the 1970s oil boom, and the regional growth take-off, all of which presented new opportunities and challenges.

4. The role of agriculture

This section examines the contribution made to Indonesia's economic development by the agricultural sector. There is general agreement that technical progress in agriculture played a key role in the growth of the 1970s, and also in poverty reduction. Yet this was not simply an exogenous productivity shock, because in contrast with many developing country governments elsewhere, the Suharto regime did much to make agriculture a priority, raising some interesting political economy questions.

As in other poor countries, Indonesia's agricultural sector accounted for around three-quarters of total employment in the early 1960s. This implies that, in the early phases of development, growth in labor productivity will be strongly related to agricultural

⁵ Observers of Indonesia agree that the Pertamina scandal was one of the most important and remarkable events of the 1970s. After the company failed to meet its debt obligations in 1975, a government report revealed that Pertamina had accumulated external debt equivalent to almost 30% of Indonesian GDP. Sjahrir and Brown (1992) describe the company president's approach to financial management as "unorthodox".

performance. One way to see this is to note that aggregate labor productivity can be written as a weighted average of labor productivity in each sector, where the weights are the shares of each sector in total employment. If agriculture accounts for a high share of employment, growth in GDP per capita requires either respectable productivity growth in agriculture, or breakneck expansion elsewhere in the economy.

In this respect, analysis of a country like Indonesia may have some important lessons for the empirical modelling of growth. Cross-country empirical work rarely acknowledges the predominant role of agriculture in many of the countries being studied. Analyzing the role of agriculture is an area in which case studies have much to contribute, and where these studies could inform future empirical work. Once again Indonesia stands out as a useful laboratory, since agricultural development was a stated priority of the New Order, even if some of its policies discriminated against the sector.⁶

Before discussing these issues in more detail, I want to point out a common fallacy in analyzing the performance of a particular sector, which might be called the 'enclave fallacy'. This is because writers assessing the performance of a sector will often proceed as if the sector were a self-contained economy or enclave, and then compare growth in sectoral output and labor productivity across countries. The problem here is that in general equilibrium, changes in agricultural output and labor productivity will typically depend not only on agricultural performance, but also on the performance of other sectors.

This type of result can be derived from very simple general equilibrium models of production, of a form often used in trade theory and described in the appendix to this chapter. The appendix also shows how to calibrate one such model, in order to confirm that a productivity gain in agriculture can have a major impact on overall output. The particular examples considered are based on an initial employment share for agriculture of 75 percent, Indonesia's position in the 1960s. Depending on the technology parameters, a doubling of agricultural total factor productivity raises overall output by roughly 80 percent.

With all this in mind, we can now return to the Indonesian example, to assess the New Order's agricultural policies and their implications for development. In practical terms, the emphasis on agriculture was reflected in large subsidies for inputs (fertilizers, pesticides), stabilization of rice prices, and investments in rural infrastructure (irrigation, roads and schools). The early attempts to raise agricultural productivity were not particularly successful, but the regime had learnt from some of these mistakes by the time of the oil boom of the 1970s, which greatly increased the resources available for spending on rural development and food policy.

Combined with the introduction of high-yielding crop varieties - the Green Revolution - the results have been genuinely impressive. Perhaps the best index of this success is provided by measures of crop yields (weight/hectare). Yields of the major crops have all risen strongly. The principal crop to examine is rice, which dominates the Indonesian diet. Rice yields showed particularly strong growth in the late 1970s and early 1980s, as the government raised fertilizer subsidies and sought to accelerate the

⁶ For more on urban versus rural bias in Indonesia, see Timmer (1993) and Garcia Garcia (2000).

spread of high-yielding varieties, measures that were funded with oil revenues. The striking achievement was to move Indonesia from a position where it imported almost a third of the world's traded rice in some years, to self-sufficiency by 1985, a goal that had been thought unattainable by informed commentators (Hill, p. 131).

Such emphasis on agriculture is unusual among developing countries. This raises an interesting question of political economy: what was different about Indonesia that led the New Order to see rural development as a key priority? Gelb and Glassburner (1988) imply that part of the reason was the country's predominantly rural nature. Policies that favored the urban sector, and hence encouraged rural-urban migration, would have put great pressure on the cities. Another argument sometimes made is that the explanation lay partly in Suharto's rural background.

A more cynical view is that, given the predominance of rice in the Indonesian diet and its importance to Javanese agriculture, the regime's policies to help rice farmers were motivated by Suharto's desire for self-preservation, and the need to maintain his power base in Java. The unrest during the rice shortage of late 1972, after prices doubled in a matter of months, illustrated the potential dangers to the regime of neglecting food policy. Part of the background is that under the previous leader, Sukarno, the Indonesian state had appeared committed to the interests of ordinary people, creating expectations that later became a constraint on Suharto, and that help to explain his emphasis on poverty alleviation (Bevan et al., p. 420). The regime was also aware that many rural farmers had given strong support to the communist party in the 1960s; any return to this political radicalism in rural areas would have been highly destabilizing (MacIntyre 1999b).

Another open question is the extent to which the emphasis on rural development contributed to overall industrialization. In this respect, it is worth pointing out that Indonesia's productivity gains had significant opportunity costs. The drive for self-sufficiency in rice required high subsidies for inputs, especially fertilizer. Nor was the strategy to promote rural development uniformly successful, with notable policy failures in the promotion of cash crops such as palm oil, and in the production of natural rubber (Muller 1998).

