

Operationalizing Pro-Poor Growth
Country Study for the World Bank

Indonesia

By

C. Peter Timmer
Senior Research Fellow
Center for Global Development
1776 Massachusetts Avenue, NW, Suite 300
Washington, DC, 20036
ptimmer@cgdev.org

Acknowledgements

This country study, prepared primarily by Peter Timmer, Senior Research Fellow at the Center for Global Development, Washington, DC, has drawn heavily on the work of many collaborators and scholars. Louise Cord and Ignacio Fiestas have been especially helpful from the World Bank offices in Washington, and Ignacio prepared three of the annexes in this report. Vivi Alatas, Jehan Arulpragasam, and Neil McCulloch in the Jakarta offices of the World Bank have been generous with their time, data, and analytical skills. I absolve them of any responsibilities for the arguments I make here. Wally Falcon, my long-time colleague on matters Indonesian and agricultural, provided very helpful comments on the penultimate draft. Gunilla Petterson was able to figure out how to draw the figure in Annex 1 in Word. My daughter, Ashley provided badly needed econometric skills for an earlier, related paper published in the *Bulletin of Indonesian Economic Studies* in August, 2004. My wife Carol has come out of retirement to edit the entire manuscript, and readers who know her transformational skills on my earlier work will certainly cheer. My collaborators on the other country studies, and on the background papers for the pro-poor project, have stimulated my thinking more than they realize. To all, a “thank you” is small pay, but I offer it sincerely nonetheless.

The main message from this study is succinct but powerful: *The poor in Indonesia have been very closely connected to economic growth in the country, benefiting differentially when the economy was growing rapidly, and suffering disproportionately when the economy is not growing, or suffers a major crisis, as in 1998. Of all the country experiences in this project, Indonesia’s record from the late 1960s to the mid-1990s was one of the most “pro-poor,” and from the late 1990s to the present, one of the most traumatic.*

	Page
Outline	3
Executive Summary	4
Chapter 1. Introduction and overview	6
Chapter 2. Historical context and the political-economy origins of the strong link between growth and poverty reduction	15
Chapter 3. Why economic growth in Indonesia has been so pro-poor	25
Chapter 4. Connecting the macro economy to markets and to the capabilities of the poor	41
Chapter 5. Tradeoffs cause tough choices for analysts and policymakers alike	50
Chapter 6. Political economy and governance	58
Chapter 7. Looking forward: Optimism or pessimism?	66
References	68
Annexes	
1. Regression coefficients for calculating the Index of Pro-Poor Growth, and the analytical framework linking income distribution to the average income elasticity of demand for food energy	76
2. Sources of economic growth and labor force trends	81
3. Sources of productivity growth for agriculture and the overall economy	89
4. Poverty characteristics, growth incidence curves, and rates of poverty reduction (prepared by Vivi Alatas, Jehan Arulpragasam, and Neil McCulloch)	90
5. Gender issues in Indonesia (prepared by Ignacio Fiestas)	100
6. Non-monetary measures of welfare (prepared by Ignacio Fiestas)	102
7. Social safety nets (prepared by Ignacio Fiestas)	105
8. Data for the debate over rice price policy and poverty	107

Executive Summary: Indonesia and Pro-Poor Growth

Economic growth in Indonesia has been the main source of sustained poverty reduction, which has been dramatic since the late 1960s. There have been growth episodes when income inequality increased and episodes during which it decreased. Indonesia has experienced both “relative” and “absolute” pro-poor growth, and there have been no episodes in which the poor were absolutely worse off during sustained periods of economic growth. During economic decline and crises, the impact on the poor has been severe.

The pro-poor performance from the late 1960s to the mid-1990s was based on a conscious strategy that combined rapid economic growth with investments and policies that insured the growth would reach the poor. This strategy integrated the macro economy with the household economy by lowering the transactions costs of operating in the markets—factor markets and product markets—which provide links between the two levels of the overall economy. This strategy was designed and implemented by highly skilled economic planners (the “technocrats”) at the direct urging of President Suharto.

The success of the strategy also depended on good luck, as powerful new agricultural technology became available in the late 1960s, just as the country was putting in place the economic strategy and rural investments to make it effective. In the 1980s, foreign direct investment arrived from Northeast Asia just as Indonesia needed to restructure its manufacturing sector to be more labor intensive and export oriented.

There has been relatively little long-run change in the overall distribution of household expenditures in Indonesia, with the average Gini coefficient about 0.33 (compared with about 0.32 for India, 0.45 for Thailand and the Philippines, and 0.50 for Malaysia). The Gini does change somewhat during short periods, reflecting changes in variables that affect how well the poor connect to economic growth. This short-run variance in the “growth elasticity of poverty” is caused mostly by changes in real rice prices, but these in turn are largely driven by macro economic policy, especially control of inflation and management of the real exchange rate. Over the long run, income growth of the poor has depended almost entirely on overall income growth.

The interaction between macro policy and poverty reduction is especially important in Indonesia because of the relatively smooth interface between the tradable and non-tradable sectors (and between the formal and informal economies). Rapidly rising demand for the goods and services produced by the non-tradable, informal sector, especially in rural areas, has been an important short-run mechanism for pulling people out of poverty. The close integration of rural and urban labor markets, facilitated by rural financial market intermediation, especially on Java, has made economic growth pro-poor.

Investments in agricultural infrastructure have also had a major impact. When productivity-enhancing agricultural technology was available and profitable—from the late 1960s through the mid-1980s—growth could be “strongly” pro-poor. Much of the rural infrastructure was built using labor-intensive techniques. The jobs created were “self-targeted” to the poor because of the low wages paid. Thus investments in rural infrastructure were doubly pro-poor.

The financing for these projects came mostly from the Central Government, whose budget until the early 1980s depended very heavily on two sources of revenue: donor funding in the early years (especially from the World Bank), and oil revenues after the mid-1970s. The decade of the 1970's was the era of the most massive rural investments, and these provided the foundation for broadly-based rural development.

Important tradeoffs emerged between overall economic growth and growth in the incomes of the poor. Micro- and sectoral policies, often implemented in the name of poverty reduction or improved income distribution, caused economic growth to be slower than the macro policy environment would have permitted. Only the interventions in the agricultural sector have a claim to poverty reduction.

In other areas—minimum wage legislation and specific industry protection, for example—the dead-weight losses hurt the poor as well as economic growth. Trade protection for inputs into labor-intensive manufacturing—sugar, tinsplate, yarn and textiles, and leather, for example—slowed the development of small and medium enterprises. Tradeoffs might also have existed in public investments, as investments in infrastructure had a more immediate impact on the poor than investments in human capital, which were the long-run route out of poverty. Indonesia was unusual in being able to invest heavily in both dimensions—infrastructure and human capital—in the early stages of its development because of financial support from donors and then from oil revenues.

“Pro-poor” public expenditures and targeted subsidies to the poor have played a minor role in poverty reduction in Indonesia. Only the labor-intensive public works programs might claim to be large enough, targeted well enough to the poor, and productive enough in the creation of rural infrastructure, to have linked public expenditures for poverty reduction to pro-poor economic growth. The *direct* impact of public expenditures on poverty reduction has been very limited, both because of the limited sums and because of poor targeting.

During the Asian financial crisis, the targeted health subsidies, and to some extent, the school subsidies were more effective than the targeted rice subsidies. In relative terms, the poor benefited from access to publicly funded schools and health clinics, but there is little evidence to suggest that policies focused these investments specifically on the poor, either as families or regionally.

The political economy of pro-poor growth is complicated by the transition to democracy and the absence of effective institutions to insulate economic policy making from populist rhetoric. The country has been through massive upheavals since 1998, however, and has survived and even recovered at a modest pace. Sheer survival is grounds for hope, but effective leadership will be needed to re-establish rapid economic growth and a strong connection to the poor.

Chapter 1. Introduction and overview

There are three basic strategic approaches to reducing poverty. Indonesia, over its long history, has tried all three. Under President Sukarno, most attention was on *redistributive measures*, including efforts at a systematic land reform in 1960. After 1967, the focus shifted under the “New Order” regime of President Suharto to active implementation of *pro-poor growth* strategies because, in the famous words of one of the economic technocrats who came to power in the late 1960s, “there is nothing to re-distribute; we have to make the pie bigger.” Under the democratic governments in power since 1999, most of the effort to help the poor has been through *direct fiscal transfers* involving loosely targeted distribution of rice, school vouchers, and cards granting access to health facilities.

The political economy of dealing with poverty has been complex. Efforts by the Dutch during the “ethical policy” era in the early 20th century collapsed with the price of commodities in the 1920s. The ethical policy attempted to leave more income in the hands of native cultivators, but its success depended on high commodity prices in world markets. Sukarno’s nationalist populism generated political support but provided no economic foundation, and his era ended in hyperinflation and political turmoil. Suharto’s reversal of the political and economic priorities paid high dividends in poverty reduction, but his approach to political economy was inherently self-limiting without development of the political institutions needed to support a modern, open economy. His regime also ended in political turmoil. Recently, the political economy of poverty has become complicated by the need for Indonesia’s new democratic institutions to work out effective mechanisms for economic governance in the face of populist pressures to redress many of the abuses of the Suharto era. A historical perspective is essential to understanding this evolution of the political economy of poverty—especially to identify strategic approaches that worked and those that failed. This historical perspective also illuminates future challenges to strategic approaches and policy initiatives.

This paper argues that only the pro-poor growth strategy, implemented after 1967, has shown any capacity for sustained progress in reducing poverty. As noted, an important issue is to understand the political economy of that strategy, both in the Suharto era and in the future. Political scientists speculate on the nature of the political coalition assembled by Suharto to maintain and strengthen his hold on power (Liddle, 1991, 1996; MacIntyre, 2001, 2003) and the reasons why that coalition supported the pro-poor growth strategy that evolved very early on in the New Order regime. This coalition was clearly held together by fear of a communist resurgence from the countryside, but that concern does not explain why rural growth rather than physical repression was the operable strategy.

Most of the coalition supporting Suharto was, in fact, held together by the corrupt distribution of economic resources, often in the form of lucrative access to easily marketable commodities, such as oil or timber (i.e., the rents from natural resources). Because of its vast resource riches in the form of minerals, oil and gas, and timber, Indonesia had the potential to experience the “natural resource curse” in an acute manner. But precisely because there was an active concern for poverty, especially in rural areas, the government took steps in the late 1970s to avoid the worst macro economic manifestations of the “Dutch Disease” that normally accompanies exports of natural

resources. How it did so is another important component of the “pro-poor” story (Warr, 1984; Gelb and Associates, 1988).

The record will show that Indonesia is one of the few developing countries that *consciously* tried to design and implement a strategy of pro-poor growth over a sustained period of time—at least since the late 1960s. Although the terminology at the time did not talk about “pro-poor growth,” planners did seek to use economic growth to reach the poor, especially in rural areas, and this effort quickly became a key objective of the New Order government of President Suharto. As noted, the political economy behind this commitment has been the object of much speculation and analysis, but the results speak for themselves: rapid growth with rapidly falling poverty—from perhaps 2/3 of the population in 1967 to less than 1/8 of the population just before the Asian financial crisis. This event caused a severe setback to the progress against poverty.

The performance of most countries is influenced by the “neighborhood” in which they live, and Indonesia is no exception. East and Southeast Asia has been a “good” neighborhood since the mid-1970s because economic growth has been widespread and quite evenly distributed (see Figure 1). The figure presents long-run growth paths for per capita incomes on the horizontal axis and growth in per capita incomes for the bottom quintile of the income distribution—a readily comparable proxy for the poor—on the vertical axis. Over the long run, income distribution seems to be relatively stable, and the incomes of the poor keep pace with average incomes, at least in percentage terms.

There are important exceptions to this rule. China, for example, has experienced a sharp deterioration in its income distribution after the initial equalizing effects of profound reforms in the early 1980s. For Indonesia, however, the main story is the sharp reversal in overall growth rates after 1997 rather than similarly dramatic changes in income distribution. But focusing the analysis solely on growth would miss two important parts of the story. First, there have been short episodes when income distribution did change significantly (see Figure 2). But even when viewed from the perspective of the worst years of the past three decades—1996 to 2002--the Growth Incidence Curve (GIC) is remarkably pro-poor. There is a surprising “anti-rich” tail for the top ten percent of the income distribution, perhaps caused by the depth of the financial crisis and the lasting impact this had on the portfolios of the wealthy. But overall, even during these difficult years, the poor have done quite well in terms of growing real incomes (see Figure 3).

Second, the relatively stable long-run distributional outcome is arguably a result of conscious efforts by policymakers to correct for any tendencies of distribution to worsen significantly (Prawiro, 1998; Afiff, 2004). If so, the mechanisms that generate *stability* of income distribution are just as interesting for pro-poor growth strategies as would be mechanisms that lead to rapid changes in distribution.

To foreshadow the argument, Indonesia’s experience with pro-poor growth was very much the outgrowth from conscious policy attention to achieving precisely those results. The task was extraordinarily difficult, as the country started in 1967 from a wrecked economy, hyperinflation, an absence of effective political or legal institutions, and a hostile regional environment dominated by the war in Vietnam.

... 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 capital GDP rose more than fourfold, it is clear that the necessary conditions for successful economic development are not quite as demanding as often suggested" (Temple, 2001).

The weak starting conditions did significantly influence how the economic planners approached the task of linking growth to the poor. In retrospect, they designed a three-tiered strategy for pro-poor growth which linked sound macro economic policy to market activities that were facilitated by progressively lower transactions costs, which in turn were linked to household decisions about labor supply, agricultural production, and investment in the non-tradable economy (see Figure 4). The rate of poverty reduction driven by this strategy then depended on how fast progress was being made at both ends of Figure 4—the overall rate of growth in GDP, which was clearly a function of macro economic policy (and the external environment), and the extent to which poor households were connected to this growth.

That connection depended on the array of assets controlled by the poor: their labor, human capital, social capital, and other forms of capital, including access to credit. Those dimensions could also be influenced by appropriate government policies, especially in health and education. Thus the "road to pro-poor growth" started from desperately poor economic conditions, weak institutions, and a decade of political instability. It seemed that everything needed to be done at once. The key was to focus on re-starting and then sustaining rapid economic growth, empowering poor households to enter the market economy, and reducing the costs and risks of doing so by investments to lower transactions costs. If all this seems obvious now, it was not so at the time (World Bank, 1968, Thee, 2003; Prawiro, 1998). Perhaps more to the point, the issue is not "what to do," but "how to do it." The historical record provides important guidelines for implementing a pro-poor growth strategy.

If much can be accomplished from unpromising beginnings, collapse can come quickly and surprisingly. This introduction is not the place to rehearse all the reasons for the economic and political disintegration in 1998, or of the slow and obviously painful efforts by the country to pull itself back together again in the face of new challenges from separatism, terrorism, a "big bang" decentralization of political authority, and the rise of a highly competitive Chinese economy. Still, it is important to understand the *sustainability* of the pro-poor growth strategies pursued by the Suharto regime and whether they were inherently self-limiting. In this context, sustainability refers to political and economic payoffs from the strategies relative to political and economic costs of pursuing them. Understanding this *political economy* is crucial to making the historical lessons relevant to the Indonesia of today and to the broader development community.

The next four chapters build toward this understanding of the political economy of pro-poor growth in Indonesia. Chapter 2 provides a long, historical perspective on how strong links between growth and poverty reduction were established, partly because the rural institutions that make this link possible are deeply rooted in Indonesian history.

Chapter 3 then examines the modern growth record and its concomitant impact on poverty. The sectoral composition of growth receives special attention, as the strategy designed by Indonesia's economic planners was quite explicit in its use of the rural economy as the bridge between growth and the poor. Chapter 4 provides details to the conceptual framework that links overall economic growth, stimulated by good macro and trade policies, to increased capabilities of the poor (see Figure 4). Specific attention is given to how transactions costs in the market economy were reduced, and to the direct role of public expenditures in poverty reduction. Chapter 5 then addresses trade-offs between growth and poverty reduction, especially in the context of the numerous computable general equilibrium (CGE) models available for analyzing the Indonesian economy.

The final two chapters focus the discussion on governance issues as they impact both economic growth and poverty reduction. Chapter 6 links economic governance to political economy variables that have become especially important in the wake of the massive decentralization of political and fiscal authority that took place in 2002. Finally, Chapter 7 looks forward. The reader will note a bias for optimism in much of the discussion in this paper, a bias generated by the long historical perspective taken and the astonishing ability of the Indonesian society to sustain deep and multiple shocks and still move forward. That optimism is made explicit in Chapter 7 as the basis for recommendations to put before the reformist government of Susilo Bambang Yudhoyono, which took office on October 20, 2004.

Box 1

Jonathan Temple (2001) on Lessons from the Suharto era

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 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...

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...

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 capital 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 traveled, 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.

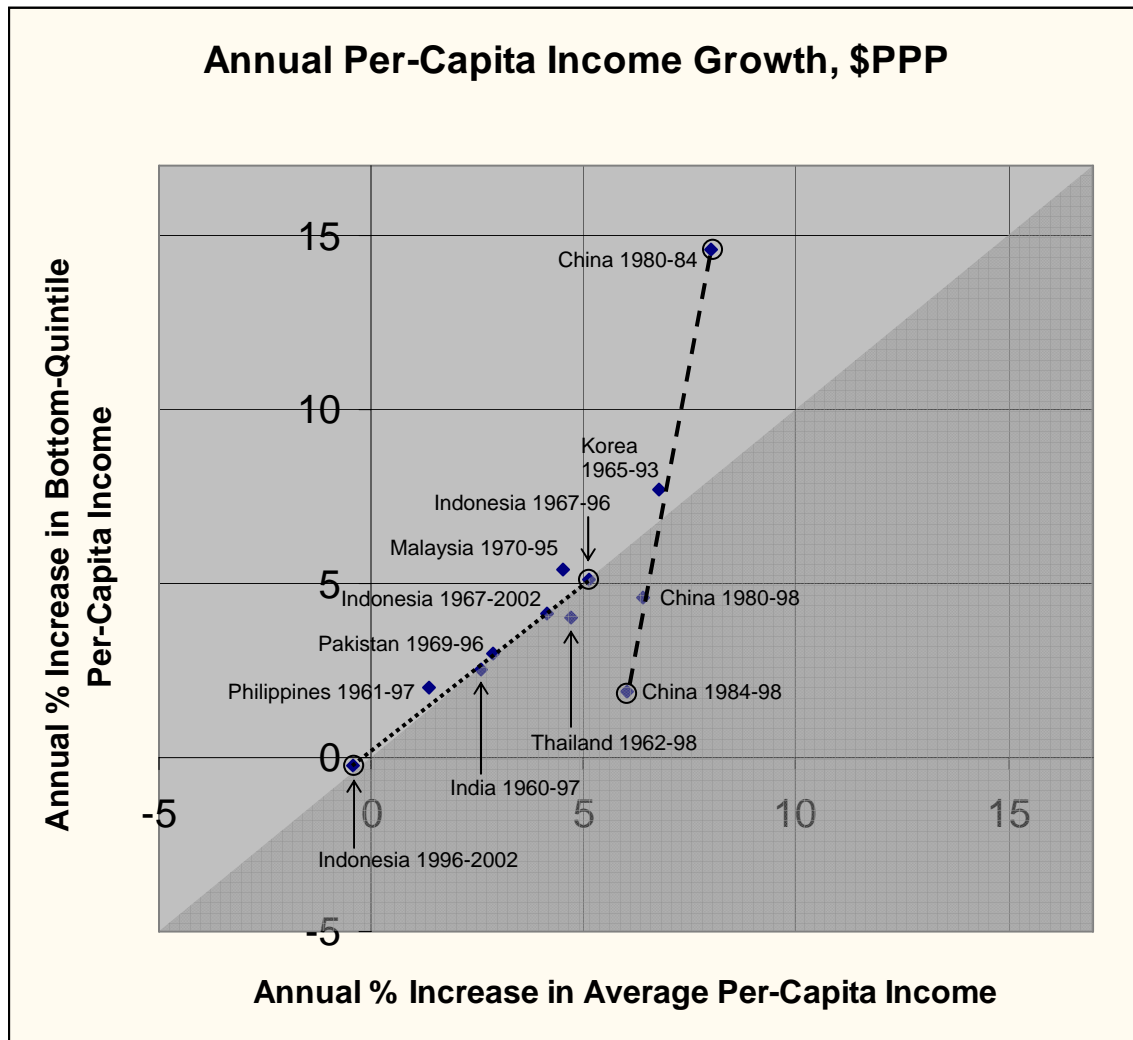


Figure 1. Income Growth for the Bottom Quintile Plotted Against Growth for Average Per Capita Incomes, for Eight Countries in Asia

SOURCE: Timmer (2004)

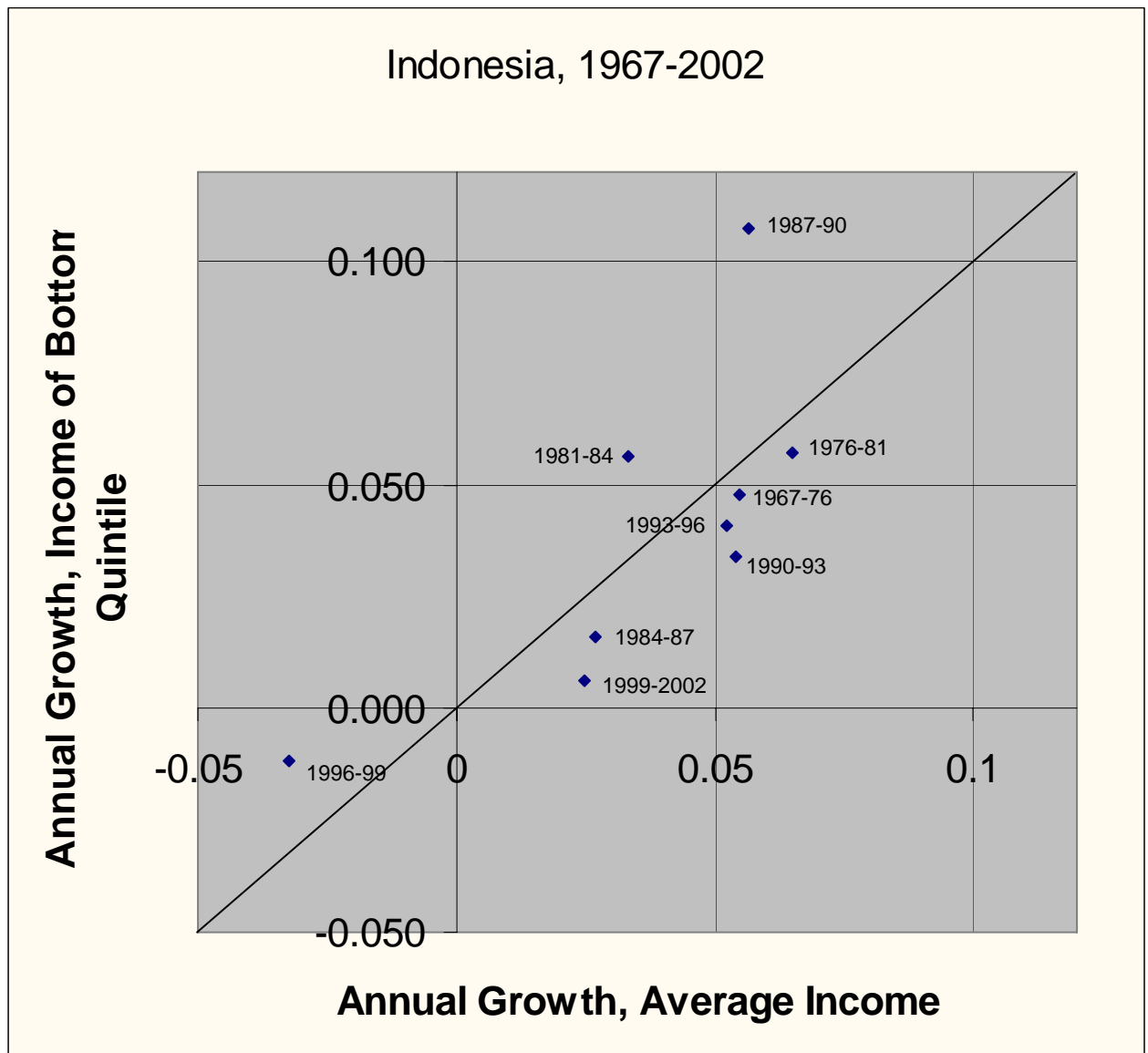
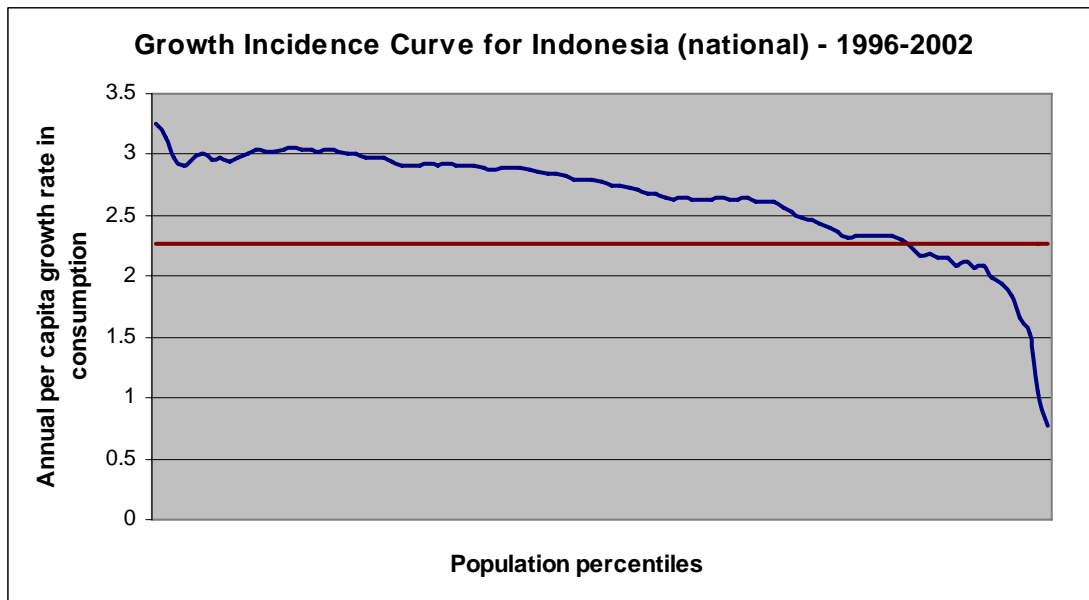


Figure 2. Income Growth for the Bottom Quintile Plotted Against Growth for Average Per Capita Incomes, for Separate Time Periods in Indonesia

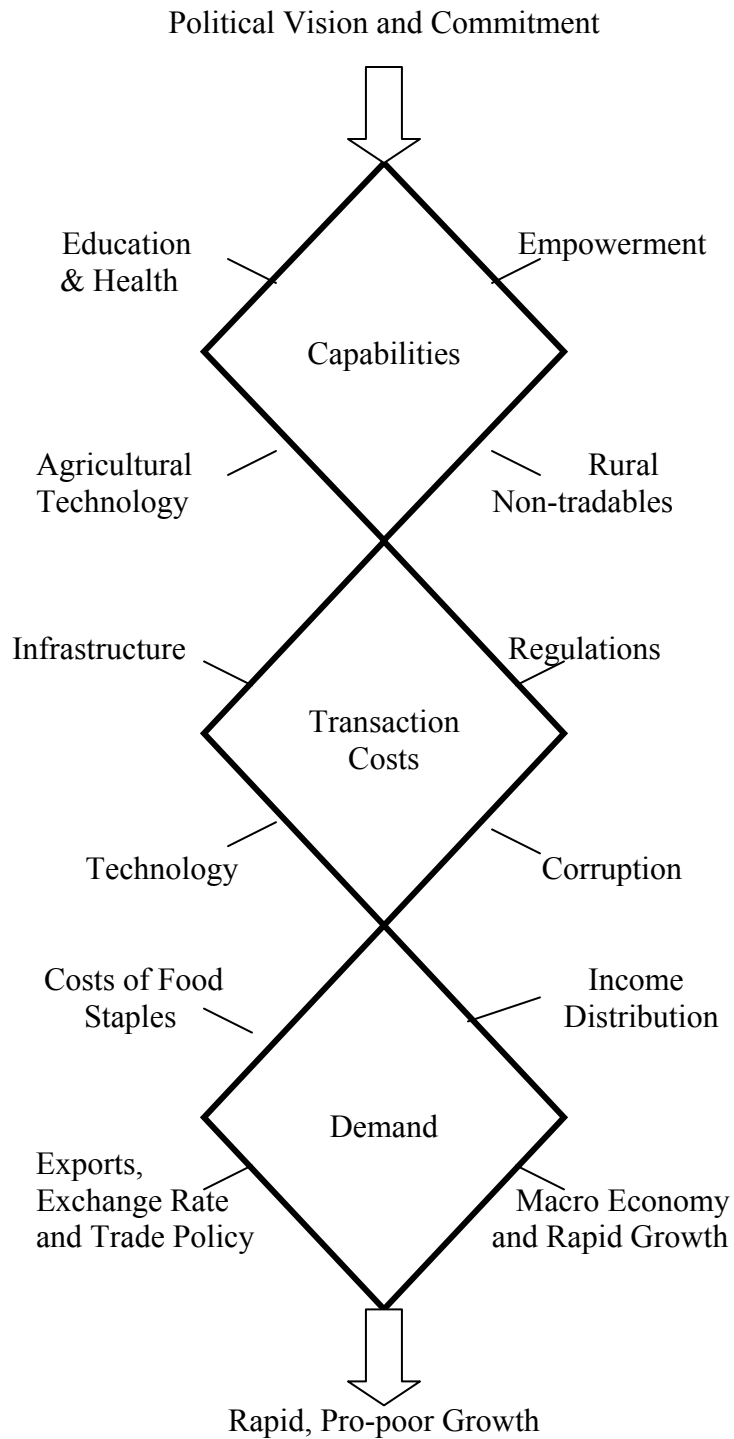
SOURCE: Timmer (2004)

Figure 3. Growth Incidence Curve for Indonesia 1996-2002



For further growth curves and calculations of pro-poor growth for sub-periods, see Annex 4. These growth curves and calculations were provided by Vivi Alatas, Jehan Arulpragasam, and Neil McCulloch in the Jakarta office of the World Bank.

Figure 4. The Road to Pro-Poor Growth



SOURCE: Timmer (2004)

Chapter 2. Historical context and the political-economy origins of the strong link between growth and poverty reduction

Indonesia is the original home of the dual economy. At least Boeke's experience during the Dutch colonial administration of Java led him to identify two types of economic agents—"rational" and "traditional"—with almost entirely separate spheres of economic activity (Boeke, 1946). Lewis (1954) built his Nobel-Prize-winning model of the dual economy with unlimited supplies of labor on the behavior of such agents. A historical perspective on Indonesia's development has much to offer.

The record shows astonishing variability in both the rate of economic growth and how well it connects to the poor. The three decades of Suharto's "New Order" regime far surpassed all that had come before in both dimensions, and the new democratic governments that were elected after Suharto's fall have yet to match that record. An "Index of Pro-Poor Growth" (IPPG) is constructed to put empirical flesh on these summary bones.

2.1. The historical setting for Indonesia's growth experience

Indonesia is an archipelago nation, with thousands of islands. The soils are mostly volcanic on Java, and they support intensive rice cultivation. The laterite soils on the Outer Islands are most productive in tree crops and natural rain forest. Indonesia's agriculture is dominated by wet and dry season rice cultivation and a variety of tree crops for export. There has been long-term experience with international trade, and Muslim traders established Islam peacefully by the 16th century.

Under Dutch colonial rule, which started in the 15th century and ended with Independence in 1945, the trade and tax regime favored Dutch extraction of income, except for a brief period at the beginning of the 20th century when Dutch public opinion supported a more developmental approach to the colony, known as the "ethical policy." However, this policy collapsed with world prices for export commodities in the 1920s, and Indonesia experienced especially poor economic management during the Great Depression. The Dutch forced the Netherlands East Indies to stay on the Gold Standard well after their regional competitors, including the Japanese, devalued. The colonial authorities did build a significant network of irrigation canals, roads, ports and shipping facilities, and railroads. There was, however, very little investment in education of the local population. Only 3.5 percent of the population was attending school of any kind in 1939 compared with 13.3 percent in 1995. The historical record suggests there was severe poverty in the mid-19th century, which fell gradually until the 1920s. Poverty increased rapidly until the end of World War II.

After Independence, the Sukarno government put "politics in command" after 1958. It severely neglected agriculture, adopted an "inward looking" development policy, and the result was economic and political chaos by the mid-1960s. Incomes fell and the hyperinflation in 1965/66 had an impact on virtually everyone. In 1968, Gunnar Myrdal's judgment in *Asian Drama* was that "no economist holds out any hope for Indonesia." The postwar recovery had helped reduce poverty, but the poverty rate increased rapidly as inflation soared and the economy collapsed. Probably 70 percent of the population

was “absolutely poor” by 1966. Average food energy intake was about 1,600 kilocalories per day. Hunger was widespread.

