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*The Indonesian Adjustment Experience  
in an International Perspective*

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This study analyses stabilization and structural adjustment policies in Indonesia in relation to the highly varied experience of other developing countries. The paper begins by deriving salient lessons from adjustment experience in general. It is found that political economy considerations such as the nature of the state and institutions, are important to explain differential performance. The importance of outward orientation and exports for adjustment success is discussed along with country-specific tailoring of reforms and optimal timing and sequencing. This is followed by a discussion and overview of Indonesia's experience during the 1982-88 period, which was successful compared to that of most developing nations. After a short initial contraction, growth resumed at a fast pace and poverty alleviation continued throughout the adjustment phase. Indonesia also managed to diversify significantly from resource-based primary exports to manufactures. Most significantly, the reforms were undertaken voluntarily rather than under pressure from the Bretton-Woods agencies. Finally, the paper explains Indonesia's rapid and successful response in terms of the political-institutional conditions prevailing at the onset of the crisis, the economic factors that determined the range of feasible options and the government's response strategy. The most important of these are the stability and credibility of the regime, stemming from sustained commitment to growth, rural development and poverty alleviation, relatively even land distribution, a rice boom that preceded the crisis and the strategy adopted. By simulating alternative policy scenarios on a computable general equilibrium model, it is shown that the policies adopted were near optimal.

# The Indonesian Adjustment Experience in an International Perspective<sup>1</sup>

## 1. Introduction

The main objective of this paper is to evaluate Indonesia's episode with stabilization and structural adjustment (SSA), between 1982 and 1988, in the broad context of lessons learned from adjustment experiences in the developing world in the 1980's. Indonesia's record is significant for many reasons. First, in spite of an unavoidable deceleration of growth during the implementation of adjustment measures, growth resumed subsequently at a fast pace.<sup>2</sup> Secondly, the process of poverty alleviation which was already underway before the crisis continued throughout the adjustment phase. Thirdly, Indonesia was able to shift rapidly from an inward-looking import substitution industrialization strategy to an outward strategy during the latter part of the adjustment phase. This led to a remarkable diversification in its export pattern away from an overwhelming dependence on non-renewable export products to manufactured exports over a very short period of time. Finally, the package, including the timing and sequencing of adjustment measures adopted voluntarily by the government was arguably close to optimal under the prevailing conditions and constraints.

Clearly, the successful nature of the Indonesian adjustment experience contrasts markedly with the experiences encountered by the great majority of developing countries. This raises the question of what lessons might be learned from the Indonesian episode and, more particularly, can one identify the specific factors and initial conditions in the political and socioeconomic fabric of that

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<sup>1</sup>This paper owes much to the excellent research assistance of Chris Rodrigo.

<sup>2</sup>Ironically, it appears that some problems are now being generated by too rapid a growth of industry. For a brief survey from a business perspective, see "Too Fast Too Soon", Euromoney, September 1990, pp. 299-312.

country which contributed to successful adjustment? It is argued in this paper that among the latter set are political stability; a sustained record of high and equitable growth going back to the early seventies which lend legitimacy and credibility to government adjustment policies; and a set of centralized institutions that insured a high degree of built-in monetary and fiscal discipline.

This paper consists of three major sections and brief conclusions. Section 2 attempts to distill and synthesize some of the more robust lessons and propositions learned from the highly varied experiences of adjusting countries. These lessons are presented under three interrelated headings as they relate more specifically to 1) the political economy of SSA; 2) outward orientation, state intervention, trade liberalization and export promotion; and 3) the appropriateness of the chosen package of SSA reforms, including the timing and sequencing of individual measures. Section 3 presents a brief chronology and overview of the SSA program actually implemented and the macroeconomic performance of the Indonesian economy during the 1982-88 episode.

Section 4 confronts the Indonesian adjustment episode with the lessons learned and propositions derived from the critical evaluation undertaken in Section 2 of the SSA process in the international context. It attempts to answer such questions as what were the initial conditions which facilitated the adjustment process and which set of institutions and combinations of policies and reforms contributed to the successful macroeconomic performance. The Indonesian experience is scrutinized under the same subheadings as in section 2. In particular, on the basis of a computable general equilibrium model of the Indonesian economy, the impact on socioeconomic performance of the adjustment package actually implemented by the government during the adjustment phase is compared with the simulated impact of a number of alternative counterfactual policy scenarios.

## **2. Some Key Issues and Lessons Derived from Cross-country Adjustment Experiences**

A number of significant critical analyses have appeared within the last few years, which attempt to understand the reasons for the highly uneven record of stabilization and adjustment experiences spanning the developing world. Distinct from previous critical surveys of SSA by well known structuralists such as Taylor (1988, 1989), these new assessments are presented by distinguished economists of the mainstream, some associated with the World Bank itself. The latter seem to go at least part of the way towards accommodating some individual criticisms of the structuralists.

To a large extent this shift is a natural one. Ten years down the road, it is time to take stock and find explanations for the highly varied experience of SSA. The 1991 World Development Report (hereafter WDR91) also reflects a more nuanced and situation-specific approach, with some alternative perspectives delicately woven into the presentation. Careful study of the successes and failures have clarified many issues, narrowed differences, softening the ideological stances of earlier years. It is perhaps too strong to say that there is a convergence to consensus, given the rather basic differences in approach between the neoclassical and structuralist visions. There is at least a significant narrowing of areas of dispute and greater agreement over what the major issues and problems are deriving from a decade of historical experience of developing countries with different SSA packages and their impact on socioeconomic performance.

In this section an attempt is made at synthesizing the emerging wisdom regarding the diversified impact of SSA on performance in developing countries. In particular, some of the key lessons learned from various recent critical evaluations of cross-country experiences under a variety

of SSA packages and initial conditions are highlighted. This review is not meant to be a comprehensive survey of SSA but rather the distillation of key selective lessons and propositions which appear particularly relevant in examining the Indonesian experience subsequently. Subsection 2.1 focuses on the political economy of adjustment and the role of the state and institutions in influencing SSA policies and ultimately performance. This part draws largely on a small but growing body of literature described collectively as the political economy approach to macroeconomic policy. The location of economic behavior within a broader socio-political matrix is, of course, hardly novel; it was an integral part of the political economy of Marx, Ricardo and other classical economists<sup>3</sup>.

Subsection 2.2 touches on the current debate relating to the appropriate role of the state in encouraging an outward oriented strategy. There is growing evidence that the outstanding success of the East Asian economies including Japan, derives partially from state intervention to promote outward orientation leading to export-led growth. A shift to outward orientation is considered a key element of reform in SSA packages but what the appropriate form and degree of government intervention is, remains a question?

Section 2.3 reviews the findings of some recent cross-country evaluations of SSA experiences and draws some inferences about the most appropriate package of measures and their timing and sequencing. The complementarity among, and mutually reinforcing impact of, various policy measures and reforms are scrutinized.

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<sup>3</sup>This approach appears to be shared increasingly today by the structuralists and non-structuralists, alike; Taylor (1985), for instance, sees inflation very explicitly as deriving from distributional conflicts between classes. Dornbusch (1990) also seems to suggest that much of the weakness of the Latin economies stems from the myopic subservience of the state to propertied interests.

## 2.1 The political economy of SSA

The most important reason for invoking political economy factors rooted in the social and political makeup of nations is, of course, to explain serious departure from the economic models hitherto used in formulating SSA policy. These factors can be considered as **inherited** country-specific 'initial conditions' and must clearly be taken into account in the design of effective SSA packages, which means that the specific combination of policy instruments and reforms used and their intensity, will in general vary from country to country.

The primary distinction to be drawn for initial conditions, is between conditions that are favorable and unfavorable to the implementation of SSA. Among the former are a stable, technocratic regime, with credibility, commitment to growth, a strong, centralized apparatus, modern infrastructure, relatively even land distribution underpinning a dynamic agricultural sector, social and political institutions favoring fiscal and monetary discipline, creditworthiness abroad and an efficient and broadly-based tax system.

Inherited factors inimical to success would include excessive reliance on trade in primary exports, especially those based on non-renewable resources, populist political traditions, excessive dependence on special interest groups such as large landlords, unions or import-substituting industrialists, a bloated civil service and inefficient, patronage-ridden public enterprises. In general, developing countries have been characterized more by the negative conditions than by the positive. Their specific incidence and interaction with macroeconomic variables is discussed below.

The World Bank seems to endorse the new political economy approach to SSA. In a chapter suggestively titled "Rethinking the state" it calls for "governments to intervene less in certain areas

and more in others - for the state to let markets work where they can, and to step in promptly and effectively where they cannot" (WDR91, p.128), a view likely to be shared by many.<sup>4</sup> WDR91 also analyses the role of culture and social institutions in promoting or stifling economic growth<sup>5</sup>. These include legitimate government, socially accepted property rights, land reform, social peace, modernized and efficient legal and financial institutions and state bureaucracies, the curtailment of scope for rent-seeking and so on. The Bank dismisses the notions that authoritarianism and high income inequality are conducive to economic growth. It argues that with the **exception of East Asia**, "dictatorships have proven disastrous for development" and that inequality seems to be associated with slower growth.