There is also some theoretical ambiguity in the relation between agricultural improvement and long-run development. In a closed economy, improved productivity in agriculture will raise the steady-state level of income almost inevitably, both directly and perhaps also through market size effects. Matsuyama (1992) pointed out that things are more complex in an open economy, however. Given a positive shock to agricultural productivity, comparative advantage shifts against non-agriculture. If there are significant externalities or learning effects in non-agriculture, the economy as a whole may grow more slowly in the long run.⁷ Such ambiguity can also be found in models with multiple equilibria, for instance when there are a number of non-traded intermediate inputs produced with fixed costs. Overall, these considerations mean that identifying the net benefits of the New Order's agricultural policies is potentially a complex task.

⁷ This may not be a good argument against promoting agricultural productivity, since an economy which specialises in agriculture may have a relatively high standard of living.

Given that Indonesia was a poor, rural economy in the 1960s, any movement in the direction of rapid capital accumulation and higher productivity was likely to generate substantial structural change. The remainder of the section will analyze this process, partly to cast some light on Indonesia's status as a latecomer to industrialization.

Orthodox explanations of structural change are based on varying income elasticities of demand, differential rates of productivity growth, or changes in comparative advantage brought about by technical change and/or shifts in factor endowments. At first glance, trade theory seems to offer some remarkably strong predictions. In a model with two goods and two factors, the Rybczynski theorem implies that a rising capital-labor ratio should prompt an increase in the relative output of the capital-intensive good. At least on a conventional view of capital intensities, Indonesia's shift out of agriculture could then be explained by its high rates of investment, as in the empirical analysis of Martin and Warr (1993).

Yet from a theoretical perspective, this kind of account is not wholly satisfactory. One problem is that the Rybczynski theorem is among those which do not generalize in a straightforward way to an economy with more than two goods. Even if we retain the 2 x 2 version of Heckscher-Ohlin trade theory, this has the limiting implication that factor prices will be independent of factor supplies.⁸ If it is capital accumulation driving structural change, rather than technical progress, then wages and returns to capital will be constant.

The solution of Leamer (1987) to this problem is to introduce a third factor, land or natural resource abundance. One advantage of this approach is that there are now several distinct paths of development, depending upon where a country initially stands in its relative endowments of capital, labor and natural resources. In the case of intermediate resource abundance, a country will eventually shift towards exporting manufactures, but manufacturing specialization will only emerge relatively late in the development process compared to resource-scarce countries, where this pattern is found at lower levels of capital intensity.

The relevance to Indonesia's development is clear, given its traditional specialization in resource-based exports. More recently, indices of relative comparative advantage show a marked shift in export specialization, beginning in the early 1980s, towards resource-based manufacturing, and increasingly towards labor-intensive manufacturing (Hill 2000a). Hill suggests that "Indonesia is following the well-trodden path of labor-intensive, outward orientation of the East Asian economies, albeit a good deal later than most" (p. 83). The delay can be attributed at least partly to resource abundance, as in Leamer's analysis, and need not be interpreted in a negative light. The next section will reinforce this argument, by drawing attention to the general equilibrium effects of the oil windfall.

5. The oil windfall

An account of economic performance under Suharto would be seriously incomplete without some consideration of the 1970s oil boom, and Indonesia's distinctive and effective policy response. This section provides a discussion of the 'Dutch Disease',

⁸ This statement should be qualified somewhat, since factor prices will only be independent of factor endowments while the economy remains incompletely specialized.

and the extent to which the patient resisted the usual symptoms. The potential importance of this analysis can be seen by examining the structure of Indonesia's exports and government revenues. By the peak of the oil boom, oil accounted for around three-quarters of export earnings, and more than 60% of government revenues (Warr 1986).

The quadrupling of oil prices in 1973 represented a windfall gain for Indonesia, raising real income almost overnight. Yet we know from the experience of other oil exporters that such a windfall has often been a mixed blessing. Swings in oil prices have been accompanied by fiscal deficits and macroeconomic instability, while the new government revenues were often wasted (Gelb and associates, 1988). More generally, newly valuable endowments of natural resources have often been associated with predatory states or political instability, as opposing groups compete for a share of the associated rents.

Theoretical work on resource windfalls has provided a good understanding of their general equilibrium effects. The windfall means an increase in real income. Since the price of traded goods is set on world markets, the effect of the increase in demand is to put upward pressure on the relative price of non-traded goods (the 'spending effect'). Production of non-traded goods increases, and the non-oil traded sector will typically have to contract, at least in relative terms, as a real appreciation takes place.⁹

There is more to the Dutch Disease than short-run reallocation, however. The reason is that contraction of the non-oil traded sector may work against long-run industrialization. If learning effects are important in industry, or if non-traded intermediate inputs are produced under increasing returns to scale, or if industrial productivity depends on other agglomeration effects and externalities, any contraction of the non-oil traded sector could retard industrialization and growth.

The importance of these considerations could easily be exaggerated, not least because the high oil prices were a temporary phenomenon. For most countries, it appears to have been the adjustment to the end of the oil boom, rather than the Dutch Disease effects, that became a crucial determinant of economic performance. Here, Indonesia scored highly. When the current account moved sharply into deficit over 1980-82, the government responded quickly with a series of measures designed to restore stability. Of the six oil exporters studied by Gelb and associates (1988), Indonesia was the only one to follow a determined policy that combined expenditure reduction with exchange rate realignment. Although growth weakened in the early 1980s, a more dramatic crisis was avoided, due to swift adjustment and an initial debt burden that was lower than elsewhere.

Indonesia had also performed well on another criterion, namely the allocation of the massive new government revenues created by the oil boom. As we have seen, the New Order pursued a relatively broad development strategy, which emphasized infrastructure, education and agriculture, as well as capital-intensive industry. An unusually high proportion of government spending was allocated to agriculture. In

⁹ See for example Neary and van Wijnbergen (1986). In the case of a country like Indonesia, committed to a fixed exchange rate for most of the 1970s, the appreciation must be achieved by inflation rates that are high relative to those of trading partners.

this way, the oil boom contributed to the long-term success of other sectors, limiting the extent of Dutch Disease effects.