2.2 Pro-poor growth in historical perspective

Thanks to the painstaking historical research of Pierre van der Eng (1993a, 1993b, 2000, 2002), it is possible to construct a long-run indicator of how well the poor have fared since 1880. Van der Eng’s time series data from 1880 to 1990 can be divided into five main epochs: Dutch colonial exploitation of the Indonesian economy (1880-1905); the “ethical policy” era when efforts were made by the Dutch to improve living standards of native Indonesians (1905-1925); the tumultuous period during the Great Depression, Pacific War, and fight for Independence (1925-1950); the Sukarno era (1950-1965), whose “guided economy” after 1958 created economic turmoil; and President Suharto’s “New Order” regime in the 1965-90 period, which is the main focus of this paper. The original van der Eng data end in 1990. In view of the growing consensus in the development profession that long-run institutional development is the key to sustained economic growth and structural transformation, this historical perspective is essential to understanding the starting point for development efforts in the modern era, as well as the path dependency of institutional evolution (North, 1990).

Three sets of calculations are made for each epoch (see Table 1). The first column in Table 1 shows the trend growth rate of incomes per capita (YPC), as estimated from a semi-logarithmic time trend for the respective time period. These growth rates vary widely. There was a sharp deterioration over the quarter century of economic chaos from 1925 to 1950, which contrasts equally sharply with strong growth in both the “ethical policy” era under the Dutch and, strikingly, in the Suharto era. Over the entire time period for which van der Eng reports these data, per capita incomes rose 0.89 percent per year.

The second column in Table 1 shows the similarly estimated time trend for intake of food energy, as measured from food balance sheet data on kilocalories (Kcal) consumed per capita per day, on average for each year from 1880 to 1990. During two epochs this time trend was negative, which indicates a decline in nutritional status on average for the whole society and the strong likelihood of significant increases in hunger among the poor. During such episodes, poverty was rising. A sharply positive trend in food energy intake, however, as during the “ethical policy” era and the early Suharto era, suggests that income growth was reaching the poor and improving their access to food. Over the entire time period, the trend in food energy intake was just 0.2 percent per year.

The relationship between the variables underlying these two trends is also reported in Table 1. The third column reports the average income elasticity of demand for food energy (Kcal), which is estimated from the annual data for each epoch. Importantly, the pattern of coefficients is similar for the income elasticities and the rate of change in food energy intake. The logic connecting the two is straightforward. Engel’s Law suggests that the income elasticity of demand for food (of which energy is an important component for the poor) is a declining function of income level. When income growth includes the poor, their higher income elasticities for food energy raise the income elasticity observed on average. It is thus possible to infer what is happening to the poor

during long-run periods of economic growth (or decline) by analyzing these changes in food energy intake (Timmer, 1996b).

This approach works, of course, only for those societies in which the poor wish to increase their food energy intake when their incomes increase--that is, when they are still on the rising part of the Engel Curve. This is the case for Indonesia. Even in 2002 when the last SUSENAS results were reported, at least the bottom half of the income distribution had significantly positive Engel elasticities for food energy. This half of the population subsists on less than \$2 per day (World Bank, 2003b).

Finally, Table 1 carries this inference process to its logical conclusion, by constructing a crude "index of pro-poor growth." The scale is somewhat arbitrary, but it is based on an analytical relationship between the overall incidence of poverty and the observed, average income elasticity of demand (see the derivation and proof in Annex 1). The income elasticity of food energy for the entire period from 1880 to 1990, estimated to be 0.313, is used as the long-run base, scaled to one. It is multiplied times the long-run growth rate in per capita incomes, 0.89 percent per year, to generate the long-run average index of pro-poor growth (IPPG) of 0.89. The income elasticity for each separate epoch is then scaled relative to the long-run average, and multiplied times the growth rate in per capita incomes, to generate the IPPG for each epoch. Note that *the IPPG incorporates both the growth and the distributional dimensions of pro-poor growth*, and this index is thus a country-specific version of Equation 1 in "Concept Paper on Operationalizing Pro-Poor Growth" (World Bank, 2004).

As shown in Table 1, the IPPG has varied dramatically over time, from -2.53 during the 1925-1950 epoch, to 4.57 during the "ethical policy" era, 1905-1925. The index is surprisingly high during the Sukarno era, when economic policy is widely regarded to have been a disaster. But a combination of a modest recovery from the quarter century of depression and wars, with average per capita incomes rising 1.5 percent per year, and a large average income elasticity for food energy, suggest that what growth there was actually reached the poor. This conclusion is likely to be controversial because it contradicts the scattered data on changes in real wages during this period. These data, however, are subject to large margins of error because of the difficulty of finding suitable deflators in periods of hyperinflation (Papanek, 2004). This difficulty will also arise in evaluating the continuing impact on poverty of the financial crisis in 1997/98.

The strongest pro-poor growth has been since 1965. The data analyzed in Table 1 carry the story to 1990 (the *starting point* for many of the country studies in this project), which is well before the Asian financial crisis in 1997/98. The quarter century from 1965 to 1990 has an IPPG of 6.56, which is more than seven times the long-run average and nearly half again as large as during the next best epoch, from 1905 to 1925. Clearly, something quite outside earlier historical experience was going on during the first two and a half decades of the Suharto era. What made this era so pro-poor?

Table 1. Long-run Patterns of Pro-Poor Growth in Indonesia¹

Time Period	Growth Rates (%)		Income Elasticity for KCAL	Index of Pro-Poor Growth (IPPG) ²
	YPC	KCAL		
Dutch Colonial Exploitation				
1880-1905	0.33	-0.34	0.051 0.165	0.05
“Ethical Policy” Under the Dutch				
1905-1925	1.63	1.39	0.878 2.805	4.57
Depression, the Pacific War, and the Fight for Independence				
1925-1950	-2.42	-0.78	0.333 1.064	-2.57
The Sukarno Era, including the “Guided Economy” Period				
1950-1965	1.46	0.68	0.509 1.626	2.37
The “New Order” Regime of Suharto				
1965-1990	3.45	2.10	0.595 1.901	6.56
The Long-run Averages, 1880-1990				
1880-1990	0.89	0.22	0.313 1.000	0.89

¹ Details of the regressions are shown in Annex 1, along with a full explanation of the analytical relationship between the overall incidence of poverty and the average income elasticity of demand for food energy.

² The Index of Pro-Poor Growth (IPPG) is calculated as the product of the growth rate in per capita income times the “standardized” income elasticity of demand for food energy (KCAL), where the base income elasticity is the value for the entire time period from 1880 to 1990 (0.313). Growth rates are calculated as least squares time trends of logarithmic values of incomes per capita (YPC) and average daily per capita food energy intake per capita (KCAL). The “top” value for the income elasticity of demand for food energy for each epoch is estimated as a constant elasticity value from a double logarithmic function. The “bottom” value re-scales this estimated value, with the 1880-1990 average of 0.313 equal to 1.000. As an example, the IPPG value of 6.56 for the Suharto era from 1965 to 1990 results from the OLS-estimated rate of growth in per capita income of 3.45 percent, times the “standardized” income elasticity of 1.901. This standardized value is computed by scaling up the OLS-estimated income elasticity for the period of 0.595 from the historical base income elasticity of 0.313. Thus $0.595/0.313 = 1.901$, and $3.45 \times 1.901 = 6.56$.

2.3 The “New Order” government of Suharto³

In the early years of the Suharto government, pre-OPEC (1966-1973), there was a need to establish stability and consolidate political power. In this process, there was an important role for the food logistics agency (Bulog) in stabilizing rice prices, and for donor assistance, especially the provision of food aid. Major investments were made to stimulate agriculture: irrigation rehabilitation, the introduction of high-yielding varieties of rice from the International Rice Research Institute (IRRI), fertilizer imports and distribution, and the BIMAS program of extension and farm credits. Because median farm size was less than a hectare, rice intensification had widespread benefits, although larger farmers (those who cultivate about one hectare of land) benefited the most in the early years (Afiff and Timmer, 1971).

Macro economic stability was achieved through a balanced budget and donor-provided foreign borrowing, with all proceeds to the Development Budget (World Bank, 1968; Hill, 1996). Poverty fell rapidly as the economy stabilized and grew 5 to 6 percent per year in per capita terms, and as food production and overall food supplies rose sharply. Still, absolute poverty was thought to be about 60 percent in 1970. The first official poverty estimates, based on the 1976 SUSENAS, indicate a national poverty rate of about 40 percent.

Even for an oil exporter, coping with high oil prices (1973-1983) is not the luxury it might seem. To be sure, there was rapid expansion of the economy as the role of the state expanded, but much of this expansion was in inefficient public-sector investments. Accompanying the real appreciation of the rupiah was declining profitability of tradable goods production, especially in agriculture (Warr, 1984). During the mid-1970s there was a growing sense of income inequalities and severe poverty in rural areas, although the regional and commodity dimensions of the poverty masked its economic roots.

Income distribution deteriorated sharply between 1976 and 1978, confirming the growing anxieties (see Table 2). The technocrats took a highly original strategic approach to what was then diagnosed as “Dutch Disease,” with a devaluation in November, 1978, that came as a big surprise to financial markets. After this, tradable goods production rapidly recovered, especially in agriculture. Poverty rates after 1978 fell, driven by a significant recovery in the share of income garnered by the bottom 40 percent of the distribution.

By the early 1980s the oil boom was over. It became necessary to restructure the economy for a world of low commodity prices in world markets, which is the basic story from 1983 to 1993. Agriculture continued to grow, and rice prices were stable (this stability amounted to protection against the low prices in world markets). The government pursued aggressive exchange rate protection via further devaluations in 1983

³ An excellent summary of experience with economic growth from the Suharto era to the present is in Bert Hofman, Ella Rodrick-Jones, and Thee Kian Wee, “Indonesia: Rapid Growth, Weak Institutions,” prepared for the World Bank Conference on “Scaling Up Poverty Reduction,” Shanghai, China, May 26-28, 2004. For an “insider’s” view of how the technocrats consciously managed both the growth process and its link to poverty reduction, see Saleh Afiff, “Scaling Up Poverty Reduction in Indonesia,” May 2004. This paper was presented as the Indonesia paper at the same conference. An assessment of the impact on the poor of economic policies under Sukarno, Suharto, and the governments that followed the New Order regime is in Papanek (2004).

and 1986 (Hill, 1996; Thorbecke, 1995)). Massive investments in rural infrastructure from earlier oil revenues began to pay off in higher production and lower transactions costs for marketed goods (and improved labor mobility). Industrial output surged in the latter part of the period, led by labor-intensive manufactured exports.⁴

The manufacturing sector contributed 29.2 percent of the growth in GDP between 1987 and 1992, a radical increase from the 10.0 percent contributed during the recovery from 1967 to 1973 (Hill, 1996). Large scale and sustained economic deregulation led to better incentives for exports, and these were matched by incentives for foreign direct investment (FDI). Manufactured exports responded even faster than policy makers had hoped and contributed almost *half* of all exports by 1992, up dramatically from the 3 percent in 1980. The fortuitous “push” in FDI from Japan and the “pull” from the attractive climate in Indonesia thus allowed manufactured exports to play a significant role in employment generation by the end of the 1980s.

There was also a boom in the non-tradable economy. National income accounts, however, are not kept according to this distinction--hence the data are more impressionistic. Nonetheless, just as the export economy was booming in the late 1980s and early 1990s, and overall GDP was growing by nearly 7 percent per year, roughly half of that growth was made up of non-tradable goods and services. According to the Mellor model of poverty reduction (Mellor, 2000), production of non-tradable goods and services, especially in rural areas, provides the economic link between higher incomes from both agriculture and manufacturing wages, and serves to pull people out of underemployment in rural areas--and out of poverty.

The Mellor model stresses the role of producing *rural non-tradables* that are locally consumed—processed foods, construction, trade, and small-scale manufactures—as the “ladder” for underemployed workers in agriculture to begin the climb to modern jobs at higher wages. In most poor, rural economies this non-tradable sector is demand-constrained. That is, expanding it, and the number of jobs it creates, does not depend on better access to capital or to management skills, but on greater purchasing power among local consumers. Thus Mellor emphasizes rising profitability of agriculture—through higher productivity, not higher prices. Higher prices for agricultural output, especially food, do not contribute much to added demand for non-tradable goods and services because the higher prices choke off demand for non-food items except from farmers with significant surpluses to sell. The growing wages of workers in a rapidly expanding manufacturing export sector also contribute to higher demand for the output from the non-tradables sector.

⁴ See Annex 2A for the time series data from 1960 to 2002 that record these and other key macro economic variables. This table was assembled and reported by Papanek, 2004.

Table 2
Income Distribution and the Share of the Poor in National Income, 1964/5-2002

Year	Gini			Percentage of National Income shared by Poorest 40%		
	Urban	Rural	National	Urban	Rural	National
1964-65	0.34	0.35	0.35			
1970	0.33	0.34	0.35	19.5	19.6	18.6
1975						
1976	0.35	0.31	0.34	19.6	21.2	19.6
1977						
1978	0.38	0.34	0.38	17.4	19.9	18.1
1979						
1980	0.36	0.31	0.34	18.7	21.2	19.6
1981	0.33	0.29	0.33	20.8	22.8	20.4
1982						
1983						
1984	0.32	0.28	0.33	20.6	22.3	20.8
1985						
1986						
1987	0.32	0.26	0.32	21.5	24.3	20.9
1988						
1989						
1990	0.34	0.25	0.32	19.7	24.4	21.3
1991						
1992						
1993	0.33	0.26	0.34	20.5	25.1	20.3
1994						
1995						
1996	0.36	0.27	0.36	19.0	23.2	20.3
1997						
1998						
1999	0.32	0.24	0.31	21.5	25.0	21.7
2000						
2001						
2002	0.33	0.25	0.33	20.3	25.8	20.9

Source: BPS, 1992 for 1978-90; 1996-2002: BPS 2002a; 1993 unpublished from BPS; 1969/70 from Asra, also from BPS. Assembled by Papanek (2004).

This Mellor model is basically a three-sector version of the standard Lewis model of the dual economy. In Mellor's version there are two "commercial" sectors—industry and agriculture. The latter has come to use modern technology and is market-driven, a departure from the traditional rural economy envisioned by Lewis (1954). Relatively separate from the commercial sectors is the "non-tradable" sector, which is informal and mostly rural. The two commercial sectors are the "engines of growth" because of their potential for rapid productivity gains. Connecting them to the "non-tradable" sector, however, is the key to a high "elasticity of connection" between overall economic growth and rapid poverty reduction. This is the sector where most of the poor make a living (Timmer, 1997, 2002). Unless demand from rising incomes in the commercial sectors spills over to this non-tradables sector, the poor tend to be left out of the growth process.

The combined boom in agriculture, manufacturing, and non-tradables meant the period from the late 1970s to the mid-1990s is one of the most "pro-poor growth" episodes in modern economic history. This result is a surprise to many. The extensive economic restructuring that took place in the 1980s was expected to create widespread unemployment and lead to lower wages for unskilled labor.⁵ Instead, agricultural growth continued, labor-intensive exports surged, and poverty continued to decline throughout the period of restructuring (Ravallion and Huppi, 1991).⁶ The regional comparison of the Indonesian experience for the entire period from 1967 to 1996, presented in Figure 1, shows just how remarkable this overall growth record was.

Corruption and increasing distortions in resource allocation from 1993 to 1998 followed the interests of the Suharto family, especially the children (and grandchildren!). These interests distorted trade policy and public-sector investments, and had visible effects on competitiveness, which were partly masked by the inflow of FDI (Cole and Slade, 1996). As the economy boomed, deregulation lost steam, first in the Bulog commodities, then more broadly. The performance of the overall economy rapidly deteriorated.⁷ Poverty levels in 1996, the last SUSENAS report before the crisis, dropped to their lowest levels ever. Absolute poverty, measured in a comparable fashion to the poverty statistics reported first in 1976, fell below 12 percent.

The three decades of superb economic results were over. The Asian financial crisis hit in late 1997. Investors started to lose confidence in the ability of the Suharto government to

⁵ See the World Bank report of May 5, 1987, *Indonesia: Strategy for Economic Recovery*. In particular, the report notes that "...Indonesia's growth rate continues to be extremely low in relation to past performance and barely above the rate of population growth. With the added loss of purchasing power from lower oil prices, the impact on personal incomes and employment was severe." (page vii)

⁶ It should be noted that the rice sector in particular was protected from the worst pressures of low prices in world markets, and the substantial devaluations in 1983 and 1986 provided enhanced profitability for the rest of the tradable sector.

⁷ The full story of how the Suharto regime came apart has yet to be told, but Stern (2003) provides many details seen from the perspective of a long-term advisor to the Ministry of Finance. The regular "Survey of Recent Developments" published in each issue of the *Bulletin of Indonesian Economic Studies* also provide a blow-by-blow account. Booth's (2002b) comparison of the growth collapses in Indonesia in the 1930s and 1990s provides important historical insights. Finally, despite the widespread surprise at the sudden collapse of the Suharto regime, one of the leading political scientists who specializes in Indonesian affairs, Andrew MacIntyre, predicted the collapse several months before it happened (MacIntyre, 1998).

cope, especially after the new cabinet was named in April, 1998, packed with Suharto cronies and relatives. The crisis caused a massive depreciation of the rupiah, which eventually led to chaos in the domestic rice market (Schydrowsky, 2000). Spiraling rice prices late in 1998 led to huge increases in poverty, which is estimated to have reached over 30 percent of the population by the peak in late 1998 or early 1999. This was a dismal period for economic growth and poverty reduction (see Figures 1 and 2).

2.3 The “Democratic Era” (1999 -)

Indonesia successfully elected a democratic legislature in 1999, which in turn selected a new president. Representative democracy brought along a new political economy of economic policy. Populist voices ostensibly spoke on behalf of the poor. An important test is underway to determine whether Indonesia’s pro-poor growth experience under a highly centralized and politically dominant regime put down sustainable, even irreversible, roots, or whether the very foundations of the strategy will come undone under political challenge.

Economic history has many examples of reversals of fortune, from the collapse of early civilizations to more modern experiences in Argentina and Zimbabwe. In the short run, politics is always the master of economics, but in the long run, good economic governance is essential for growth. Indonesia has experienced its own reversals of fortune over the centuries, as Table 1 documented, but the current challenge is unprecedented in the memories of most voters. It is already clear that the transition from the autocratic rule of Suharto, an era of economic policy designed and administered by an insulated group of skilled technocrats, to a politically responsive system is going to be difficult for both economic growth and its connection to the poor. There are few public institutions in place to protect economic policy from polemicists.

Part of the donor effort to help Indonesia cope with corruption in the national government was to promote decentralization of political power (World Bank, 2001). Domestic reform groups supported this agenda and responsibility for schools and most local services devolved to *kabupaten* (“county”) levels in 2002 in a “big bang” political decentralization. Not surprisingly, given the speed, this transfer was made without adequate funding, policy guidelines, or training of local officials (Alm, Aten, and Bahl, 2001; Aspinnall and Fealy, 2003). Inevitably perhaps, corruption at the local level has become rampant. Local “trade” policies are being used to enforce commodity taxes and trade barriers, especially for rice. Partly because of the resulting “compartmentalism” in the economy, and the higher transactions costs for most economic activities caused by these activities, donor interest and activity have focused on improved local governance. The stakes are high. On-going research by SMERU, the most influential local research institute focusing on poverty issues, indicates that measures of the “quality” of local governance are closely associated with the rate of poverty reduction between 1999 and 2002 (Sumarto, Suryahadi, and Arifianto, 2004).

Indonesia has not recovered fully from the Asian financial crisis, at least in terms of average per capita incomes and health of the modern industrial and service economy. Recovery and restructuring are again the main items on the policy agenda. So far, growth has been led by domestic demand, as net foreign investment remains negative, leading to

deep concerns about the “investment climate.”⁸ The country is clearly paying the price for decades of forgone institution building, especially in the arenas of property rights and rule of law. The new democracy is finding it difficult to make rapid progress in these arenas, although more has been accomplished than many observers credit (MacIntyre, 2003; Ramage, 2004).

On average, the rural economy has remained quite healthy after the significant depreciation of the rupiah, especially on the Outer Islands where most export crops are produced. There is a significant debate over the recovery of real wages. Published statistics indicate that real wages in rural Java remain below their pre-crisis levels. However, the rapid inflation during 1998 and 1999 has made it difficult to find appropriate deflators to calculate real wages. Intensive research into the details of the rural price deflator series used by the Central Statistical Board has shown that the index formula used generates an incorrect asymmetry in how rising and falling prices are handled. A significant upward bias is evident in the resulting price index (Molyneaux and Rosner, 2004b).

This research has settled a long-standing debate over the apparent paradox with respect to poverty levels. SUSENAS data show emphatically that poverty levels have returned to their pre-crisis lows, or better, whereas the uncorrected real wage data had suggested that major pockets of poverty had not recovered. A new poverty measure reflecting the quality of the diet—the starchy staple ratio (SSR)—is used in the next chapter to confirm that poverty levels are below their pre-crisis levels. The SSR is closely related to the Engel Curve, which provided the rationale for the historical analysis presented in Section 2.2, and which was used to construct the Index of Pro-Poor Growth (IPPG).

⁸ This is a key theme in the World Bank’s recent brief for the Consultative Group on Indonesia, *Indonesia: Beyond Macro Stability*, November, 2003 (World Bank, 2003a).

Chapter 3. Why economic growth in Indonesia has been so pro-poor

From a historical perspective, there are two main puzzles about the pro-poor growth record in Indonesia after the late 1960s. First, what measures turned around the *overall* rate of growth after the Suharto regime took power? Second, in view of the initial equitable distribution of income (almost inevitable because nearly everyone was desperately poor), how did policy makers ensure that the poor were connected to this growth and that income distribution did not deteriorate significantly?

Agriculture specifically, and the rural economy more broadly, played a key role in answering both questions. The availability of new seed technology from IRRI sharply raised the potential productivity of Indonesia's millions of small-scale rice farmers. The initial spurt of growth after 1967 was led by agriculture. This growth was especially pro-poor because food supplies increased significantly and with income growth widely distributed, food intake also rose sharply, raising millions above the poverty line in just a few years. The rural economy continued to play an equalizing role even when it was no longer the main source of growth, and massive investments in rural infrastructure both absorbed rural labor and stimulated further productivity gains. The key to rapid, pro-poor growth was constant attention to keeping labor-intensive activities profitable.

3.1 The growth drivers and how they have changed over time

Economic growth since the mid-1960s can be traced to three major sources: economic recovery and rehabilitation of the existing capital stock and infrastructure; rapid growth in agricultural productivity because of new technology and massive new investments in rural infrastructure; and, eventually, the emergence of a dominant manufacturing sector, stimulated by foreign direct investment and exports.⁹

As is documented in Manning (1998), all three sources of growth drew on the abundance of unskilled labor in Indonesia. A high labor intensity of output, on average and at the margin, characterized the most pro-poor episodes of Indonesia's growth. When labor intensity slipped, and the capital-output ratio rose, poverty reduction slowed dramatically. This was the case in the mid-1970s, during the oil boom. But from the late 1960s to the early 1990s, the "secret" of Indonesia's pro-poor growth was the labor intensity of its generally rapid growth. In the 25 years between 1967 and 1992, Indonesia's population grew 2.1 percent per year, total GDP (in real rupiahs) grew by 6.7 percent per year, and employment grew by 3.0 percent per year. As best the data can say, poverty rates fell from roughly two-thirds of the population to less than an eighth.

Since the early 1990s, and especially since the crisis in 1998, the story has been quite different (Islam, 2002). Statistics providing details of Indonesia's recent economic growth experience are in Annex 2. The main trends are highlighted here. From 1990 to 1997, overall GDP continued to grow rapidly, by 7.0 percent per year, but the Gini coefficient increased from 0.32 in 1990 to 0.36 in 1996. The crisis in 1998 caused GDP

⁹ The best analysis of economic growth during the Suharto era is in Hill (2000). The Hofman, et al. paper (2004) contains details of institutional development, and failures, over the same period. Because of the size of its lending program in Indonesia, the World Bank has been a close observer of, and participant in, economic policy making since 1968. The recent Indonesian Country Assistance Strategy (CAS) paper (World Bank, 2003b) captures this involvement nicely.

to fall by over 13 percent, and growth has averaged less than 4 percent per year in the five years since then.

One of the key stories of the crisis is the reversal of long-run structural trends in the Indonesian economy. From 1990 to 1997, employment in the agriculture, forestry and fisheries sector declined by 2.3 percent per year, reflecting rapid growth during that period and a successful structural transformation in both the economy and labor force. But employment in agriculture surged 13.3 percent between 1997 and 1998, as many workers in the urban economy returned to their rural families and sought productive employment, even at low wages or just shared meals and housing. Thus the crisis was not one of massive unemployment, despite the closure of much of the formal banking and industrial sectors, but of falling wages and real incomes. The rural economy was the main safety net for millions of workers previously employed in the urban economy. Without this rural resilience, the impact of the crisis on poverty would have been much deeper.

The second striking trend after the crisis is the growing divergence between the formal and informal economies (Islam, 2002). Since minimum wage legislation had minimal impact during the Suharto regime, and mobility of labor was high geographically and across sectors, the formal and informal labor markets had been reasonably well integrated (Mason and Baptist, 1996; Agrawal, 1995). After the crisis, and in the face of aggressive labor activity and responses from newly-democratic regional governments, increases in the minimum wage have led to a substantial divergence between trends in the formal and informal economy (see Figure 2.5 in Annex 2b).¹⁰ Virtually all of the job growth since 1997, accordingly, has been in the informal sector (Aaron, et al., 2004; Manning, 2000). As Table A2.5 shows, employment growth in the formal sector has been *negative* since 2000.

Finally, there has been a striking change since 1990 in the composition of manufactured exports according to factor use (see Annex Table 2.7). Natural resource intensive exports, such as wood and cork products, have declined from a third to a tenth of manufactured exports. Labor-intensive exports have also declined as a share, but their total value has increased impressively, from \$5 billion in 1990 to over \$11 billion in 2002. There have also been substantial increases in human-capital intensive and technology intensive exports. Exports of telecommunications and electrical machinery showed especially large increases. These export areas are directly competitive with China's growing capacity. Further growth will require serious attention to reducing costs and improving productivity, and both tasks have proven difficult historically.

Total factory productivity growth has been rapid in agriculture, but much slower in industry and services (see Annex 3). Thus much of Indonesia's economic growth since the mid-1960s has reflected rapid factor accumulation, including human capital. Only during major growth "spurts" did TFP grow significantly for the whole economy. The two major reasons for slow TFP growth have been (1) surges in oil revenues, which permitted inefficient, capital-intensive, public-sector investments and encouraged "nationalist" calls for protection of important industries, and (2) growth of "crony

¹⁰ The World Bank (2003a) report to the Consultative Group on Indonesia (CGI) includes a table on regional minimum wages for the first time.

capitalism” in the 1990s (Hill, 2000; Cole and Slade, 1998). Indonesia has long been known as a “high cost” economy because of endemic corruption, heavy bureaucratic regulations, and the real exchange rate effects of being a large exporter of “point-specific” natural resources that require relatively little labor to exploit (World Bank, 2003b). The effect of slow TFP growth also shows in the poverty record through a combination of slower growth and reduced connection of the poor to that growth, an effect discussed below.

3.2 Poverty reduction has been dramatic, and so was the increase in 1998-99

Various poverty measures have been used in the Indonesian context (see Annex 4). Because there has been relatively little distributional change over the past 30 years, and perhaps for a decade or more before that, the various poverty measures tell more or less the same story. Notably, Indonesia has been the “proving ground” for much of the early methodological work on poverty measurement and its disaggregation geographically (Ravallion and Huppi, 1991; Freidman, 2002).

Poverty Measurement

The Growth Incidence Curves and measures of pro-poor growth have been calculated according to the guidelines for this project (see Alatas, Arulpragasam, and McCulloch, forthcoming). Earlier calculations of changes in the headcount index [P(0)], the average poverty gap [P(1)] and the severity of poverty [P(2)], show that poverty reduction has been at least as fast for the more severe measures of poverty as for the headcount index (Sumarto and Suryahadi, 2003). But many people exist just above the poverty line, and more than half the population earns less than \$2 per day.

Explaining the Poverty Elasticity of Economic Growth

In addition to developing the methodology of poverty measurement, early analysis also focused on *sources* of poverty reduction. The work by Ravallion and colleagues provided the first concrete evidence of the dramatic role played by the rural economy in this process (Ravallion and Huppi, 1991). This work was part of a broader engagement by the World Bank on Indonesian poverty issues, which started in the mid-1980s. The 1990 World Bank report, *Indonesia: Strategy for a Sustained Reduction in Poverty*, was especially influential in establishing research protocols and policy attention to the difficulties in measuring poverty.¹¹

The rate of growth of incomes of the poor using the Indonesian poverty definition, and hence the rate of poverty reduction, shows variance over the time periods, but growth in incomes of the poor is always positive when aggregate growth is positive. The high

¹¹ The 1990 report was prematurely pessimistic about prospects for further rapid reductions in poverty, noting the diminishing role of agriculture and the difficulties in restructuring the Indonesian economy during the 1980s in the face of low commodity prices. It did not foresee the dramatic impact that labor-intensive manufactured exports would have in the 1990s on the level of real wages throughout the economy. However, many of the concerns in the 1990 report have resurfaced for the post-Millennium Indonesian economy.

“elasticity of connection” of the poor to economic growth also works in reverse. The impact on the poor of the financial crisis was devastating. At the same time as the onset of the financial crisis, Indonesia experienced its worst drought in several decades. Both of these events were followed by the political crisis that resulted in Suharto’s resignation. The impact on poverty of these events was largely mediated by skyrocketing rice prices in the second half of 1998. But the high rice prices, and the political fallout from them, were caused by the loss of faith in the rupiah and its collapse earlier in the year (Schydowsky, 2000). In combination, the loss in incomes and changes in rice prices had a huge impact on the rate of poverty.

The impact of rice prices on short-run poverty levels is dramatic, as might be expected for a commodity that still makes up half the average Indonesian’s food energy intake (see Table 3). For each of nine growth episodes from 1967 to 2002 (where there are reasonably comparable SUSENAS data for each episode), the growth elasticity of poverty (GEP) is calculated as the annual percentage change in the headcount poverty index relative to the annual change in real per capita incomes. The simple average of the absolute values of GEP for the nine periods is 1.75, well above the East Asia and Pacific average of 1.00 reported by Besley and Burgess (2003), and repeated in the India country study for this project (Besley, Burgess, and Esteve-Volart, 2004). By this measure, Indonesia’s post-1967 growth record has been especially pro-poor (Kraay, 2004).

There is also a great deal of variance in the GEP, however, as it ranges from a low of 0.81 in the 1987-90 period, to a high of 3.29 from 1999 to 2002. Much of this variance is explained by changes in domestic rice prices during each growth episode, as is shown in Table 3. A simple regression that explains GEP as a function of an intercept term (1.57) and changes in the real price of rice (coefficient of -0.21, with a *t*-statistic of 5.9), explains over 80 percent of the variance in GEP between 1967 and 2002 (see Equation 1 in Table 3). Even dropping the observation for 1996 to 1999, during the worst of the financial crisis, leaves the regression explaining over 40 percent of the (much reduced) variance.

Alternatively, changes in per capita incomes (DPCI) and in real rice prices can both be used to explain changes in the poverty index (DPI) directly, as is shown in Equation 2. Equations 1 and 2 tell somewhat different stories. In Equation 1, the GEP is constructed by dividing DPI by DPCY, and then the variance in this ratio is related to changes in the rice price (DRRP). The coefficient is 0.209, indicating that for every 1.0 percent movement in real rice prices, the GEP moves 0.2 points. When rice prices are unchanged, the intercept term in Equation 1 says that the GEP is -1.57, a relatively large number in absolute terms.

By contrast, Equation 2 relaxes the restriction that it is the *ratio* of DPI to DPCY that is the relevant variable to explain, and focuses instead on changes in the poverty index directly. Statistically, this costs an extra degree of freedom in the estimation, not trivial with only 9 observations, but the results are very illuminating nonetheless. The coefficient on DPCY is only -0.853 (instead of the 1.000 implied in the ratio specification), and the coefficient on changes in the real rice price more than doubles, to 0.445. In this unconstrained model, rice prices are twice as important to conditioning the rate of poverty reduction as they are in the GEP model, and economic growth becomes

somewhat less of a driver. However, the intercept term in Equation 2 of -2.42 suggests that even when changes in per capita incomes and real rice prices are *both* kept constant (or are even zero), poverty falls by over two percentage points per year. This is not a statistically robust result, as the intercept is significant at only the 85 percent confidence level.