The overall thrust of the new approach is to highlight the importance of a host of country specific institutions or initial conditions rooted in culture, society and history, which go well beyond the austere neoclassical framework of the past. **Where these do not exist, it is the prime task of the state to create them, such as in Meiji Japan.** However, the rationalization of an overextended public sector is also strongly advocated with privatization wherever feasible, to promote economic and administrative efficiency.<sup>6</sup>

The new approach to political economy takes institutions as largely given exogenously and

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<sup>4</sup>An abbreviated list of indispensable interventions would include the maintenance of law and order, the provision of public goods, investment in human capital, the construction and repair of physical infrastructure, and the protection of the environment". Protection of infant industries, if used, must be temporary, but is not recommended. Excessive intervention is conducive to corruption which is severely detrimental to efficiency of government and economy.

<sup>5</sup>The Bank refers to the intellectual foundation laid for this integrated approach in the work of Hayek, Hegel, Marx and Weber (WDR91 p.134).

<sup>6</sup>But rationalization need not always lead to privatization; WDR91 cites the existence of efficient state enterprises in some developed and developing countries.

argues that actual policies tend to be determined endogenously within a specific institutional context.<sup>7</sup> The implication is that policy makers have only very limited control over actual policy instruments. To direct these instruments would require changing the underlying institutions, a very difficult and time-consuming process under most circumstances. In a very interesting recent study, Edwards and Tabellini (1991) build on the above theoretical approach and test a number of hypotheses empirically on the basis of a large sample of countries. They attempt to identify empirically the social and political determinants of particular fiscal policies by different governments. This is a novel departure for mainstream thinking on SSA which has hitherto taken fiscal policy as something that can be exogenously determined. Their main proposition is that political determinants have to be invoked to explain cross-country differences in inflation, budget deficits and devaluation episodes.

Edwards and Tabellini (1991) begin by reviewing recent thinking on inflation; in particular, they attempt to explain why some countries resort to the inefficient system of inflation tax and, in general, are much more prone to hyperinflation episodes.<sup>8</sup> Drawing on a simple model formulated by Persson and Tabellini (1990) they develop a testable model where inflation is postulated to depend on a) the government's reputation to undertake, or not undertake, unexpected policy action which might disrupt the system of expectations of private agents; b) the stability of the regime; and c) the degree of social polarization in the country.<sup>9</sup>

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<sup>7</sup>The principal proponents of this approach are Persson and Tabellini (1990). This approach is, of course, in contrast with Tinbergen's theory of economic policy which assumes that policy instruments and, to a lesser degree, institutions were directly under the control of the policy maker and could be altered at will. See Tinbergen (1956).

<sup>8</sup>Corden (1990), starting from the argument that inflation results mainly from the monetization of deficits, details its negative effects on investment, growth and macroeconomic instability.

<sup>9</sup>The authors test a simple regression of average inflation against various measures of political instability and polarization on cross-country data.

Political and institutional variables such as frequency of government changes, coups and an instability index are able to explain a significant amount of the cross-country variability in inflation. More specifically, the more unstable and polarized a nation and the less credible its government is, the greater the tendency to rely on inefficient inflation and trade taxes. Likewise, political instability is found to be generally positively related to budget deficits.

Another key question which is raised is what determines the degree of success of adjustment programs. This is largely explained by the asymmetry between such measures as relying on the inflation tax and borrowing, on the one hand, and other fiscal policy actions, such as reducing government expenditures and increasing taxes. Printing money and issuing government debt are generally administrative decisions which can be easily and quickly taken even by a weak government while raising taxes or cutting spending, in contrast, are normally much more discrete and difficult to implement policy decisions that require sustained political strength or consensus to hold out against the reactions of those adversely affected.<sup>10</sup> It is also argued that the more decentralized the policy making process is, the more difficult would be the task of stabilizing the economy. Particularly, if spending authority is highly decentralized and spread among several echelons of decision units there exists a greater potential for mutually inconsistent and incompatible decisions to be taken which may, ultimately, work against the collective interest.

Still another interesting finding of Edwards and Tabellini (1991) is that it is possible to predict statistically whether stepwise devaluation episodes<sup>11</sup> will be successful or unsuccessful on the basis

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<sup>10</sup>Edwards and Tabellini (1991, p.23) remark that "When the resolution of political conflict is difficult, inflation and government deficit may be the only way out, if no political consensus can be reached on other policy decisions".

<sup>11</sup>The degree of success was estimated using a composite index incorporating fiscal stabilization, external asset position and real exchange rate movement, all measured over a three year period.

of macroeconomic policies alone. They find the degree of success with crawling devaluations is much more limited than under discrete devaluations.

Finally, a finding which is particularly relevant in the context of Indonesia, and to which we return to in Section 4, is that policy actions that reduce the degree of polarization, such as say a reduction of poverty and income inequality, would also lead to a more stable economic and political environment. A recent evaluation of the adjustment experience of about a dozen countries with particular emphasis on distributional consequences strongly supports the above point. (See Bourguignon, de Melo and Morrisson, 1991 forthcoming). In short, the main message is that there is a causal relationship between political instability and the ability to implement painful stabilization and adjustment policies<sup>12</sup>.

Structural adjustment loans tied to conditionality requirements, is the main instrument by which the Bank has attempted to strengthen recipient governments commitment to reform. The realistic design and modeling of conditionality bargaining in adjustment loans is discussed by Mosley (1987). In this respect he argues that the most effective structural adjustment lending programs have been those which were undertaken voluntarily by a government.

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<sup>12</sup>In a similar context Dornbusch (1990, p.45) argues that "There are economic equilibria and there are political equilibria. Open economy issues must be modeled with both in mind.....What markets consider sufficient policy actions may simply be beyond the political scope of democratic government. To create sufficient incentives to motivate the return of capital and the resumption of investment, the implied size of real wage cuts might be so extreme that on political grounds asset holders might consider the country too perilous for investment. Stabilization loans may have a place as well as a complete suspension of external debt service for a substantial period."

## **2.2 Outward orientation, state intervention, trade liberalization and export promotion**

Outward orientation mainly through trade liberalization is considered one of the key pillars supporting any successful SSA package. Outward orientation is distinguished from inward orientation as follows: under the former regime similar incentives are provided to exports and import substitution, while import substitution is favored over exports in the latter; inward orientation also implies a bias against primary production which is not found in the former (Balassa 1988). For most developing countries, therefore, a shift to outward orientation requires considerable liberalization of trade.

In a survey of the performance of 83 developing countries since 1965, Faini and de Melo (1990) divide up this sample into three groups, manufacturing exporters, fuel exporters and a residual category of primary exporters. They find that after adjustment, it is only the manufacturing exporters, mostly the East Asian countries, that have resumed growth at around the pre-crisis rates. They report that the debt service burden for this group is high, but that again is partly because of a few Latin countries in the group. Annual growth in the fuel exporting group has declined steadily from 6.6% in 1978-81 to 0.9% in the 1986-88 period. Primary exporters have recaptured most of their loss in growth in the same time frame but have suffered a worsening trend in their external debt service.

The salient proposition that derives from the Faini-de Melo survey is that it is manufacturing exporters, represented by the East Asian countries and a few others, that have adjusted most successfully. If so, the question which suggests itself is whether other developing countries as well could achieve resilience against shocks within the international economic system by export promotion, or more specifically by raising the volume of manufactured exports. There is now a preponderance of evidence that countries adopting outward oriented development policies, have

performed better than those that have stayed with inward oriented import substitution.

The Bank/Fund view has been that exports have been promoted best by outward oriented policies combined with the relatively untrammelled operation of market forces, under very liberal, even laissez-faire, trade regimes. This view has been contested by others who point to many contingent factors and strong state intervention behind the export success of Japan, South Korea, Singapore, Taiwan and Hong Kong (Sachs 1987, Taylor 1988, Amsden 1990, Wade 1990).

Edwards (1989), quoting other detailed studies and specific country examples, concludes that some trade liberalization, carefully sequenced, is a **necessary condition** to sustain outward orientation and export growth, but definitely not a policy of laissez-faire. The danger of excessive and untimely liberalization is illustrated by the Chilean disaster<sup>13</sup>. Sachs (1987) concludes that the success of Japan, Korea, Singapore, Taiwan and Hong Kong was achieved by state promotion of exports in an environment where imports were not fully liberalized; but macroeconomic equilibrium was fostered, especially fiscal discipline.

Once a country becomes a significant exporter of manufactured goods, it is clear that domestic resources are being used in some effective fashion with technology and productivity growth, scale economies and human capital advancement locked into internationally competitive rates. But export performance may be the consequence of hard-won domestic competitive strength rather than an easy pathway to this desired state. Taylor (1988) argues that export success was almost always preceded by a phase of import substitution and required much more than merely getting prices right.