In sharp contrast, other governments appear to have wasted a large part of their oil revenues on over-ambitious and risky investments in resource-based industry. That Indonesia did not follow suit was partly a matter of historical accident: the government's own plans in this direction were fortunately delayed by the Pertamina crisis. This meant that when oil prices declined in the early 1980s, there was still time to postpone or cancel many of the planned investments. As elsewhere in the story of Indonesia's development, a combination of historical accident and the government's pragmatism served the economy well.

6. The geography of industrialization

So far, we have examined two instances of good fortune for Indonesia, namely the effects of the Green Revolution on agriculture, and the oil boom of the 1970s. In this section, I will consider a third and final external shock: the rapid growth of Indonesia's geographic neighbors and trade partners. This change in the external environment has taken on greater importance over time, and the consequences for trade and investment patterns have been especially clear since the late 1980s.

One reason to emphasize this development is that, for most of its recent history, Indonesia has been remote from large markets. If we look at the Great Circle distance between Jakarta and other capital cities, the USA is more than 16000km away, Western Europe about 11000km away, and even Canberra in Australia is 5400km distant. By contrast, Jakarta is relatively close to Singapore, Malaysia, Thailand, Hong Kong and Taiwan (all under 4000km) while China, Korea and Japan are all about 5000km away.¹⁰

In the 1960s, the East Asian markets were small relative to those of Europe and the USA. As a result, the indices constructed by Redding and Venables (2000) show that the extent of Indonesia's access to international markets, relative to that of other countries, has been intermediate at best. Another measure of isolation can be derived from using geographic variables to predict bilateral trade flows. Even for 1985, an exercise of this kind predicts a low trade share for Indonesia, below ten percent (Frankel and Romer 1999).

To understand why a country like Indonesia might benefit from proximity to newly fast-growing markets, we need to go beyond the world of the trade theory textbooks. In the simpler models of international trade, rapid growth in Japan, China and the newly industrializing countries of East Asia would have no more consequence for Indonesia than for Nigeria or Brazil.

This presumption is overturned by the emerging literature on international economic geography.¹¹ The starting point of these models is a simple hypothesis, namely that increasing returns to scale are central to the spatial distribution of production. If returns to scale were constant, firms would supply local markets with many small plants, given the presence of transport costs. In contrast, with increasing returns, firms

¹⁰ These data are taken from Jon Haveman's website at <http://www.eiit.org/>

¹¹ The following discussion draws heavily on Henderson, Shalizi and Venables (2000).

will choose to produce in relatively few locations, and the outcome is agglomeration. Importantly, this agglomeration involves 'cumulative causation' or feedback effects which reinforce the process over time.

The ideas and models of economic geography can be used to understand differences in economic outcomes across countries. For example, Puga and Venables (1999) model the spread of agglomeration from country to country. With increasing world demand for manufactured goods, the wage gap will tend to widen between industrialized countries and those that are less developed. As this process continues, the widening wage gap encourages increased production in low wage countries. Yet not all countries will benefit at once, since the forces for agglomeration imply that firms gain by producing in a country where other firms are also active, or becoming established. Given the potential importance of the feedback effects, any country that gets slightly ahead may pull away.

Given Indonesia's initial isolation, together with proximity to some unusually fast-growing markets, it seems to be a very good testing ground for the predictions of the economic geography literature. We can start by identifying trade partners. As one might expect, Indonesia trades relatively intensely with Japan, Singapore, and the other developing countries of northeast Asia, including China (see Hill 2000a). By using a measure of per capita growth rates of trading partners, weighted by trade shares, we can measure the extent to which Indonesia's trading partners have expanded rapidly, compared to the partners of other countries. Table 3 shows that GDP per capita of trading partners has grown more rapidly for Indonesia than for the median countries in South Asia, sub-Saharan Africa, and Latin America. The differences in growth rates imply substantial divergence of GDP per capita of trading partners over time.

Table 3 about here

Given the rapid growth of Indonesia's trade partners, the importance of trade should have increased over time. There has certainly been an upwards trend in the trade share since the early 1970s, although the oil boom and trade reform must also be part of the explanation. Another prediction is more tightly related to the economic geography literature. One might expect the other newly industrializing countries of East Asia to have invested increasingly heavily in Indonesia, since as wages rose in the NICs, the incentives to relocate production will have increased. Exactly this process does seem to have taken place in the 1980s. Firms from the NICs did shift some of their labor-intensive manufacturing production into Indonesia, and East Asia's importance as a foreign investor in Indonesia rose dramatically (Thee 1991).

It would be easy to exaggerate the importance of FDI, since inward FDI flows accounted for only 9% of total fixed investment in Indonesia even at their 1996 peak (Ramstetter 2000). More generally, it is not clear that Indonesia has made the most of the regional growth take-off. As noted earlier, industrialization occurred relatively late, with rapid growth in labor-intensive manufacturing exports not emerging until the 1980s. If Suharto had originally followed an export-promoting strategy, rather than import substitution, it is possible that Indonesia would have benefited earlier from the rapid growth of its trading partners, even in the presence of the oil boom.

7. The 1980s reforms

From a policy perspective, the 1980s are one of the most interesting periods in Indonesia's development. Over the decade, there were several rounds of wide-ranging microeconomic reform. Some of these reforms represented a change in overall strategy, from import substitution towards export promotion. The reforms were followed by a dramatic increase in the growth of manufacturing exports, and a marked improvement in the TFP performance of the manufacturing sector. The analysis of this section forms a reminder that Indonesia's economic success has not been simply a matter of sound macroeconomic policy and good fortune. Microeconomic intervention and reform is also part of the story.