Table 3. Factors Affecting Changes in the Headcount Index of Poverty

	Annual % change in per capita income	Annual % change in poverty index	Growth Elasticity of Poverty	Annual % change in real rice prices
1967-76	5.48	-6.0	-1.09	2.5
1976-80	6.37	-8.1	-1.27	-3.5
1980-84	4.23	-6.8	-1.61	3.0
1984-87	2.69	-7.0	-2.60	-2.5
1987-90	5.66	-4.6	-0.81	5.5
1990-93	5.41	-4.6	-0.85	-1.6
1993-96	5.23	-6.2	-1.19	5.8
1996-99	-3.25	9.9	-3.05 (+)	19.2
1999-2002	2.49	-8.2	-3.29	-7.1

Note: The Growth Elasticity of Poverty (GEP) is calculated as the ratio of the percentage reduction in the headcount poverty index relative to the percentage change in per capita incomes (in \$PPP) from the World Bank Data Base on Pro-Poor Growth. An OLS regression of GEP on the change in the real rice price (DRRP) explains 80 percent of the variance in GEP, with highly significant coefficients. The results are as follows (*t*-statistics in parentheses):

$$\text{GEP} = -1.57 + 0.209 \text{ DRRP} \quad \text{R-squared} = 0.8325 \quad \text{Eq. 1}$$

(5.8) (5.9) Adj. R-squared= 0.8086

Alternatively, changes in per capita incomes (DPCI) and in real rice prices can both be used to explain changes in the poverty index (DPI). This specification has the following results:

$$\text{DPI} = -2.42 - 0.853 \text{ DPCY} + 0.445 \text{ DRRP} \quad \text{R-squared} = 0.9108 \quad \text{Eq. 2}$$

(1.68) (2.93) (3.95) Adj. R-squared= 0.8811

When the intercept term is constrained to be zero (thus *assuming* there is no exogenous trend in poverty reduction), the result is something of a blend between Equations 1 and 2, as Equation 3 indicates:

$$\text{DPI} = -1.285 \text{ DPCY} + 0.3205 \text{ DRRP} \quad \text{R-squared} = \text{na} \quad \text{Eq. 3}$$

(8.37) (3.36) Adj. R-squared = na

Equation 3 in Table 3 fixes this problem by constraining the intercept term to equal zero, thus assuming there is no exogenous reduction in poverty apart from the influence of growth in per capita incomes and changes in rice prices. This is not an unreasonable assumption in view of the stability of income distribution over the period. The result is a blend between the two previous approaches. The GEP is about 1.3 and the elasticity of poverty with respect to rice prices is a bit over 0.3. Again, these results indicate the pro-poor nature of economic growth in Indonesia, but also the vulnerability of the poor to instability in their economic environment, particularly in incomes and the price of their major foodstuff.

3.3 The regional incidence of poverty

It is important to disaggregate the incidence of poverty geographically, as much of the story is regional. Differences in agricultural potential and efficiency of market connections are the basic causes of geographical variance poverty rates (see Annex 4). One striking difference is between urban and rural areas. Four times as many poor people live in rural areas as in urban areas, despite the rapid urbanization of the population over the past four decades. Java, however, contains 75 percent of the urban poor and just 55 percent of the rural poor. Diverse job opportunities are available on densely settled Java which are not available to rural households on the Outer Islands. The importance of good infrastructure to connect rural households to non-farm employment opportunities is reflected in these numbers. Equally important is the dilemma of how to provide good infrastructure in areas with low population densities.

The dominance of Java in the total numbers of poor people, and of the Eastern Islands in poverty incidence, is readily apparent. Java has 59.9 percent of the poor, with a poverty incidence of 15.3 percent. Eastern Indonesia (excluding Maluku and Papua) has 9 percent of the poor, but a poverty incidence of 36.9 percent. Strategies for reducing poverty must cope with this obvious bi-modal distribution of the problem.¹²

The bi-modality of poverty stems from the success of economic growth on Java compared with the lagging growth in Eastern Indonesia. In the 1960s and 1970s, poverty was concentrated on Java in both absolute terms and in incidence. In the mid-1960s, some districts in Central Java would have been among the most impoverished anywhere in the world (Timmer, 1975). Today, this region of Java is exporting hand-crafted furniture to demanding markets in the West.

Not all of the variance across regions can be explained by lower incomes in regions with high poverty. There are major differences in *income distribution* across regions and between urban and rural areas (Friedman, 2002). This variance is not so surprising in view of the great diversity seen in Indonesia's local economic systems, although the variance does suggest that factor flows are not as smooth as the absence of formal trade barriers within the economy might suggest. What is more surprising is that the actual relationship between economic growth and poverty reduction seems not to vary

¹² This problem was stressed as early as the HIID report on poverty for BAPPENAS in 1992 (Timmer, et al., 1992). See Box 2 and Figure 5. This overview of the report highlights the joint focus on making rapid economic growth more pro-poor and on addressing the reverse impact of poverty programs on growth. The regional and sectoral dimensions of poverty are the main organizing themes.

substantially across provinces. As a result of Friedman's careful analysis of six SUSENAS data sets from 1984 to 1999, we now have a clear statistical picture of the geographic variation in the relation between levels of poverty and income and inequality. This statistical picture complements the view from the ground that was developed in 1991 and 1992 by the Harvard-Stanford Poverty Team which reported to BAPPENAS in September 1992 (Timmer, et al., 1992). An overview of the key messages from that report is presented in Box 2.

Box 2—The 1992 Poverty Report

This report of the Harvard-Stanford Poverty Team confirms the significant progress against poverty shown by the SUSENAS data. Interviews in the field in seven different provinces [Central Java and Yogyakarta, East Java, Southeast Sulawesi, West Nusa Tenggara (Lombok and Sumbawa), East Nusa Tenggara, and West Kalimantan] reveal a common perception among villagers and local officials that enormous strides have been made during the last 25 years in raising living standards on average while also lifting many of the poorest out of absolute poverty. But this progress has also raised expectations for the rapid elimination of the poverty that remains while simultaneously making that task more difficult. The "easy" poverty already has been overcome; the remaining 15 percent of the population below the poverty line will be harder to reach.

Our fieldwork, research, and analysis confirm the judgment a year ago that the government has important opportunities to overcome these difficulties and to maintain, perhaps even accelerate, the extraordinary rate of progress against poverty since the start of REPELITA I. We divide these opportunities into two basic categories: a poverty-oriented strategy of economic growth; and a set of new initiatives to provide more effective anti-poverty programs. Figure 1 [Figure 5 below] summarizes the key elements in each of these categories. There are no surprises—the difficult tasks are to articulate the overall strategy within the government and to the people, to coordinate the implementation of policies for growth with the local initiatives needed to make anti-poverty programs work better, and to find the extra resources that will permit much more aggressive funding of these programs.

Figure 5

Overview of the Poverty Report to BAPPENAS (1992)

Rapid Economic Growth

...for greater impact on poverty, it should be targeted to ...

Sectors		Regions	
Smallholder agriculture	Labor-intensive manufacturing	Infrastructure and technology in Eastern Indonesia	“Pockets of poverty” on Java
Rural Financial Services			

Anti-Poverty Programs

... can have an impact on growth as well as poverty, but need ...

Better Procedures	More Resources for Basic Welfare
Better targeting regionally	Village water supplies
Better local control of resources	Better access to health care
Better local administration and leadership	Emergency relief

Source: Timmer, et al. 1992.

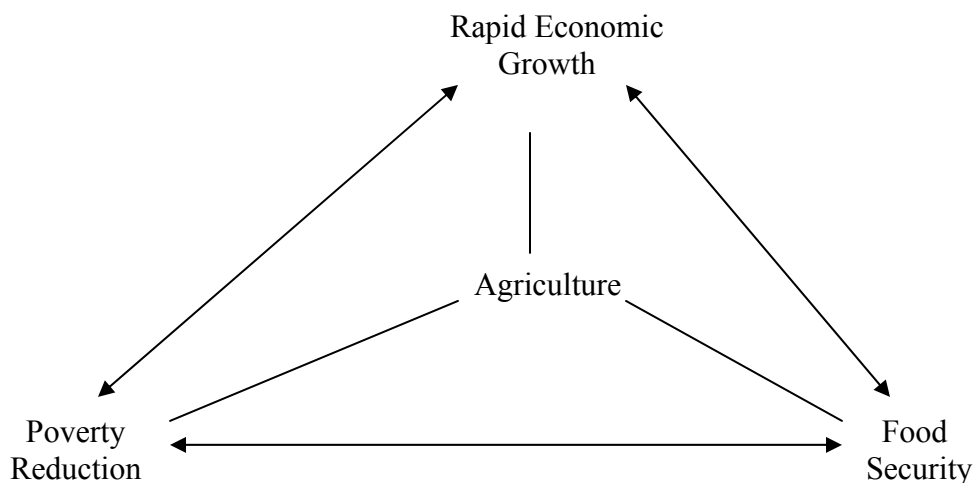
3.4 Sectoral growth and poverty reduction

Early work by Ravallion and Huppi (covering the entire economy for the 1984 to 1987 period) and recent work at the provincial level for the period from 1984 to 1996 by Sudarno Sumarto and Asep Suryahadi of SMERU, highlight the powerful impact of growth in agricultural productivity on the reduction of poverty. There is much controversy in linking sectoral growth patterns to a long-run reduction in poverty because mobile factors of production should make the overall growth rate the ultimate determinant.¹³ This is a subject for an entire treatise, only some of which is written. The general perspective in the Indonesian context is summarized in the “development trilogy” first invoked in REPELITA II (1974-79) and widely used by the government to explain its strategic approach to development. The general idea is quite simple—rapid economic growth must be in balance with equitable outcomes and societal stability in order to sustain the development process. At least in the early stages of the New Order regime, it was also widely understood that the agricultural sector was at the center of efforts to create this balance, as Figure 6 illustrates.

Figure 6

The “Development Trilogy”

Three “Spheres” of Activity, Held Together by Agriculture



This general perspective on the role of the food and agricultural sector in poverty reduction is also reflected in Timmer, Falcon and Pearson (1983), which was shaped significantly by intensive work in Indonesia by the three authors. Formal analysis of the Indonesia-specific dimensions of the role of agriculture and the rural economy in the country’s generally successful record on poverty reduction date to Ravallion and Huppi (1991), although much of the earlier work in the late 1960s and early 1970s, which the Agricultural Development Council sponsored through the Agro-Economic Survey based

¹³ For an especially thoughtful and technically sophisticated review of this issue on a global scale, see Bravo-Ortega and Lederman (2004). Sarris (2001) and Booth (2002a) also provide useful insights.

at the Bogor Institute of Agriculture (*Institut Pertanian Bogor*, or IPB) addressed this broad theme as well (Collier and Sajogyo, 1972).

More recently, Timmer (1996b, 1997, 2002), Warr (2003), and Sumarto and Suryahadi (2003) have examined the contribution of growth in the agricultural sector to poverty reduction. Warr's results, which explain aggregate poverty rates in East Asia (Taiwan), Southeast Asia (Thailand, Indonesia, Malaysia, and the Philippines) and South Asia (India), revealed that the Southeast Asian countries depend mostly on agricultural and services growth for poverty reduction. There was no significant impact from growth in the industrial sector.

This sectoral disaggregation of the sources of poverty reduction has been pursued intensively by Sumarto and Suryahadi (2003), who used panel data at the provincial level from 1984 to 1996 to examine the impact on local poverty according to the sector of growth in the province. Their measure of poverty was the headcount index using a constructed measure of expenditure deficits in current consumption at the household level. This measure of poverty is similar to that used by the country's Central Statistical Bureau for the official statistics on poverty. The two measures track closely. Sumarto and Suryahadi also estimated the impact of sectoral growth on the poverty gap (P1) and poverty severity (P2). These results are not reported here. They confirm, however, that when economic growth does reach the poor, it reduces the poverty gap and severity even more than the headcount index.

Over the decade and a half, the results are quite startling: agricultural growth accounts for most of the reduction in poverty. Table 4 is constructed from results in their presentation to the Trade, Growth and Poverty Conference in London, December 8-9, 2003 (Sumarto and Suryahadi, 2003).

Roughly two-thirds of the reduction in poverty observed during the period of fastest growth in manufactured exports was due to growth in agricultural output at the provincial level. This result is surprising. Most observers felt that agriculture's key role had been played in the previous two decades and that the "engine of growth and poverty alleviation" had passed to manufacturing (Papanek, 2004). The manufacturing export boom had a *direct* impact on only a handful of provinces, however, all of them on Java. At the local level, it is likely that the direct impact on poverty continued to come via the local agricultural economy.

Table 4**The Impact of Economic Growth on Poverty (Total Poverty Headcount)**

Independent Variables	Total Growth Coefficient	Sectoral Growth Coefficient
Total GDP Growth	-0.0254 (-0.90)	
Agricultural GDP Growth		-1.8595 (-3.62)**
Industrial GDP Growth		-0.0664 (-1.63)
Services GDP Growth		0.0048 (0.09)
Total Population Growth	0.0653 (2.37)*	0.1193 (3.93)**
Initial Poverty Headcount	-0.1316 (-2.96)**	-0.1085 (-2.55)**
Constant	0.0189 (0.78)	0.0524 (2.16)*
Number of Observations	130	130
F-Test	5.43**	7.16**
R-squared	0.1144	0.2240

t-statistics in parentheses: * = significant at 95 percent; ** = significant at 99 percent

The Contribution of Agricultural Growth to Poverty Reduction, 1984-1996

Poverty Headcount:	Urban	Rural	Total
-Observed change in poverty (% point)	-22.14	-41.82	-39.24
-Impact of agricultural growth (% point)	-12.16	-31.12	-25.74
-Contribution of agricultural growth (%)	54.94	74.40	65.58

SOURCE: Sumarto and Suryahadi (2003)

This result would be consistent with the Mellor (2000) model, which stresses the role of the local, non-traded goods economy in poverty reduction. The rise in real wages is also consistent with a response to increased demand from workers in the manufacturing sector. Both demand for labor and consumer goods spilled back to the rural economy as stimulus. Full cause and effect remain to be sorted out, but the Sumarto and Suryahadi results show, at a minimum, that increases in agricultural output are closely associated with reductions in poverty.¹⁴

With little effective agricultural technology currently on the research shelf, at least for basic commodities such as rice and soybeans, the pressing issue is whether other sources of rural dynamism are available to revive this engine of poverty reduction.¹⁵

3.5 Gender and poverty

On the international stage, profiles of poverty by gender indicate that important differences remain in several dimensions, including literacy. “Gender and poverty” is not the major issue in Indonesia that it is in Africa, the Middle East, or parts of Asia (see Annexes 4 and 6). In the 2004-2007 Indonesia Country Assistance Strategy paper, gender is accorded just “moderate” priority by the World Bank and the Indonesian government (World Bank, 2003b, Annex B10, page 1).

Terrance Hull, one of the leading demographers studying Indonesia, reflected on the transformational impact of modern education on the society, especially its impact on women (see Box 3).

Box 3

Terrance Hull on Indonesia’s Demographic Turning Point

A variety of studies have concluded that the course of fertility decline in Indonesia was shaped by reductions in the desired family sizes among the succeeding generation of mothers and the opportunity to attain substantial control over fertility through the government-sponsored provision of efficient forms of birth control. In turn, both of these changes were driven by the transformation of education that took place in Indonesia over the course of the twentieth century. There was a steady increase in the proportions of adolescents who had attained literacy by the time they married, and there was consequently a steady increase in the average age of marriage. Over the first two decades of independence Indonesian girls were increasingly likely to spend at least six years in school, and many were going on to junior high school. Thus at the time of the

¹⁴ A full causal model of the links between agricultural growth and poverty reduction has yet to be specified and estimated for Indonesia (or any other country). This would be an obvious task for the INDOPOV research program now underway in Indonesia under World Bank auspices. Bravo-Ortega and Lederman (2004) have made an important start at a global level, with some disaggregated results for the Latin American and Caribbean (LAC) region and for rich countries.

¹⁵ See Box 4 in the 2004-2007 Indonesia Country Assistance Strategy paper (World Bank, 2003b) for a brief assessment of the difficulties in “getting agriculture moving” again. Extensive discussion of the role of rice policy in agricultural diversification is available at www.macrofoodpolicy.com, the website for the now-completed Food Policy Support Activity funded by USAID and managed by Development Alternatives, Inc. (DAI) for BAPPENAS and the Ministry of Agriculture.

formation of a national family planning program in 1970, well over half of the women of the peak childbearing age groups of 15-30 years of age had attended primary school, and over a third had graduated. In the next thirty years these figures rose dramatically so that by the turn of the century only two percent of women in this age group were illiterate. Strangely, the elite leaders of government systematically underestimated this revolutionary change in the way all citizens were socialized, and the vast increase in the skill levels of working age people. Throughout the 1970s and 1980s government programs were framed in terms of targeting social interventions to illiterate peasants, yet the population was rapidly become literate and more urbane as a result of schooling.

Education was a dual driver of fertility decline. Educated mothers obtained the skills to negotiate the modern institutions of health care and the technology of contraception effectively. The acquisition of such skills takes time, and the years spent in school meant that the women were not likely to marry as early as their mothers and grandmothers had done. They were also more likely to have employment in the modern economy, thus gaining some independence and somewhat increased autonomy in the family. At the same time the education of children was a major ambition of parents, and they understood the relation between the numbers of offspring and the burden of educational costs on the family budget. These two drivers were mutually reinforcing—the more education the parents had attained, the higher their hopes and expectations for their children. One factor that sharpened this process in Indonesia was the relative gender equity that the cultural setting supported. While boys may have received more attention than girls, the gap was not as great as those found in Chinese or South Asian cultures. By the 1990s the educational differentials between females and males had narrowed, and in many of the best universities females dominated classes—including in the faculties of law and medicine that provide very definite professional careers and expectations.
[Hull, 2004, p. 2]

Consistent with the story Hull is telling, non-monetary measures of poverty tell a story similar to those determined by income measures (see Annex 7). Net primary school enrollment rates reached gender parity in 2002, a significant improvement from the 78/67 ratio of males to females in 1970-75. Female life expectancy continues to outdistance that of males. The gap has grown from 3 years (53 versus 50) in 1970-75 to 4 years (69 versus 65) in 2002. There are some important exceptions, especially for maternal mortality rates and child mortality rates. At 373 maternal deaths per 100,000 live births, and 60 “under 5” deaths per 1,000 live births, both statistics (for 2002) remain high by regional standards and even by the standard of Indonesia’s average income level. Progress on these dimensions of poverty will involve active government programs. A resumption of rapid economic growth cannot be the sole remedy, a point made emphatically in the 1992 Poverty Report to BAPPENAS (Timmer, et al., 1992).

Analysis of poverty relationships in Indonesia for the report to BAPPENAS demonstrated the power of economic growth to reduce income poverty as well as such measures of non-income poverty as the infant mortality rate. In that analysis, both the structure of the economy (the share of agriculture in regional GDP) and the quality of the diet (SSR) influenced the infant mortality rate. Strikingly, the most important variable, holding these economic variables constant, was the immunization rate of infants in the provinces (Timmer, 1996b). As Indonesia strives to meet the Millennium Development Goals, the revival of rapid and pro-poor economic growth will be essential. So too, will be renewed

attention to public health and education, especially in rural areas (World Bank, 2003b, p.4).

3.6 Why Indonesia is so unusual in its “pro-poorness”

The Mellor model of poverty reduction shows why growth in production of non-tradables is the main mechanism pulling the rural underemployed out of poverty. In Mellor’s interpretation, the non-tradables sector is demand constrained. Only rapid growth in incomes in households that *purchase* the goods and services produced by this sector can stimulate rapid reductions in poverty. These purchasing households might not necessarily be poor by the standards of the country.

Historically, the sources of such growth were rapid increases in the incomes of commercial agricultural households and, somewhat later, in the incomes from wage labor in the manufactured export sector. When both commercial agriculture and the manufactured export sector are booming, demand for non-tradable goods and services also booms, leading to the accelerated impact on poverty reduction.

Some of these effects can be seen in regional comparisons with Indonesia, which are illustrated in Figure 1 and explored quantitatively in Timmer (2004).¹⁶ In explaining the level of and changes in the Gini coefficient for Asian countries, a number of sectoral variables turn out to drive the results. The most important variable is a “synthetic” Gini coefficient constructed solely from shares of agriculture and non-agriculture in population and in total economic output.

The econometric results are easily summarized. Income distribution deteriorates when relative incomes between rural and urban areas widen. In addition, several variables are highly significant: those that capture the role of rice prices at the farm and retail level; and two “food policy” variables, which have direct implications for revealing the distribution of income (Timmer, 2004).¹⁷ These variables are of direct relevance to understanding policy approaches to pro-poor growth.

In particular, the starchy staple ratio—an indicator of food quality that measures the share of food energy intake derived from such starches as rice, wheat, corn, potatoes, cassava and yams—is a sensitive indicator of welfare status. Better-off households consume higher quality foods, including animal products, fruits and vegetables. Changes in the starchy staple ratio (SSR), especially in relation to the percentile of household expenditures or income, can illuminate changes in income distribution—hence pointing to changes in levels of poverty. This potential is clearly evident in the SSR plots for 1996, 1999, and 2002, which are based on household records from SUSENAS and reported in Molyneaux (2003) (see Figure 7).

¹⁶ The paper, “The Road to Pro-Poor Growth: The Indonesian Experience in Regional Perspective,” provides much of the empirical analysis that influenced the arguments and structure of the present paper. See Timmer (2004).

¹⁷ In the *Festschrift* to celebrate Professor Moh. Sadli’s 80th birthday, Peter McCawley, a long-time and astute observer of Indonesia’s development, prepared a “balance sheet” for economic policy during the period when Professor Sadli was associated with the government: “Food policy was one of the most successful aspects of overall economic policy during the Soeharto era. Many millions of poor Indonesians benefited greatly.” (McCawley, 2002, p.262).

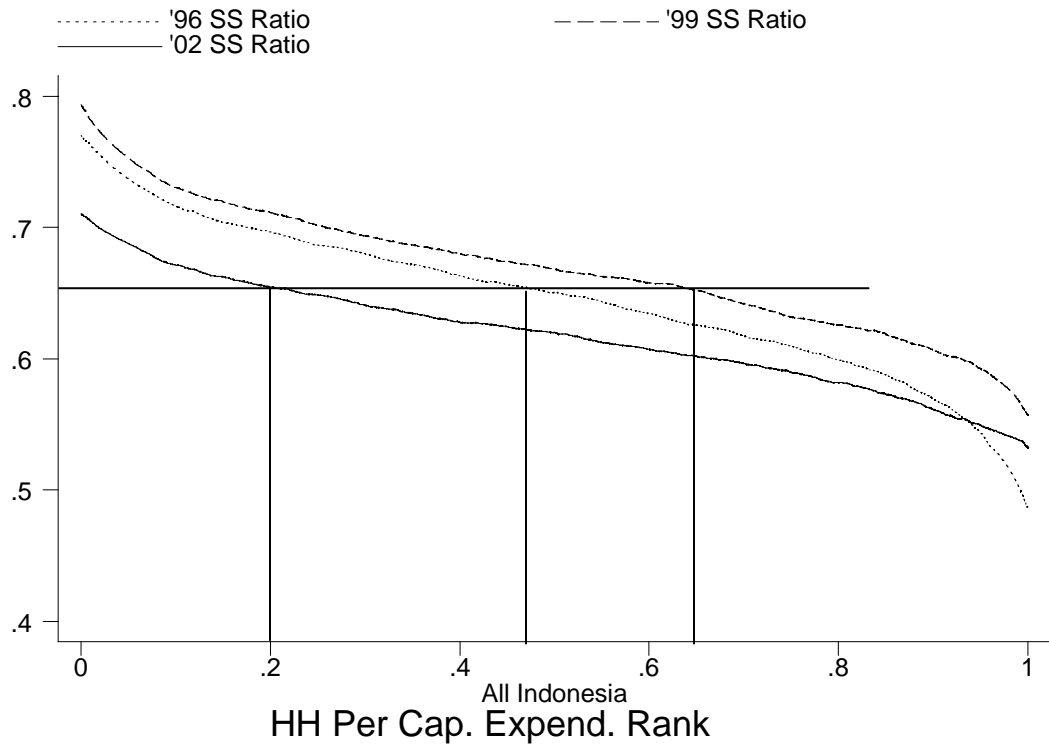
The impact of the financial crisis on well-being for the entire Indonesian society is readily seen in the shift upward in the SSR curve between 1996 and 1999. A “flattening” of the curve in 1999 reveals a more equal income distribution. This shift is also apparent in summary measures of income distribution: the Gini coefficient fell significantly between the two years, from 36.5 to 31.5.

What is startling is the dramatic improvement in nutritional welfare of the poor between 1999 and 2002. Except for the top decile of expenditures, the levels surpassed even those of 1996.¹⁸ The evidence points to substantial gains in dietary quality, especially the rapid increase in consumption of foods rich in micronutrients. The notable improvement in the quality of the average Indonesian’s diet since the mid-1990s, with greater quantities of fruits, vegetables, and livestock products, has significant implications for agricultural development strategy, especially for Java’s very small farmers (see Molyneaux and Rosner, 2004a).

Both the SSR and a food energy variable reflecting the Engel Curve relationship play an important role in the econometric results used to explain variation in the Gini coefficient across Asia (see Timmer, 2004). The logic of this connection has already been explained in the examination of Indonesia’s pro-poor growth in historical perspective. The basic economic relationships most assuredly hold across countries and for modern Indonesia as well.

¹⁸ This improvement, however, is not consistent with official data that show real wages for unskilled workers, especially in rural areas, remaining well below their peaks reached in 1996. As noted above, Molyneaux and Rosner (2004b) show convincingly that the problem lies mostly with the Rural Consumer Price Index (RCPI) component of the Farmers’ Terms of Trade used to deflate agricultural wages. Recently completed reconstruction of these Terms of Trade data by the Central Statistical Bureau show that, contrary to declines of 25 percent in real rural wages from 1996 to 2002, which were officially reported to the Cabinet, the revised numbers show a 2-5 percent increase.

Figure 7. Starchy Staple Ratios by Income Percentile and Year



SOURCE: Molyneux (2003)

Chapter 4. Connecting the macro economy to markets and to the capabilities of the poor

In the real world of policy making, there is a major distinction between knowing “what to do” and knowing “how to do it” (Pardey and Smith, 2004). One could argue that the Indonesian model of pro-poor growth, as conceptualized in Figure 4, fails to explain *how* the Suharto government actually brought about the results that were highlighted in the previous chapter. The writings, statements, and memoirs of officials who served in this government offer a gold-mine of information to address this issue (Thee, 2003; Prawiro, 1998; Afiff, 2004).

The pro-poor growth strategy articulated by these officials emphasized rapid increases in the demand for unskilled labor. A macro economic policy that stressed stability, to lower risks to investors, a competitive exchange rate, to keep tradable goods production profitable, and a monetary and fiscal policy that did not subsidize the use of capital, was the “growth engine” for the market economy. Markets were the arena for participation by the poor in economic activities that improved their productivity and household incomes. The household economy served as the “foundation” of the pro-poor strategy, with *public* investments made to improve their human capital and capabilities. The local market economy then served as the bridge to the growth-oriented macro policy. This market economy was accessible to the poor because transactions costs of engagement were manageable and the risks low.

4.1 The pro-poor paradigm

Even a casual reading of the memoirs of the technocrats who were responsible for designing economic policy in the early years of the Suharto regime reveals their emphasis on the importance of economic growth as the only way to reduce poverty.¹⁹ Their assessment of the economic situation in late 1965 was stark. Nearly the entire population was poor by absolute standards. Indonesians had one-half the per capita income of India at the same time, for example. In the short-term, there was simply no choice but to stress economic growth over poverty reduction—there was nothing to “redistribute.” The first steps were straightforward: government activities that were repressing economic growth had to stop.²⁰

In the medium- and longer-run, policy makers had an array of strategic choices. Since the disastrous experience of “politics in command” of the “guided economy” under Sukarno was vivid in everyone’s mind, the early strategy had a clear focus: stabilize

¹⁹ Some commentators have taken this to mean that the Suharto government was not *interested* in poverty reduction by more direct means (Booth and McCawley, 1981; Fox, 2002). The themes developed in this paper argue, to the contrary, that the government had a *conscious* strategy for reducing poverty, but it concentrated in the early years on economic growth that reached the poor.

²⁰ A review of the notes from the planning sessions held in 1968, as the first five-year plan (REPELITA I, 1969-1974) was being drafted, shows that both government planners and their foreign advisors had a clear picture of steps needed to re-start growth. There was much less agreement about a medium-term growth strategy (World Bank, 1968; Harvard Development Advisory Service, 1968). For a historical perspective on economic growth as the “natural course of things,” once governments stop repressing it, see Jones, 1988.

macro economic policy through a balanced budget and a realistic exchange rate; stabilize the food economy by controlling rice prices (using market-compatible interventions); and rehabilitate infrastructure using the proceeds from foreign aid. Trade and investment policy was opened, and in 1971, the capital account was dramatically liberalized.²¹

Note how unorthodox this early experiment with liberalization and structural adjustment was, and yet how effective. There was much more government intervention in maintaining a stable exchange rate, and in overall trade policy, than is now fashionable. The opening of the capital market preceded (by decades) efforts to provide sound regulation of the banking sector. It is now argued that the seeds of economic collapse during the Asian financial crisis were planted during this early reform era (Cole and Slade, 1998). But three decades of rapid, pro-poor growth intervened.

Because global inflation was high and the United States was deeply engaged in Vietnam, the external environment was not particularly hospitable to the new government and its economic policies. But this environment permitted the Indonesian government to develop its own strategy for economic growth. In particular, since neither Suharto nor the technocrats had any experience in policy making, they had to design the mechanisms of economic governance almost from scratch, and put in place a workable set of relationships and division of responsibilities. And despite a surprising “constitutionalism” in Suharto’s approach to governing, the government made no serious effort to open economic governance into a more democratic process (Liddle, 1991, 1996).

The full history of the workings of this process has yet to be written, but the biographical interviews with many of the key technocrats published by Thee (2000) contain many insights. The speech at the World Bank conference in Shanghai on “Scaling Up Reducing Poverty,” by Saleh Afiff, former Chairman of BAPPENAS (1988-1993) and Coordinating Minister for the Economy (1993-1998), is a useful history. In particular, the technocrats were consciously aware of the need to link economic growth and poverty reduction. Indonesia’s “development trilogy” of growth, equity, and stability was formally established in Repelita II, which ran from 1974 to 1979 (see Figure 5). Outside economists often dismissed as mere political rhetoric claims that the government was giving roughly equal attention to each component of this trilogy--but the technocrats most certainly took the concept, and challenge, seriously.

Paradoxical as it seems now, it was Suharto himself who stressed to the technocrats the importance of connecting the poor to economic growth. Political scientists continue to debate why he was so concerned about this connection. Much of the emphasis on improving the welfare of the rural population was, in fact, initiated by the President.²² He knew that most of the poor lived in rural areas and that they could be helped through

²¹ The best references on these issues are Hill (1996, 2000) and Hofman, Rodrick-Jones, and Thee (2004).

²² In his “balance sheet” on successes and failures of the Suharto regime, McCawley places growth and development, and poverty reduction, at the top of his list of successes. “Perhaps the single most notable characteristic of economic policy-making during the Soeharto era was the central commitment to growth and development (Soeharto, 1989; Elson, 2001). This was reflected in President Soeharto’s unwavering support for *pembangunan* (development). The President made it clear that this broad stance of policy was non-negotiable. For many years, this policy received strong support across the nation. It led, amongst other things, to sharp reductions in the measured levels of mass poverty in Indonesia” (McCawley, 2002, p. 261).

agricultural development, schools, clinics and family planning centers, and investments in rural infrastructure (Rock, 2002, 2003). Out of this concern, the technocrats evolved a development strategy that consciously tried to merge the ingredients of rapid economic growth with powerful connections to the livelihoods of the poor. The rural economy was the key element in these connections.

In retrospect, the pro-poor strategy encompassed the three basic levels seen in Figure 4. Macro economic policy was directly in the hands of the technocrats and, always, they sought to maximize the overall rate of economic growth. This rate was subject to maintaining stability, however, so controlling inflation through fiscal and monetary discipline was also important. The exchange rate was an instrument of policy, not an objective except in the very short run. Policy makers managed it to maintain profitability of producing tradable goods, especially in agriculture (Thorbecke, 1995). Active management of the exchange rate was especially important in dealing with Dutch Disease (Warr, 1984).

Such a growth-oriented macro policy should call forth investments from the private sector that become the actual engine of economic growth, but the institutional foundations for rapid expansion of the private sector in Indonesia were not in place until the reforms of the 1980s; so a more active public role was necessary to stimulate appropriate investments. Apart from the mid-1970s during the peak of the oil boom, the public role was not investments in state enterprises, but rather in the supporting infrastructure, soft and hard, for private-sector enterprises.

These investments in infrastructure lowered the costs of market connections that generated jobs and raised the productivity of the poor. Indeed, public-sector investments and regulatory improvements to lower transactions costs as an approach to market development are arguably the crucial link between growth-oriented macro economic policy and widespread participation by poor households in the market economy. In Indonesia, these investments were in roads, communications networks, market infrastructure and ports, and irrigation and water systems. Many of them were built as labor-intensive public works, making millions of jobs available to unskilled labor willing to work at local market wages (Papanek, 2004).