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<sup>13</sup>Dornbusch (1990) and Edwards (1989) both cite the Chilean experience of 1975-1981, when a major stabilization effort was pursued simultaneously with drastic trade liberalization and the currency fixed to the dollar. Inflation was reduced from 40 to 9 percent per annum leading to a RER (real exchange rate) appreciation that sharply reduced the competitiveness of the tradeables sector. This was a time when the equilibrium RER, required to maintain macroeconomic stability, had depreciated significantly. This misalignment led to the worst financial debacle in Chilean history. The post-1983 stabilization was more successful, the RER was pushed down into a competitive range and rising exports supported a sustained growth in the economy.

It is now well understood that export success brings with it a host of positive economic spin-offs such as scale economies, easier external financing, access to new technology and a drive to continually raise productivity and build human capital. Dornbusch (1990, p.34) remarks, "Deregulation and trade reform may be effectively the instruments that take an economy out of the trap of slow growth toward an acceleration of growth but then develops its own dynamics and financing." However, there is no clear consensus yet on what is the optimal form and degree--if any--of state intervention in encouraging an export-led outward oriented development strategy. The answer to this question is likely to depend in a crucial way on the underlying country and time-specific characteristics and initial conditions that prevail.

### **2.3 Evaluation of SSA country experiences: Appropriate SSA package and timing and sequencing of policies.**

What is the most appropriate set of policies and reforms, including their timing and sequencing, to move from a stabilization phase to an adjustment phase which leads subsequently to sustainable growth? Many policy measures are complementary and self-reinforcing and are likely to have the most favorable impact on socioeconomic performance if they are implemented in a certain sequential order and with certain degrees of intensity. By now there is much international cross-country evidence and analyses which can be used to distill a number of hypotheses and propositions relating to the design of optimal SSA strategies and packages. What makes this question particularly difficult to answer is that initial conditions (such as the political economy environment discussed in 2.1 and a prevailing resource endowment and trade pattern, which might

make a country particularly vulnerable to shocks originating abroad) differ widely among countries and can have a critical influence on ultimate success or failure. Hence the package appropriate to each country must necessarily include consideration of these initial conditions. Given the rather wide scope of context-specific analyses, this issue is only touched on briefly here.

Dornbusch (1990) and Edwards (1989) present overall evaluations of SSA experience. Dornbusch sharply rejects the optimistic scenarios of previous Bank/Fund perspectives which assume that the transition from adjustment to growth is automatic<sup>14</sup> and where the key mechanisms in dispute are solved by assumption. His analysis is particularly appropriate for SSA in Latin American countries, where high inflation is common and the tax system is very weak.

It is generally agreed that most SSA packages should begin with an immediate devaluation and budgetary retrenchment, to be followed by trade liberalization, deregulation of markets, privatization and tax and financial reform. Immediate and sustained budgetary discipline is, of course, a sine qua non for a stable macroeconomic environment, with the size of the tolerable deficit depending on the degree of inflation.<sup>15</sup> To overcome the "hysteresis effects" (i.e. the tendency for previous financial instability to undermine the scope for non-inflationary deficit finance), it is argued that at the outset of the stabilization program quick success in achieving disinflation is critical in

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<sup>14</sup>Dornbusch (1990, p.19) states: "Adjustment is a necessary, but not necessarily a sufficient condition for a resumption of growth, because asset holders may postpone repatriating flight capital, and investors may delay initiating projects." Further (p.42), "close inspection of the IMF model reveals that all the crowding-in problems discussed above are solved by assumptions: investment is assumed to rise spontaneously; real depreciation drives growth immediately and whenever the economy deviates from full employment, the growth rate responds positively to the gap by an unexplained mechanism. In practice none of these assumptions hold.... If the private sector does not respond with investment and capacity expansion, and if confidence and inflation fears bar a public sector expansion, then the policy maker becomes the proverbial emperor without clothes".

<sup>15</sup>WDR91 presents a list of reforms organized in the form of a bar chart over time (page 146). There appears to be considerable agreement about most immediately needed reforms. These are fiscal and monetary stabilization and reform, devaluation, the liberalization of prices (except that of basic necessities) and the immediate replacement of QRs (quantitative restrictions) by import tariffs.

gathering the political capital and credibility for further progress on more basic adjustments. (Dornbusch, 1990)<sup>16</sup>

An immediate devaluation is considered critical to the success of the entire SSA strategy. The rationale is that a depreciation of the real exchange rate (RER) to a competitive level is required to encourage a shift of resources into tradeable activities.<sup>17</sup> The RER, however, is an endogenous variable which is only partially under the control of policymakers. There is no universal agreement whether regimes based on fixed rates (with discrete devaluations) are more effective than floating rates regimes. Some analysts prefer the former on the ground that under a floating rate it is more likely that, as the SSA program begins to work, the RER would rise making necessary sharp and inconvenient further devaluations. In fact, an empirical study found a very high proportion of SSA failures among the "crawling devaluers" (Edwards and Tabellini, 1991).<sup>18</sup> Corden (1990), however, advocates frequent small depreciations rather than large discrete changes which he fears could trigger an inflationary spiral.

Fiscal austerity has to be supplemented by a temporary incomes policy which should soon be replaced by a system of indexation of wages, public sector prices and the exchange rate. Wage indexation on a semi-annual or annual basis will create a new inertia around the low inflation rate. Wage indexation protects the economy against rapid inflationary escalation provided that monetary and fiscal policies are sound. Adjustment loans could also play a role here to afford temporary

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<sup>16</sup>Dornbusch (1990) also forcefully rejects the argument that tight money is a substitute for a balanced budget.

<sup>17</sup>A cross-country evaluation of the impact of devaluation on performance is given at the end of this subsection.

<sup>18</sup>Colombia is one of the few crawlers that achieved success; but it is also the only Latin nation to have escaped the traumatic experience of the debt crisis while maintaining growth. Colombia's case is exceptional in other ways as well since reforms were begun as far back as 1967 (Edwards, 1989).

protection to groups adversely affected by fiscal cutbacks (Mosley 1987). Perhaps even more effective as a shock absorber to the transitional contractionary effects of stabilization measures might be sector loans or public works projects at the local level providing (emergency) employment opportunities to some of the more vulnerable and disadvantaged groups and localities. (Bourguignon, de Melo and Morrisson 1991, forthcoming and Dornbusch, 1990)

A simple, fair, transparent, and strongly enforced tax system is also mandatory if fiscal discipline is to be maintained. Financial stability hinges on reforming the tax system to generate new and predictable sources of revenues. Dornbusch (1990, p.23) expresses a general consensus in advocating a productive tax structure which consists of four elements: "a broad tax base, without exemptions and only a few taxes; a firm attitude towards tax compliance; moderate, preferably uniform rates of taxation; and absence of significant subsidies of any form and establishment of efficient public utility rates."

Major benefits are to be derived also from comprehensive reform of the public sector, including 1) pricing policies for public services; 2) management of public enterprises; 3) civil service reform. Financial liberalization and the establishment of modern financial institutions is also very important for retaining and mobilizing domestic savings.

The liberalization of trade, deregulation of internal markets and the promotion of exports are also of critical importance to the success of long term adjustment. The measures involved have already been discussed in detail in 2.2 above and need not be repeated, except to highlight two macroeconomic conditions that are essential to the success of trade reform i.e. a stable macroeconomy and a real exchange rate that is not seriously misaligned.

The restructuring and development of financial markets and the privatization of small state

enterprises can begin almost immediately, but would probably take 3-4 years to be completely spun off into the private sector. The restructuring and privatization of large enterprises would take much longer; it could not be begun without careful evaluation<sup>19</sup> for viability over a year or so.

Regarding the sequencing of trade reforms, Dornbusch (1991) asserts that the elimination of obstacles to trade invariably spills over into a large increase in imports. The beneficial effect on exports are much slower to appear if real depreciation is not possible; hence trade liberalization should occur in two rounds; first, the country should move from quotas and licenses to a uniform, high tariff of say, 50%. Later tariffs can be taken down to 10%. Edwards (1989, p.36) also advises that "an important principle is making sure that tariff reduction reforms are not undertaken until the fiscal sector has been reformed and other revenue sources have been found." He argues that the switch to tariffs results in greater efficiency, higher revenues, potentially better income distribution and also increases the effectiveness of devaluations.

There exists a natural tendency for governments in power to expand public expenditures on the upswing (as terms of trade improve and export revenues grow) and, conversely, a natural reluctance to reduce planned programs on the downswing. The increased spending during commodity booms raises the price of nontraded goods relative to traded goods and tends to shift factors of production to the expanding sector. The consequent appreciation in the real exchange rate often leads to the squeeze of the nonborn tradeables sector in a phenomenon known as "Dutch disease" (for specific country examples, see WDR91, p. 112). A wise policy prescription, in this connection, is that given by Williamson (in a comment made on Corden's 1990 paper in World Bank 1990, p.85) "A useful dictum that may help successful technocrats avoid overconfidence is that all

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<sup>19</sup>Corden (1990) insists that public projects must be carefully vetted for profitability.

positive shocks should be treated as though they were transitory and all negative shocks as though they were permanent".