The background to the reforms is that microeconomic intervention by the Indonesian government had steadily increased for much of the 1970s.¹² The banking system was dominated by state-owned banks. Credit was subsidized, and favored the politically powerful. The government took an increasing role in investment, acting through state-owned companies and increasing its equity holdings. The various objectives of industrial policy, including the desire for regional dispersion of development and a greater economic role for indigenous ethnic groups, led to complex regulations. There was an increase in barriers to imports, partly in response to demands for protection from the non-oil traded sector, increasingly being hurt by the real appreciation associated with the oil boom.

The reform process began in the early 1980s, apparently precipitated by declining oil prices and a sharp rise in the current account deficit, which was over 7% of GDP by 1983. The initial response to the deficit was a devaluation in March 1983, followed by another in September 1986. Accompanying this was a series of microeconomic reforms, encouraged by concern that Indonesia had become a 'high cost economy', with many industries that would be uncompetitive if required to trade at world prices. The banking sector was reformed in 1983 and 1988, with entry barriers and most credit subsidies removed. In an interesting example of successful institutional reform, the tasks of the corrupt and inefficient customs service were contracted out to a Swiss company from 1985. In May 1986, a degree of import liberalization was introduced for exporters, based on a duty draw-back scheme that was implemented efficiently and without corruption. Starting later that year, quantitative restrictions and other non-tariff barriers were gradually dismantled, with a shift towards tariffs as the preferred tool of trade policy.

The response was dramatic. Between 1983 and 1992, the share of manufactures in total merchandise exports rose from 7 percent to almost 50 percent. A naive interpretation of this shift is that it was entirely due to the policy reforms, but the explanation is more complex. Part of the change in export shares was due to falling world prices for oil and rubber, and to the 1980 export ban on unprocessed logs, which raised exports of plywood. Hill nevertheless suggests that the boom in exports of manufactured goods "represents a watershed in Indonesia's modern economic development" (Hill 2000a, p. 84). Among other things, it created for the first time a sizeable export lobby in the manufacturing sector, and momentum for further reform.

¹² The discussion here draws on Aswicahyono et al. (1996).

The change in export specialization happened so quickly that one might indeed regard it as an outcome of successful structural reform, and hence something of a watershed in the country's industrialization. But it can also be seen, in part, as the effect of the Dutch Disease in reverse, as world oil prices started to decline in the early 1980s, with sharp falls in 1985-86. The lower oil prices implied a reduction in national income, and adjustment to this required the relative price of non-traded goods to fall and the non-oil traded goods sector to expand. This process of adjustment implies a real depreciation, carried out by Indonesia with the two large devaluations of 1983 and 1986. The changes in the real exchange rate are likely to have played an important role in the manufacturing export boom.

One consequence is that it is difficult to disentangle the relative contribution of structural reforms from the fall in oil prices. Yet in thinking about the oil price effects, one point of interest is that the export growth of the 1980s was in manufacturing rather than export crops. This may reflect a shift of comparative advantage away from agriculture from the early 1970s onwards, due to productivity growth and capital accumulation. When oil prices fell in the 1980s, the effect was to create rapid growth in manufacturing exports, something that might have been observed much earlier, and perhaps less dramatically, in the absence of the oil boom.

Given the general equilibrium considerations associated with the Dutch Disease and also with agricultural development, the most informative way to assess the structural reforms is to examine changes in total factor productivity. Timmer (1999) presents estimates for the manufacturing sector for 1975-95. As he notes, the degree of uncertainty is considerable, and previous estimates differ widely. His own work shows a sharp contrast between 1975-86, for which annual TFP growth is just 0.3%, and 1986-95, for which the figure is 4.8%. These figures tend to support the idea that the microeconomic reforms were highly effective, although the comparison may overstate the change in underlying performance, given the recession of the early 1980s.

What motivated the reforms, and should they have been carried out earlier? There is no doubt that the ending of the oil boom was a major factor, and was regarded by some officials as 'a blessing in disguise' precisely because it created a political climate allowing reform (Booth 1992). MacIntyre (1992) provides an account of the reform process which also emphasizes political changes, including growing influence for business groups, and changing social attitudes towards capitalism. Earlier liberalization, for example in the 1970s, would have been greeted by hostility and suspicion, reflecting a deep-seated ambivalence towards free markets. The government was careful to present the 1980s reforms as pragmatic, to avoid discussions of overall development strategy that would have quickly polarized opinion.¹³ All this suggests that while earlier microeconomic reform may have been desirable, it would have been difficult to implement.

8. Growing into trouble?

To summarize the arguments so far, Indonesia grew rapidly after 1966 for a number of reasons, including political stability, unusually competent macroeconomic policy,

¹³ This point is made by Soesastro (1989), quoted in Hill (2000a, p. 117).

rapid productivity improvement in agriculture, and an effective response to the oil windfall. A shift towards manufacturing took place later than in some of the other high-performing East Asian economies, but this can probably be attributed at least partly to natural resource abundance, and especially the effect of the oil boom on the structure of production and exports. When oil prices fell and the Dutch Disease was reversed, manufacturing exports in the 1980s grew dramatically. At this time, TFP growth was unusually rapid, suggesting that the microeconomic reforms of the mid-1980s also played a central role.