It is difficult to measure transactions costs directly, especially because the costs and risks of engaging in market exchanges are to a large degree perceptual. But some rough statistics illustrate the commitment of the government, in policy terms and budget revenues, to reducing transactions costs. For example, statistics on the kilometers of roads and the number of registered trucks are available, and the “density” of trucks for a number of years before and during the Suharto era can be calculated (see Table 5).

Virtually no progress was made in road-building between the waning years of the Dutch administration and the early years of the Suharto regime. Average annual increases in kilometers of roads were just 0.3 percent per year between 1939 and 1960, and 0.4 percent from 1960 to 1970. There was modest investment in new trucks between 1960 and 1970, virtually all of which occurred after 1965. The transformation of Indonesia’s network of highways took off and accelerated through the 1990s. Kilometers of total roads expanded 8.3 percent per year between 1970 and 1998. Not shown in the table (because earlier breakdowns are not available), is a surge in “local” roads after the late

1970s. These would have been mostly farm-to-market roads. They expanded from 8,500 kilometers in 1977 to 31,900 kilometers in 1998.

Investments in trucks show a similar, but even more dramatic surge after 1970. The total number of registered trucks increased by 16.5 percent per year. This explosion in the truck population caused the “density” of trucks on highways to increase from just one truck per kilometer in 1965 to 4.48 trucks per kilometer in 1998. Obviously, the capacity to move goods around the country was radically transformed in two decades, thus lowering that component of transactions costs.

Table 5

Roads and Trucks in Indonesia, 1939-1998

Year	Kilometers of roads (all conditions, 000 km)	Number of trucks registered (all sizes), 000 vehicles	Trucks per km of road
1939	75.1	~60	0.80
1960	80.8	75.5	0.93
1965	83.2	83.8	1.01
1970	84.3	102.3	1.21
1977	122.8	279.0	2.27
1993	344.9	1160.5	3.36
1998	355.4	1592.6	4.48
Average annual percent increase			
1939-60	0.3 percent	1.1 percent	0.7 percent
1960-70	0.4	3.1	2.7
1970-98	8.3	16.5	7.5

Source: Statistical Pocketbook of Indonesia, various issues, and author’s calculations.

A similar story can be told, without quite the detail, about communications costs. In 1990, nearly 77 million domestic long distance telephone calls were placed, an increase of 13 percent per year from the 7.58 million calls placed in 1971. After a restructuring of calling services in 1989/90, so that most calls became “local” instead of long distance, the number of local calls (“*pulsas*”) increased by more than 25 percent per year through 1997, *totaling over 50 billion calls in that year* (or 250 calls for every man, woman and child in Indonesia!). Through investment in a modern telecommunications system, Indonesia was able to make the communications component of transactions easy and reliable.

The final component of transactions costs involves the risks of doing business. These risks range from normal market fluctuations that all businesses face, to the prospect of expropriation or demand for “special fees” when a business becomes visibly successful. The lack of transparency, rule of law, and the lucrative opportunities handed to Suharto

children and cronies obviously raised the cost of doing business for other, legitimate firms. On this count, the Suharto regime would seem to have *raised* transactions costs.

There is another element of risk from market engagement, however: whether price behavior is reasonably predictable and price margins are within normal business costs. Because of the regime's emphasis on price stability, most day-to-day business activities became more predictable--hence less risky. A farmer could sell rice during the harvest and be confident that, six months later, rice would be available for purchase in the market at a reasonable price. A trader could buy and store rice and be pretty sure that price behavior would provide normal returns to storage. Urban consumers did not have to hoard rice in anticipation of unexpected shortages. The rice market in particular, and most commodity trading in general, became routine, and operated on relatively thin margins. Lower transportation and communications costs contributed greatly to these lower transactions costs, but so too did an environment of lower risks from normal market activities.

Lower transactions costs mean more market opportunities and faster economic growth, but they also mean easier access for the poor to markets and better connections to economic growth. To ensure that access translates into participation, the capacity of poor households to enter the market economy needs to be enhanced. Investments in human capital—education, public health clinics and family planning centers—improve the “capabilities” of the poor to connect to rapid economic growth.

There is little evidence that the incidence of public expenditures in these social sectors was deliberately pro-poor. In the early years, the needs were so great that simply building schools and clinics was the first priority. Not surprisingly, the relatively better off took advantage of these facilities, and reaped the benefits of the subsidies spent on them, before the poor. But pioneering research by the World Bank has shown that the poor have begun to benefit in very important ways (Lanjouw, et al., 2001). For both education and health expenditures, the marginal incidence of spending on the poor is substantially higher than the average, and this fact complicates the design of future spending (see Box 4).

Box 4

Lanjouw, et al. (2001) on the incidence of public expenditures on poverty

To recap so far, our analysis suggests that the poor have generally benefited from government subsidies in primary health care. However, the evidence on household spending suggests that the subsidies are only a small fraction of total costs—so that the poor are still left to pay a significant amount. In the case of education, the evidence seems to suggest that the poor have not been the principal beneficiaries of public spending. Moreover, the actual government transfers in education are orders of magnitude higher than for health. It would seem that a case could be made for recommending an increase in government spending on health, possibly financed by a reduction in education subsidies at the post-basic level.

However, we have shown in this paper that before such a recommendation is offered it is necessary to consider the distributional impact of changes in government spending, not simply the current average incidence of government spending. We started by taking a long view, and asking what has been the incidence of government education and health spending between 1978, 1987 and 1997. The evidence indicates that the poor benefited considerably from the expansion of spending on primary education throughout the period. The expansion of junior secondary and senior secondary education became increasingly pro-poor in the decade between 1987 and 1997. This picture suggests that the non-poor have been able to enjoy “early capture” of education subsidies but that over time expansion of education spending goes disproportionately to the poor. The expansion also allowed girls to catch up with boys virtually eliminating the sex bias at present.

On the health side, the evidence is rather more difficult to compare over this long period. However the tentative picture is also consistent with a marginal incidence of spending on primary health which is pro-poor; while the non-poor may be the early beneficiaries of this spending, expansion benefits the poor rather more (and contraction would hurt the poor disproportionately). In the case of hospitals, the evidence is stronger that the poor are not major beneficiaries throughout the period.

Does the general impression of the marginal incidence of spending across decades provide a good indication of the incidence of changes in government spending at a given point during the late 1990? While multiple rounds of SUSENAS data are available for the 1990s, there is little evidence of change in the scale of government spending during this period, and thus little change in the incidence of this spending at a national level from one year to the next. We employ recent econometric techniques which exploit the spatial variation in the incidence of spending across districts and provinces to probe the above question. The results supported the suggestion from the historical analysis that the marginal incidence of primary education spending is pro-poor. This conclusion is somewhat weaker in the case of junior secondary and senior secondary schooling, but in all cases the evidence suggests the marginal incidence is less regressive than what one might think by just looking at average incidence figures. The overall impression is that changes in government spending on education would not leave the poor unaffected. If the changes concern primary education, the poor would be particularly hard hit (positively in the event of an expansion, negatively in the event of a reduction).

Our econometric approach to estimating the incidence of health spending suggests, once again consistent with the historical analysis, that changes in government spending on public primary health would not leave the poor unaffected. The evidence here, too, is that increases in public spending on primary health care centers would benefit the poor considerably.

To summarize, our dynamic analysis of the incidence of government spending on education has yielded the important insight that the choices facing the Indonesian government on the allocation of spending across education sectors is less neat than one might have thought at first glance. Static benefit incidence analysis might have suggested that further expansion of primary and possibly junior secondary schooling, could be financed by a reduction of subsidies for secondary schooling, with only minor impact on the poor. However, the marginal incidence analysis suggests that removal of secondary

subsidies would also affect the poor. We have suggested that in all education sectors, the non-poor are generally among the first to benefit from government spending, but that as this spending has continued and expanded the poor have come to benefit from these subsidies as well. Removing subsidies from one education sub-sector to finance further subsidies in another sub-sector is likely to produce both winners and losers among the poor. The results also imply that a policy aimed at improving the quality of the existing providers (for example by providing better textbooks) will be more pro-rich than a policy that aims at expanding the supply of education (by building new schools). For the latter the marginal benefit incidence is the appropriate result to look at while for the former the average incidence is relevant.

Our analysis has also suggested that while there seems to be an unambiguous case for further expansion of primary health care spending in poor areas by the Indonesian government, it is not at all obvious that this should be financed, even only in part, by a reduction in education spending. Once again, the marginal incidence analysis which has shown that the poor are beneficiaries of government spending on primary but also junior secondary and senior secondary education, indicates that shifting resources out of education (at least secondary levels and lower) would create losers among the poor, although it also seems clear that the poor would benefit from lower health care costs. A more compelling direction to take, if it truly proves impossible to increase health spending out of general government revenues, would be to shift health spending out of hospitals and toward primary health centers. [Lanjouw, et al., 2001, pp. 52-53]

Expenditures on the education and health sectors were the most important way Indonesia attempted to influence returns to the portfolio of assets held by the poor. These kinds of human development expenditures, as emphasized by Hull, had a transforming effect on Indonesian society. Beyond these sectors, however, there was little effort to address poverty directly. At least during the Suharto regime, when the pro-poor strategy was most effectively implemented, there were few efforts to influence wage rates directly, and organized labor was actively suppressed. The technocrats closely monitored Indonesia's wages relative to such competitors as Malaysia and Thailand in the early years and China, Vietnam and India in the later years. The concern was always on job creation and the profitability of labor-intensive activities, not on transfer programs to the poor.

An active price policy for rice attempted to stabilize the returns to smallholders producing the commodity. At least until the 1990s, there was no long-run effort to raise these returns above trends in the world market, converted at the open-market exchange rate. The impact of this price stabilization policy on farm productivity, consumer welfare, and national food security was highly positive (Timmer, 1996a). According to finance theory, both farmers and consumers gain if the average prices they receive and pay are stabilized at their long-run mean. Reduced variance for the same mean improves the performance of a diversified asset portfolio. Until the 1990s, the costs of this price policy, as implemented by the market-oriented operations of BULOG, were modest (Pearson, 1990). By the mid-1990's, with Suharto's reign nearing an end simply because of his age, corruption expanded so rapidly that the agency no longer carried out its mandate.

4.2 Connecting the poor to economic growth

The pro-poor strategy worked extremely well, as poverty rates fell rapidly between the late 1960s and the mid-1990s, and economic growth averaged more than 5 percent per capita per year. But how well the strategy works obviously depends on the efficiency of transmission mechanisms that connect the poor, through factor and product markets, to the overall growth process. The efficiency of these mechanisms depends on demand and supply pressures in the markets for unskilled labor and how well integrated these markets are across skill classes and regions. Initial conditions for income and asset inequalities play an important role in the connection process, possibly because of failures in credit markets that make it hard for the poor to invest in their own human capital (Gugerty and Timmer, 1999). Thus public investments in education and rural public health are likely to be necessary for the transmission mechanisms to work effectively for the poor. Further, migration, job mobility, and flexibility in the face of shocks all help maintain upward mobility during the growth process, and cushion the irreversibility of suddenly falling into poverty seen in so many countries. The flexible response of the rural economy to the sudden shock from the Asian financial crisis in 1998 shows that these mechanisms were in fact operating reasonably efficiently in the Indonesian economy.

There are, of course, many non-economic dimensions to the escape from poverty, and the Indonesian experience is rich with complex institutions that condition the interface of the poor with the economy. For many families, this institutional and social context affects their connection to the economy, or the risk of being connected to it. Family safety nets and remittances have played an important role in diversifying income streams, cushioning shocks, and providing modest sums of capital for micro enterprise investments. Village safety nets may have played an important role in the early years of rapid growth, but evidence suggests that many village institutions withered in the face of political controls by the Suharto regime (although others were built, under central guidance, to reinforce the New Order's political control all the way to the rural village).

There were also economic reasons for the loss of village safety nets. For example, the controversy over the demise of the *lumbung desa*, a village-level rice storage facility, implicates BULOG for driving these facilities out of business through subsidized, thus unfair, competition. In fact, lower marketing costs, both geographically and temporally, made the *lumbung desa* a losing proposition.

Indonesia's experience with government-sponsored social safety nets has been limited. Most of the safety nets now in operation were designed and implemented hurriedly in response to the Asian financial crisis. These include the program to distribute subsidized rice to the poor, vouchers for school attendance, and identity cards which provide access to public health facilities. Nearly all evaluations of these programs indicate they are poorly targeted and inefficient mechanisms to deliver significant benefits to the poor (see Annex 7).

The pro-poor growth strategy emphasized rapid increases in the demand for unskilled labor. But here, too, public investments were the key to making the process of real benefit to the poor. There are no doubt important tradeoffs in how the public sector manages the array of investments needed, from human capital in rural areas to infrastructure that links rural households to market opportunities. Eventually all of these

investments need to be made for pro-poor growth to succeed. Indonesia was able to make these investments faster because of large oil revenues in the 1970s, but most countries in similar circumstances squandered the largess.

Why President Suharto's government carried out the pro-poor strategy as aggressively as it did remains a mystery of modern political economy, although a personal concern for the welfare of farmers seems to be at least part of the explanation. This personal engagement may also have inhibited more flexible policies as the economy evolved and matured. Hull (2004) notes the continued tendency of the elite to think of peasants as illiterate, which matched President Suharto's memories of growing up among peasants in rural Central Java. The President's determination that civil servants receive rice in kind, as part of their salaries, extended far beyond the early and sensible justification for the program--local rice markets were thin and subject to highly unstable prices. Thus the personal influence of the President clearly played a major role in the evolution of policy, and this role probably became counterproductive as the society became more affluent and sophisticated and as the economy became more complex. Further reflections on the political economy of pro-poor growth in Indonesia are developed in Chapter 6.

Chapter 5. Tradeoffs cause tough choices for analysts and policymakers alike

Economics is often defined as the science of opportunity costs, or tradeoffs. Because the chief economic policy makers in the Suharto government were well-trained economists (often called the “Berkeley Mafia” because several of them received their Ph.D.s in economics from the University of California, Berkeley), they were acutely aware of the tradeoffs they faced in the design of basic development strategy and the implementation of economic policies. This chapter reviews some of the major tradeoffs that were dealt with during the Suharto era, several of which remain as issues for the new democratic government.

5.1 Tradeoffs between sectoral policies with positive impact on the poor, and overall macro policies that speed economic growth in total

In academic and policy circles in Indonesia, much nonsense has been bandied about with respect to targeting industrial policies on behalf of the poor. The arguments always involve industrial protection and inevitably raise the costs of inputs to labor-intensive industries. Agricultural protection (for sugar, especially) leads to high costs for food processors. Protection of rice producers raises the cost of labor, inducing an anti-labor bias in the choice of rural technologies in small- and medium-sized enterprises. Growth in agricultural productivity has, in fact, been pro-poor: such growth requires substantial public investments--perhaps even active price policy and support. Possibly, a significant tradeoff exists between enhancing agricultural growth and keeping the economy fully open to trade, which stimulates faster overall economic growth.

Tradeoffs in the real world: An example

A historical example of tradeoffs is instructive: a comparison of the experience of Thailand and Indonesia in the 1980s. This was a challenging time for the entire region. Commodity prices in world markets collapsed, presenting enormous problems for both countries. Both went through major economic restructuring, both received substantial flows of foreign direct investment (FDI) as they opened their borders to foreign investment (especially for labor-intensive manufactured exports), and both countries faced a depression in their agricultural sectors when low world prices were transmitted to their borders.

Thailand passed these border prices directly on to its farmers. Indonesia did not. It directly protected its rice farmers from the acute fall in world prices and indirectly supported the entire tradable goods sector, especially agriculture, through aggressive depreciation of the rupiah. The result was much as economic theory would suggest. Thailand’s greater openness led to faster economic growth per capita: 5.3 percent per year for Thailand versus 4.4 percent per year for Indonesia. However, an equally important story is what happened to the poor—the bottom 20 percent of the income distribution, in both countries, almost entirely rural households. In Thailand, incomes in this quintile grew by 3.9 percent per year, just three-quarters of the rate of the whole economy. Clearly, income distribution worsened, although equally clearly, the incomes of the poor increased fairly rapidly.

In Indonesia, incomes of the bottom 20 percent increased by 6.8 percent per year, more than *half again* as fast as the entire economy (which was undergoing a major restructuring). Although average per capita incomes in Thailand were nearly twice as high as in Indonesia (in purchasing power parity terms), by the end of the decade the per capita incomes of the poor in Indonesia were 25 percent higher than those in Thailand. There are two dimensions to this “pro-poor growth” story. First, there were real tradeoffs between overall growth and poverty reduction, at least in the medium term. Second, the experiences in both countries show clearly that income distribution can change significantly—for better or worse—in the course of just a decade.

The key to this result is what happened to agriculture in both countries. It grew by just 1.2 percent per year in Thailand—less than a quarter of the rate of overall economic growth—whereas it grew by 2.6 percent per year in Indonesia—or nearly 60 percent of the overall rate. Both countries faced the same harsh *external* economic environment. What was different was the determination in Indonesia not to make the agricultural sector pay all the adjustment and restructuring costs *immediately*, because so many of the poor lived in rural areas.

In combination with the rapid expansion in manufactured exports by the end of the 1980s—seen in both countries—the attention to continued growth in agriculture in Indonesia translated into one of the most pro-poor growth episodes in modern development experience. It is worth noting, however, that the lack of diversification out of rice in Indonesia in the mid-1980s caused structural problems that the country still faces. The diversification process is just now underway in a significant way.

Understanding tradeoffs analytically

The analytics needed to understand these kinds of tradeoffs are extremely complicated, with very heavy data requirements to build even roughly realistic models.²³ Various approaches to evaluating policy tradeoffs can only be reviewed briefly. There is a note of caution on the use of computable general equilibrium (CGE) models to provide guidance even on such broad issues as which economic sectors lead the reduction in poverty. Because Indonesia is rich in data and has attracted some of the best modelers to address its policy issues, several models “duel” with each other in the literature, each with conflicting structures, assumptions, and conclusions. A review of these issues is in order.

To ask “what if” questions about the impact of alternative policies in a given setting, it is necessary to find similar experiments in similar settings for other time periods, mostly the province of economic historians and comparative economists, or to build economy-wide models that replicate the issues under debate (Pardey and Smith, 2004). A particularly relevant example to be reviewed here is the model by Fane and Warr (2003). Based on a substantial literature on computable general equilibrium models for Indonesia, the

²³ A particularly skeptical view of CGE models is seen in Lant Pritchett’s judgment in his review of the INDOPOV concept note: “...I have never seen general equilibrium analysis (other than pure macro, which is GE with no sectoral detail) actually affect policy making for the good reason that no GE model sufficiently sophisticated to generate plausible results can be understood by anyone other than its creator and hence are ‘black boxy’.” (Pritchett, 2004). Neil McCulloch (2004a) notes that this judgment fails to recognize the importance of CGE models in trade policy debates.

authors construct a specific CGE model to ask how economic growth reduces poverty in Indonesia.

The model disaggregates GDP into agriculture (18 sectors), agricultural processing (9 sectors), resources (5 sectors), services (15 sectors), and manufacturing (18 sectors). There are seven rural household “types” and 3 urban types. The 1993 Social Accounting Matrix prepared by the Central Bureau of Statistics is used to link household types to ownership of factors, and these are disaggregated to the individual household level using plausible statistical distributions to generate estimates of poverty and inequality. The model assumes perfectly competitive factor and product markets, and international trade is modeled with standard Armington elasticities. Not all factors are fully mobile, especially from agriculture to other sectors.

Two “shocks” to the model—Hicks-neutral increases in total factor productivity by each broad sector, or increases in factor supply—are used to calculate the impact of a given increase in GDP on poverty, that is, to calculate the extent to which growth from a particular sector or factor is “pro-poor.” The results are radically different by source of growth. When TFP increases equally across all sectors, the elasticity of poverty reduction is -4.33. When the shock is in a specific sector, however, the elasticities vary from -5.91 in services to only -1.46 in agriculture.

Similarly, an increase in skilled labor has a poverty elasticity of -7.65, but an increase in land has an elasticity of just -1.46, mobile agricultural capital of -1.61, and of unskilled labor of -2.51. Thus Fane and Warr conclude:

The results and methodology reported here suggest that large over-simplifications are involved in relating poverty reduction directly to GDP growth without distinguishing among different possible sources of growth. Contrary to the assumptions of many commentators, the poor do much better if a given amount of GDP growth is produced by technical progress in services or in manufacturing than if it is owing to technical progress in agriculture. Although more work needs to be done to improve on the parameter values assumed in this study, these qualitative results are robust with respect to wide variations in assumptions about elasticities of substitution among goods and factors.

The results also imply that growth in broad sectors—agriculture, manufacturing, services, etc.—will be associated with very different effects on poverty and inequality depending on whether the exogenous shocks affect demand or supply. For example, an increase in the supply of factors used intensively in agriculture depresses the real returns to these factors while raising agricultural output; whereas an increase in demand for agricultural products, perhaps owing to policy changes, would raise both agricultural output and the real returns to the factors used intensively in agriculture.

Another important implication of the results found here is that providing the poor with free education—modelled as the conversion of unskilled labour into skilled labour—is a doubly effective way of reducing poverty:

besides the obvious direct effects on the incomes of those receiving education, the increase in the supply of skilled labour and the reduction in the supply of unskilled labour both help to reduce poverty by raising the wage bill of the remaining unskilled workers (Fane and Warr, 2000, pp. 232-3).

What are we to make of these results? They fly directly in the face of the empirical results reported by Huppi and Ravallion (1991), Timmer (1997, 2002), Warr (2003), and Sumarto and Suryhadi (2003), as summarized in the discussion on sectoral contributions to poverty reduction in Indonesia (see Chapter 3). Are the empiricists just theoretically naïve, not able to consider general equilibrium consequences of individual sectoral changes (as Temple, 2001, hints)? Or does the CGE model, even with 65 producing sectors and 10 household types, not capture reality well enough to provide a plausible interpretation of the dynamics of the Indonesian economy? For example, the impact of changing the tariff on imported rice (the simplest policy measure to change domestic rice prices) depends fundamentally on the “pass-through coefficient” by which foreign rice affects the price of domestic rice. The Fane-Warr model uses an Armington elasticity of just 0.2, which is a value estimated from experience in other countries in Asia. Recent estimates for Indonesia, however, are closer to one (McCulloch, 2004b). But estimating these elasticities misses the point, to some extent, because they depend crucially on the policy environment and domestic marketing structure, which can change quite rapidly. More importantly, foreign rice in Indonesia competes much more directly with the low quality of rice typically purchased by the poor than it does with the high grades of domestic scented rice that are far more expensive. No CGE model of Indonesia captures this effect.

There are no clear answers to the questions raised about the usefulness of CGE models, although it is fair to say that alternative specifications for CGE models can provide vastly different conclusions. Allowing underemployment for unskilled labor in the rural economy, for example, a feature of the Indonesian CGE model constructed and used by the International Food Policy Research Institute (IFPRI), significantly alters the poverty impact of exogenous shifts in sectoral productivity. Agriculture has the most impact in the IFPRI model.

A further issue is whether “empirical” or “analytical” models are more forward looking. By their nature, empirical studies of the impact of growth in agricultural productivity on poverty reduction, for example, are backward looking, relying on lengthy time series data to produce significant results. Unless these analyses are truly dynamic, and thus model the changing degree of impact over time in order to capture the evolving economic structure, their lessons are naturally time-bound. In contrast, CGE parameters can be forward looking (although, to the extent that they too are econometrically estimated, they suffer the same backward looking orientation as simpler empirical models). Hence, as McCulloch (2004a) argues, part of the divergence between the CGE models and empirical models on the sources of poverty reduction in Indonesia might stem from the direction of the time horizon.

Because of the rich data available for Indonesia and the great interest in its economy by development scholars, a variety of Indonesian-based CGE models have been used to illuminate important policy or analytical debates. Two examples are particularly

interesting. Hertel, et al. (2003) extend analysis of multilateral trade reforms to include the impact on earnings of different household “types” (as in the Fane and Warr model, described above), to complement earlier analyses that concentrated only on consumption adjustments. They use a variant of the IFPRI CGE model of Indonesia as an example, but emphasize that each country in the trade model would need its own CGE model for the results to be representative. But the Indonesian example illustrates how important the earnings adjustments to trade liberalization are, especially in differentiating between short-run and long-run adjustments. Indeed, the signs are often different for the impact on vulnerable groups, with poor households suffering in the short run but benefiting in the long run. This result obviously raises important policy issues, especially with respect to short run safety nets needed in order to proceed with trade liberalization.

The second paper has more of an analytical agenda. Bourguignon, Robilliard, and Robinson (2002) use another variant of the IFPRI CGE model of Indonesia to examine the impact of using “real” households rather than “representative” households when modeling the macro-economics of income inequality. Most CGE models designed to understand distributional issues, such as the Fane and Warr model discussed above, rely on “representative” households to capture the impact of changes in factor and product prices. But much of the distributional action takes place within such representative households, and these effects are usually not captured by assuming some statistical distribution to allow for such changes. In this paper, a “top-down” method for integrating microeconomic data on real households into the modeling is used, with fairly divergent results from the standard analysis. In some cases, the sign of impact on poor households changes in the two approaches.

Although CGE models do have the potential to help analysts understand general tradeoffs in the Indonesian economy, they do not have the clarity and focus to reveal these tradeoffs at the specific level of different parts of the income distribution. They do not speak directly to costs and benefits of different approaches to poverty reduction, especially to the tradeoffs between speeding economic growth as one strategy and spending more money on anti-poverty programs as a second. The following discussion of tradeoffs is thus not a quantitative exercise.

5.2 Human capital investments versus investments in infrastructure that serves the poor

There are very different time horizons for payoffs to human capital investments versus infrastructure investments: fifteen to twenty years for education and child health, for example, and just three to five years for roads, ports, communications, market facilities, etc.²⁴ What rate of time discount should be used for these decisions? What opportunity cost of capital? Does the government have to pay for all of these investments, or will partial subsidies and incentives work? The key tradeoff is short-run versus long-run growth, and whether the poor can “wait” for payoff to their human capital. A “win-win” strategy might be for the poor to be actively engaged in building the infrastructure, thus earning income in the short run and being able to afford to keep their children in school, with its long-run payoff.

An important “counterfactual” question is the role of oil revenues in funding Indonesia’s massive investments in rural schools and infrastructure after 1974. How “pro-poor” would Indonesia’s economic growth have been if these investments had been scaled back significantly for budgetary reasons? Such a question can be answered only in the context of a detailed and dynamic general equilibrium model, as less oil revenue would have meant a more competitive rupiah and more stimulus to the tradables sector. No models currently available can address this specificity of budget allocations and impact on both growth and distribution. The answer to this question is a political economy issue for future governments, which is addressed in chapters 6 and 7.

5.3 Cushioning transition costs

General tradeoffs may exist between “payoffs” to ensure political stability (to individuals, industrial groups, students, military, and/or labor unions) and efficient resource allocation, leading to faster economic growth. Protection of farmers in East Asia during their rapid structural transformation is a key case in point. Historically, the three fastest episodes of pro-poor growth occurred in Japan, Korea, and Taiwan. These three countries also had the fastest growth in agricultural protection, and reached the highest levels of protection at the end of their period of rapid growth. Malaysia utilizes similar protection for its rice farmers, despite remaining an important exporter of other agricultural commodities. All signs point to Indonesia’s being on the verge of significantly protecting its rice farmers, despite the immediate impact on the poor.

As argued previously with regard to the impact of rice prices on the growth elasticity of poverty, the debate over rice prices and poverty goes to the core of current political realities and the prospects for a return to pro-poor growth. In particular, the debate over

²⁴ The different time horizon for impact of investments significantly affects the payoff to different types of foreign assistance. Clemens, Radelet and Bhanvani (2004) show that the 45 percent of development assistance that might reasonably have an impact within 4 years of the investment has a large and statistically significant impact on economic growth. The 45 percent of development assistance with a longer time horizon, especially education and health projects, has no measurable impact on growth within the 4-year horizon of the growth panels. The remaining 10 percent of foreign assistance is for humanitarian assistance and emergency relief. Not surprisingly, this component has a small negative association with economic growth.

the full impact of the tariff on imported rice has been heated and voluminous. Extensive data and analysis can show that higher rice prices have a direct and immediate impact on the level of poverty. Alternatively, the induced employment effects from higher rural incomes can actually reduce poverty within a reasonably short period of time. This debate is reviewed carefully in McCulloch (2004b), from which the tables and figures in Annex 8 are drawn. The Food Policy Support Activity (FPSA) Project with BAPPENAS and the Ministry of Agriculture conducted extensive analysis of the issue. Working papers are available at the project website (www.macrofoodpolicy.com). Finally, Timmer (2003) puts the debate into political economy and historical policy context.

One major reason for the continuing controversy is the rapidly changing structure of Indonesia's food demand and supply. As noted in the discussion of the starchy staple ratio, and the detailed analysis by Molyneaux and Rosner (2004a), food consumption patterns, even among the poor, have moved away from heavy reliance on rice, cassava, and maize, and toward higher-value foods (both nutritionally and economically), such as fruits, vegetables, fish and livestock products--especially eggs and chicken. The patterns of Indonesian agricultural output have been slow to diversify in the face of changing demand patterns, although the share of farmers describing themselves as fruit and vegetable producers in 2003 (38 percent) was double the level in the previous Agricultural Census in 1993.

Now, the rapid emergence of supermarkets is offering Indonesian farmers an opportunity to participate in these new supply chains for higher-value commodities, but procurement officers are ruthless in looking for the lowest cost products. Understanding the competitiveness of Indonesia's farmers is thus an important research task, but it is already apparent that artificially supporting the price of rice has direct consequences for the cost of production of other commodities, especially on the tiny farms characteristic of Java.

The rice tariff thus not only has an impact on Indonesia's poor consumers immediately and directly, with a micro-based estimate suggesting that every 10 percentage points of import tariff on rice pushes an additional one million Indonesians below the poverty line (Buehrer, 1999). If higher rice prices also have net costs to Indonesian farmers, which now seems likely in view of the evolving production structure, they have an unambiguous and unmitigated negative impact on poverty. The analysis in McCulloch (2004b) comes to the same conclusion.

5.4 Reaching the absolute poor versus the near-poor and vulnerable

Despite the impressive record in reducing the numbers of absolute poor over the past three decades, two large problems remain. First, there are many poor just above the official poverty line. For example, the Asian Development Bank reports that 53 percent of the Indonesian population subsists on \$2 per day or less, whereas only 7 percent subsists on less than \$1 per day (ADB, 2004). That is, more than two-fifths of the population is "near poor" in monetary terms, with significantly diminished levels of welfare in other dimensions as well. Second, this large proportion of the population near the poverty line is vulnerable: even modest shocks to the economy or to basic food prices can drive large numbers of people into absolute poverty.

The appropriate government response to these two problems raises another tradeoff. Should most resources be devoted to continuing the attack on the small share of the population below the official poverty line (or below the \$1 per day standard)? Or should policies now be re-focused on the much broader share of the population, nearly half, whose households have risen above those poverty lines but who remain highly vulnerable to economic shocks? Is pro-poor growth the best strategy for dealing with “poverty,” or are targeted programs now the main hope for reaching the absolutely poor?

Some policy approaches will be complementary, of course, as efforts to stabilize the economic environment of most Indonesian households would also benefit the remaining households that are absolutely poor. But tradeoffs will remain, as many of these poor households will be helped only gradually by a return to pro-poor growth and a more stable economy. Speedier assistance will be needed in the form of serious budget commitments to improving rural health and education programs to reach these households. These resources will have significant opportunity costs in terms of broader investments in supporting infrastructure, improvements in the quality of secondary and tertiary education, and improving the quality of governance at both national and local levels.

Chapter 6. Political economy and governance

The standard story to explain the political economy of the Suharto regime's emphasis on agriculture (and pro-poor growth) relies on conflict between traditional political forces—communist-inspired peasants and workers faced opposition from an authoritarian military. Buying off the peasants was cheaper than repression. Rural development was seen as the least-cost approach to political stability. Large-scale ethnic (Chinese) businesses bought protection from Suharto and his military allies and received lucrative import and operating licenses in return. When these highly protected businesses, and their closely associated banks, collapsed in the Asian financial crisis, the entire regime came unraveled. The vacuum of political institutions, deliberately created by Suharto to remove any challenge to his authority, exposed the country to years of political chaos and weak leadership. There is only modest hope that the presidential election in September 2004 will return the country to strong leadership and rapid, pro-poor growth.

As with most stories based on conventional wisdom, there are substantial elements of truth in this one. But it misses what distinguishes the Suharto regime from otherwise similar military dictatorships around the world: its focus on *development* and the effort to improve the welfare of the poor by connecting the rural economy to rapid economic growth. Fear of radical peasants wielding scythes simply does not explain this passion, or the massive budgetary resources devoted to it. Oil revenues in the mid-1970s helped, to be sure, but the basic strategy was already laid down before the OPEC price shock. A much more nuanced story is needed, one that includes the complexities of the structure of political power and the role of leadership. This chapter attempts to provide some of that nuance by tracing the political economy of poverty through a governance lens to the problems caused by decentralization. The chapter concludes with open speculation on the role of President Suharto, personally, in the strategy that generated rapid, pro-poor growth for three decades.