A significant finding of the Faini-de Melo study (covering 83 countries) is the universal decline in the investment share in GDP. From 1978 to 1988 this ratio declined by 30% for fuel exporters and by 20% for the rest, including the manufacturing exporters. For a smaller sample of the most severely indebted countries the decline was even worse. In general, except for the manufacturing exporters, adjustment was achieved by cutting investment rather than by increasing savings; this raises serious concerns about the prospects for sustained recovery.

Furthermore, the real exchange rate (RER) had risen (depreciated) by close to 40% for all countries in the sample over the period of the survey. The depreciation of the RER was "the centerpiece of these adjustment packages", designed to restore external balance and shift resources to the production of tradeables by cutting back on domestic absorption. Thus, though a sharp depreciation of the RER had been achieved, this had not brought about the desired supply response, in most cases. Instead it seems to generate at least a temporary output loss. They infer that this effect captures the inability to switch factors from non-tradeable to tradeable activity in the light of foreign exchange constraints. The authors conclude that this result has strengthened the structuralist argument that devaluation have only a small effect on the trade balance because of low elasticities and that they are contractionary from the demand side and the supply side. Their econometric analyses show that RER depreciation contributed most to trade balance improvement for the manufacturing exporters. For the rest, which are countries at a relatively early stage of industrialization with low diversification, there is little room for expanding exports which are concentrated in a few primary commodities. The natural resource based economies, such as the fuel

exporters, are even less able to respond. The data also shows very limited scope for import substitution. It will be seen in section 4 that a number of factors, in the Indonesian context, contributed to a significant supply response in both manufacturing exports and agricultural tradeables - in contrast with the more general picture painted above.

Faini and de Melo (1990) also note that the severity of the adjustment programs has sharply reduced the share of private investment in GDP, raised the cost of capital because of the debt overhang and steadily worsened income distribution. The relative price of investment had been significantly raised, more for manufacturing exporters than for primary exporters. The incremental capital output ratios (ICOR) had improved for manufacturing exporters<sup>20</sup>, but remained stable for primary exporters.

Further analysis reveals that only a small part of the fall in private investment is attributable to increases in the cost of capital, even for the manufacturing exporters where investment is most sensitive to the cost of capital. The main determinant is found to be uncertainty deriving from instability in the general macroeconomic environment. This linkage completes the vicious circle of a self-fulfilling, inefficient and low-investment equilibrium trap<sup>21</sup>. No evidence is found that public investment attracts private investment in what has sometimes been called the "crowding in" phenomenon. Again, as will be discussed in 2.4, there is evidence that at least in the agricultural sector in Indonesia "crowding in" occurred.

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<sup>20</sup>For this group the fall in public and private investment was accompanied by an increase in efficiency. This could result from the elimination of less efficient investments and the rationalization of public sector investments. It is possible however, that the fall in ICOR may reflect a higher rate of capacity utilization. It may also reflect a cut-back of projects with long gestation lags. In Indonesia for instance, large capital intensive projects were phased out and emphasis was placed on quicker labor intensive projects as is discussed in section 4.

<sup>21</sup>This effect is confirmed by Edwards and Tabellini (1991); see section 2.1 for details.

### **3. The Adjustment Program and Macroeconomic Performance in Indonesia, 1982-1988**

This section provides a brief chronology and overview of the stabilization and structural adjustment program and the macroeconomic performance of the Indonesian economy during the 1982-1988 episode. Many issues which are only touched upon here are explored in more detail and more systematically in the next section where the Indonesian experience is contrasted and confronted with that of other countries and analyzed from a political economy standpoint.<sup>22</sup>

The origin of the macroeconomic disequilibrium which affected the Indonesian economy starting in 1982/83 is clear and direct. First, the worldwide recession of the early 80's affected the prices of, and demand for additional Indonesian exports (mainly agricultural products) adversely. Secondly, and more dramatically, earnings from all exports dropped from \$10.6 billion in 1981/82 to \$7.2 billion in 1982/83.<sup>23</sup> The slide in oil prices continued steadily until 1988. Indonesia's crude oil export price reached a peak of \$34 per barrel in 1981/82 falling to \$25 per barrel in 1985/86 and collapsed in 1986/87, with the average price dropping to below \$13 per barrel.

The structural adjustment package which was adopted and implemented can be grouped under four broad categories, i.e., 1) exchange rate management; 2) fiscal policy; 3) monetary and financial policy; and, 4) trade policy and other regulatory reforms. With regard to the first category above, Indonesia resorted to currency devaluations twice during the period under consideration. In March 1983, the rupiah was devalued by 28% and full currency convertibility was established. The

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<sup>22</sup>Sections 3 & 4 of this paper draw extensively on the recent volume by the author: E. Thorbecke, Adjustment, Growth and Income Distribution in Indonesia (OECD Development Centre, Paris, 1991, forthcoming). The information and statistical data presented in this paper, unless specifically mentioned otherwise, originate in the above volume.

<sup>23</sup>The macroeconomic indicator which probably tracked these shocks best is the ratio of the current account balance to GNP which swung from a positive 4% in each of the three years preceding 1981/82 to -3.6% that year and -8.4% in 1982/83.

second devaluation occurred in 1986 when the rupiah was again devalued by 31%, in direct response to the rapid decline in oil prices.

In its fiscal policy the government undertook major changes in the level and pattern of, respectively, government expenditures and revenues. On the expenditure side, the government went through a major budget retrenchment effort, the magnitude of which can be judged by comparing the ratio of total realized to planned expenditures during Repelita IV (the Five-Year Plan covering the period 1984/85-1988/89). On average, during this period, realized (actual) expenditures fell in constant terms 21% short of the expenditures which had been planned and programmed at the outset of Repelita IV (see Table 1). The budget retrenchment pattern was quite selective in the sense that current expenditures on education and health and "other wages and salaries" were cut relatively much less than subsidies and capital expenditures on investment projects in the various sectors. Several large public investment programs were canceled or postponed while smaller labor intensive projects under the regional development INPRES program were encouraged. In general, as is shown in section 4, the observed budgetary retrenchment was successful in stabilizing the economy while sheltering the more vulnerable socioeconomic groups from the unfavorable effects of drastic budget cuts.

On the revenue front, the corporate tax on oil and gas had historically been the predominant source of central government revenue. The share of total domestic revenues generated by this corporate tax fell drastically from about 68%, at the outset of the oil crisis, to about 49% in the period 1985/86-1987/88, and has continued to fall. In response to the rapid absolute fall in oil exports and oil revenues constituting the primary source of government receipts, Indonesia undertook important reforms in its tax structure. In 1984, an income tax was introduced based on three relatively low

Table 1 Ratio of Realized Central Government Expenditures to Planned Expenditures, 1979/80 to 1988/89