If I had been writing this piece in 1996, the above summary of Indonesia's performance would have led me to sound a note of cautious optimism about the country's economic prospects. The crisis of 1997-98, however, has cast a shadow over such predictions, and also over the historical record. While the economy was growing rapidly, some of its latent problems could be regarded as worrying, but perhaps not critical. In the aftermath of an economic collapse as severe as Indonesia's, one of the swiftest reversals of post-war history, the foundations naturally tend to appear rather insecure. The undeniable achievements of the past thirty years now look less than inevitable, and more like a precarious balancing act. Perhaps some degree of failure was never far away.

When it came, the crisis saw “everything going wrong at once” (Hill 2000b). As elsewhere, it seems likely that institutional weaknesses are a large part of the explanation (see for example Johnson et al. 2000). This section of the chapter adds to existing accounts, by asking whether rapid growth itself made an indirect contribution to the severity of the crisis. This inquiry is in the tradition of Olson (1963), who argued that growth could be a destabilizing force. His central argument is that rapid growth is associated with social dislocation and hence political instability. Time has not necessarily been kind to this hypothesis, but Indonesia may offer some support for the broader theme.

This section will argue that in the case of Indonesia, fast growth interacted with weak institutions in a way that gradually undermined the country's capacity to withstand an adverse shock. In particular, it will discuss the connections between growth and the highly centralized form of corruption that was integral to the functioning of Suharto's government. The extent of corruption was one of the key factors in his failure to respond effectively to the crisis, and in his subsequent downfall.

The nature of Suharto's rule was almost monarchical. Cassing (2000) argues that the observed patterns of regulation, rent-seeking and corruption can be largely explained by Suharto's desire to eliminate political competition. The lack of competition allowed him to engineer streams of rents that were not only lucrative but also largely free of risk, and could then be used to enrich politically important allies and even family members. This highlights a key feature of Indonesia's corruption problem: Suharto's grip on power was sufficiently secure that he had no incentive to compromise in his policies and interventions. In particular, there were few mechanisms by which the extent of corruption could be restrained. In the circumstances, it is perhaps all the more remarkable that Indonesia grew so rapidly for so long, and that the state was not more predatory.¹⁴

¹⁴ The seemingly paradoxical coexistence of Indonesia's rapid growth with a high degree of centralized corruption is analyzed by MacIntyre (1999c, 2000a).

The form of corruption was connected to the high degree of state involvement in the economy, or what some discussions refer to as the politicization of economic activity. This process dates back to the nationalizations under Sukarno, and even though the state gradually started to disengage from business in the 1980s, it was partly replaced by private conglomerates that were often associated with political patronage. Hence growth and structural change, including the increased importance of private industry, contributed further to the prominence of rent-seeking and 'crony capitalism'.

When resource allocation depends on political influence as much as commercial acumen, distortions and deadweight losses are inevitable. But there have also been more important adverse effects, on social cohesion and the prospects for political stability and economic reform. Some of the main beneficiaries of growth have been conglomerates strongly associated with Sino-Indonesian entrepreneurs rather than indigenous ethnic groups, and their increasing visibility and economic dominance has contributed to social tensions (Hill 2000a). One side-effect is that the government has remained committed to a large state enterprise sector, and resisted other reforms that might benefit the private conglomerates, in order to placate restless indigenous groups. Meanwhile, support for privatizing at least some state enterprises has not always been forthcoming from the expected quarters, partly because of fears that attempts at such reform would quickly be undermined by corruption.

The unchecked authority of Suharto, and the centralized nature of corruption, may also be part of the explanation of the severity of the crisis in Indonesia's financial sector. Cole and Slade (1998) argue that the crisis had political origins. Although it exposed problems in financial supervision, these were not always due to a lack of expertise or awareness on the part of regulators, but to the obstacle that political connections sometimes placed in the way of effective supervision. Cole and Slade point out that some prominent officials tried and failed to apply prudential rules to financial institutions or transactions connected with the Suharto regime. Increasingly, connections to Suharto became seen as a guarantee or collateral, sometimes the only kind underpinning enterprises and financial institutions, notably in banking.

Partly due to these considerations, the financial sector was ill-prepared for the events of 1997. The initiating factor was Thailand's devaluation, which led to a reassessment of exchange rate valuations across the region. McLeod (1998) argues that this reassessment was the straw that broke the camel's back: with a new awareness of exchange rate risk, the depreciation of the rupiah became a self-fulfilling prophecy. The depreciation, combined with a series of policy mistakes, particularly the sudden closure of sixteen failing banks, contributed to a swift collapse of confidence in the financial sector. The financial crisis led to astonishingly steep declines in investment and output, and Indonesia's economic miracle unraveled amidst growing social disorder and internal tensions.

In summary, the long period of rapid growth under Suharto may have interacted with institutional weaknesses in a way that partly explains the severity of the crisis. Structural change and growth created new and highly lucrative opportunities for rent-seeking and centralized corruption. The increasing visibility of 'crony capitalism' undermined Suharto's legitimacy, an important event in a country where urbanization and mass education have begun to change the social and political context. Meanwhile,

the effects of corruption, and the politicization of economic activity, started to threaten the security of the financial system.

These institutional weaknesses suggest that, by the late 1990s, Indonesia may have lacked resilience in the face of shocks. Over the course of 1997-98, everything went wrong at once. As Hill (2000b) argues, corruption certainly did not precipitate the crisis, but its form and the wider nature of the political system may explain why Suharto was unwilling, and perhaps unable, to respond effectively. The public perception that Suharto was intent on protecting his commercial interests, perhaps at all costs, undermined faith in the regime, and the crisis began to feed on itself. Once Suharto lost the support of the Indonesian elite, his fall from power was inevitable.