6.1 Trends in governance at the national level

A focus on the quality of governance at the national level is an essential component of any effort to understand, in political economy terms, the historical and emerging patterns of support for pro-poor growth. The poor themselves seldom have an active voice in the strategies that influence the growth process, and they rely on government officials to act on their behalf. In addition to its “voice” on behalf of the poor, governance is now seen as a major factor in the growth process itself. First, such dimensions as government effectiveness and regulatory quality influence growth directly. Second, dimensions such as rule of law and control of corruption influence growth indirectly and in the longer run.

Understanding the quantitative significance of this influence is difficult because the components of governance are so hard to measure. The World Bank has made a major contribution in this field by designing, quantifying, and publishing a set of indicators that attempt to address these concerns (Kaufmann, Kraay and Mastruzzi, 2003). The authors note that:

These indicators are based on several hundred individual variables measuring perceptions of governance, drawn from 25 separate data sources constructed by 18 different organizations. We assign these

individual measures of governance to categories capturing key dimensions of governance, and use an unobserved components model to construct six aggregate governance indicators in each of the four periods. We present the point estimates of the dimensions of governance as well as the margins of errors for each country for the four periods.

Except for “Voice and Accountability,” the results for Indonesia for 1996, 1998, 2000, and 2002, show marked deterioration in each of the indicators (see Table 7).

Table 6
Governance Indicators for Indonesia, 1996-2002

Category	1996	1998	2000	2002
Voice and Accountability	-1.08	-1.33	-0.52	-0.49
Standard error	(0.21)	(0.23)	(0.22)	(0.17)
Political Stability	-0.34	-1.52	-1.85	-1.37
Standard error	(0.27)	(0.25)	(0.23)	(0.20)
Government Effectiveness	0.08	-0.58	-0.49	-0.56
Standard error	(0.20)	(0.21)	(0.17)	(0.15)
Regulatory Quality	0.19	0.10	-0.43	-0.68
Standard error	(0.21)	(0.21)	(0.24)	(0.17)
Rule of Law	-0.34	-0.97	-0.90	-0.80
Standard error	(0.15)	(0.18)	(0.14)	(0.13)
Control of Corruption	-0.44	-0.99	-1.09	-1.16
Standard error	(0.17)	(0.17)	(0.16)	(0.15)
Average for all 6 Factors	-0.322	-0.882	-0.880	-0.843
Standard error	(0.202)	(0.208)	(0.193)	(0.162)

SOURCE: Kaufmann, Kraay, and Mastruzzi (2003)

Even allowing for the difficulty in comparing these indices over time, these are disturbing trends. The index for Voice and Accountability has improved between 1996 and 2002, and this improvement signals the switch to reasonably representative democratic government. There have been steep declines, however, in political stability, regulatory quality, and control of corruption. This deterioration has immediate ramifications for the pace of economic growth, as it affects investment in a direct manner. Direct foreign investment has been negative since 1998. A concern is that such poor governance affects the extent to which economic growth actually reaches the poor. That is, governance itself might be a decisive factor influencing *both* the growth and distributional dimensions of pro-poor growth performance.

There is accumulating evidence of this connection at the regional level. Indonesia conducted a massive decentralization of many governmental functions in 2001. Recent research has attempted to judge the quality of local governance and its impact on poverty reduction between 1999 and 2002.

6.2 The role of governance at the regional level

The experiment with decentralization of government services to the *kabupaten* level presents challenges and opportunities. The challenges are obvious enough, and have stimulated important efforts by the government of Indonesia and its major donors to provide legal guidelines and financial incentives to make the new structure work. The opportunities are equally obvious. Design and implementation of many basic services in health, education, and business regulation are now closer to the people and far more transparent. Whether they become more responsive is the key challenge to democracy.

One opportunity for researchers that stems from the decentralization is the introduction of a great deal of variance into local government activities, which had been precluded by the strong centralization of power during the Suharto regime. With variance comes an opportunity to analyze what works and what does not. Obviously, it is too early to see many systematic effects, but researchers at SMERU have examined initial data to determine if rough measures of the quality of local governance matter for poverty reduction (Sumarto, Suryahadi, and Arifianto, 2004).

The authors stress that no single indicator provides statistically significant results, but because a variety of approaches to studying the issue yield similar patterns, they are reasonably confident their results are worth reporting. Perhaps the most interesting result comes from a survey of 87 cities and *kabupatens* for which a research team was able to construct an index of bureaucratic culture at this level. There were four levels: “disruptive, less conducive, conducive, and very conducive” in fostering the local business environment. None of the districts had a disruptive climate, and 12 were “less conducive,” 61 were “conductive,” and 14 were “very conducive.” (Sumarto, Suryahadi, and Arifianto, 2004, p. 28)

Using *kabupaten*-level reports from the SUSENAS reports for 1999 and 2002, the researchers then compared the mean level of poverty reduction for each of these categories of local bureaucratic culture. The overall mean level of poverty reduction for all 87 cities and districts was 7.8 percent between the two years, but it was only 3.4 percent in the “less conducive” environments, 7.0 percent in the “conductive” environments, and 15.1 percent in the “very conducive” environments. Local “good governance,” at least as measured by this index of bureaucratic culture with respect to business climate, is associated with an immediate impact on poverty reduction. Because of the small sample size and the high degree of “noise” in the local data, a clear story on the mechanisms that translate governance into performance cannot yet be told. Nor can it be determined whether the causation goes the other direction. But further research results in this arena can be expected as the sample is enlarged and as time extends the impact from the experiment in decentralization.

6.2 The political economy of pro-poor growth

Political scientists speculate on the nature of the political coalition assembled by Suharto to maintain and strengthen his hold on power. This coalition was held together by the distribution of economic resources, often in the form of lucrative access to such easily marketable commodities as oil or timber. Import licenses for rice, wheat, sugar and soybeans were equally lucrative. Bulog controlled these closely in the interests of the Suharto regime. Whether the pro-poor policies, and results, of the regime were tied to keeping these interest groups satisfied, even at the expense of faster economic growth in the short run, is the subject of active debate, especially because Bulog, despite being “privatized,” established close ties with the husband of President Megawati and is lobbying aggressively for renewal of Bulog’s monopoly control over trade in most agricultural commodities. The ability of Bulog to stall the deregulation process in the early 1990s is seen by some observers as an early signal that the entire growth process was running off the rails into corrupt and distortionary cronyism. From this perspective, the collapse of the formal sector during the Asian financial crisis was not such a surprise, as it had become increasingly dominated by these interests (Stern, 2003, 2004; Cole and Slade, 1998).

The most debated political economy aspect of the New Order government was the near schizophrenia between macro and sectoral policies. What is so puzzling is why macro economic policy was left largely in the hands of very talented, but highly apolitical, technocrats. Persuasive arguments are made that they provided access to the donor community, which has been a strong, almost lavish, supporter of Indonesia since the late 1960s. But another argument is simply that the technocrats delivered the economic growth the country so desperately needed. In a comparison of the political economy of growth in the Philippines and Indonesia, Thorbecke (1995) came to the following conclusion:

In the final analysis, the most fundamental difference between the development environments in the two countries relates to the macroeconomic policy management and the role of the technocrats. In Indonesia, the latter followed a consistent, far-sighted, credible, and enlightened macroeconomic policy that was outward-oriented and provided a framework within which both economic growth and poverty alleviation could occur. In particular, the key policy instrument that the technocrats relied on was an appropriate exchange rate. Even at the height of the oil boom, when Indonesia was swimming in petro-dollars and was generating large balance-of-payments surpluses, and when the natural inclination would have been to let the rupiah appreciate, instead the technocrats devalued the currency to protect the traditional tradable sectors—foremost among them agriculture—and recycled large parts of these windfall profits back into agriculture. This policy contributed substantially to the phenomenal poverty alleviation process in the rural areas that characterized Indonesia in the seventies and eighties (Thorbecke, 1995, pp. 34-5).

The technocrats had no political base of their own. They depended entirely on their patron, Suharto, to implement their plans and policies. The President was an active

participant in every major macroeconomic decision, especially the timing and magnitude of changes in the exchange rate. Professor Widjojo Nitisastro, the acknowledged dean of the technocrats, receives high praise for his ability to manage the economic team and to consolidate their advice when he explained pressing economic issues to the President. His close colleague, Radius Prawiro, makes the following observation:

All the people in the economic team were intelligent and dynamic men with no shortage of self-esteem. It was Widjojo, however, who quickly became the unofficial yet acknowledged head of the group. Widjojo was an expert in both demographics and economics. He was a brilliant strategist and a person of vision with a long-term focus. He was an excellent listener and without resorting to domination or relying on the authority of conferred title, Widjojo was able to guide a team comprising many of Indonesia's most capable and influential economists. He brought out the best in each member. He kept meetings moving without imposing rigid procedures or formality. Widjojo was a natural leader. Throughout his career, he deliberately kept a low profile and yet if there is anyone who deserves the title of 'architect' of Indonesia's economic development, it is Widjojo (Prawiro, 1998, p. 83).

Despite the control of the economic team over macro economic policy, with the President's equally clear support and blessing, Suharto used trade policy to protect special interests in his circle and even beyond, sometimes with no more apparent rationale than a nationalist interest to develop a modern industrial capacity. The role of good economic governance and political commitment to poverty reduction is a key lesson from this experience, but the paradox is why the autocratic Suharto regime provided both ingredients for so long, and why the new democratic governments have not.

Part of Suharto's commitment to the rural economy seems to have come from the highly visible politics, and power, of food security. The drive for higher agricultural productivity—a key ingredient in pro-poor growth—was fueled at least in part by the desire for households, and the country, to have more reliable supplies of rice than what was available, at least historically, from world markets. When the world rice market quite literally disappeared for several months during the World Food Crisis in 1973, Indonesia's dependence on imported rice to stabilize domestic prices highlighted its vulnerability to external markets beyond its control—the opposite of food security in the minds of most Indonesians—and showed how important it was to increase rice production (Timmer, 2000). A ratcheting up of policy attention to agriculture and budget support for rural infrastructure followed the traumatic loss of control of rice prices in 1972-73. But here, too, the world has changed. A drive for rice self-sufficiency that made technical and economic sense in the late 1970s and early 1980s would be folly today, a reality that has not yet registered with the present government.

Indeed, the current political economy of pro-poor growth seems quite perverse, especially policies with respect to the rice economy which are intended to generate that growth. There is, however, a rationale that explains the current political economy. Behind the Suharto regime's commitment to pro-poor growth were two important constituencies: one that backed economic growth itself; and the other that expressed concern for the poor. The growth coalition was made up of the modernizing elements of the military, the

business elite not already comfortably protected by anti-growth protectionist measures, and most of the rural sector, which was near starvation in the mid-1960s.

The voices for the poor included many of this same coalition, but for somewhat different reasons. The military was concerned about rural unrest. It did not have the coercive resources to suppress it by force alone. The Jakarta political elite, led by President Suharto, increasingly staked its credibility on political stability. Both the urban and rural poor could pose a threat to that, as the 1974 Malari riots demonstrated.²⁵ Increasingly, the donor community came to stress the importance of poverty reduction. The World Bank made a major commitment in the late-1980s to the analytical work that surfaced in its 1990 report on poverty.

The fortuitous intersection of the growth and poverty coalitions thus offered the Suharto regime a political opportunity to do well by doing good. In the context of powerful opportunities to stimulate rapid growth in rural areas through high-payoff investments in rehabilitating irrigation systems and rural infrastructure and the importation of new rice technologies, a cumulative process started that built both rapid growth and poverty reduction into the basic dynamics of the Indonesian economy. But the process started in the agricultural sector.

This cumulative process appeared to have ended in the early 1980s, as prices for agricultural commodities collapsed in world markets, oil prices declined, and the whole growth process seemed threatened. Fortuitously, again, but under the determined guidance of the technocrats, and with the full support of the President, the economy was restructured to make it more open to foreign trade and investment, just as Japan and Korea came looking for opportunities to invest in labor-intensive manufacturing facilities. Only with the economic and political collapse in 1998 did this source of pro-poor growth disappear (and with it the patron of the technocrats).

What next? The political appeal of the new strategy for dealing with poverty—direct fiscal transfers to the poor—is obvious. In principle, these transfers have immediate and visible impact on the recipients, and the political “pitch” for the programs makes it sound as though the government is actively committed to poverty reduction. Although democracy has probably *increased* the size and influence of the political coalition concerned about poverty, it has greatly *undermined* the coalition supporting economic growth as the main mechanism for dealing with it (see Box 5 for Andrew MacIntyre’s interpretation of the political economy of recent years).

²⁵ One of the major grievances of the student rioters was the loss of control over rice prices in the previous year, and the continuing high rice prices.

Box 5.

Andrew MacIntyre (2003) on political economy

Indonesia is a notable case for considering the problems of poorly performing states, given the sharp swings in its developmental trajectory over time. In the early 1950s it was, like many newly independent countries, muddling along with weak and fragmented governance – albeit of a generally democratic nature – and modest economic growth. As political and economic difficulties accumulated, this situation was overturned by the country’s founding president, Sukarno, who imposed authoritarian rule. His chaotic dictatorship only deepened the country’s problems and had severely negative consequences for the economy. During this phase – the late 1950s, through until the mid 1960s – Indonesia was in many ways a prime exemplar of the dangerously degenerative consequences of weak governance and a sickly economy. Eventually the situation deteriorated so far that the military was able to move against Sukarno and claim power for itself. Thereafter, in a stark break with the past, strong and systematic authoritarian controls were imposed, enabling Suharto’s new regime to enforce stability across the archipelago. This paved the way for strongly pro-growth economic policies to drive a 30 year boom and industrial transformation, before the regime finally unravelled amidst the upheaval of the Asian financial crisis. Most recently, we have seen Indonesia struggle to rebuild itself economically and politically amidst particularly challenging circumstances.

Viewed in its entirety, Indonesia’s developmental record thus offers an important illustration both of how poorly performing states can readily slide into more dire circumstances and of how even acute situations can be salvaged. (In 1964 or early 1965, no one – inside or outside Indonesia – could have guessed that within a few years the country would be enjoying sustained strong economic growth.) But the model that was so successful in economic terms and for so long, could not endure indefinitely given its shallow base of public consent. And in the wake of the regime’s dramatic collapse, the country has faced an uphill battle to rebuild. Also of analytic and policy interest are the ambiguities of Indonesia’s current situation.

Indonesia’s problems today are numerous and very serious, but the situation is not dire. Thanks primarily to its own internal reform efforts, but also aided by constructive policy engagement in certain areas by the United States and other providers of development assistance, amidst persistent problems the country is now showing signs of slowly emerging from a deeply worrying period of flux. But just as there is ambiguity in assessing Indonesia’s developmental performance over the past half decade, so too there is ambiguity in considering the likely character for the period ahead. Given the recent progress with restructuring the national political institutions, there are good grounds for expecting that, over the next half decade, Indonesia will experience stable and moderately effective government and moderate economic growth. A stable developing country with a viable form of democratic government and economic growth in the 3-4% range is above the deeply worrying status of low income poorly performing states. And yet it is by no means a situation about which one can be sanguine either.

A trajectory of only moderate economic growth will not allow Indonesia to regain the rapid pace of developmental progress it once enjoyed. In practical terms this means improvement in living standards will be slow and we may well see the deterioration of

public infrastructure, such as public health and education systems and roads in outlying areas. If this is correct, a growing gap is likely to emerge between Indonesia and the more strongly performing economies of East Asia. The best hope is that it will be able to continue its record of broadly successful institutional reform at the national political level, and extend this to the next wave of institutional challenges: regional government and the legal system. Better institutions will permit better governance, and better governance will permit more rapid economic progress. Primary carriage of these issues inevitably lies with Indonesia itself, but this is something to which the United States has shown it can make a significant and positive contribution. (MacIntyre, 2003)

In the current political rhetoric, poverty reduction is no longer linked to economic growth. In fact, as the agency distributing subsidized rice to the poor, Bulog seems to have built an “anti-poverty” political coalition similar to the one supporting Food Stamps in the U.S. Congress. Support in the U.S. comes from conservative rural legislators eager to have additional markets for the food that is produced in surplus by their farm constituents and from urban liberals who have in their constituency many poor people who use food stamps as a major source of income.

Similarly, Bulog is the agency that procures rice domestically with budget support from Parliament, and distributes this rice to the poor at low prices that are, again, subsidized by the budget. Bulog has mobilized political support from two constituencies concerned with poverty: first, for its rice procurement program, on the grounds that it helps rice farmers; and second, for its implementation of the “special market operations” (OPK) program that delivers subsidized rice to the poor. As Stephen Mink (2004) of the World Bank has observed, no parliamentarians have been willing to take on both dimensions of the rice program simultaneously. As a result, the huge budget subsidies that accrue to Bulog to run these programs, and the corruption that accompanies them, go unchallenged.

Rebuilding the economic growth coalition is likely to take a long time. It will depend on the underlying conditions of economic governance—political stability, rule of law, control of corruption, and so on—that are still moving in the wrong direction. Probably the best that can be done in the short run—the next three to five years—is to minimize policy damage to the interests *of the poor* while trying to improve the effectiveness of the programs transferring resources directly *to the poor*. Chapter 7 speculates on whether this is an optimistic or pessimistic outlook for the Indonesian economy and the fate of the country’s poor.

Chapter 7. Looking forward: Optimism or pessimism?

Much of this paper has been spent looking backward, trying to understand the historical, and positive, reversal in the fortunes of the poor in Indonesia after 1967, and the challenges the poor have faced in the transition from the authoritarian Suharto regime to real democracy. Interesting as these historical lessons are, the most important reason for spending the time and energy to understand that often paradoxical record is to offer useful insights into the future. In particular, how does the new government move forward on an agenda of pro-poor growth? This concluding chapter attempts to answer that question.

Most of the reviewers of early drafts of this paper were surprised, even disturbed, by its generally optimistic story. For the past six years, the press reports out of Indonesia have not been encouraging. The country has been through a historic drought. Only imports of 6 million metric tons of rice in 1998--20 percent of consumption--kept per capita supplies at their trend level. The Asian financial crisis swept Indonesia in its fullest fury. The dominant political regime, which had spent thirty years building a support structure to ensure its continued survival, collapsed. When that structure collapsed, there was nothing.

How does a society cope with three such massive shocks in the span of just a year? If 1966, in the famous words of President Sukarno, was “the year of living dangerously,” what was 1998? The quiet and emerging answer is “the year of transformation to a freer and fairer society.” This is not the stuff of headlines. The headline grabbers are the Bali and Marriott bombings, judicial ineptitude and outright corruption, human rights abuses by the military, and continuing games played by Jakarta’s political elite (McBeth, 2003).

Little noticed is the steady progress that is being made. If occasional jabs at foreign companies by local courts still roil investors, the clear competence of the new constitutional court is unreported. The petty (and not so petty) corruption of newly empowered local governments makes news and is troublesome. But the open competition to create good business environments at the local level might have more long-run impact (Ramage, 2004).

Amidst the gloom and doom, the historical resilience and successes of Indonesian society need to be appreciated and valued. From a long-run perspective, the Indonesian experience with pro-poor growth provides genuine hope that desperately poor societies can escape from the worst manifestations of their poverty in a generation, provided appropriate policies are followed. This is a critically important message for the Indonesia of the future, unsure as it is over what path to follow during its democratic transition. In its broadest outlines, that path is clear. The three-tiered strategy of growth-oriented macro economic policy, linked to product and factor markets through progressively lower transactions costs, which in turn are linked to poor households whose capabilities are being increased by public investments in human capital, is a general model accessible to all countries, including the future Indonesia.

Investments in infrastructure and human capital are at the heart of the public-sector dimensions of this model. The pace of investments in infrastructure to lower transactions costs and in human capital to improve the capabilities of the poor will depend on the

country's ability to generate public revenues. A fairer and more effective form of public taxation is essential if the new government is to make these investments. The design of these pro-poor mechanisms of public finance is urgent, because foreign resources, from donors and foreign consumers of petroleum, are becoming less available. But there is no escaping the hard fact that these resources dictate not only the pace of economic growth but also the extent to which that growth reaches the poor. With the right pro-poor growth model in place, foreign assistance could have a very high payoff in both dimensions.

The ingredients of that model include many of the policies and types of investments put in place after 1967—the *basics* of economic growth do not change much over the decades. But the Indonesia of 2004 and beyond also needs fresh ideas and approaches to cope with problems that are far more complex than just removing the impediments to growth and rehabilitating the market economy. Wise, pragmatic, and effective leadership—at all levels of government—is essential if rapid growth is to be re-established in a way that continues to improve the lives of the poor. Indonesia's success from 1967 to 1997 did not just happen as the accident of market forces. It was planned, nurtured, and largely financed by an activist government intent on reducing poverty as rapidly as possible. A new government with similar commitment can do the same.

References

- Aaron, Carl, Lloyd Kenward, Kelly Bird, Mehir Desai, Haryo Aswicahyono, Chatib M. Basri, and Choesni Tubagus. 2004. "Strategic Approaches to Job Creation and Employment in Indonesia," Report prepared for the United States Agency for International Development, Jakarta Mission, February 4, processed.
- Afiff, Saleh. 2004. "Scaling Up Poverty Reduction in Indonesia." Presented at the World Bank Conference on "Scaling Up Poverty Reduction," Shanghai, China, May 27.
- Afiff, Saleh, and C. Peter Timmer. 1971. "Rice Policy in Indonesia." *Food Research Institute Studies in Agricultural Economics, Trade, and Development*, Vol. X, no. 2, pp. 131-159.
- Agrawal, Nisha. 1995. "Indonesia: Labor Market Policies and International Competitiveness." Policy Research Working Paper 1515. The World Bank, processed.
- Alatas, Vivi, Jehan Arulpragasam, and Neil McCulloch. 2004. "Poverty Rates and Growth Incidence Curves for Indonesia, 1990-2002." Working Paper, World Bank, Jakarta.
- Alm, James, Robert H. Aten, and Roy Bahl. 2001. "Can Indonesia Decentralize Successfully? Plans, Problems, and Prospects." *Bulletin of Indonesian Economic Studies*, Vol 37, no. 1.
- Asian Development Bank (ADB). 2004. "Poverty in Asia: Measurement, Estimates and Prospects." Special Chapter in *Key Indicators, 2004*. Manila.
- Aspinall, Edward, and Greg Fealy (editors). 2003. *Local Power and Politics in Indonesia: Decentralisation and Democratisation*. Institute of Southeast Asian Studies, Singapore.
- Besley, Timothy, and Robin Burgess. 2003. "Halving Global Poverty." *Journal of Economic Perspectives*. Vol. 17, no. 3, pp. 3-22.
- Besley, Timothy, Robin Burgess, and Berta Esteve-Volart. 2004. "Operationalizing Pro-Poor Growth: India Case Study." Department of Economics, London School of Economics. Processed.
- Boeke, Jan H., 1946. *The Evolution of the Netherlands Indies Economy*. Institute of Pacific Relations: New York.
- Booth, Anne. 2002a. "Rethinking the Role of Agriculture in the 'East Asian' Model: Why is Southeast Asia Different from Northeast Asia?" *ASEAN Economic Bulletin*, Vol. 19, No. 1 (April), pp. 40-51.

- _____. 2002b. "Growth Collapses in Indonesia: A Comparison of the 1930s and the 1990s." Working Paper, SOAS, University of London, Processed.
- Booth, Anne, and Peter McCawley (editors). 1981. *The Indonesian Economy during the Soeharto Era*. Oxford University Press. Petaling Jaya.
- Bourguignon, Francois, Sophie Robilliard, and Sherman Robinson. 2002. "Representative Versus Real Households in the Macro-economic Modeling of Inequality," The World Bank and IFPRI, working paper, processed.
- Bravo-Ortega, Claudio, and Daniel Lederman. 2004. "Agriculture and National Welfare around the World: Causality and International Heterogeneity since 1960." Draft paper for the Latin America and Caribbean Region Department of the World Bank. August 10, processed.
- Buehrer, Timothy S. 1999. "Rice Prices, Tariffs, and Poverty." Memorandum 136/99/525. Harvard Advisory Group, Indonesia. November 19, processed.
- Bulletin of Indonesian Economic Studies*. "Survey of Recent Developments." Various issues.
- Clemens, Michael, Steven Radelet, and Rikhil Bhavnani. 2004. "Counting Chickens When They Hatch: The Short-term Effect of Aid on Growth. Working Paper No. 44, Center for Global Development, Washington, DC.
- Cole, David C., and Betty F. Slade. 1996. *Building a Modern Financial System: The Indonesian Experience*. Cambridge University Press: Melbourne.
- _____. 1998. "Why Has Indonesia's Financial Crisis been so Bad?" *Bulletin of Indonesian Economic Studies*. Vol. 34, no. 2, pp. 61-6.
- Collier, William L., and Sajogyo. 1972. "Employment Opportunities Created by the High Yielding Rice Varieties in Several Areas on Java." *Ekonomi dan Keuangan Indonesia* [Economy and Finance in Indonesia], Vol. 20, no. 2.
- Elson, R. E. 2001. *Soeharto: A Political Biography*. Cambridge University Press: Cambridge, UK.
- Fane, George, and Peter Warr. 2003. "How Economic Growth Reduces Poverty: A General Equilibrium Analysis for Indonesia." In Ralph van der Hoeven and Anthony Shorrocks, eds., *Perspectives on Growth and Poverty*. WIDER: United Nations University Press. Pp. 217-234.
- Fox, James W. 2002. "Poverty Reduction in Indonesia, 1967 to 1997: A Country Case Study." Technical Report submitted by Nathan Associates, Inc. to USAID, Washington under Contract No. PCE-I-00-00-00013-00. November 29.

- Freidman, Jed. 2002. "How Responsive is Poverty to Growth? A Regional Analysis of Poverty, Inequality, and Growth in Indonesia, 1984-1999." RAND Working Paper, June. Processed.
- Gelb, Alan, and Associates. 1988. *Oil Windfalls: Blessing or Curse?* Oxford University Press for the World Bank, New York.
- Gugerty, Mary Kay, and C. Peter Timmer. 1999. "Growth, Inequality and Poverty Alleviation: Implications for Development Assistance." Prepared for CAER II, USAID, Washington, DC. November.
- Harvard Development Advisory Service. 1968. "An Appropriate Tactic for the Five Year Plan: Notes on the "Bull Session" held March 16-17 to prepare for REPELITA I." March 20. Jakarta. Stenciled.
- Hertel, Thomas W., Maros Ivanic, Paul V. Preckel, and John A. L. Cranfield. 2003. "The Earnings Effects of Multilateral Trade Liberalization: Implications for Poverty in Developing Countries." Working paper, Purdue University, processed.
- Hill, Hal. 1996. *The Indonesian Economy Since 1966*. Cambridge University Press.
- _____. 2000. *The Indonesian Economy Since 1966*. 2nd Edition, Cambridge University Press.
- Hofman, Bert, Ella Rodrick-Jones, and Thee Kian Wie. 2004. "Indonesia: Rapid Growth; Weak Institutions." Paper prepared for the Shanghai Conference on "Scaling Up Poverty Reduction," May 28-29, 2004. Preliminary Draft (April 18). Jakarta: The World Bank, processed.
- Hull, Terence H. 2004. "Indonesia's Demographic Turning Point." August. Working Paper, Australian National University, Canberra. Processed
- Islam, Iyanatul. 2002. "Poverty, Employment and Wages: An Indonesian Perspective." ILO-JMHLW-Government of Indonesia Seminar on Strengthening Employment and Labour Market Policies for Poverty Alleviation and Economic Recovery in East and Southeast Asia. April 29-May 1. Jakarta: ILO, processed.
- Jones, E. L. 1998. *Growth Recurring: Economic Change in World History*. Oxford, UK: Clarendon Press.
- Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. 2003. "Governance Matters III: Governance Indicators for 2996-2002." The World Bank, processed.
- Kraay, Aart. 2004. "When is Growth Pro-Poor? Cross-Country Evidence." World Bank Policy Research Working Paper 3225. March. Washington, DC: Processed.

- Lanjouw, Peter, Menno Pradhan, Fadia Saadah, Haneen Sayed, and Robert Sparrow. 2001. "Poverty, Education and Health in Indonesia: Who Benefits from Public Spending? December. Working Paper, World Bank, Washington, DC.
- Lewis, W. Arthur. 1954. "Economic Development with Unlimited Supplies of Labor." *The Manchester School*. Vol. 22, pp. 3-42.
- Liddle, R. William. 1991. "The Relative Autonomy of the Third World Politician: Soeharto and Indonesian Economic Development in Comparative Perspective." *International Studies Quarterly*. Vol. 35, no. 4, December, pp. 403-27.
- _____. 1996. *Leadership and Culture in Indonesian Politics*. Sydney: Allen and Unwin, in association with the Asian Studies Association of Australia.
- McBeth, John. 2003. "Leadership: The Betrayal of Indonesia." *Far Eastern Economic Review*. Cover Story, June 26.
- MacIntyre, Andrew. 1998. "The End of the Suharto Regime is Near." *Los Angeles Times*. March.
- _____. 2001. "The Politics of Agricultural Policy-making: the Importance of Institutions." In Ammar Siamwalla, ed., *The Evolving Roles of State, Private, and Local Actors in Asian Rural Development*. Oxford University Press, Hong Kong, pp. 243-70.
- _____. 2003. "Indonesia as a Poorly Performing State?" Australian National University. Processed.
- Manning, Chris. 1998. *Indonesian Labour in Transition: An East Asian Success Story?* Cambridge University Press, Cambridge.
- _____. 2000. "Labour Market Adjustments to Indonesia's Economic Crisis: Context, Trends and Conclusions." *Bulletin of Indonesian Economic Studies*. Vol 36, No. 1 (April), pp. 105-36.
- Mason, Andrew D., and Jacqueline Baptist. 1996. "How Important are Labor Markets to the Welfare of Indonesia's Poor? Policy Research Working Paper 1665 (October), The World Bank, processed.
- McCawley, Peter. 2002. "Economic Policy during the Soeharto Era: A Balance Sheet," in Mohamad Ikhsan, Chris Manning, and Hadi Soesastro (editors), *Ekonomi Indonesia di Era Politik Baru: 80 Tahun Mohammad Sadli* [The Indonesian Economy in the New Political Era: Mohammad Sadli's 80 Years]. Penerbit Buku Kompas, June, Jakarta, pp. 259-270.
- McCulloch, Neil. 2004a. Some Comments on the Indonesia Country Study by Peter Timmer. July 8. World Bank, Jakarta.

- _____. 2004b. "Trade and Poverty in Indonesia—Assessing the Links." May 5. Working Paper, World Bank, Jakarta.
- Mellor, John W. 2000. "Agricultural Growth, Rural Employment, and Poverty Reduction: Non-Tradables, Public Expenditure, and Balanced Growth." Prepared for the World Bank Rural Week 2000, March.
- Mink, Stephen. 2004. "Comments on presentation by Jorge Garcia-Garcia on the costs and benefits of Bulog's commodity interventions from 1993 to 1998." July 7. The World Bank, Washington, DC.
- Molyneux, Jack. 2003. "Starchy Staple Consumption and Household Nutrition: A Fresh Look at Indonesian Welfare." Indonesian Food Policy Program (www.macrofoodpolicy.com), February, Jakarta: Processed.
- Molyneux, John W., and L. Peter Rosner. 2004a. "Changing Patterns of Indonesian Food Consumption and their Welfare Implications." Food Policy Support Activity (FPSA) Working Paper. DAI/USAID/BAPPENAS. May. Jakarta, Processed.
- _____. 2004b. "Preliminary Findings from Revised Rural Data." Food Policy Support Activity (FPSA) Research Note. DAI/USAID/BAPPENAS. June. Jakarta, Processed.
- Myrdal, Gunnar. 1968. *Asian Drama: An Inquiry into the Poverty of Countries*. Kalyani Publishers: New Delhi (A Twentieth Century
- North, Douglas. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.
- Papanek, Gustav. 2004. "The Poor During Economic Decline, Rapid Growth and Crisis: The Case of Indonesia." Prepared for the USAID Project on Pro-Poor Growth conducted by DAI and BIDE, Bethesda, MD: processed.
- Pardey, Philip G., and Vincent H. Smith (editors). 2004. *What's Economics Worth? Valuing Policy Research*. Johns Hopkins University Press for IFPRI: Baltimore, MD.
- Pearson, Scott R. 1990. "Financing Rice Price Stabilization in Indonesia." *Indonesian Food Journal*. Vol 4, no. 7, pp. 63-83.
- Pritchett, Lant. 2004. "Comments on INDOPOV Concept Note." Transmitted by e-mail, January 26.
- Prawiro, Radius. 1998. *Indonesia's Struggle for Economic Development: Pragmatism in Action*. Oxford University Press, Kuala Lumpur.
- Ramage, Douglas. 2004. Presentation on "The Political Dynamics of Indonesia's Elections." Asia Society and US Indonesian Association (USINDO), April 29.