	REPELITA III					REPELITA IV							YEARLY AVERAGE	
	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1987/88	1988/89	REP III	REP IV
<b>TOTAL REALIZED/PLANNED EXPENDITURES</b>	1.16	1.51	1.61	1.50	1.72	0.90	0.89	0.73	0.74	0.69	0.74	0.69	1.50	0.79
<b>A. Total Current expenditures</b>	1.18	1.74	1.63	1.40	1.56	0.89	0.90	0.79	0.76	0.66	0.76	0.66	1.52	0.80
1. On education and health	1.16	1.51	1.61	1.50	1.72	0.88	0.94	0.81	0.73	0.67	0.73	0.67	1.50	0.81
2. Other wages and salaries	1.18	1.20	1.57	1.52	1.59	1.01	1.11	0.96	0.85	0.75	0.85	0.75	1.41	0.94
3. Other goods and services	1.17	1.24	1.57	1.56	1.63	0.97	0.91	0.67	0.56	0.49	0.56	0.49	1.43	0.72
4. Interest on debt	1.18	1.22	1.13	1.52	2.34	0.73	0.65	0.94	1.03	1.01	1.03	1.01	1.48	0.87
5. Subsidies	1.21	1.87	2.13	1.29	1.04	0.70	0.55	0.23	0.43	0.15	0.43	0.15	1.51	0.41
a. On food	1.20	2.04	2.32	1.19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
b. On chemicals	1.21	1.83	2.10	1.29	1.04	0.70	0.55	0.22	0.43	0.15	0.43	0.15	1.49	0.41
6. Others	1.00	1.00	1.00	1.00	1.00	0.96	0.97	1.00	0.99	1.02	0.99	1.02	1.00	0.99
<b>B. Total Capital expenditures</b>	1.15	1.50	1.59	1.54	1.94	0.92	0.87	0.65	0.71	0.72	0.71	0.72	1.54	0.77
1. Debt amortization	1.18	1.21	1.48	1.53	2.37	1.00	1.21	1.50	2.26	2.68	2.26	2.68	1.55	1.73
a. Domestic	1.00	1.00	1.00	1.00	1.00	0.96	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00
b. Foreign	1.21	1.23	1.51	1.56	2.48	1.00	1.22	1.50	2.28	2.71	2.28	2.71	1.60	1.74
2. Transfers to private	6.75	6.10	5.45	3.59	2.67	1.24	0.77	0.64	0.55	0.46	0.55	0.46	4.91	0.73
3. Investments	1.00	1.43	1.51	1.49	1.88	0.90	0.83	0.53	0.49	0.44	0.49	0.44	1.46	0.64
a. Agriculture	1.26	1.87	1.51	1.20	1.24	1.29	0.66	0.36	0.80	0.69	0.80	0.69	1.40	0.76
b. Industry and mining	0.87	1.20	1.80	1.81	3.83	0.87	1.04	0.51	0.25	0.21	0.25	0.21	1.90	0.58
c. Electric power	0.99	1.45	1.61	2.10	1.63	0.85	0.86	0.49	0.49	0.41	0.49	0.41	1.56	0.62
d. Transportation and tourism	0.91	1.28	1.19	1.17	1.83	0.98	0.89	0.58	0.63	0.63	0.63	0.63	1.28	0.75
e. Education	1.02	1.41	1.60	1.41	1.85	0.79	0.72	0.52	0.43	0.35	0.43	0.35	1.46	0.56
f. Health	1.07	1.48	1.73	1.43	1.38	0.75	0.66	0.46	0.28	0.30	0.28	0.30	1.42	0.49
g. Housing and water supply	1.50	1.98	1.54	1.28	1.67	0.50	0.67	0.58	0.68	0.56	0.68	0.56	1.60	0.60
h. General public services	0.88	1.59	1.65	1.47	1.36	0.96	0.86	0.59	0.31	0.27	0.31	0.27	1.39	0.60
i. Other expenditure programs	1.05	1.35	1.45	1.55	1.61	0.91	0.87	0.60	0.48	0.44	0.48	0.44	1.40	0.66
<b>C. Total current expenditures (net of interest on debt)</b>	1.18	1.32	1.67	1.48	1.49	0.93	0.96	0.76	0.70	0.58	0.70	0.58	1.43	0.79
<b>D. Total capital expenditures (net of debt amortization)</b>	1.15	1.51	1.59	1.54	1.90	0.91	0.82	0.53	0.49	0.44	0.49	0.44	1.54	0.64

Source: Thorbecke (1991, forthcoming) Based on Table 2.5

rates and a substantial personal deduction. A value added tax (VAT) replaced an old sales tax in 1985 and, subsequently, a number of additional taxes were imposed. Overall, the tax reforms are progressive and have been effective in raising the share of non-oil tax revenues in total revenues significantly.

An important feature of Indonesian public finance which is scrutinized in some detail in the next section is that the government is constitutionally obligated to maintain the equivalent of a balanced budget. This means that any excess of government expenditures over and above domestic revenues has to be financed from abroad and almost totally from project aid. The cumulative flow of additional (essentially concessional) aid combined with the depreciation of the dollar vis-a-vis the Japanese yen (given that a significant part of the Indonesian foreign debt was denominated in yen) contributed to make the Indonesian foreign debt soar from roughly US\$21 billion in 1983 to US\$41 billion in 1987.

Throughout the adjustment period the government's monetary policy has been conservative and generally based on maintaining low rates of inflation. In 1983 a major reform of the banking system was undertaken to require banks to follow market principles in attracting deposits and allocating credit. Limits on both deposit rates and lending rates were removed; sectoral credit ceilings were lifted, and subsidized liquidity credits were abandoned. A number of financial measures were adopted to encourage the development of a capital market and strengthening the financial sector by increasing competition.

With regard to trade and other regulatory reforms, Indonesia adopted a series of measures that have had the effect of significantly liberalizing trade. Tariffs were reduced across the board and the number of tariff categories was significantly cut. The whole import licensing system was

revamped and import restrictions were lifted from a wide range of products. Other major regulatory reforms affected the treatment of investment. Prior to 1984, all major investments required government approval. Throughout the adjustment period Indonesia enacted a continuous stream of measures relaxing restrictions on investments and making the environment for investment more attractive.<sup>24</sup>

The impact of adjustment policies on performance can be judged from the standpoint of 1) economic growth, the structure of production and efficiency; 2) external equilibrium (particularly the balance of payments); 3) fiscal and monetary equilibrium; and, 4) income distribution and poverty alleviation.

As was to be expected, the adjustment package occurred simultaneously with a pronounced deceleration of economic growth. The rate of growth of GDP fell by half from 7.2% per annum in the pre-adjustment period (1970-1982) to 3.6% per annum during the adjustment period (1982-1987). On the whole, the sectoral composition and structure of production remained extremely stable during the adjustment period. In particular, agriculture's share of GDP remained constant (at just below one-fourth) which suggests that in addition to a deceleration of aggregate growth, structural adjustment appeared to have slowed down considerably the process of structural intersectoral transformation which was occurring before the crisis. The same structural stability can be observed with regard to the sectoral pattern of employment. The most noteworthy change appeared in the relative rise in the employment share of the trade sector from 13 to 15% of the labor force, reflecting increasing labor absorption into informal activities which is a characteristic feature of the stabilization

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<sup>24</sup>The results of this deregulation process have been encouraging. "Approved domestic investment" which amounted to Rp. 3643 billion in 1982/84 (three-year average) jumped to almost Rp. 15000 billion in 1988. Likewise, "approved foreign investment" rose from 1795 million US\$ to 4435 million US\$ over the same period. (See World Bank, Indonesia's Strategy for Growth and Structural Change, May 3, 1989, Statistical Tables 10.3 and 10.1.)

program. There is some evidence which is presented in the next section that the widespread deregulatory measures initiated by the government have had favorable effects on economic efficiency. Both the rate of return on investment and total factor productivity appear to have gone up significantly during the adjustment period.

If external equilibrium is defined as a current account deficit just compensated by a net capital inflow which can be sustained, and is consistent with the Indonesia's debt servicing capacity, then it can be argued that the country is approaching this objective. The balance of payments equilibrium was restored through a combination of reduced absorption (compressing aggregate demand through lower growth) and expenditure switching policies. The main measures which appear to have contributed to the restoration of external equilibrium are the rephasing of large capital projects which had the effect of reducing imports of capital goods; changing budgetary allocation away from relatively high import-intensive sectors to less import-dependent sectors; and, the two relatively large devaluations which by raising the prices of tradeables relative to domestic goods, led to a shift away from imports towards domestic import substitutes and encouraged exports and, particularly, manufactured exports. A major achievement on the export side which is highlighted in the next section was the successful changing commodity composition away from non-renewable resources exports which had the effect of reducing significantly Indonesia's vulnerability to external shocks. Clearly, in contrast with most other developing countries, the adjustment response in Indonesia was greatly facilitated by its continued access to concessional systems from a variety of sources.

In the Indonesian context, fiscal equilibrium constitutes, in some sense, the mirror image of external (balance of payments) equilibrium. Given its constitutional mandate to maintain a balanced

budget, the government could not borrow from the Central Bank to finance the deficit. Any excess of government capital expenditures over and above government savings (i.e. total domestic revenues minus total current expenditures) must be financed, essentially, through project aid or a drawdown of foreign exchange reserves. The trick is to adjust the level and pattern of government expenditures so that it a) equals total domestic revenues plus what can safely be borrowed from abroad without straining the future debt repayment capacity, on the one hand; and b) is consistent with external equilibrium, on the other hand. Financial equilibrium was restored through an increasing share of non-oil revenues following the tax reform combined with the previously mentioned budget retrenchment effort which affected particularly capital expenditures.

Monetary equilibrium entails, first, achieving rates of interest which tend to equate the supply of, and demand for loanable funds (or, in other words, the supply of savings to the demand for investment funds); and, secondly, the maintenance of a relatively stable overall price level. In both of these areas Indonesia has been successful. Since deregulation of the banking system in 1983, interest rates have been market-determined. Whereas in the pre-adjustment phase, real interest rates were either very low or negative, real deposit rates varied between 7.5% and 9.8% over the period 1984-88, while real lending rates fluctuated between 11 and 13.9% throughout the same period. The high rates were necessary to prevent capital flight and to expand banks' deposit base.

To reduce inflation, the monetary authorities curtailed the expansion of reserve money but, more importantly, encouraged households to increase their holdings of money and, particularly, quasi money (time and savings deposits) by deregulating deposit rates. This phenomenon contributed to a large increase in the financial deepening of the economy. The inflation rate has come down markedly during the adjustment phase to approximately 7.5% per annum.