Hill writes that “it is hard to think of a regime which, having achieved so much over a quarter of a century, ended so abruptly and ignominiously” (Hill 2000b, p. 135). The case that rapid growth contributed to this ignominious end could easily be overstated. Many of the institutional weaknesses would have emerged as problematic in the absence of growth, structural change, and urbanization. If the Suharto regime had not delivered in economic terms, it is likely that popular discontent would have emerged much earlier, with uncertain consequences. It is also the case, as Hill points out, that bad luck played a role in the depth of the crisis.

Whether or not one regards economic growth as indirectly contributing to the crisis, it seems likely that Indonesia was destined for trouble. The experience of 1997-98 draws attention to the ways in which even an autocracy as long-lived as Suharto's may be vulnerable to events, and this raises the question of whether the crisis would have been less severe under an alternative set of political institutions.

The central importance of institutions for sustaining growth in the face of external shocks has been emphasized by Rodrik (1999a). He argues that shocks are more likely to be problematic in countries with latent social conflict and weak institutions for managing conflict. Both conditions seem to apply to Indonesia. The unbalanced nature of growth, unevenly spread among regions and ethnic groups, has worsened long-standing tensions. Meanwhile the country's political institutions, which imposed few constraints on Suharto, meant that the scope for decisive action was also accompanied by the potential for arbitrary, destabilizing measures and swift policy reversals, of the kind seen during the unfolding of the crisis (MacIntyre 1999d, 2000b).

Would a democracy have fared any better? In examining the East Asian crisis and how policy responses varied across the countries involved, Rodrik (1999b) has pointed to three advantages of democratic institutions in managing a crisis. First, there is the handling of leadership transitions. A democratic tradition in Indonesia might have allowed a smoother transfer of power from the discredited Suharto to new leaders. Instead, his attempts to retain power and influence, and to a lesser extent his failing health, contributed to the worsening of the crisis. Secondly, the democratic process may allow the fashioning of consensus about the policies needed in the face of an external shock, important in a divided country like Indonesia. Thirdly, a democracy should allow opposition to be voiced through recognized channels, and so undermines the perceived legitimacy of direct protest through riots or other social disorder.

The issues here are complex, because even if Indonesia's existing political institutions were badly suited to handling the crisis of 1997-98, that is not necessarily true of earlier times. One can point to occasions when the authoritarian regime almost certainly achieved better outcomes than would have been possible under democracy. One obvious example would be in 1974, when inflation was rising and deflationary measures were needed, while at the same time political pressure mounted to spend the huge increases in oil revenues. More generally, it is possible that Indonesia's abundance of natural resources would have persistently undermined democracy, because of the political advantage that the availability of rents is likely to confer on incumbents.¹⁵

Yet the Indonesian example does clarify the lurking dangers of authoritarian regimes in which power is as tightly concentrated as it was under Suharto. The regime delivered long-term political and economic stability, but such a political system is only as effective as its current leader. Concerns about the failure of Suharto to groom an appropriate successor had been expressed before the crisis. As support for him diminished, together with any belief that he would act in the national interest, so it became increasingly clear that Indonesia was destined for a period of considerable political turmoil at exactly the wrong time. As a result, one of the central lessons of Indonesia's recent past is that even a long-lived and economically successful autocracy cannot guarantee an effective response to adverse shocks, and at least eventually, may even preclude it.

9. Conclusions

Most recent work by economists on Indonesia has been focused, quite naturally, on the deep crisis of 1997-98. This chapter has taken a longer view, and I hope to have shown that Indonesia's experience under Suharto is likely to be of lasting interest. I will first discuss some possible implications for future growth research, and then consider the more immediate lessons for other countries.

There is general agreement that research on growth, and especially empirical research, has been more successful at identifying interesting associations than at providing a clear view of the forces and mechanisms behind success or failure. An example of this would be the much-discussed negative correlation between resource abundance and growth. Analyzing a case like Indonesia allows a more nuanced view. Resource abundance is not destiny, and as one might expect, its consequences turn on the policy response. The distinctive features of Indonesia's response were the use of oil revenues to fund agricultural improvements, followed by successful adjustment to the end of the oil boom, through exchange rate management, expenditure reduction and microeconomic reform. This adjustment seems to have been a more important determinant of growth outcomes than any long-run Dutch Disease effects, and therefore helps us to understand more fully why resource booms might have undermined growth elsewhere.

Indonesia's experience can also alert us to some possible omissions in much research on growth. Many accounts draw attention to the importance of the New Order's

¹⁵ Wantchekon (2000) analyzes the observed relationship between resource abundance and autocracy along these lines.

agricultural policies, and this perhaps confirms that cross-country empirical work should probably give more attention to agricultural performance and its determinants, as development economists have frequently pointed out. Equally, given that the changing pattern of Indonesia's access to markets appears to have had effects on industrial growth, it is possible that future empirical research should give more attention to economic geography, as in Redding and Venables (2000).

More fundamentally, almost any case study is likely to draw our attention, once again, to the centrality of political economy in explaining development outcomes. In cross-country empirical work, it is difficult to assess or explain the origins of good policy in a satisfactory way, yet perhaps nothing is more important. The chapter has tried to offer some thoughts on why policy outcomes were so much better in Indonesia than elsewhere, but the account is far from complete, and a great deal remains to be done.

These questions are urgent, because Indonesia's record may have wider lessons. Most obviously, it shows what can be achieved despite unfavorable initial conditions, some weak institutions, and flawed microeconomic policies. Given that the country grew rapidly for three decades, so that per capita GDP rose more than fourfold, it is clear that the necessary conditions for successful economic development are not quite as demanding as often suggested.

Less optimistically, if Indonesia's road to development has been the one less travelled, it may also be a difficult one for others to follow. To a large extent, the rapid growth under Suharto can be seen as the outcome of two mutually reinforcing factors, political stability and macroeconomic stability. Neither are easily achieved, and neither were anywhere near inevitable given Indonesia's institutions, as the record before 1966 makes clear.