- Ravallion, Martin, and Monika Huppi. 1991. "Measuring Changes in Poverty: A Methodological Case Study of Indonesia during an Adjustment Period." *World Bank Economic Review*. Vol. 5, no. 1, pp. 57-82.
- Rock, Michael T., 2002. "Exploring the Impact of Selective Interventions in Agriculture on the Growth of Manufactures in Indonesia, Malaysia, and Thailand." *Journal of International Development*. Vol. 14, No. 4, pp. 485-510.
- _____. 2003. "The Politics of Development Policy and Development Policy Reform in New Order Indonesia." William Davidson Institute Working Paper 632. (November), Processed. Pp. 1-56.
- Sarris, Alexander H. 2001. "The Role of Agriculture in Economic Development and Poverty Reduction: An Empirical and Conceptual Foundation." Prepared for the Rural Development Department of the World Bank, Washington, DC. March.
- Schydlofsky, Daniel M. 2000. "Misperceived Corporate Exchange Risk and Hyperinflation in Indonesia 1998-99." American University and Boston Institute of Developing Economies, Ltd. Processed. January 15.
- Stern, Joseph J. 2003. "The Rise and Fall of the Indonesian Economy." CID Working Paper no. 100, June, Harvard University, Cambridge, MA.
- _____. 2004. "The Impact of the Crisis—Decline and Recovery." CID Working Paper no. 103, January, Harvard University, Cambridge, MA.
- Soeharto. 1989. *Pemikiran, Ucapan dan Tindakan Saya: Otobiografi*, PT Citra Lamtoro Gung Persada. Jakarta.
- Sumarto, Sudarno, and Asep Suryhadi. 2003. "The Indonesian Experience on Trade Reform, Economic Growth and Poverty Reduction," Presented at the Trade, Growth and Poverty Conference, December 8-9, London. The SMERU Research Institute, Jakarta, processed.
- Sumarto, Sudarno, Asep Suryhadi, and Alex Arifianto. 2004. "Governance and Poverty Reduction: Evidence from Newly Decentralized Indonesia." Working Paper, The SMERU Research Institute, Jakarta, (March), processed.
- Temple, Jonathan. 2001. "Growing into Trouble: Indonesia after 1966." Working Paper, Department of Economics, University of Bristol. August 15, processed.
- Thee, Kian Wie (editor). 2003. *Recollections: The Indonesian Economy, 1950s – 1990s*. Singapore: Institute of Southeast Asian Studies, and Canberra: Research School of Pacific and Asian Studies, Australian National University.
- Thorbecke, Erik. 1995. *The Political Economy of Development: Indonesia and the Philippines*. The Frank H. Golay Memorial Lecture. Cornell Southeast Asia Program. Ithaca, NY.

- Timmer, C. Peter. 1975. "The Political Economy of Rice in Asia: Indonesia." *Food Research Institute Studies*, Vol. XIV, no. 3, pp. 197-231.
- _____. 1996a. "Does BULOG Stabilise Rice Prices in Indonesia? Should it Try?" *Bulletin of Indonesian Economic Studies*. Vol 32, no. 2 (August), pp. 45-74.
- _____. 1996b. "Economic Growth and Poverty Alleviation in Indonesia." *Research in Domestic and International Agribusiness Management, Volume 12*. (Greenwich, CT: JAI Press, 1996), pp. 205-34.
- _____. 1997. "How Well do the Poor Connect to the Growth Process?" Harvard Institute for International Development for the USAID/CAER project, December, processed.
- _____. 2000. "The Macro Dimensions of Food Security: Economic Growth, Equitable Distribution, and Food Price Stability." *Food Policy*. Vol 25, pp 283-295.
- _____. 2002. "Agriculture and Economic Growth." In Bruce Gardner and Gordon Rausser, eds., *The Handbook of Agricultural Economics, Vol. II*. Amsterdam: North-Holland. Pp. 1487-1546.
- _____. 2003. "Food Security and Rice Price Policy in Indonesia: The Economics and Politics of the Food Price Dilemma." In Mew, T. W., Brar, D. S., Peng, S., Dawe, D., and Hardy, B. eds. *Rice Science: Innovations and Impact for Livelihood*. Proceedings of the International Rice Research Conference, 16-19 September, 2002, Beijing, China. International Rice Research Institute, Chinese Academy of Engineering, and Chinese Academy of Agricultural Sciences, pp. 777-788.
- _____. 2004. "The Road to Pro-Poor Growth: The Indonesian Experience in Regional Perspective." *Bulletin of Indonesian Economic Studies*. Vol. 40, no. 2 (August), pp. 173-203.
- Timmer, C. Peter, Walter P. Falcon and Scott R. Pearson. 1983. *Food Policy Analysis*. Johns Hopkins University Press for the World Bank. Baltimore: Md.
- C. Peter Timmer, Walter P. Falcon, Franck Wiebe, and Andrew D. Mason, "An Approach to Poverty Alleviation in Indonesia: Overview," in *Approaches to Poverty Alleviation in Indonesia*, Harvard Institute for International Development Report No. 136/92/255, September, 1992.
- van der Eng, Pierre. 1993a. *Agricultural Growth in Indonesia since 1880: Productivity Change and the Impact of Government Policy*. Groningen, Netherlands: Rijksuniversiteit Groningen.

- _____. 1993b. "Food Consumption and the Standard of Living in Indonesia, 1880-1990." *Economics Division Working Papers: Southeast Asia*, no. 93/1. Canberra: Research School of Pacific and Asian Studies, Australian National University.
- _____. 2000. "Food for Thought: Trends in Indonesia's Food Supply, 1880-1995." *Journal of Interdisciplinary History*. Vol. 30, No. 4, pp. 591-616.
- _____. 2002. "Indonesia's Growth Performance in the Twentieth Century." In Angus Maddison, D.S. Prasada Rao, and William F. Shepherd, eds. *The Asian Economies in the Twentieth Century*. Edward Elgar.
- Warr, Peter G. 1984. "Exchange Rate Protection in Indonesia." *Bulletin of Indonesian Economic Studies*. Vol. XX, no. 2, August, pp. 53-89.
- _____. 2003. "Industrialization, Trade Policy and Poverty Reduction: Evidence from Asia." *Festschrift in Honour of Peter Lloyd*. Melbourne, January, processed.
- World Bank. (1968) (Then known as the International Bank for Reconstruction and Development, or IBRD). *Economic Development in Indonesia: Volume I, Main Report*. Report: AS-132a, February 12.
- _____. 1987. *Indonesia: Strategy for Economic Recovery*. May 5. World Bank Country Study, Washington, DC.
- _____. 1990. *Indonesia: Strategy for a Sustained Reduction in Poverty*. November. World Bank Country Study. Washington, DC.
- _____. 2001. *Indonesia: Poverty Reduction in Indonesia: Constructing a New Strategy*. October 29, World Bank Country Study, Washington, DC.
- _____. 2003a. *Indonesia: Beyond Macro-Economic Stability*. World Bank Brief for the Consultative Group on Indonesia, December.
- _____. 2003b. *Indonesia: Country Assistance Strategy, FY 2004-2007* (Advance Copy), Jakarta.
- _____. 2004. "Concept Paper on Operationalizing Pro-Poor Growth." A Research Project Sponsored by AFD, DFID, GTZ, KfW and PREM. May 11. Washington, DC.

Annex 1. Regression coefficients on logarithm of per capita income (LYPC), logarithm of kilocalorie intake per capita per day (LKCAL), and TIME, from 1880 to 1990, and specified sub-periods (*t*-statistics in parentheses).

Dependent Variable: LKCAL

Time Period	Constant	LYPC	Time	Adjusted R-squared
1880-1905	1.343 (1.5)	1.182 (6.7)	-0.0074 (9.0)	0.759
	7.118 (5.3)	0.051 (0.2)		0.00
	7.429 (498.6)		-0.0034 (3.6)	0.318
1905-1925	1.045 (0.5)	1.241 (2.7)	-0.0064 (0.8)	0.722
	2.789 (4.3)	0.878 (7.4)		0.727
	7.063 (82.5)		0.0139 (5.9)	0.629
1925-1950	5.606 (11.8)	0.344 (5.1)	0.0005 (0.2)	0.647
	5.697 (21.9)	0.333 (7.0)		0.661
	7.982 (56.5)		-0.0078 (3.2)	0.276
1950-1965	4.030 (2.8)	0.652 (2.0)	-0.0027 (0.5)	0.389
	4.617 (5.6)	0.509 (3.5)		0.422
	6.929 (31.8)		0.0068 (2.5)	0.252
1965-1990	4.956 (14.7)	0.227 (1.8)	0.0131 (3.0)	0.964
	4.032 (24.8)	0.595 (22.1)		0.951
	5.555 (65.8)		0.0210 (24.5)	0.960
1880-1990	5.166 (28.0)	0.440 (12.1)	-0.0017 (4.3)	0.685
	5.775 (46.0)	0.313 (13.9)		0.636
	7.391 (327.6)		0.0022 (6.4)	0.266

Dependent Variable: LYPC

Time Period	Constant	Time	Adjusted R-squared
1880-1905	5.149 (502.4)	0.0033 (5.0)	0.490
1905-1925	4.850 (130.7)	0.0163 (16.0)	0.927
1925-1950	6.912 (23.0)	-0.0242 (4.8)	0.464
1950-1965	4.450 (27.0)	0.0146 (7.0)	0.759
1965-1990	2.637 (19.9)	0.0345 (25.7)	0.963
1880-1990	5.055 (130.1)	0.0089 (14.8)	0.665

There is some evidence that the income elasticity of demand for calories is declining slightly over time, as the significant coefficient on “time” in the equation for KCAL from 1880 to 1990 indicates. But this is not because of higher incomes per se. Including a squared term for LYPC causes both income coefficients to become insignificant. It is more likely that the negative “drift” in the income elasticity is due to urbanization and less strenuous work loads, thus reducing caloric requirements for a given level of income.

Data for these regressions are from van der Eng, 1993a, 1993b.

Derivation of the analytical relationship between changes in per capita income, food energy intake, and the poverty headcount index

Known:

Long-run average Engel curve, $C = a + b \text{Log} Y_t$,

where C = daily per capita food energy intake in kilocalories; $\text{log} Y_t$ = logarithm of average per capita income at some point in time t ; and a, b = parameters that are constant for a given income distribution, set of food prices, etc.

Income distribution, $D = c + d \text{Log} Y_i$,

Where D = cumulative income distribution in percent; and c, d = parameters for a given distribution. With this distributional form, “neutral” economic growth is reflected by a progressive reduction in the intercept term c . If income distribution becomes more equal, d becomes larger, and vice versa.

Let C^* = the “nutritional poverty line”, and $\text{Log} Y^*$ = the equivalent income poverty line. At time t_0 , we observe per capita income Y_0 and the associated average food energy intake C_0 . From Figure A1 we can see that the initial incidence of poverty, HCI^* , is determined by the intersection of D with $\text{Log} Y^*$. Note that D is drawn on the basis of $\text{Log} Y_0, C_0$ as the averages observed at time=0, and is consistent with the Engel curve relationship.

At time=1, all we observe is Y_1 and C_1 , with no additional information on any changes in D . What can we say about changes in HCI ?

Answer: Within this poverty framework, HCI at $t=1$ is completely identified with knowledge of the income elasticity of demand for food energy between $t = 0$ and $t = 1$. This (arc) elasticity can be estimated from (Y_0, C_0) and (Y_1, C_1) , both of which are observed data points.

Proof: Note that when D is constant, the change in HCI is simply $\Delta \text{HCI} = -d \Delta \text{Log} Y$, where $\Delta \text{Log} Y = \text{Log} Y_1 - \text{Log} Y_0$.

In such cases, the *observed* C_1 lies on the average estimated Engel curve, at C_{1e} .

However, when C_1 is above (or below) C_{1e} , income distribution has improved (or worsened). This distributional change can be quantified as the additional (or reduced) income, if neutrally distributed, that would be needed to induce the consumption of the *observed* food energy, C_1 .

In the log-linear model of Figure A1, the additional food energy consumed ($C_1 - C_{1e}$) is proportional to the additional income needed to generate it ($\text{Log}Y_1' - \text{Log}Y_1 = \Delta\text{Log}Y'$).

By the rule of similar triangles, this proportion is equal to b'/b , where b' is the slope of the new Engel curve reflecting the relationship between (Y_1, C_1) . But $b'/b = E'/E$, where E = long-run average income elasticity of demand for C . Note $E = b/C$.

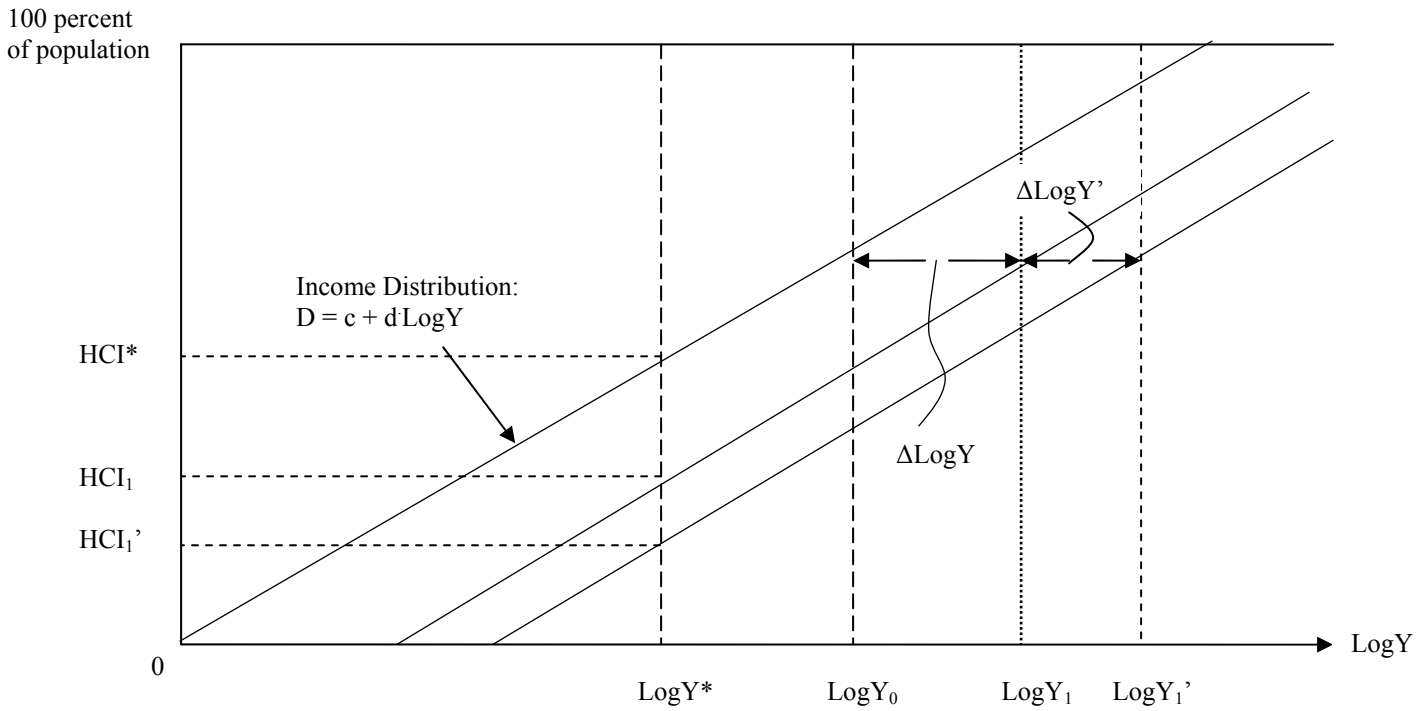
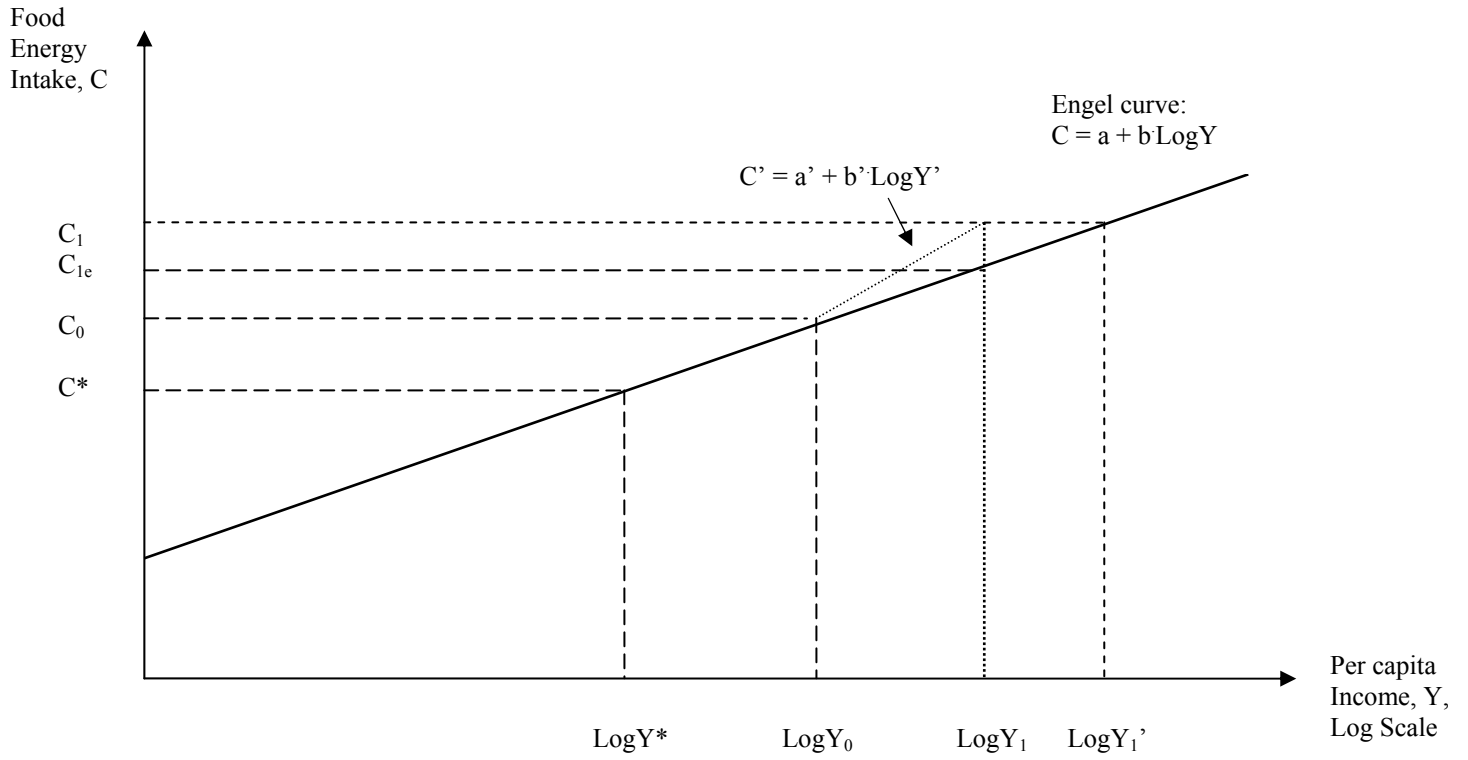
E' = period-specific income elasticity of demand for C , between $t = 0$ and $t = 1$.

Thus, $[\Delta\text{Log}Y + \Delta\text{Log}Y'] = [E'/E]\Delta\text{Log}Y$

and

$\Delta\text{HCI} = -d[E'/E]\Delta\text{Log}Y$.

Figure A1.
The Relationship between the Engel Curve for Food Energy (C) and the Poverty Headcount Index (HCI)



Annex 2A. Macro data from Papanek (2004)

	GDP	GDP	GDP	GDP	GDP/cap growth Growth (%)	Inflation			Exports	Total (US\$ mn)
	Current (Rp.billion)	1993=100 (Rp.billion)	Growth (%)	per capita (Rp. 000)		General (%)	Food (%)	NonOil (US\$ mn)	Oil&Gas (US\$ mn)	
1960	390	52534		552		30	23	621	219	841
1961	470	55550	5.74	572	3.59	77	123	527	261	788
1962	1335	56573	1.84	571	-0.23	154	129	448	216	664
1963	3209	55308	-2.24	547	-4.22	128	155	429	269	698
1964	7134	57260	3.53	555	1.43	135	128	458	266	724
1965	23710	57879	1.08	549	-0.97	594	685	436	272	708
1966	316	59495	2.79	553	0.70	635	500	475	203	679
1967	848	60316	1.38	549	-0.68	112	146	426	240	665
1968	2097	66900	10.92	597	8.66	85	65	433	298	731
1969	2718	71464	6.82	625	4.65	10	9	471	383	854
1970	3340	76863	7.55	658	5.37	9	1	662	446	1108
1971	3794	82262	7.02	690	4.85	2	2	756	478	1234
1972	4548	88051	7.04	721	4.54	26	45	865	913	1778
1973	6605	95187	8.10	762	5.58	27	28	1602	1609	3211
1974	10708	102454	7.63	801	5.12	33	32	2215	5211	7426
1975	12643	107553	4.98	821	2.52	20	23	1792	5311	7103
1976	15467	114960	6.89	857	4.39	14	13	2542	6004	8547
1977	19011	125032	8.76	910	6.22	12	12	3555	7298	10853
1978	21967	133493	6.77	949	4.27	7	4	4205	7439	11643
1979	32025	143270	7.32	995	4.82	22	22	6719	8871	15590
1980	45446	157426	9.88	1067	7.31	16	16	6169	17782	23950
1981	54027	169905	7.93	1130	5.84	7	8	4501	20663	25165
1982	59632	173722	2.25	1133	0.26	10	7	3929	18399	22328
1983	71215	181006	4.19	1157	2.17	11	10	5005	16141	21146
1984	77623	193632	6.98	1214	4.90	9	6	5870	16018	21888
1985	89885	198399	2.46	1220	0.48	4	2	5869	12718	18587
1986	96997	210055	5.88	1266	3.82	9	14	6528	8277	14805
1987	102683	220403	4.93	1303	2.89	9	12	8580	8556	17136
1988	124817	233143	5.78	1352	3.73	5	8	11537	7682	19219
1989	142105	250728	7.54	1425	5.46	6	7	13480	8679	22159
1990	167185	269181	7.36	1501	5.28	10	7	14604	11071	25675
1991	227450	287470	6.79	1571	4.72	10	10	18248	10895	29142
1992	259885	308051	7.16	1656	5.37	5	6	23300	10496	33796
1993	302018	329776	7.05	1744	5.30	10	5	26994	9613	36607
1994	382220	354641	7.54	1845	5.82	9	14	30292	9931	40223
1995	452381	383792	8.22	1965	6.51	9	13	36969	10485	47454
1996	532631	413798	7.82	2087	6.17	6	5	38021	12167	50188
1997	627695	433246	4.70	2152	3.12	21	12	44576	11721	56297
1998	989573	376375	-13.13	1841	-14.42	78	118	42951	7420	50371
1999	1099732	379352	0.79	1829	-0.69	2	-5	40987	10254	51241
2000	1282018	397934	4.90	1891	3.38	9	4	50341	15067	65408
2001	1490074	411132	3.32	1925	1.84	13	12	44805	12558	57363
2002	1610012	426741	3.80	1971	2.36	10	13	46307	12511	58818

	Exports Growth			Oil Prices 1995=100	Exchange Rate Rp/USD	Net Official Flows (US\$ mn)	Net Private Flows (US\$ mn)	GDP Current (US\$ mn)	as % of GDP	
	NonOil (%)	Oil&Gas (%)	Total (%)						Net Official Flows	Net Private Flows
1960					45	163	20	8617	1.89	0.23
1961	-15.1	18.9	-6.3		45	365	-11	10382	3.52	-0.11
1962	-15.1	-17.3	-15.8		45	109	11	29485	0.37	0.04
1963	-4.2	24.5	5.1		45	113	10	70866	0.16	0.01
1964	6.7	-0.9	3.8		253	103	25	28251	0.36	0.09
1965	-4.8	2.1	-2.3	9.60	253	253	18	93901	0.27	0.02
1966	9.1	-25.2	-4.1	9.60	253	124	50	1251	9.91	4.00
1967	-10.4	17.8	-2.0	9.60	235	233	109	3608	6.46	3.02
1968	1.7	24.2	9.8	9.60	326	220	65	6432	3.42	1.01
1969	8.7	28.7	16.8	9.60	326	284	71	8338	3.41	0.85
1970	40.6	16.6	29.8	9.60	378	361	75	8837	4.09	0.85
1971	14.2	7.1	11.3	12.00	415	317	150	9142	3.47	1.64
1972	14.4	91.1	44.1	16.01	415	378	427	10959	3.45	3.90
1973	85.3	76.2	80.6	22.99	415	556	498	15916	3.49	3.13
1974	38.2	224.0	131.3	68.53	415	596	382	25802	2.31	1.48
1975	-19.1	1.9	-4.4	72.70	415	1778	-1493	30464	5.84	-4.90
1976	41.9	13.1	20.3	73.92	415	1632	237	37269	4.38	0.64
1977	39.8	21.5	27.0	77.87	415	1397	-72	45809	3.05	-0.16
1978	18.3	1.9	7.3	77.87	625	1387	333	35148	3.95	0.95
1979	59.8	19.3	33.9	105.68	627	1725	-611	51077	3.38	-1.20
1980	-8.2	100.4	53.6	175.56	627	2204	-630	72510	3.04	-0.87
1981	-27.0	16.2	5.1	201.15	644	1963	18	83893	2.34	0.02
1982	-12.7	-11.0	-11.3	200.70	693	4117	1639	86111	4.78	1.90
1983	27.4	-12.3	-5.3	173.99	994	4776	1826	71645	6.67	2.55
1984	17.3	-0.8	3.5	169.71	1074	2865	757	72274	3.96	1.05
1985	0.0	-20.6	-15.1	164.44	1125	1739	68	79898	2.18	0.09
1986	11.2	-34.9	-20.3	163.97	1641	3074	1291	59108	5.20	2.18
1987	31.4	3.4	15.7	106.17	1650	2104	1548	62232	3.38	2.49
1988	34.5	-10.2	12.2	88.83	1731	1965	407	72107	2.73	0.56
1989	16.8	13.0	15.3	100.79	1797	776	314	79079	0.98	0.40
1990	8.3	27.6	15.9	127.70	1901	633	4113	87946	0.72	4.68
1991	24.9	-1.6	13.5	108.79	1992	1419	4410	114182	1.24	3.86
1992	27.7	-3.7	16.0	108.79	2062	1112	5359	126035	0.88	4.25
1993	15.9	-8.4	8.3	100.31	2110	743	5219	143136	0.52	3.65
1994	12.2	3.3	9.9	92.30	2200	307	3701	173736	0.18	2.13
1995	22.0	5.6	18.0	100.00	2308	336	10253	196006	0.17	5.23
1996	2.8	16.0	5.8	116.86	2383	-522	11511	223513	-0.23	5.15
1997	17.2	-3.7	12.2	109.37	4650	2880	-338	134988	2.13	-0.25
1998	-3.6	-36.7	-10.5	70.86	8025	9971	-13846	123311	8.09	-11.23
1999	-4.6	38.2	1.7	101.12	7085	5353	-9922	155220	3.45	-6.39
2000	22.8	46.9	27.6	163.98	9595	3217	-9990	133613	2.41	-7.48
2001	-11.0	-16.7	-12.3	137.87	10400	-741	-8252	143276	-0.52	-5.76
2002	3.4	-0.4	2.5		8940	-546	-2270	180091	-0.30	-1.26

SOURCE: Papanek (2004)

Annex 2b: Sources of economic growth and labor force trends (Data in this annex are from Aaron, et al. (2004))

Table A2.1: GDP Growth Rates by Major Economic Sector and Expenditure Group (% , average per year)

Economic sector		Agriculture	Industry	(Non-oil manufacturing only)	Services	Overall GDP
Pre-reform	1980-85	3.4	4.2	Na	6.9	5.0
Reform	1985-90	3.0	7.0	12.0	7.3	6.3
High growth	1990-97	2.5	9.1	11.5	6.9	7.0
Crisis	1998	-1.3	-14.0	-13.1	-16.5	-13.1
Recovery	1999	2.2	2.0	3.5	-1.0	0.8
	2000	1.9	5.9	7.0	5.2	4.9
	2001	1.0	3.3	5.0	4.6	3.4
	2002	1.7	3.7	4.2	4.4	3.7
	2003*	2.3	3.4	--	4.7	3.7
Expenditure group		Household consumption	Gov Consumption	Investment	Exports of goods	Imports
Pre-reform	1980-85	6.5	5.7	6.6	-2.3	9.1
Reform	1985-90	8.5	4.3	13.8	8.5	4.6
High growth	1990-97	9.7	2.8	11.2	9.4	14.3
Crisis	1998	-6.2	-15.4	-33.0	11.2	-5.3
Recovery	1999	4.6	0.7	-18.2	-31.8	-40.7
	2000	1.6	6.5	16.7	26.5	25.9
	2001	4.4	9.0	7.7	1.9	8.1
	2002	4.7	12.8	-0.2	-1.2	-8.3
	2003*	4.4	9.0	2.4	0.5	0.2

Source: National Income Accounts, BPS

Notes: * Preliminary, first three quarters of 2003 over same period in 2002

Industry includes manufacturing, mining, utilities and construction

Table A2.2: Percentage Share of GDP by major Economic Sector (constant 1993 prices), 1970- 2002

	Agriculture	Industry	(Non-oil manufacturing only)	Services
1970*	45.5	21.7	Na	32.8
1980*	30.7	30.9	9.9	38.4
1990	20.1	37.9	17.3	42.0
1997	14.9	43.2	22.4	42.0
1998	16.9	42.8	22.4	40.3
2002	15.9	43.6	24.0	40.4

Note: *Based on constant 1973 prices.

Table A2.3: Summary Table of Labor Force Trends

(% change per annum, shares as % of total)

	1990-97	1997-98	1998-2002	Share 1990	Share 2002
Working Age Population	2.5	2.6	1.8	100.0	100.0
Male	2.5	2.9	-15.0	49.1	49.7
Female	2.5	2.3	1.5	50.9	50.3
Urban	6.2	5.1	4.7	30.9	45.3
Rural	0.6	0.9	-0.3	69.1	54.7
Age 15-24	1.6	3.3	-0.5	30.0	25.8
Age 25-49	3.0	2.3	3.0	49.6	53.5
Age 50+	2.8	2.4	1.7	20.4	20.7
Education: Primary or Less	0.3	-0.3	0.2	73.6	57.7
Education: Lower secondary	5.8	6.9	5.1	13.8	20.4
Education: Upper Secondary	8.6	7.8	2.7	11.2	18.1
Education: Tertiary	13.2	10.1	5.9	1.5	3.8
Participation Rate (in 90, 98, 02)	66.4	66.9	65.7	...	...
Male (as %)	82.8	83.2	83.8	...	...
Female (as %)	50.5	51.2	47.7	...	...
Of which: Rural	56.2	56.6	52.6	...	...
Labor Force 1/	2.5	3.5	1.3	100.0	100.0
Male	2.6	2.7	2.2	61.2	63.5
Female	2.3	4.8	-0.2	38.8	36.5
Urban	7.5	4.7	5.1	25.5	41.8
Rural	0.4	2.9	-1.0	74.5	58.2
Age 15-24	1.5	2.5	-0.9	23.1	19.5
Age 25-49	2.9	3.2	2.2	57.6	61.1
Age 50+	2.6	5.5	0.7	19.3	19.4
Education: Primary or Less	0.0	2.0	-0.6	76.4	58.6
Education: Lower secondary	7.1	7.1	6.2	10.1	17.1
Education: Upper Secondary	9.4	5.1	2.6	11.5	19.3
Education: Tertiary	13.7	7.4	5.6	2.0	5.0
<i>Memo Item: Total Labor Force</i> <i>(In millions, 1990, 1998 and 2002)</i>	<i>75.4</i>	<i>92.7</i>	<i>97.7</i>	...	...
<i>Source: Sakernas</i>					
1/ Labor Force Definition is Employment plus Unemployment, where unemployment is 'Open Unemployment'.					