The most remarkable and surprising achievement in the Indonesian context, is the apparent reduction in the overall incidence of poverty and undernutrition during the adjustment phase. A case is made in the next section that some of the trends relating to the changing composition of employment and the interrelationship among employment, endowment (particularly of land) and income which were already under way before the crisis were, in fact, reinforced and accelerated by specific measures undertaken as part of the adjustment program. The best and most comprehensive evidence available regarding the changing poverty and nutritional picture during the adjustment period is contained in two excellent recent studies based on a comparison of the SUSENAS tapes on household consumption for 50,000 randomly sampled households in 1984 and 1987.<sup>25</sup>

Three different poverty measures--the headcount ratio, the poverty gap and a distributionally sensitive measure (the Foster-Greer-Thorbecke measure)--were used to estimate the overall incidence of poverty in 1984 and 1987 and to decompose the changes in poverty between these two years. For all three measures, the incidence of poverty was found to be significantly lower in both urban and rural areas in 1987 as compared to 1984. For example, it was found that the proportion of the population below the lowest selected poverty line fell from 1 in 3 in 1984 to slightly over 1 in 5 by 1987. An even more robust test of whether overall poverty declined is the, so-called, first-order dominance test which states that poverty will have unambiguously fallen between two dates if the cumulative distribution of income for the latter date lies nowhere above that for the former date, over the entire interval up to the maximum allowable poverty line. Ravallion and Huppi (1989) give the cumulative distribution of consumption (per person) for the two dates derived from the SUSENAS

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<sup>25</sup>See M. Ravallion and M. Huppi (1989), "Poverty and Undernutrition in Indonesia during the 1980's", World Bank, mimeo and M. Huppi and M. Ravallion (1990), "Indonesia's Sectoral Structure of Poverty in the 1980's", World Bank, mimeo.

surveys and show that the 1984 distribution lies entirely above the 1987 distribution.<sup>26</sup>

An analysis of the evolution of government current and capital expenditures on two key social sectors affecting poor households, mainly, education and health, suggest that during the first years of the adjustment period, the government shielded these two social sectors which must have contributed to the above described process of poverty alleviation at least until 1987. On the other hand, the relatively large retrenchment--particularly in capital expenditures (e.g. construction of schools, hospitals, clinics and dispensaries) after 1985/86--could well have a possible lagged negative social impact which might only be felt in the present decade. Even though Indonesia appears to have been quite successful in protecting the poor during the adjustment phase up to 1987, it is too early to assess in definitive sense the impact of adjustment policies beyond that year. This is a qualification which should be kept in mind.

#### **4. Confronting Indonesia's Adjustment Episode with SSA Lessons from Other Countries**

The adjustment experience which Indonesia underwent appears, in retrospect, to have been very successful. This raises the question of what were the major factors that contributed to this success. What were the initial conditions which facilitated the adjustment process and the continuation of the trend towards growth with equity? More specifically, which set of institutions and combinations of policies and reforms contributed to the successful macroeconomic performance?

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<sup>26</sup>The same finding applies to the distribution of income per person and almost to the distribution of daily calorie intake per person. On the basis of data generated by the Indonesian Central Bureau of Statistics, and a different poverty line, Iwan Azis (1990) argues in a critical evaluation of the adjustment program that there was some absolute increase of people living below the poverty line in the urban areas from 9.3 million in 1984 to 9.7 million in 1987. However, "the trend has reduced the gap between the urban and rural poverty figures because during the same period the rural poor declined quite considerably in size from 25.7 million to 20.3 million". (p. 249)

Conversely, what were some of the inimical initial conditions faced by the Indonesian economy at the outset of the crisis and how, and to what extent, were these obstacles overcome? Was the adjustment package the most appropriate one under the prevailing circumstances or could it have been improved upon? These are the main questions which are addressed in this section.

The approach which is taken is to confront the Indonesia episode with lessons learned and propositions developed from the critical evaluation of the SSA process undertaken in section 2. The Indonesian experience is analyzed under the same headings as in section 2, i.e. 4.1 the political economy of SSA; 4.2 outward orientation, state intervention, trade liberalization and export promotion; and 4.3 comparison of the actual Indonesian SSA package with some counterfactual policy scenarios.

#### **4.1 The Political Economy of SSA in Indonesia**

A key characteristic of the Indonesian regime in power until now has been political stability. The state is in the hands of a one party system which initially relied extensively on the military but, increasingly, derives much of its support from various civilian groups. State institutions are very highly centralized and the government is technocratic.<sup>27</sup>

The underlying economic philosophy is expressed in the Pancasila economic system which, in its original form, was meant to protect the people from the vagaries of the free market forces through a type of paternalistic welfare state (Myint, 1984). Initially, this system encouraged creation of strong cooperatives, a major role for state enterprises and trading corporations, protection of the

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<sup>27</sup>At one time, four Cabinet Ministers possessed PhDs in economics from the University of California at Berkeley. A common expression around Jakarta in referring to the technocrats is "the Berkeley Mafia" which is used in a non-pejorative sense.

domestic economy and a pervasive degree of government regulation (Booth and McCawley, 1981).

The government relies on a system of indicative planning based on a series of Five-Year Plans (Repelitas). As recently as Repelita IV (1984/85-1988/89) public investment amounted to 54 percent of total planned investment.<sup>28</sup> As section 3 has indicated, the adjustment period was marked by a significant retrenchment in the degree of government intervention in the economy. A number of specific examples are brought out subsequently.

Another key initial condition which is crucial to an understanding of the continued process of poverty alleviation which occurred before as well as during the adjustment period is the strong state commitment to equity which was the prime objective of Repelita III.<sup>29</sup> In contrast with many other countries' development plans which pay lip service to greater equity in the Indonesia context this objective appears sincere.

In fact, the underlying income and land distributions are relatively even. A crucial trend which started in the pre-adjustment phase and which dampened significantly any potentially negative impact of the oil crisis on poverty and income distribution was the strong support the government provided to paddy production through a set of complementary measures such as large public investment in agricultural infrastructure, fertilizer subsidies and price policies. This resulted in a "rice boom" which converted Indonesia from the largest rice importing country in the world to virtual self-sufficiency by the mid-eighties (paddy production increased at an annual rate of 7.1 percent between

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<sup>28</sup>See Poot, Kuyvenhoven and Jansen (1990) for an interesting discussion of Indonesia's approach to development.

<sup>29</sup>This philosophy was clearly stated by President Suharto in 1978 "The creation of such conditions and atmosphere as will give increasing surety of achieving social justice for the whole of the people through making development and its products evermore equitable". Eight paths to equity were spelled out in the Plan. 1) equitable fulfillment of the basic necessities of the mass of the people, especially food, clothing and housing; 2) equitable opportunities to obtain education and health services; 3) equitable distribution of income; 4) equitable job opportunities; 5) equitable business opportunities; 6) equitable opportunities to participate in development, especially for the youth and for women; 7) equitable distribution of development over the whole of Indonesia; and, 8) equitable opportunities to obtain justice.

1978/80 and 1983/84). This structural transformation contributed significantly to the alleviation of poverty, particularly in the rural areas, not only in the pre-adjustment phase but also during the adjustment phase.<sup>30</sup>

Consistent with reliance on a technocratic system, many key institutions have been designed and are functioning in a way to reduce discretionary actions and encourage (if not guarantee) a high degree of monetary and fiscal discipline. The prime example is a constitutional mandate to maintain a balanced budget. Until recently the government could not borrow from the Central Bank to finance the deficit. Any excess of government capital expenditures over and above government savings (i.e. total domestic revenues minus total current expenditures) must be financed, essentially, through project aid or a drawdown of foreign exchange reserves. Only towards the end of the adjustment episode (1987) did Indonesia receive a trade liberalization loan in the form of program assistance. Prior to that time the government relied exclusively on project aid.

The superior international creditworthiness enjoyed by Indonesia in international capital markets and among international lending institutions made it possible to tap on a large flow of concessional project aid. Incidentally, the fact that a large and increasing part of public investment during the adjustment phase consisted of projects financed by bilateral and multilateral donors meant that these projects had to undergo feasibility studies and meet the benefit/costs criteria of the donor agencies. This fact combined with a much greater emphasis on smaller, more labor-intensive and regionally decentralized projects after the crisis may go a long way in accounting for the observed increase in the rate of return on investment from 13 percent per annum in 1982-85 to almost 22 percent in 1986-88 (World Bank, 1988, pp. 18-19).

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<sup>30</sup>Recall that the proportion of the population below the poverty line fell from one in three in 1984 to slightly over one in five in 1987 as discussed in section 3.