This point is worth emphasizing, as a qualification to the analysis above. There is a danger in any historical case study, particularly of a single country, of seeing the past as fully determined. It is worth remembering that a different leader might have emerged in 1966, for better or worse. Suharto might have been Marcos, and the economic history of Indonesia could have been that of the Philippines. Even if we take Suharto's ascent to power as a given, his task was made easier by some instances of good fortune. The recent crisis adds to this chapter's case that Indonesia's remarkable achievements have been precariously balanced.

What does this imply for the country's future prospects? I should leave detailed thoughts on this to more expert observers, but there seems little doubt that almost everything depends on the political developments of the next few years. The universal obstacles to establishing democracy are accompanied in Indonesia's case by a history of corruption and institutional weaknesses, as in the legal framework, which will only make the task even more difficult. Long-standing regional and ethnic tensions suggest that the stakes are high.

Appendix

This appendix shows how simple general equilibrium models of production, of the form often used in trade theory, can offer some insight into growth and structural

change in an economy like that of Indonesia. In particular, the models demonstrate that labor productivity is likely to be an inadequate measure of sectoral performance. Consider a small open economy with two sectors, agriculture (subscript a) and non-agriculture (subscript m). The agricultural good is the numeraire. Outputs of both sectors are tradeable, so that world prices tie down the relative price of the non-agricultural good, denoted by p . Under this assumption, a simple model might start from the following four equations:

$$Y_a = A_a L_a$$

$$Y_m = A_m F(K, L_m)$$

$$Y = Y_a + pY_m$$

$$L = L_a + L_m$$

where Y is total output, L is total employment, Y_a and Y_m are outputs of the two sectors, L_a and L_m are employment in the two sectors, K is the capital stock, A_a and A_m are productivity parameters, and $F(\cdot)$ is a constant returns to scale production function.

If we assume that labor is paid its marginal product in both sectors, and labor movements between the two sectors bring about equality in wages, then the level of real wages is determined entirely by the exogenous level of productivity in agriculture, A_a . Hence this model yields a very strong conclusion, which is that while specialization is incomplete, wages in both sectors will only rise to the extent that agricultural productivity increases. Another implication of this framework is that simple measures of labor productivity are a good yardstick by which to judge performance in agriculture.

Yet these implications are clearly far from general, at least in the long run. A more conventional model would allow for the possibility of substitution in agriculture between labor and other inputs, as in the two good, specific factors model of trade theory. That is, we would have:

$$Y_a = A_a G(R, L_a)$$

where R is a factor, perhaps land, specific to agriculture. Now it is clear that wages in each sector, and by implication labor productivity, will depend on what is happening in both sectors. One corollary is that in the long run, raising agricultural productivity is not necessarily the only way to help the rural poor, at least if rural and urban labor markets are well integrated.

We can use a model of this form to analyze the increase in output associated with an increase in agricultural total factor productivity. The simplest interesting case is provided by Cobb-Douglas production functions in labor and two specific factors:

$$Y_a = A_a R^\beta L_a^{1-\beta}$$

$$Y_m = A_m K^\gamma L_m^{1-\gamma}$$

Labor is the only mobile factor, and labor market equilibrium implies:

$$(1-\beta)\frac{Y_a}{L_a} = (1-\gamma)\frac{pY_m}{L_m}$$

$$(1-\beta)A_a\left(\frac{R}{L_a}\right)^\beta = (1-\gamma)pA_m\left(\frac{K}{L_m}\right)^\gamma$$

What happens if agricultural TFP is raised by a factor θ ? We can write down a new labor market equilibrium condition similar to that above, and dividing one by the other and simplifying yields:

$$\theta = \left(\frac{1-a}{1-b}\right)^\gamma \left(\frac{b}{a}\right)^\beta$$

which implicitly defines the new agricultural employment share, b , as a function of the initial share a , the productivity increase θ and the two technology parameters, β and γ .

We can then calculate the ratio of new output to old, Λ , as follows:

$$\Lambda = \frac{Y'_a + pY'_m}{Y_a + pY_m} = \frac{pY'_m}{pY_m} \left[\frac{\frac{Y'_a}{pY'_m} + 1}{\frac{Y_a}{pY_m} + 1} \right]$$

where a dash (') indicates the new values of output in agriculture and non-agriculture. Using the old and new labor market equilibrium conditions, this can be rewritten as:

$$\Lambda = \left(\frac{1-a}{1-b}\right)^\gamma \left[\frac{1-\beta-b(\gamma-\beta)}{1-\beta-a(\gamma-\beta)} \right]$$

We can now calculate the effect of a rise in agricultural TFP on overall output. Taking the case where the initial employment share is $a=0.75$, the effect of doubling agricultural total factor productivity is shown in Table 4, for a variety of assumptions about the technology parameters.

Table 4 about here

These calculations show that the aggregate effects of higher agricultural TFP can be substantial, but they should be seen as only illustrative. In particular, the assumptions made on β and γ are inconsistent with the observed data on agriculture's share of output unless there is a wage differential across sectors. In turn, a fixed wage differential has implications for the output gain. If the marginal product of labor is higher in non-agriculture than in agriculture, the effects of a rise in agricultural TFP will be less than those shown in Table 4, because labor will be reallocated to a sector in which it has lower marginal productivity.