Table A2.4: Summary Table of Employment Trends

(% change per annum, shares in % of total)

	1990-97	1997-98	1998-2002	Share in 1990	Share in 2002
By Status:					
Total Formal & Informal	2.2	2.7	1.1	100.0	100.0
Formal:	5.8	-4.5	1.6	29.2	35.3
Employers	14.0	4.0	16.2	0.8	3.0
Wage earners 1/	5.5	-4.9	0.7	28.4	32.3
Informal:	0.4	6.9	0.8	70.8	64.7
Self-employed 2/	4.3	3.3	0.8	20.2	23.1
Self-employed, assisted by family	0.1	9.5	2.8	24.4	24.0
Unpaid	-2.8	8.3	-1.6	26.3	17.6
Workers by Sector (excl. employers)	2.1	2.6	0.8	100.0	100.0
Tradables:	-0.7	7.3	1.3	66.4	58.5
Agriculture, Forestry & Fisheries	-2.3	13.3	0.5	55.5	44.7
Mining	7.8	-23.9	-1.7	0.7	0.7
Manufacturing	5.6	-9.6	4.6	10.1	13.1
Food, beverages & tobacco	7.3	-14.0	5.0	2.4	3.4
Textiles, garments and footwear	7.1	-5.5	4.0	2.2	3.3
Wood products	7.1	5.3	-5.0	2.0	2.2
Other	2.7	-20.5	13.5	3.6	4.7
Non-Tradables:	6.2	-3.4	-0.3	33.6	41.7
Construction	10.7	-16.4	4.2	2.7	4.5
Trade	6.4	-1.2	1.0	14.7	19.2
Transportation & Communication	8.6	0.6	2.8	3.1	5.0
Utilities and Other Services	4.9	-2.1	-3.4	13.1	12.7
By Area (incl. Employers):					
Urban	7.2	3.2	5.2	24.6	40.5
Rural	0.2	2.3	-1.2	75.4	59.5
By Age:					
15 to 24	0.2	0.6	-2.3	21.8	16.3
25 to 49	2.7	2.4	2.2	58.4	63.2
50+	2.6	5.3	0.7	19.8	20.6
By Education:					
Primary education or less	-0.2	1.7	-0.7	77.7	60.9
Lower secondary education	6.8	5.4	5.9	9.9	16.7
Upper secondary	9.1	3.2	2.6	10.5	17.6
Tertiary	13.3	6.7	5.9	1.9	4.8
By Gender:					
Male	2.4	1.7	2.1	61.3	63.9
Female	1.9	4.2	-0.5	38.7	36.1
Memo Item					
Total Employment (millions, 1990, 1998, 2002)	73.4	87.7	91.6	....	....

Source: Sakernas

1/ Includes Casual Agricultural workers after 2000.

2/ Includes Casual Non-Agricultural workers after 2000.

Table A2.5: Employment Growth, by Economic Sector 1999-2002 1/

(in percent)

	1999-2000	2000-01	2001-02	Share in 2002
Agriculture	6.0	-2.8	2.1	45.1
Formal	-0.6	19.8	6.2	23.5
Informal	8.2	-6.4	1.3	55.7
Manufacturing	1.2	2.7	0.2	13.2
Formal	13.2	0.3	-4.0	25.1
Informal	-16.6	7.6	8.2	7.4
Construction	3.9	6.6	12.2	4.6
Formal	5.6	-31.8	-12.0	5.9
Informal	-4.8	220.0	40.9	3.9
Trade Services	5.6	-6.3	1.7	19.4
Formal	20.4	-3.1	5.2	11.0
Informal	2.9	-7.0	1.0	23.6
Trans & Comm.	9.3	-2.8	5.9	5.1
Formal	8.6	-1.6	-6.8	4.8
Informal	9.7	-3.4	12.9	5.2
Other Services	-17.9	14.7	-6.3	12.7
Formal	-12.7	4.6	-5.2	29.9
Informal	-38.0	70.0	-10.1	4.1
Total 1/	2.3	-0.4	1.3	100.0
Formal	1.3	1.6	-1.9	100.0
Informal	2.7	-1.4	2.9	100.0

1/ Excludes Employers, Mining and Utilities

Figure 2.5: Real Wages in the Formal Sector Significantly Outpace Those in the Informal Sector

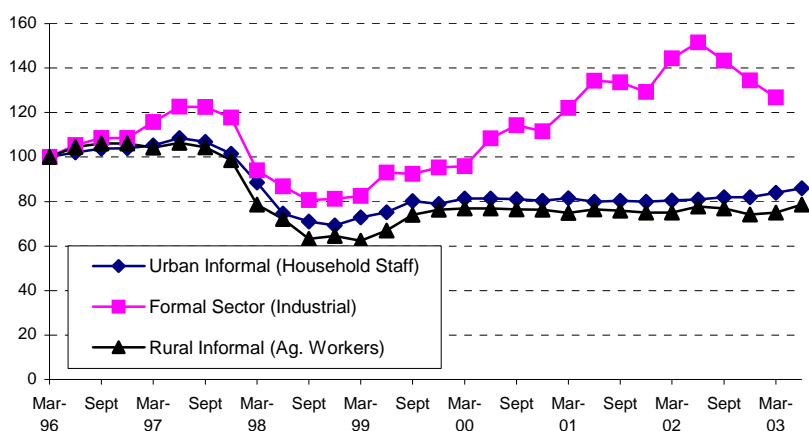


Figure 2.6: But Formal Sector Employment Lags Way Behind the Informal Sector

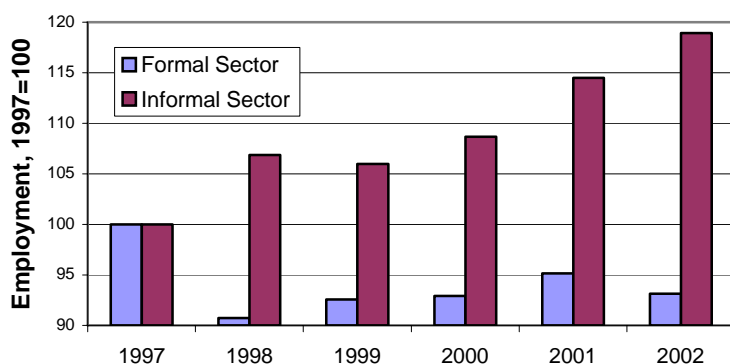


Table A2.6: Sources of Employment Growth 1995 to 2002

GDP component	Number of new jobs created		Share of new jobs from 2000 through to 2002 (%)
	1996 to 2000	2000 to 2002	
Private household consumption	1,484,403	378,841	21.0
Government consumption	-1,102,916	351,066	19.4
Investment	-2,402,135	757,799	41.9
Exports of goods	7,973,454	280,463	15.2
Exports of services	611,539	31,404	1.7
Increase in total employment	5,968,069	1,806,910	100%

Notes: Authors' estimates. Based on the 1995 and 2000 Input-Output tables and the National Labor Force Survey, 1996, 2000 and 2002. Period split as follows: 1996 pre-crisis period, 2000 beginning of the recovery, 2002 latest year.

Table A2.7. Exports of manufactured products according to Factor Use (US\$ millions)

Description	1990	1993	1996	2000	2001	2002
Natural resource-intensive (NRI)	3,850	5,359	5,052	3,697	3,507	3,381
% of total manufactures	34.2	27.2	19.3	10.0	10.8	10.6
<i>Major items:</i>						
Wood and Cork	3,586	5,129	4,843	3,260	2,932	2,853
Unskilled labor-intensive (ULI)	4,943	9,415	11,023	13,512	12,432	11,153
% of total manufactures	43.9	47.7	42.1	36.7	39.5	35.9
<i>Major items:</i>						
Textiles	1,470	2,637	2,834	3,505	3,202	2,896
Furniture	338	676	952	1,518	1,424	1,512
Clothing	2,001	3,502	3,591	4,734	4,531	3,945
Footwear	694	1,661	2,195	1,672	1,506	1,148
Physical capital-intensive (PCI)	1,018	1,091	2,145	3,963	3,450	3,843
% of total manufactures	9.0	5.5	8.2	10.8	11.0	12.4
<i>Major items:</i>						
Organic chemicals	100	244	505	1,140	1,069	1,124
Non Ferrous Metals, steel, iron	820	605	1,000	1,491	1,308	1,388
Machinery	39	141	349	911	708	938
Human capital-intensive (HCI)	779	1,833	3,059	4,351	3,959	4,192
% of total manufactures	6.9	9.3	11.7	11.8	12.6	13.5
<i>Major items:</i>						
Perfume + oils	184	133	199	318	320	369
Rubber products	85	106	299	371	352	455
Paper & Paper prods	182	494	942	2,261	2,006	2,074
Road Vehicles	46	334	348	489	475	561
Technology intensive (TI)	669	2,024	4,898	11,285	9,013	9,234
% of total manufactures	5.9	10.3	18.7	30.7	28.6	29.8
<i>Major items:</i>						
Plastics	55	68	313	665	518	494
Computers and peripherals	0	89	403	2,461	1,139	1,207
Automatic data processing eqt	1	47	357	1,205	904	978
Telecommunications/ electrical machinery	243	1367	3124	5954	5576	5685
	11,260	19,723	26,177	36,808	32,361	31,804

Source: Trade Statistics, BPS

Annex 3: Sources of productivity growth for agriculture and the overall economy

Table A3.1. Indonesian Growth Accounting (percent per year)

	1961- 2000	1961- 1970	1971- 1980	1981- 1990	1990- 1997
GDP growth	5.5	4.0	7.6	6.2	7.4
Capital Stock	1.2	-1.9	2.0	2.7	2.9
Labor Force	1.8	1.4	1.9	2.0	1.9
Schooling, years	0.6	0.9	0.6	0.2	0.6
TFP	1.9	3.6	3.2	1.2	2.0

Source: Hofman, Rodrick-Jones, and Thee (2004), from World Bank estimates

Table A3.2. Sources of growth in agricultural productivity in Indonesia, 1971-1998

Variable	Growth, % per year	Elasticity of Output	Share of Growth
Output	3.386		
<i>Inputs</i>			
Irrigated land	0.804	0.583	0.138
Rainfed land	0.516	0.080	0.012
Fertilizers	8.176	0.066	0.158
Capital	11.592	0.035	0.119
Labor	1.884	0.227	0.126
<i>State variables</i>			
Price	1.355	0.057	0.023
Price spread	0.100	0.069	0.002
No schooling	-1.301	-0.003	0.131
Roads	5.713	0.084	0.142
Infant mortality	-2.789	-0.002	0.148
Factor accumulation			0.554
State variables			0.446
Total factor productivity			0.446

Table A3.3. Average rates of rural-urban migration, percent per year, decade averages

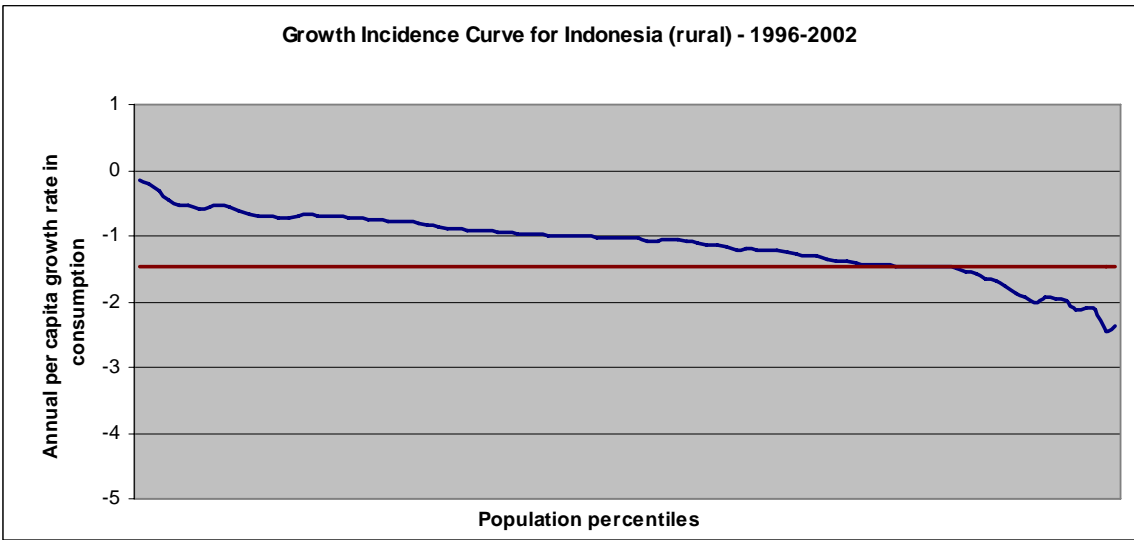
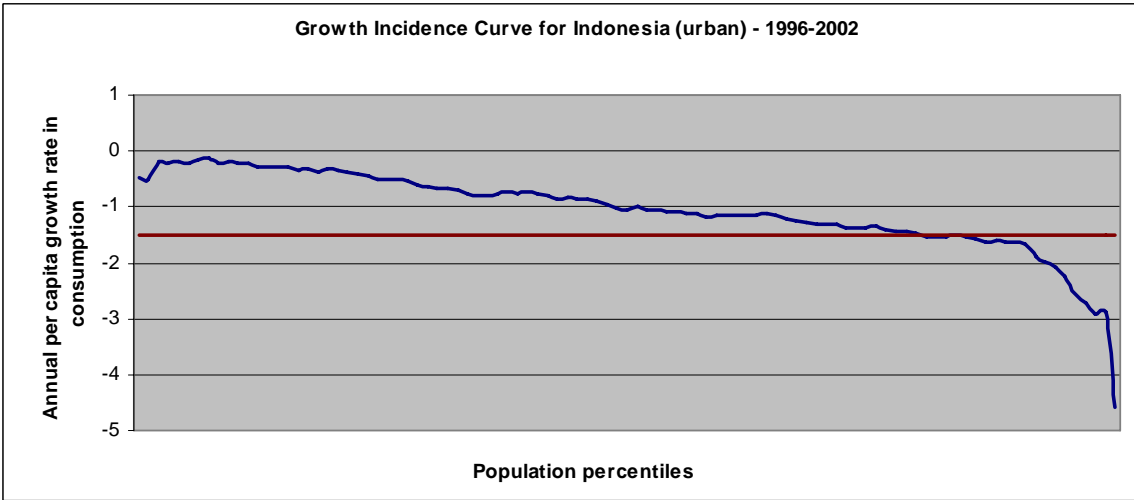
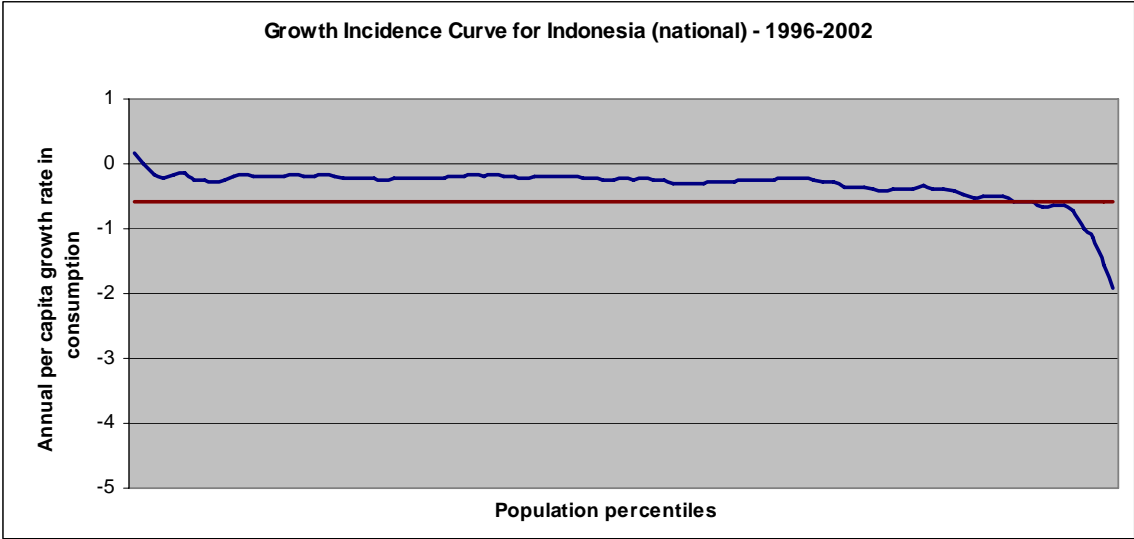
	1960s	1970s	1980s	1990s	Period Averages
Thailand	0.61	0.89	0.55	3.09	1.32
Philippines	1.32	0.35	1.39	1.45	1.11
Indonesia		1.72	0.39	2.27	1.44
Asia	1.07	1.40	1.80	na	

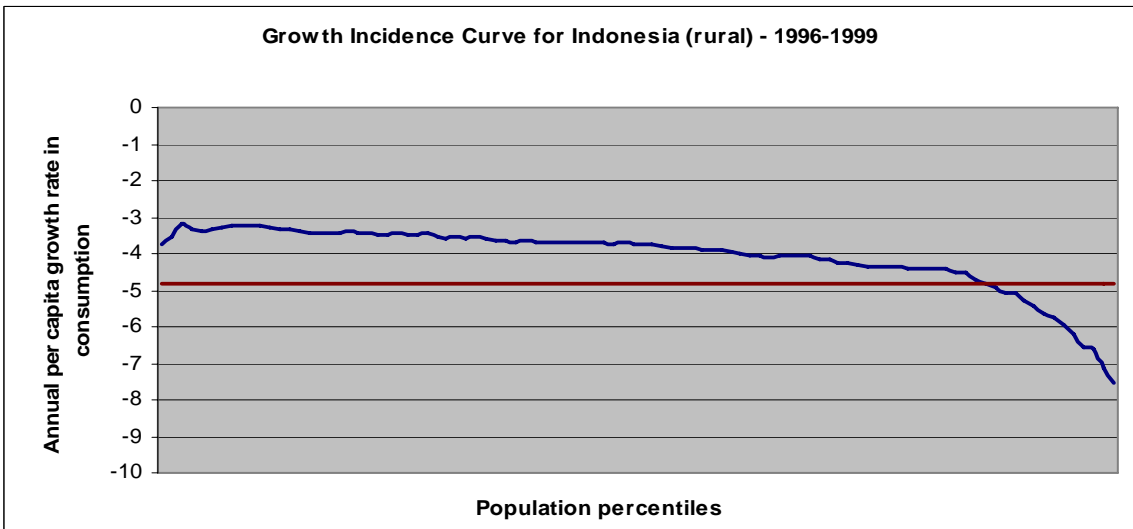
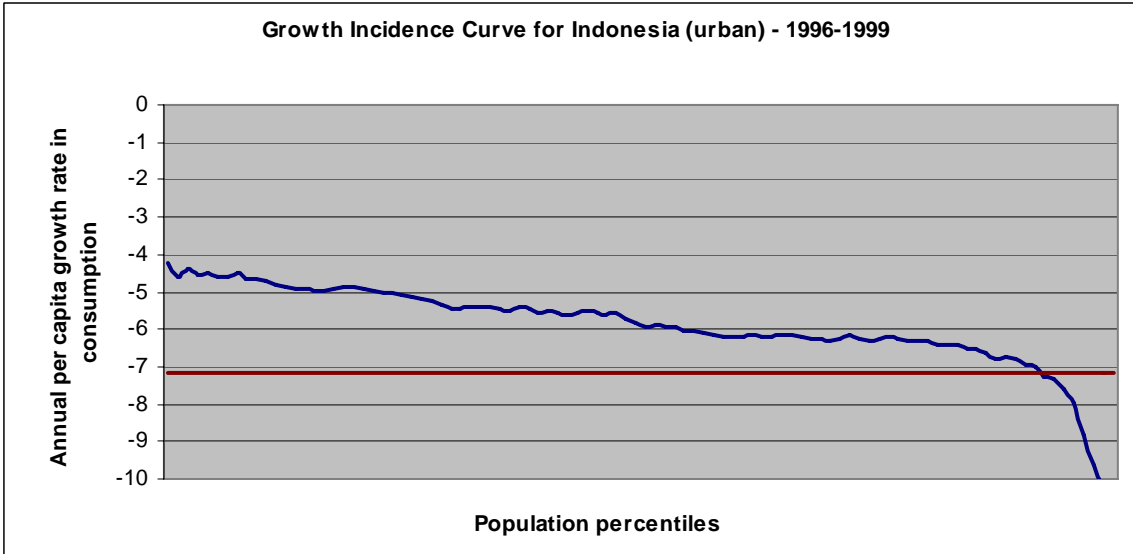
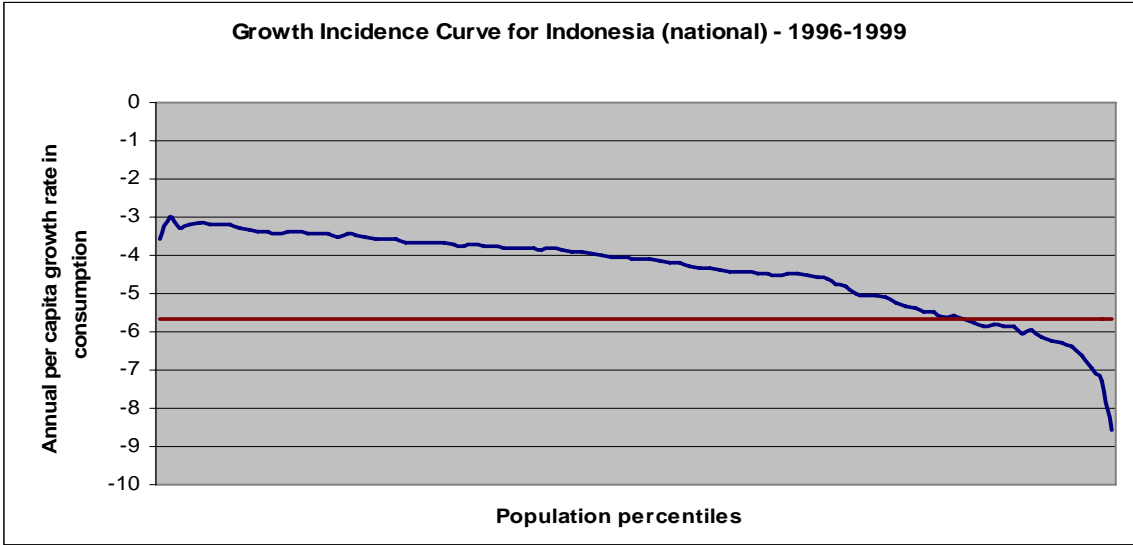
Source: Mundlak, Larson and Butzer (2004)

Annex 4: Poverty characteristics

This annex has been prepared by Vivi Alatas, Jehan Arulpragasam, and Neil McCulloch

Indonesia	1996	1997	1998	1999	2000	2001	2002	2003	Overall period
Poverty headcount									
national	15.4			27.0			16.0	15.1	
urban	7.2			16.3			7.5	8.2	
rural	20.2			33.9			23.1	20.1	
Gini index									
national	0.364			0.317			0.344	0.341	
urban	0.37			0.33			0.346	0.342	
rural	0.282			0.253			0.26	0.254	
Rate of pro-poor growth				1996-99			1999-02		1996-02
national				-3.2			3.3		-0.2
urban				-4.4			4.3		-0.6
rural				-3.3			2.3		-0.3
Decomposition - national				1996-99			1999-02		1996-02
Growth				-50.7			-32.3		-70.4
Redistribution				26.6			11.4		16.0
Residual				35.7			9.9		55.1
GEP	1993-96			1996-99			1999-02		
national	-1.19			-3.05			-3.29		
urban									
rural									
Growth in mean income				1996-99			1999-02		1996-02
national				-5.7			4.7		-0.6
urban				-7.2			4.6		-1.5
rural				-4.8			2.1		-1.5





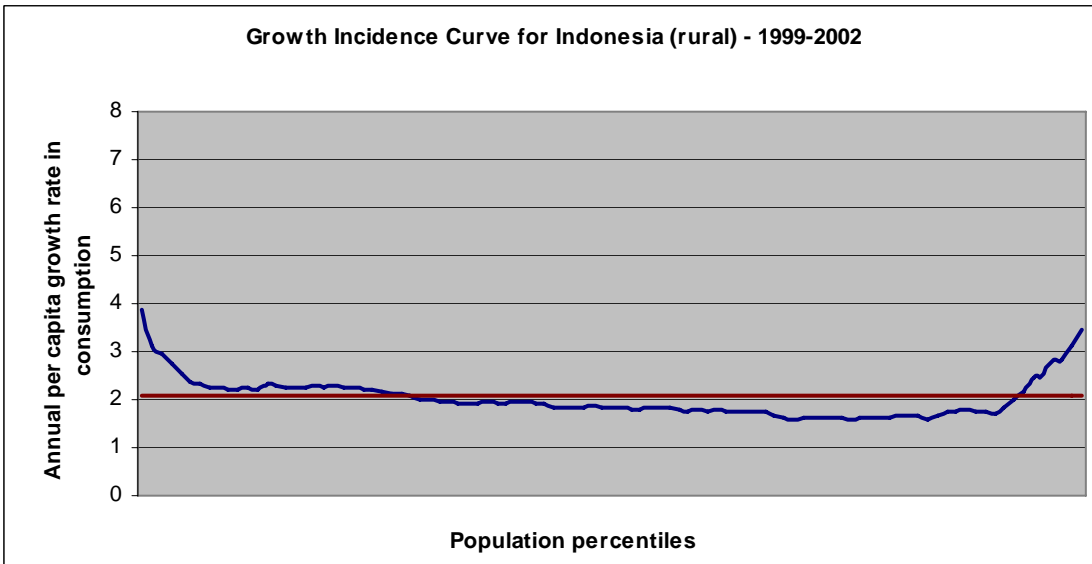
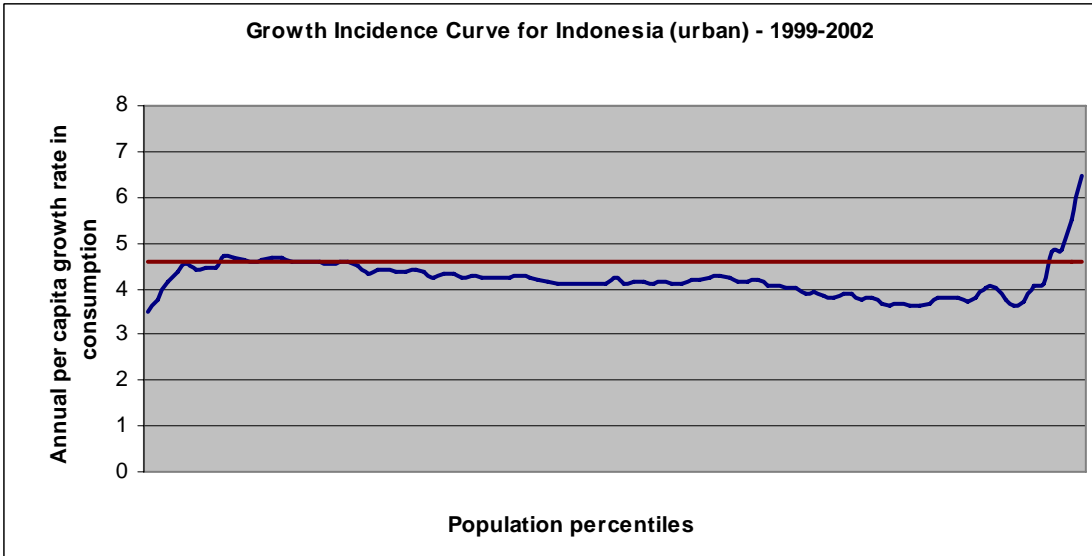
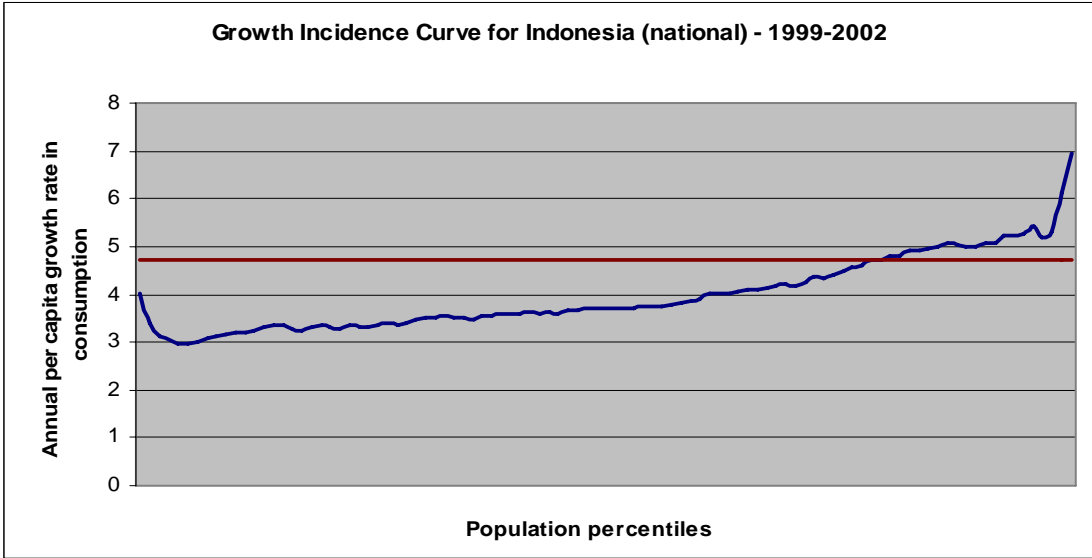


Table A4.1: Poverty Incidence in Urban and Rural Indonesia, 1976-2002

Year	Urban	Rural	Total	% Population Urban
1976	38.8	40.4	40.1	20.0
1980	29.0	28.4	28.6	22.2
1984	21.2	23.1	21.6	25.4
1987	20.1	16.4	17.4	27.9
1990a	16.8	14.3	15.1	30.5
1990b*	16.1	15.7	15.8	30.5
1993*	13.4	13.8	13.7	33.0
1996*	9.7	12.3	11.3	36.0
1996**	13.6	19.9	17.7	36.0
1998**	21.9	25.7	24.2	39.3
1999**	19.5	26.1	23.5	39.9
2000**	14.6	22.1	19.0	41.0
2002**	14.5	21.1	18.2	43.5

Notes: * Based on new methodology employed by the Central Bureau of Statistics.

** New (higher) poverty line based on an expanded basket of goods.

Sources: Central Bureau of Statistics (1992), *Poverty and Income Distribution in Indonesia, 1976-1990*; Central Bureau of Statistics (2000) *Pengukuran Tingkat Kemiskinan di Indonesia 1976-1999: Metode BPS* (Measurement of Poverty in Indonesia 1976-1999: the BPS Methodology), Jakarta. Data for 1999 and 2002 are from the full SUSENAS (National Social Economic Survey), and for 1998 and 2000 for the sample SUSENAS.