The budgetary and fiscal system is highly centralized in Indonesia both in terms of revenue collection and expenditure allocation. Central transfers still account for three-fourths of total revenues of local governments. This centralization of spending authority, with local governments being greatly constrained, reduced the potential for mutually inconsistent and incompatible decisions to be taken. On the other hand, this "top down" approach has discouraged the initiation of grass root local and regional development schemes since local governments and agencies only have a limited role in the planning and implementation of public expenditure programs. The successful budgetary retrenchment program and the imposition of new taxes to substitute for dwindling state oil royalties (described in section 3) were greatly facilitated by the existence of a strong and centralized regime. The budgetary retrenchment program is analyzed in detail in section 4.3; here, in particular, with the help of a computable general equilibrium model the impact on growth and income distribution of the pattern of public current and capital expenditures actually adopted during the adjustment period, is compared with the impact which might have resulted under a number of alternative counterfactual expenditures and other policy scenarios.

A final feature of Indonesia's policy response to the oil crisis, which appears to properly belong to the domain of political economy, is that it was undertaken voluntarily in a timely and balanced fashion. Through basically conservative fiscal and monetary policies, both during periods of expansion and recession, Indonesia has avoided the magnitude of external and internal imbalance that could have undermined the confidence of its creditors and forced it to obtain stabilization and structural adjustment loans under conditions initiated by the IMF and the World Bank. Instead, Indonesia has, on its own, adopted a sequence of trade and market liberalizing policies and contractionary budget measures that are very close to what are typically required of countries subject

to IMF conditionality.

In summary confronting the Indonesian political economy context, discussed above with lessons and propositions derived from the SSA experience of the developing world, in general, the key features which appeared to be correlated with successful adjustment performance in Indonesia appear to be the existence of 1) a stable regime committed to a development process based on growth with equity; 2) a strong set of centralized institutions with rules of the game insuring a high degree of built in monetary and fiscal discipline; 3) a society that experienced sustained growth and a significant reduction in poverty over an extended period thereby adding credibility to the actions of the government; and, 4) an adjustment strategy undertaken **voluntarily** and therefore not subject to (unpalatable) conditionality requirements imposed from outside.

#### **4.2 From Inward to Outward Orientation**

In the early eighties two key features of the Indonesian economy made it potentially vulnerable to shocks originating abroad. First, Indonesia became significantly more dependent on foreign trade between 1970 and 1982; the share of imports to GDP (current prices) rose from 15.8 percent to 26.3 percent and that of exports increased from 12.8 percent to 22.4 percent (largely because of the upward valuation of oil). Secondly, at the outset of the crisis, Indonesia suffered from an extreme reliance on non-renewable exports (oil and oil products, timber products<sup>31</sup> and metals and minerals) which constituted roughly three-fourths of the value of total exports.

Oil exports provided the major engine of growth for the entire economy in the pre-adjustment

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<sup>31</sup>The export of logs was subsequently banned.

phase. Earnings from crude oil and petroleum products accounted for two-thirds of all export earnings, one-fourth of GNP and seventy percent of total government domestic revenues in 1982. The crude oil price booms of 1973, and more particularly 1979, fueled a major expansion of the economy which lasted until the crisis. In a sense, the enormous contribution which oil exports made to the balance of payments and government revenues, up to the crisis, largely relaxed any pressure to move from an import substitution industrialization strategy to one based on export promotion. Revenues from oil allowed and subsidized the continuation of an inefficient inward looking manufacturing sector.

At the outset of the adjustment episode, both international trade and capital flows were closely regulated. Imports were subjected to a combination of tariffs and quantitative restrictions relying on an elaborate licensing system. Foreign investment had to be approved. The dramatic drop in the price of oil and oil revenues, particularly after 1985-86, provided the necessary shock and incentives to the system to implement the necessary measures to shift to an export oriented strategy.<sup>32</sup> Interestingly, Indonesia contracted a milder form of the "Dutch disease" than other oil producers because a significant part of the oil windfall profits during the boom period was redirected towards and reinvested in agriculture. This favored the non-boom agricultural export sector, mainly through the import substitution of rice.

The trade liberalization process was a gradual one. Trade deregulation began seriously in 1985 when nominal tariffs were reduced across the board. This was followed by a series of measures such as a reduction in the number of commodities subject to licensing restrictions, the

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<sup>32</sup>In a chronology of the adjustment measures Azis (1989) distinguishes between the period 1982-86 (initial oil price decline) and 1986-89 (rapid oil price decline). He characterizes the former period as still one of continued import substitution with the beginning of some export promotion. A clear commitment to an export oriented approach occurred only from 1986 on according to him.

removal of regulatory restrictions applying to exporters; reducing the role of local content program, lowering freight costs and improving customs procedures and reducing corruption by delegating the authority for many trade transactions to a private Swiss firm. Furthermore, the financial reform which liberalized credit removed the government's power to direct subsidized credit to priority sectors and firms. This factor combined with the removal of many restrictions on foreign investment led to a large flow of new investment primarily directed to export-oriented sectors. (Azis, 1990)

Export performance proved to be responsive to the two devaluations and to the whole set of trade and capital liberalization measures. Non-oil and gas exports almost tripled in value between 1982 and 1988 from about US\$4 billion to \$11.6 billion. A significant diversification process began to emerge especially in manufacturing exports (Azis, 1990). In the light of the generally highly inelastic export supply response characterizing the majority of adjusting countries (see 2.3 for evidence) what are some of the key factors which contributed to the apparent elastic supply response in Indonesia? Besides the political stability of the regime and confidence in the degree of commitment of the government to pursue the trade liberalization process and an outward oriented strategy, the following factors might be noted as having encouraged the export trend: 1) low wage rates for low-skilled labor and only partial indexation of wage rates for all categories of workers<sup>33</sup>; 2) the existence of a large domestic market which provides a basis for reaching economies of scale; 3) rising protectionism in markets of developed countries which encourages potential foreign investors to find new and stable third-country bases from which to penetrate these markets (Poot, Kuyvenhoven, and Jansen, 1990).

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<sup>33</sup>In some econometric work undertaken by the author in connection with the building of a CGE model discussed in 4.3, it was empirically determined that the sectoral wage rates for different labor skills in Indonesia are strongly influenced by the inflation rate, the price of the sectoral output, and the growth rate of labor productivity, respectively. The real wage rate is more sticky in the short run than in the medium to long run. See Thorbecke (1990, ch. 4).

Another element which could have contributed to the large supply responsiveness of manufactured exports is the observed low rates of capital utilization in many industrial sectors.<sup>34</sup> On the other hand, capacity utilization rates in Indonesia--defined as the actual rate of annual capital utilization compared with the entrepreneurial expectations at the beginning of the year--were quite high in 1980. "Hence, the fairly modest rate of capital utilization in Indonesian manufacturing is primarily related to the fixing of modest targets for plant utilization by the entrepreneurs concerned." (Poot, Kuyvenhoven, Jansen 1990, p. 264). One can speculate that under the new set of incentives following the two devaluations and the trade and financial liberalization measures, entrepreneurs may have reacted by raising their desired rates of capital utilization and moved towards the introduction of multiple shifts and other such measures. In addition, the new flow of foreign investment added to the level of capacity and brought along with it a conveyor belt of new and more efficient technologies and international marketing connections that provided a smooth environment for exports.

In short, the oil crisis which hit Indonesia provided the shock therapy to abandon its import substitution industrialization strategy and inward orientation and adopt an outward oriented strategy. In a certain sense, the oil crisis might have been a blessing in disguise. The combination of gradual trade and capital liberalization measures appears to have been effective in encouraging a significant growth and diversification of exports. As in many other countries, there is evidence that the shift to export promotion is having favorable employment effects (Azis, 1989).

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<sup>34</sup>Survey results suggest that the majority of medium and large scale establishments operated the plant at most six days a week in one shift. (Poot, Kuyvenhoven, Jansen, 1990)

### 4.3 Comparison of Actual Indonesian SSA Package with Counterfactual Policy Scenarios

It is revealing to contrast the government's behavior during the expansionary period prior to 1983, during which oil prices and revenues soared, with the contracting adjustment phase when oil prices and revenues were falling sharply. Before the crisis, during Repelita III, the government reacted to the oil boom, presumably on the expectation that the very favorable and rising international terms of trade would hold in the future, by spending significantly more than had been planned at the outset of the Five-Year Plan, i.e. in 1979. The top row of Table 1 shows that the ratio of actual to planned expenditures rose almost monotonically from 1.16 in 1979/80 (the first year of the Plan) to 1.72 in 1983/84 (the last year of the Plan). In fact, in that same year total actual capital expenditures were almost double (i.e. 94% above) what had been programmed, with a large part of this total financed through project aid from abroad.

The reverse adaptive process is visible after the crisis hit. During Repelita IV, the proportion of actual to planned total government expenditure fell monotonically from 90% in 1984/85 to 69% in 1988/89. In particular, what should be highlighted is that the proportion of total actual to total planned capital expenditures (net of principal amortization on the foreign debt) declined very sharply from 91% to 44% during the Plan. In comparison, the corresponding ratio for total current expenditures (net of interest payment on the debt) fell much less sharply from .93 to .58 (see bottom 2 rows of Table 1).<sup>35</sup>

This budget retrenchment program was highly selective, as discussed in section 2, affecting

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<sup>35</sup>The stream of principal and interest payments was largely influenced by decisions relating to debt moratorium, grace periods and extending the maturity of existing loans of creditors countries and institutions under the consultative group. These decisions affect the time path of debt amortization and interest payment in a somewhat unpredictable and stochastic way which was the reason to net them out of government capital and current expenditures.

capital expenditures on investment projects in the various sectors much more sharply than current expenditures on education and health and wages and salaries of civil servants which were cut relatively much less (see Table 1).