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Table 1 – The starting point in 1965

	Population	GDP per capita	Trade share (% of GDP)	Agriculture (% of GDP)
Indonesia	104m	608	0.24	0.53
South Korea	29m	1058	0.27	0.36
Malaysia	9m	1671	0.80	0.29
Taiwan	13m	1660	0.41	0.24
Thailand	31m	1136	0.35	0.32
<i>Regional medians</i>				
South Asia	32m	889	0.21	0.40
Sub-Saharan Africa	4m	736	0.43	0.39
Latin America	4m	2014	0.36	0.21

Notes

Regional medians exclude countries with fewer than one million people. GDP per capita is PPP adjusted and measured in international dollars (1985 base year). The trade share is imports plus exports as a share of GDP. The trade share and agriculture share are 3-year averages (1964-66) when sufficient data are available. Source: Global Development Network database.

Table 2 – Some of the initial conditions in 1965

	Urban %	Ethnic diversity	Adelman-Morris	Primary enrollment	Secondary enrollment	Life expectancy
Indonesia	0.16	0.76	-0.40	0.72	0.12	43
South Korea	0.32	0	0.85	1.01	0.35	55
Malaysia	0.30	0.72	-	0.90	0.28	56
Taiwan	0.60	0.42	1.05	0.97	0.38	66
Thailand	0.13	0.66	0.50	0.78	0.14	54
<i>Regional medians</i>						
South Asia	0.14	0.67	-0.28	0.45	0.13	43
Sub-Saharan Africa	0.13	0.73	-1.22	0.40	0.04	40
Latin America	0.44	0.17	0.79	0.97	0.18	58

Notes

Regional medians exclude countries with fewer than one million people. The Adelman-Morris index is not available for Malaysia. Sources: Global Development Network database and Adelman and Morris (1967).

Table 3 - Per capita GDP growth of trading partners 1965-1998

Indonesia	3.62
South Korea	2.82
Malaysia	3.65
Taiwan	2.76
Thailand	3.28
Regional medians	
South Asia	2.50
Sub-Saharan Africa	2.28
Latin America	2.02

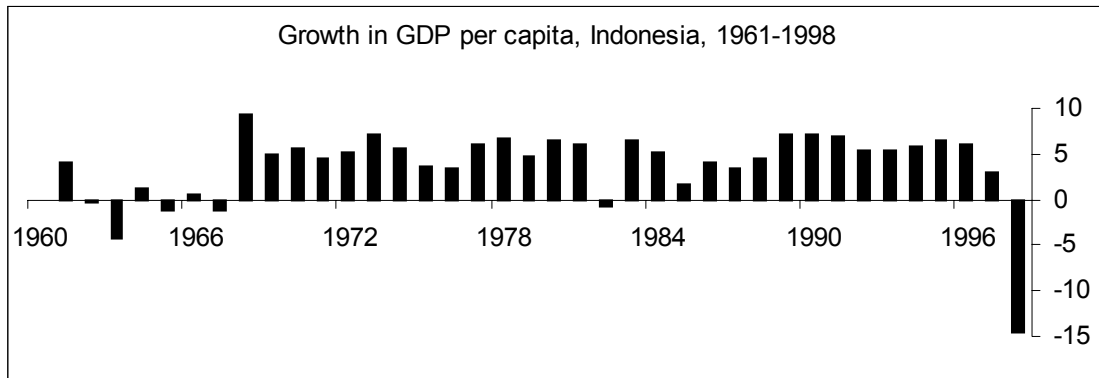
Source: Global Development Network database, World Bank.

Table 4 – Effects of agricultural TFP increases on total output

	$\beta=0.1$	$\beta=0.2$	$\beta=0.3$	$\beta=0.4$
$\gamma=0.2$	1.89	1.89	1.90	1.90
$\gamma=0.3$	1.83	1.84	1.85	1.87
$\gamma=0.4$	1.78	1.79	1.81	1.82
$\gamma=0.5$	1.72	1.73	1.75	1.78

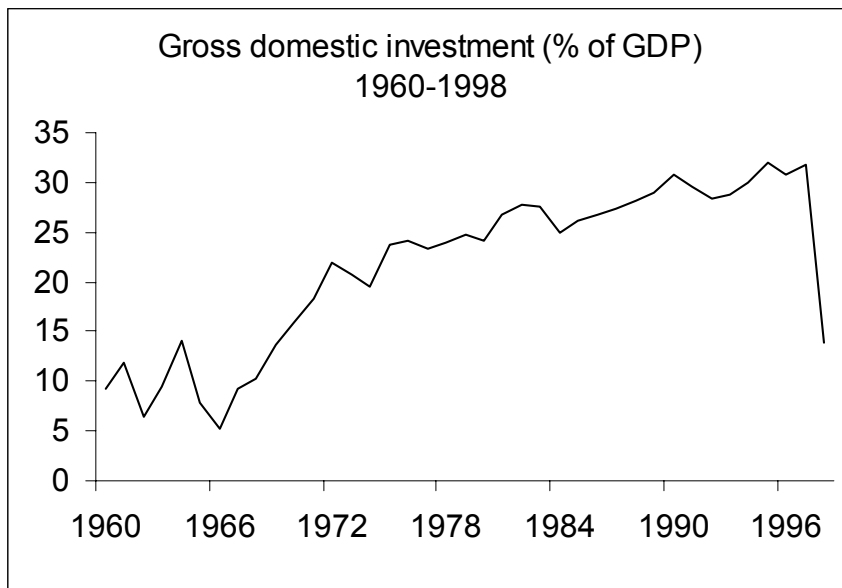
The entries in the table show the ratio of new total output to old total output in the wake of a doubling of TFP in the agricultural sector, calculated for different values of the technology parameters β and γ .

Figure 1 – Growth in GDP per capita, Indonesia, 1961-1998



Source: World Development Indicators 2000

Figure 2 – Gross domestic investment (% of GDP) 1960-1998



Source: World Development Indicators 2000