Table A4.2. Characteristics of The Poor

	Poor		Not Poor		All	
	Urban	Rural	Urban	Rural	Urban	Rural
Education						
- Household Head Years of School Attainment	5.093	4.388	8.875	5.759	8.640	5.501
- Adult Years of School Attainment	5.806	4.732	9.218	6.230	8.948	5.868
Labor						
Labor class of adult (>18 years old)						
- Inactive (%)	35.85	27.76	35.59	29.22	35.61	28.87
- Self employed (%)	24.06	33.49	20.86	34.11	21.12	33.96
- Wage worker (%)	33.39	17.95	35.80	21.04	35.61	20.29
- Unpaid family worker (%)	6.04	20.48	4.18	14.80	4.33	16.17
Labor force participation for adult (19-59 years old):						
- Male (%)	94.54	95.78	91.00	95.28	91.28	95.40
- Female (%)	50.65	60.29	50.03	55.32	50.08	56.53
Child labor (11-14 years old):						
- Male (%)	3.26	10.55	1.92	7.36	2.08	8.35
- female (%)	2.95	5.62	2.25	4.80	2.33	5.05
Job Sector of Household Head:						
- Agriculture (%)	31.11	69.09	9.92	54.85	11.24	57.53
- Forestry (%)	0.23	1.34	0.16	1.20	0.16	1.23
- Fishery (%)	1.48	2.23	1.54	2.90	1.54	2.77
- Mining (%)	1.25	0.49	0.90	0.86	0.92	0.79
- Industry (%)	12.17	4.98	13.57	6.51	13.49	6.22
- Electricity (%)	0.10	0.02	0.51	0.09	0.49	0.08
- Construction (%)	9.67	3.63	6.69	4.53	6.88	4.36
- Trade (%)	14.06	5.00	22.21	9.52	21.70	8.66
- Transportation (%)	8.94	2.73	9.54	4.53	9.50	4.19
- Finance (%)	0.69	0.08	2.52	0.35	2.40	0.30
- Service (%)	8.14	2.40	17.27	6.88	16.70	6.03
- Others (%)	0.04	0.06	0.07	0.02	0.07	0.03
Others:						
Female Headed Household (%)	13.29	11.04	13.03	12.11	13.05	11.91
Household Size	5.05	4.78	3.98	3.69	4.04	3.90
HHs have land (%)	26.89	71.52	18.47	68.54	19.00	69.10
Active in local level meetings (%)	64.16	68.84	74.87	74.73	74.20	73.62

Source: SUSENAS 2002

SOURCE: McCulloch 2004b

Table A4.3

Shares of Expenditure and Income for the Poor and the Non-Poor			
Variable	Share (%)		
	Poor	Non-Poor	All
Expenditure			
Food and Non Food Consumption	94.36	86.75	87.31
Capital Depletion	0.10	0.48	0.45
Transfer Out	2.08	3.47	3.37
Financial Transactions	3.45	9.30	8.87
Total Expenditure	100.00	100.00	100.00
Income			
Wage Income	32.77	41.60	40.96
Agriculture Income	33.67	11.92	13.49
Non Agriculture Income	16.95	24.49	23.95
Ownership Income	7.75	8.13	8.10
Capital Accumulation	0.43	0.94	0.91
Transfer In	5.65	7.11	7.00
Financial Transactions	2.77	5.81	5.59
Total Income	100.00	100.00	100.00

Source: SUSENAS 2002

SOURCE: McCulloch, 2004b

Table A4.4: Poverty by Region in Indonesia

	Urban	Rural	All
National			
- no. of poor people	6,839,389	26,082,024	32,921,413
- headcount (%)	7.6	23.2	16.2
- share of the poor (%)	20.8	79.2	100.0
Java-Bali			
- no. of poor people	5,106,318	14,296,851	19,403,169
- headcount (%)	7.9	22.9	15.3
- share of the poor (%)	15.5	43.4	58.9
Sumatra (excl Aceh)			
- no. of poor people	812,435	5,224,947	6,037,382
- headcount (%)	5.6	20.1	14.9
- share of the poor (%)	2.5	15.9	18.3
Kalimantan			
- no. of poor people	167,557	1,507,385	1,674,942
- headcount (%)	3.9	20.1	14.3
- share of the poor (%)	0.5	4.6	5.1
Sulawesi			
- no. of poor people	165,502	2,617,569	2,783,071
- headcount (%)	3.8	23.8	18.2
- share of the poor (%)	0.5	8.0	8.5
Eastern Indonesia (excl Maluku, Papua)			
- no. of poor people	538,091	2,435,272	2,973,363
- headcount (%)	24.4	41.6	36.9
- share of the poor (%)	1.6	7.4	9.0

Source: SUSENAS 2002, and McCulloch, 2004b

Table A4.5: Numbers of poor and non-poor people by sector

Labor	Poor	Non Poor	All
Sector:			
Agriculture	11,058,194	28,146,057	39,204,251
	34.99%	21.24%	
	[28.21%]	[71.79%]	[100.00%]
Mining and Quarrying	120,512	622,329	742,841
	0.38%	0.47%	
	[16.22%]	[83.78%]	[100.00%]
Manufacturing Industry	1,513,900	9,515,083	11,028,983
	4.79%	7.18%	
	[13.73%]	[86.27%]	[100.00%]
Electricity, Gas, dan Water	9,010	158,393	167,403
	0.03%	0.12%	
	[5.38%]	[94.62%]	[100.00%]
construction	681,301	3,071,181	3,752,482
	2.16%	2.32%	
	[18.16%]	[81.84%]	[100.00%]
Trade, Hotel, and Restaurant	1,702,172	14,637,120	16,339,292
	5.39%	11.05%	
	[10.42%]	[89.58%]	[100.00%]
Transportation & Communication	601,099	4,014,744	4,615,843
	1.90%	3.03%	
	[13.02%]	[86.98%]	[100.00%]
Finance, Rent, and Business Service	42,145	1,145,587	1,187,732
	0.13%	0.86%	
	[3.55%]	[96.45%]	[100.00%]
Services	847,777	9,372,729	10,220,506
	2.68%	7.07%	
	[8.29%]	[91.71%]	[100.00%]
Others	14,598	47,635	62,233
	0.05%	0.04%	
	[23.46%]	[76.54%]	[100.00%]
Unemployed	1,244,584	5,311,504	6,556,088
	3.94%	4.01%	
	[18.98%]	[81.02%]	[100.00%]
Not in Labor Force	13,768,456	56,470,425	70,238,881
	43.57%	42.62%	
	[19.60%]	[80.40%]	[100.00%]
Total	31,603,748	132,512,787	
	100.00%	100.00%	

Source: Susenas 2002 and McCulloch, 2004b

Notes: - Percentages not in brackets are percentage of poor and non poor who were employee/unemployed/not in labor force.-
- Percentages in brackets are percentages of people who are poor/not poor

- The data are weighted by frequency weight, using individual weight.

Annex Table A4.6: Number of poor people by province and sector

Province	Sector										Unemployed	Not in Labor Force	Total
	Agriculture	Mining & Quarrying	Manufact. Industry	Electricity, Gas, & Water	Construction	Trade, Hotel, & Restaurant	Transport. & Communicat.	Finance, Rent, & Business Service	Services	Others			
North Sumatra	386,717 3.51% [42.96%]	44 0.04% [0.00%]	24,716 1.65% [2.75%]	119 1.80% [0.01%]	10,949 1.65% [1.22%]	36,625 2.23% [4.07%]	18,964 3.29% [2.11%]	764 2.05% [0.08%]	18,130 2.37% [2.01%]	803 5.50% [0.09%]	32,371 2.72% [3.60%]	370,004 2.75% [41.10%]	900,206 2.90% [100.00%]
West Sumatra	79,584 0.72% [30.11%]	833 0.70% [0.32%]	8,018 0.53% [3.03%]	0 0.00% [0.00%]	5,124 0.77% [1.94%]	13,175 0.80% [4.98%]	4,024 0.70% [1.52%]	220 0.59% [0.08%]	8,044 1.05% [3.04%]	0 0.00% [0.00%]	6,868 0.58% [2.60%]	138,453 1.03% [52.38%]	264,343 0.85% [100.00%]
Riau	68,460 0.62% [26.30%]	955 0.80% [0.37%]	4,150 0.28% [1.59%]	0 0.00% [0.00%]	5,454 0.82% [2.09%]	8,532 0.52% [3.28%]	6,547 1.14% [2.51%]	330 0.88% [0.13%]	6,275 0.82% [2.41%]	279 1.91% [0.11%]	12,854 1.08% [4.94%]	146,516 1.09% [56.28%]	260,352 0.84% [100.00%]
Jambi	95,378 0.86% [32.26%]	1,501 1.26% [0.51%]	10,201 0.68% [3.45%]	161 2.43% [0.05%]	4,390 0.66% [1.48%]	13,276 0.81% [4.49%]	4,880 0.85% [1.65%]	141 0.38% [0.05%]	6,090 0.79% [2.06%]	0 0.00% [0.00%]	7,921 0.66% [2.68%]	151,742 1.13% [51.32%]	295,681 0.95% [100.00%]
South Sumatra	723,094 6.55% [46.40%]	3,814 3.20% [0.24%]	32,007 2.13% [2.05%]	0 0.00% [0.00%]	21,408 3.22% [1.37%]	41,512 2.53% [2.66%]	15,472 2.68% [0.99%]	2,121 5.68% [0.14%]	19,955 2.60% [1.28%]	0 0.00% [0.00%]	32,294 2.71% [2.07%]	1,558,543 4.95% [42.79%]	666,866 5.03% [100.00%]
Bengkulu	161,354 1.46% [51.92%]	523 0.44% [0.17%]	1,374 0.09% [0.44%]	0 0.00% [0.00%]	3,268 0.49% [1.05%]	6,740 0.41% [2.17%]	1,876 0.33% [0.60%]	259 0.69% [0.08%]	4,596 6.00% [1.48%]	0 0.00% [0.00%]	8,279 0.69% [2.66%]	122,490 0.91% [39.42%]	310,759 1.00% [100.00%]
Lampung	708,580 6.42% [41.84%]	4,112 3.45% [0.24%]	41,202 2.74% [2.43%]	296 4.48% [0.02%]	22,388 3.37% [1.32%]	54,784 3.34% [3.23%]	19,693 3.42% [1.16%]	1,220 3.27% [0.07%]	31,422 4.10% [1.86%]	348 2.38% [0.02%]	62,177 5.22% [3.67%]	747,491 5.46% [44.13%]	1,693,713 5.03% [100.00%]
DI Jakarta	1,088 0.01% [2.10%]	0 0.00% [0.00%]	2,259 0.15% [4.35%]	0 0.00% [0.00%]	327 0.05% [0.63%]	9,971 0.61% [19.21%]	1,306 0.23% [2.52%]	508 1.36% [0.98%]	3,734 0.49% [7.20%]	0 0.00% [0.00%]	6,249 0.52% [12.04%]	26,455 0.20% [50.98%]	51,897 0.17% [100.00%]
West Java	1,273,182 11.54% [22.48%]	16,214 13.59% [0.29%]	304,549 20.27% [5.38%]	1,925 29.11% [0.03%]	168,045 25.30% [2.97%]	404,055 24.62% [7.13%]	162,759 28.23% [2.87%]	7,574 20.29% [0.13%]	161,282 21.05% [2.85%]	1,019 6.98% [0.02%]	382,626 32.10% [6.76%]	2,779,989 20.65% [49.09%]	5,663,219 18.26% [100.00%]
Central Java	1,931,273 17.50% [32.19%]	24,275 20.34% [0.40%]	527,746 35.13% [8.80%]	347 5.25% [0.01%]	175,940 26.49% [2.93%]	385,509 23.49% [6.42%]	106,295 18.44% [1.77%]	4,165 11.16% [0.07%]	170,801 22.30% [2.85%]	4,601 31.52% [0.08%]	229,371 19.25% [3.82%]	2,439,976 18.13% [40.66%]	6,000,299 19.35% [100.00%]
DIY Yogyakarta	201,263 1.82% [37.96%]	2,065 1.73% [0.39%]	43,832 2.92% [8.27%]	0 0.00% [0.00%]	25,605 3.86% [4.83%]	31,844 1.94% [6.01%]	8,775 1.52% [1.66%]	598 1.60% [0.11%]	17,287 2.26% [3.26%]	0 0.00% [0.00%]	11,858 0.99% [2.24%]	187,026 1.39% [35.28%]	530,153 1.71% [100.00%]
East Java	2,526,433 22.90% [37.63%]	33,331 27.93% [0.50%]	305,050 20.31% [4.54%]	1,290 19.51% [0.02%]	133,776 20.14% [1.99%]	403,607 24.59% [6.01%]	133,274 23.11% [1.99%]	12,954 34.71% [0.19%]	196,986 25.71% [2.93%]	6,205 42.51% [0.09%]	214,839 18.03% [3.20%]	2,745,274 20.39% [40.88%]	6,713,019 21.64% [100.00%]
Bali	53,417 0.48% [38.53%]	809 0.68% [0.58%]	11,092 0.74% [8.00%]	0 0.00% [0.00%]	7,471 1.12% [5.39%]	10,062 0.61% [7.26%]	2,374 0.41% [1.71%]	142 0.38% [0.10%]	4,653 6.61% [3.36%]	0 0.00% [0.00%]	3,988 0.33% [2.88%]	44,643 0.33% [32.20%]	138,651 0.45% [100.00%]
West Nusa Tenggara	399,971 3.63% [39.04%]	6,572 5.51% [0.64%]	35,511 2.36% [3.47%]	0 0.00% [0.00%]	22,903 3.45% [2.24%]	47,630 2.90% [4.65%]	18,424 3.20% [1.80%]	860 2.30% [0.08%]	24,121 3.15% [2.35%]	122 0.84% [0.01%]	32,765 2.75% [3.20%]	435,747 3.24% [42.53%]	1,024,626 3.30% [100.00%]
East Nusa Tenggara	761,085 6.90% [52.94%]	2,802 2.35% [0.19%]	33,353 2.22% [2.32%]	131 1.98% [0.01%]	10,508 1.58% [0.73%]	19,759 1.20% [1.37%]	9,938 1.72% [0.69%]	463 1.24% [0.03%]	20,555 2.68% [1.43%]	172 1.18% [0.01%]	16,010 1.34% [1.11%]	1,437,522 4.18% [39.15%]	3,400,000 4.63% [100.00%]
West Kalimantan	458,702 4.16% [48.94%]	9,248 7.75% [0.99%]	29,667 1.97% [3.17%]	166 2.51% [0.02%]	11,283 1.70% [1.20%]	25,482 1.55% [2.72%]	7,499 1.30% [0.80%]	941 2.52% [0.10%]	11,195 1.46% [1.19%]	0 0.00% [0.00%]	26,140 2.19% [2.79%]	356,903 2.65% [38.08%]	937,226 3.02% [100.00%]
Central Kalimantan	72,948 0.66% [40.07%]	503 0.42% [0.28%]	4,963 0.33% [2.73%]	0 0.00% [0.00%]	920 0.14% [0.51%]	6,751 0.41% [3.71%]	1,801 0.31% [0.99%]	0 0.00% [0.00%]	4,528 0.59% [2.49%]	0 0.00% [0.00%]	10,575 0.89% [5.81%]	79,044 0.59% [43.42%]	182,033 0.59% [100.00%]
South Kalimantan	140,488 1.27% [42.32%]	5,131 4.30% [1.55%]	15,906 1.06% [4.79%]	303 4.58% [0.09%]	4,083 0.61% [1.23%]	18,220 1.11% [5.49%]	7,288 1.26% [2.20%]	473 0.86% [0.14%]	6,603 3.46% [1.99%]	505 3.46% [0.15%]	7,445 0.62% [2.24%]	125,507 0.93% [37.81%]	331,952 1.07% [100.00%]
East Kalimantan	50,181 0.45% [29.93%]	1,486 1.25% [0.89%]	2,789 0.19% [1.66%]	0 0.00% [0.00%]	3,564 0.54% [2.13%]	9,306 0.57% [5.55%]	3,281 0.57% [1.96%]	503 1.35% [0.30%]	4,721 6.62% [2.82%]	0 0.00% [0.00%]	10,217 0.86% [6.09%]	81,620 0.61% [48.68%]	167,668 0.54% [100.00%]
North Sulawesi	145,544 1.32% [32.66%]	1,451 1.22% [0.33%]	14,585 0.97% [3.27%]	617 9.33% [0.14%]	4,601 0.69% [1.03%]	19,101 1.16% [4.29%]	6,739 1.17% [1.51%]	554 1.48% [0.12%]	8,948 1.77% [2.01%]	202 1.38% [0.05%]	19,699 1.65% [4.42%]	223,615 1.66% [50.18%]	445,656 1.44% [100.00%]
Central Sulawesi	149,735 1.36% [40.99%]	414 0.35% [0.11%]	5,937 0.40% [1.63%]	234 3.54% [0.06%]	4,709 0.71% [1.29%]	13,722 0.84% [3.76%]	7,049 1.22% [1.93%]	0 0.00% [0.00%]	6,601 0.86% [1.81%]	0 0.00% [0.00%]	12,399 1.04% [3.39%]	164,478 1.22% [45.03%]	365,278 1.18% [100.00%]
South Sulawesi	467,389 4.24% [35.00%]	2,363 1.98% [0.18%]	25,924 1.73% [1.94%]	721 10.90% [0.05%]	12,971 1.95% [0.97%]	47,121 2.87% [3.53%]	23,573 4.09% [1.77%]	1,996 5.35% [0.15%]	21,647 2.83% [1.62%]	186 1.27% [0.01%]	34,731 2.91% [2.60%]	696,907 5.18% [52.18%]	1,335,529 4.31% [100.00%]
Southeast Sulawesi	176,881 1.60% [43.52%]	884 0.74% [0.22%]	17,431 1.16% [4.29%]	302 4.57% [0.07%]	4,417 0.67% [1.09%]	14,700 0.90% [3.62%]	4,746 0.82% [1.17%]	537 1.44% [1.94%]	7,884 1.03% [1.94%]	156 1.07% [0.04%]	10,160 0.85% [2.50%]	168,344 1.25% [41.42%]	406,442 1.31% [100.00%]
Total	11,032,747 100.00%	119,330 100.00%	1,502,262 100.00%	6,612 100.00%	664,104 100.00%	1,641,484 100.00%	576,577 100.00%	37,323 100.00%	766,058 100.00%	14,598 100.00%	1,191,836 100.00%	13,461,836 100.00%	31,014,767 100.00%

Source: Susenas 2002

Note: The data are weighted by frequency weight using individual weight.

Percentages not in bracket are percentage of poor people in the sector/unemployed/not in labor force who lived in the province

Percentages in bracket are percentage of poor people in the provinces who were employed/unemployed/not in labor force

SOURCE: McCulloch, 2004b

Annex 5: Gender issues in Indonesia (prepared by Ignacio Fiestas)

Women in Indonesia have achieved significant advances during the last quarter century. They live longer, are more educated, and have more control over their reproductive functions. However, the development has not progressed equally in all areas.

Notable progress has been made in terms of increased gender equality in education and reproductive health.

Education gender-inequality has been consistently addressed (the government introduced compulsory basic education in 1984). Far from conventional wisdom, there is no gender-gap in schooling participation as measured by net enrollment ratio, this being true for all educational levels (primary, junior high school and senior high school).²⁶

Despite improvements, illiteracy rates remain high, especially for women. In 2002, the female rate was 14.34% and compared to a 6.54% for men. Differences are most extreme in the rural areas, where the female rate is 19.19% and the male rate is 9.29%.²⁷ In fact, in rural areas 45.44% of the female population aged 45+ is illiterate.²⁸

In spite of the lack of gender disparities in present schooling participation, gender income differentials remain due to existence of systematical discrimination against women in the labor market. In 2002:

Only 50.1% of women vs. 85.6% of men were either working or looking for work.²⁹ (participation rate)

Women were over-represented in unpaid jobs. 32.7% of female workers, compared to only 6.5% of male workers were unpaid.³⁰

Wide regional differences persist in the level of literacy. Only 4.91% of women and 1.90% of men were illiterate in Sumatera Utara, compared to 13.85% and 23.82% in Nusa Tenggara Barat.

Working in similar sector and with similar education, female workers have a much larger tendency of earnings below the threshold. Sakernas 2001 shows that the proportion of male workers earnings below 1\$/day threshold is 6.35% while the proportion of female workers earnings below the same threshold is 20.7%.³¹

A study by Alatas (2002) demonstrated that female workers face higher vulnerability than male workers in all sectors and for all levels of education. As an example, the vulnerability rate for male workers with primary education who work in agriculture is 44%, while for female workers it soars up to 75%.³²

²⁶ BPS—Statistics Indonesia: Welfare Indicators. Jakarta, Indonesia, 2002, p. 63

²⁷ Ibid. p. 61

²⁸ BPS—Profile of Indonesian Women. Jakarta, Indonesia, 2002

²⁹ Ibid.

³⁰ Ibid.

³¹ Alatas, Vivi. 2002. Labor Market Vulnerability in Indonesia: A Synthetic Cohort Panel Simulation Exercise. Preliminary Draft, World Bank, Jakarta, Indonesia, September, p. 8.

³² Ibid., p. 9.

Another dimension of gender inequality in Indonesia derives from the political front, where surprisingly increased democratization has acted against political representation for women. In the People's Consultative Assembly (MPR), for example, the representation of women has fallen from 13% in 1987 to 8.8% in the 1999 elections.³³

Acting against the present status quo, in February 2003 a law was enacted that each participating political party may nominate candidates in each electoral district, giving consideration to representation of women of at least 30%.³⁴ However, not much has changed. On January 8th the General Elections Commission (KPU) announced that not a single political party was able to meet the 30-percent quota for women legislative candidates in all electoral districts.³⁵

The Government of Indonesia has emphasized the importance of gender equity in key chapters of the National Development Plan (PROPENAS) or Law 25/2000, and through the assurance of Presidential Instruction on Gender Mainstreaming (9/2000). The last requires all government ministries, non departmental government agencies, Indonesian National Armed Forces, the policy force, the Attorney General, governors, regents, and mayors to mainstream gender perspectives in the planning, development, implementation, monitoring, and evaluation of all national development policies and program.³⁶

³³ BPS—Profile of Indonesian Women, *op. cit.*

³⁴ IDEA—Institute for Democracy and Electoral Assistance. <http://www.idea.int/quota>

³⁵ The Jakarta Post, January 9, 2004.

³⁶ ADB—Asian Development Bank, Gender Equity Policy, March 2002.

Annex 6: Non-monetary measures of welfare (prepared by Ignacio Fiestas)

In the decades preceding its economic and social crisis, Indonesia made enormous economic progress, which translated into widespread achievements in social development. Between 1976 and 2002 the percentage of households living in absolute poverty declined sharply from 40 per cent to 18 per cent.³⁷

Universal basic education had already been achieved in early 1990, and net primary enrollment rates persistently remained above 90 per cent throughout the decade, while secondary net enrollment rose from 17 per cent to 47.5 per cent between 1970 and 1999. The number of girls attending primary schools is approximately the same as for boys, and seems to become increasingly higher than that for boys in secondary education. Parallel to this trend female illiteracy (ages between 15 and 24) was substantially reduced from 28.2 per cent in 1970 to 2.9 per cent in 2000, as compared to youth male illiteracy of 20.5 per cent and 2.3 per cent respectively.

In addition to having gained better access to education, women began to have fewer children, as shown by the sharp reduction of total fertility rates between 1971 and 2002 from 5.6 to 2.34. Average annual population growth declined accordingly from 2.32 between 1971-1980 to 1.49 percent in the period of 1990-2000.³⁸

In thirty years (1970 – 2000) child mortality also fell considerably from 104 to 35 infant deaths per 1,000 live births. As a result of declining fertility and mortality Indonesia has entered a process of transition in age structure. Children under 15 years of age accounted for 44 per cent of the total population in 1971, but accounted for just 30 per cent in 2000.³⁹ However, when compared to other ASEAN countries Indonesia does not rank so well. Child mortality is still at disproportionately high levels, and maternal mortality did not fall significantly in the 1990s. In 1997, 390 women died for every 100,000 births. The causes of these problems are complex and there is still a long way to go to improve the access of the poor to many crucial public services as well as the low utilization rates of these services by families.

In spite of the onslaught of the economic crisis at starting in the second half of 1997 and reaching its peak by end 1998, Indonesia's achievements in social development do not seem to have suffered disproportionately. Even though several social indicators showed signs of deterioration in 1998, they seem to have recovered and return, or even surpass, pre-crisis levels.

A good example is given in education, where the government's safety net programmes, consisting of block grants for schools and scholarships for poor students, seemed to prevent major deterioration in enrollment and participation rates.

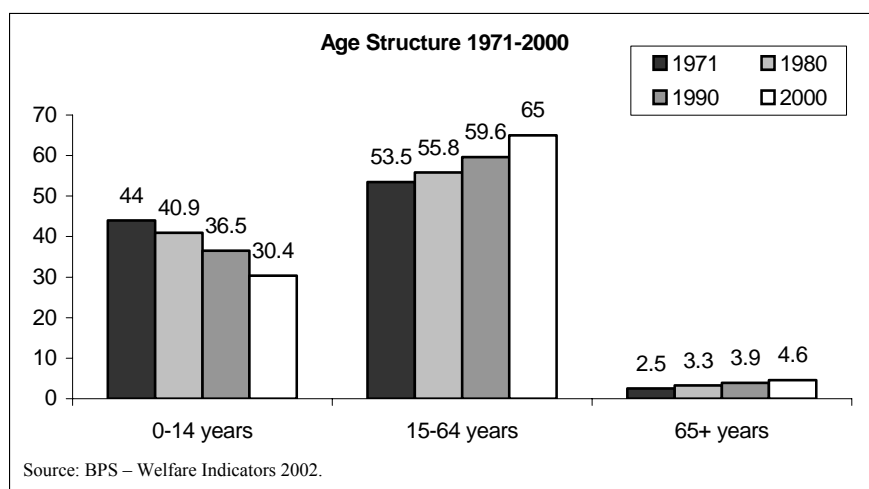
³⁷ Methodology changed in 1996 so the figures are not directly comparable.

³⁸ BPS, Statistical Yearbook of Indonesia, 2002. Pg. 32.

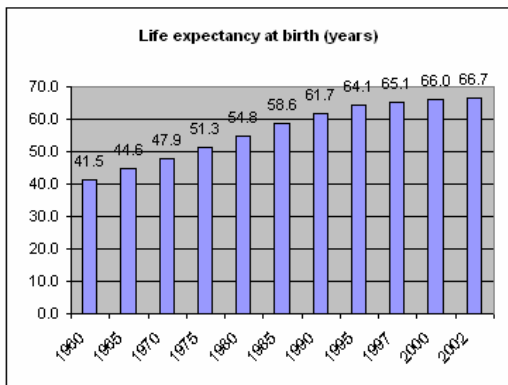
³⁹ BPS, Welfare Indicators 2002. Pg. 53.

	1960	1970	1980	1990	1995	2000	2002
Life expectancy at birth (years)	41.5	47.9	54.8	61.7	64.1	66.0	66.7
Infant mortality rate (per 1,000 live births)	128	104	79	60	46	35	
Adult literacy rate (% people ages 15 and over)	.	56.1	69.0	79.5	83.5	86.8	87.9
Youth female illiteracy rate (% of females ages 15-24)	.	28.2	14.9	6.6	4.4	2.9	2.4
Youth male illiteracy rate (% of males ages 15-24)	.	20.5	11.0	5.0	3.4	2.3	2.0
Average schooling years in total population (aged 25+)	1.1	2.3	3.1	3.3	4.0	4.0	
Primary school enrollment (% gross)	.	80.0	107.2	115.2	113.4	110.0	
Primary school enrollment (% net)	.	.	87.9	97.5	95.4	92.2	
Secondary school enrollment (% gross)	.	16.1	29.0	44.0	51.5	57.0	
Secondary school enrollment (% net)	.	.	17.5	37.9	42.3*	47.5**	

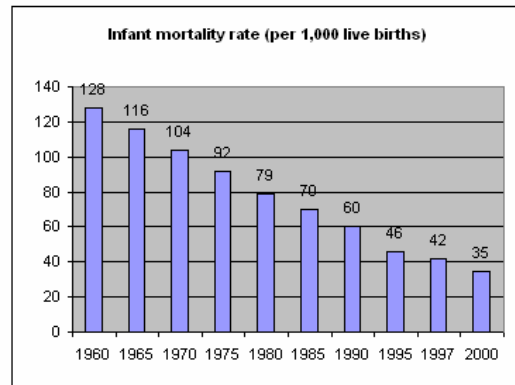
Source: WDI, 2003; * Data for 1994; ** Data for 1999



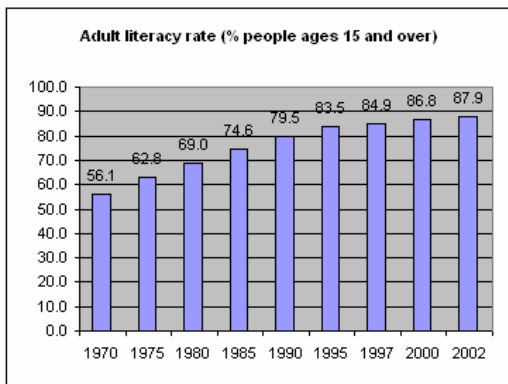
INDONESIA - SOCIAL INDICATORS



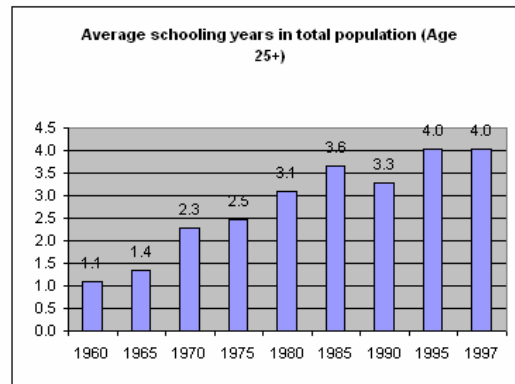
Source: WDI, 2003



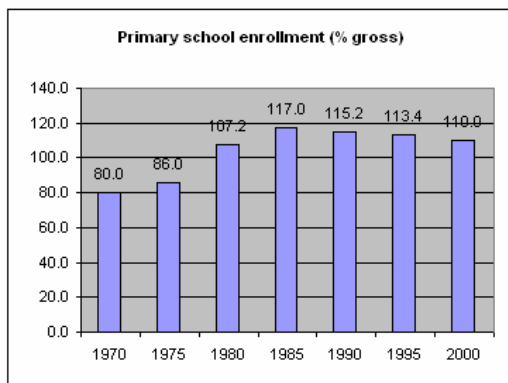
Source: WDI, 2003



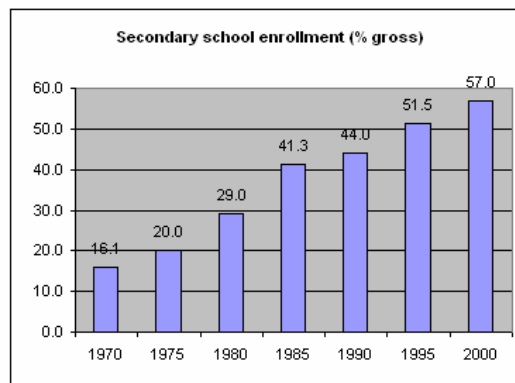
Source: WDI, 2003



Source: Barro and Lee (2000)



Source: WDI, 2003



Source: WDI, 2003

Social Safety Nets

Until the crisis, the government of Indonesia had mostly relied on employment creation, income generation and food security to eradicate poverty in the country. However, due to the gravity of the economic, social and political crisis that Indonesia was experiencing, the government came up with a set of “safety net” programs (JPS – Jaring Pengaman Sosial).

Table A8.1: Social Safety Net Program in Fiscal Year 1998/99

Food security	Education	Health	Employment creation
Subsidized Rice (OPK) National Food Security Program through Farmers Empowerment (PKPN-MPMP)	Scholarships and School Block Grant Scholarships and University Block Grant Operations and Maintenance of School Facilities Primary Schools Rehabilitation Specific Block Grant for Primary School Construction	Social Safety Net on Health Sector Social Welfare Supplementary Food for Primary School Students	Labor Intensive Program in Public Works Sector (PKPS-PU) Labor Intensive Program to Eradicate Crisis Impact (PDKMK) Labor Intensive for Trained Work Forces (P3T) Labor Intensive in Forestry Sector Empowerment of the Regions to Overcome the Impact of Crisis (PDM-DKE)

Source: SSN Program Management Coordinating Team, 1999 from Kumorotomo, W.: Poverty Alleviation Programs during the Economic Crisis in Indonesia: National Versus Local Pictures. Gadjah Mada University, Indonesia. October 2001.

Even though a commonly accepted view among scholars is that authorities should target the very poor first (*chronic poor*) and fight *transient poverty* (crisis-induced poverty) with effective macroeconomic policies, the large amount of people living just over the poverty line in Indonesia (only 7.2% of population lives below 1\$/day, but up to 55.4% lives below 2\$/day⁴⁰) created a demand not just for transfer programs to those chronically poor, but also to those households that experienced negative shocks.

In order to estimate the role that JPS programs have had on the welfare of the poor, a necessary step is to look at how effective the targeting of those programs was relatively to the areas that were most affected by the crisis. Two basic dimensions for targeting were considered: geographical and individual/household.⁴¹ In the regional dimension, the

⁴⁰ Global Poverty Monitoring. The World Bank. www.worldbank.org/research/povmonitor/

⁴¹ Pritchett, Sumarto and Suryahadi. October 2002. Pg. 6.

problems stem from the fact that indicators of the regional severity of the crisis were not acceptable: the data informing of the areas hit by the crisis were not exactly comparable for all administrative regions (provinces, districts). In the household dimension, the problem arose from the predominantly agricultural, informal and self-employed nature of the Indonesian economy, which is usually synonym (and Indonesia is not the exception) of lack of reliable data on current income.

Taking into account the serious fiscal and targeting constraints, a study by Pritchett, Sumarto and Suryahadi (2002) concluded that “employment creation programs, which relied on self-selection targeting, were much more likely to reach those households with large shocks to their expenditures than programs based on administrative targeting such as subsidized rice sales, scholarships, and health subsidies.”

The fact that SSN were practically inexistent in Indonesia until the crisis and the apparently limited role that they played during it, lead us to say that SSN have had, overall, a limited impact on the pro-poorness of Indonesia’s economic growth.

Annex 8. Data for the rice price debate (from McCulloch, 2004b)

Table A8.1: Numbers and Proportion of Net Producer Households

	Non-producers	Rice producers who are net consumers	Rice producers who are net producers	Total
National	38,330,480 (74.6%)	3,364,224 (6.6%)	9,659,561 (18.8%)	51,353,820 (100%)
Urban	20,762,432 (92.9%)	383,026 (1.7%)	1,208,744 (5.4%)	22,354,202 (100%)
Rural	17,568,048 (60.6%)	2,980,753 (10.3%)	8,450,817 (29.1%)	28,999,618 (100%)

Note: Authors calculations based on SUSENAS 2001

Table A8.2: Quintiles of Production and Consumption of Rice

	Expenditure Quintile				
	1 Lowest	2	3	4	5 Highest
Mean Production	89.6	110.2	125.2	101.7	68.7
Mean Consumption	104.8	112.8	114.7	112.5	105.5
Net Production	-15.2	-2.6	10.5	-10.9	-36.8
Median Production	0.0	0.0	0.0	0.0	0.0
Median Consumption	104.3	109.5	109.5	109.5	97.3
Net Production	-78.2	-87.6	-91.3	-91.3	-91.3

Note: Figures are in kg of rice per person per year. Based on SUSENAS, 2001, as calculated by McCulloch, 2004b.

Figure A10.1: Domestic and International Rice Prices