A relevant question is whether the specific selective budget retrenchment program which was in fact carried out, combined with the other stabilization and adjustment measures undertaken by the Indonesian government between 1983 and 1988, constituted the most appropriate SSA package under the prevailing circumstances and initial conditions. An answer to this question requires simulating the effects of hypothetical counterfactual policy packages and comparing them to the adjustment package actually adopted by the government. In order to undertake a quantitative evaluation of alternative adjustment policies, a computable general equilibrium (CGE) model of the Indonesian economy was built.<sup>36</sup> The novelty of this CGE model is that it incorporates and integrates a real and financial sector, and was purposely designed to explore the impact of adjustment on growth, income distribution, as well as on many other macroeconomic and sectoral variables. Both the real and financial specifications contain some neo-classical features which are modified and complemented with a number of structural features to conform more closely to the underlying institutional structure and behavior of actors prevailing in Indonesia at the outset of, and during the adjustment period.

The real side model consists of eight blocks of equations which determine endogenously prices; production, exports and imports; the labor market; private consumption; incomes; public finance; savings; and the real market equilibrium conditions. In turn, in the financial side model, the

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<sup>36</sup>The complete model is presented and discussed in Thorbecke (1991, forthcoming). See in particular, Chapter 4 and Table I.5. Space limitation precludes reproducing the model in this paper. Instead, its main features and characteristics are reviewed briefly.

asset holdings (portfolios) and monetary balance sheets of the various institutions (i.e. different groups of households, firms, commercial banks, Central Bank, government and rest of the world) are determined endogenously and the final market equilibrium is derived.

The first step in building a general equilibrium model integrating real and financial transactions is to capture the initial conditions prevailing at the outset of the adjustment period. This requires the specification of a financial social accounting matrix (SAM) in addition to a real SAM. The real SAM transaction matrix which was adopted as a base for the model is presented in Table 2 to show the degree of disaggregation and the classification which was used in the model.<sup>37</sup> The financial SAM (not shown here) contains the same classification of households and production activities as in the real SAM. In addition, five other institutions are identified (i.e. firms (companies), commercial banks, the Central Bank, government, and the rest of the world; and six types of assets, i.e. currency, demand deposits, time deposits, foreign deposits, equity, and foreign bonds.

The model, as designed, can be run in two distinct ways to simulate, respectively, short run and medium to long run effects. In the short run the sectoral capital stocks are assumed fixed and investment during the period only affects the economy from the demand side by generating a demand for primary and intermediate inputs during the construction phase but not by adding to capacity. Furthermore, public investment is not considered to affect sectoral productivity.<sup>38</sup>

Although, the length of the short run period is left somewhat undefined, it can be taken to reflect

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<sup>37</sup>It can be seen from Table 2 that the classification underlying the real SAM includes a) four labor categories, five kinds of capital; b) eight socioeconomic household groups, one category of companies; c) fourteen different production activities; d) four types of government current expenditures categories and eight types of government capital expenditures by sector of destination; and, finally, e) total government current and total government capital accounts, private capital, rest of the world, trade and transport markets, indirect taxes, and subsidies.

<sup>38</sup>The more limited output effects in the short run dampen, among other, labor demand and the resulting income distribution. The behavioral response of agents is also considered more inelastic in the short than in the long run.



Table 2. Transaction Matrix of SAM in 1980 - 51 sectors (in Billion of Rupiah)  
(cont.)

	Gross Value Added							GovtCur	GovtCap	PrivCap	FCM	TOTAL
	G1	G2	G3	G4	G5	G6	G7					
1 Agric	0	0	0	0	0	0	0	0	0	0	0	5474.88
2 Manual	0	0	0	0	0	0	0	0	0	0	0	4448.80
3 Cler	0	0	0	0	0	0	0	0	0	0	0	6078.24
4 Educ	0	0	0	0	0	0	0	0	0	0	0	2531.82
5 Housing	0	0	0	0	0	0	0	0	0	0	0	943.95
6 RurCap	0	0	0	0	0	0	0	0	0	0	0	7344.19
7 UrbCap	0	0	0	0	0	0	0	0	0	0	0	5365.81
8 PrivCap	0	0	0	0	0	0	0	0	0	0	0	6078.84
9 GovtCap	0	0	0	0	0	0	0	0	0	0	0	8920.12
10 AgEmplye	0	0	0	0	0	0	0	0	0	0	8.87	1575.88
11 SmpFarm	0	0	0	0	0	0	0	0	0	0	27.86	4182.46
12 MedFarm	0	0	0	0	0	0	0	0	0	0	24.35	2430.05
13 LgeFarm	0	0	0	0	0	0	0	0	0	0	24.86	4484.89
14 RurLow	0	0	0	0	0	0	0	0	0	0	19.04	4421.31
15 RurHigh	0	0	0	0	0	0	0	0	0	0	11.04	2818.71
16 UrbLow	0	0	0	0	0	0	0	0	0	0	20.31	6034.59
17 UrbHigh	0	0	0	0	0	0	0	0	0	0	30.12	5585.02
18 GovtCur	0	0	0	0	0	0	0	0	0	0	74.08	17890.28
19 FoodCrops	0	0	0	0	0	0	0	0	118.83	38	8925.74	
20 OtherAg	0	0	0	0	0	0	0	0	213.08	2785.22	11434.89	
21 Mining	0	0	0	0	0	0	0	0	903.3	11333	15049.82	
22 FoodProc	0	0	0	0	0	0	0	0	28.2	119.17	8158.83	
23 Textiles	0	0	0	0	0	0	0	0	30.08	89.88	2140.81	
24 Manufact	39.81	0	0	155.17	0	0	60.4	0	3500.7	1324.34	18564.36	
25 Utilities	0	0	0	0	0	0	0	0	0	0	0	532.82
26 PrivConst	224.45	0	0	487.58	68.77	302.93	182.88	0	3085.88	0	4848.88	
27 PubAg	0	0	0	0	0	0	0	0	0	0	0	555.25
28 PubWorks	153.98	361.85	627.58	0	84.07	16.72	734.12	0	0	0	0	2128.43
29 IntrdTrn	0	0	0	0	0	0	0	0	0	0	0	11088.88
30 FinBusServ	0	0	0	0	0	0	0	0	0	0	30.75	3547.38
31 InIServ	0	0	0	0	0	0	0	0	0	0	114.14	4549.85
32 EduHEALTH	0	0	0	0	0	0	0	0	0	0	0.07	1779.91
33 IntTrn	0	0	0	0	0	0	0	0	0	0	0	8608.09
34 IndFases	0	0	0	0	0	0	0	0	0	0	0	1794.40
35 Substns	0	0	0	0	0	0	0	1392.16	0	0	0	917.47
36 GCEstb	0	0	0	0	0	0	0	817.47	0	0	0	1392.16
37 GCVageSer	0	0	0	0	0	0	0	2544.88	0	0	0	2344.88
38 GCVageSv	0	0	0	0	0	0	0	1762.11	0	0	0	1762.11
39 GCVTran	0	0	0	0	0	0	0	81.13	0	0	0	81.13
40 GIagri	0	0	0	0	0	0	0	0	515.48	0	0	515.48
41 GIedline	0	0	0	0	0	0	0	0	418.02	0	0	418.02
42 GEnergy	0	0	0	0	0	0	0	0	361.85	0	0	361.85
43 GItranTur	0	0	0	0	0	0	0	0	827.58	0	0	827.58
44 GHEstb	0	0	0	0	0	0	0	0	142.76	0	0	842.76
45 GHEstWai	0	0	0	0	0	0	0	0	153.84	0	0	153.84
46 GGenSrv	0	0	0	0	0	0	0	0	319.85	0	0	319.85
47 GSubst	0	0	0	0	0	0	0	0	977.4	0	0	977.40
48 GovtCur	0	0	0	0	0	0	0	3388.48	0	0	22.32	10334.88
49 GovtCap	0	0	0	0	0	0	0	0	0	1401.35	0	4787.83
50 PrivCap	0	0	0	0	0	0	0	0	488.38	0	0	12527.81
51 FCM	0	0	0	0	0	0	0	450.82	302.88	4649.87	0	17827.48
TOTAL	418.02	361.85	627.58	842.76	153.84	319.85	977.40	10334.88	4787.83	12527.81	17827.48	

Source: Thorbecke (1991, forthcoming), Table 3.4

changes occurring within a one to two-year timespan.

In contrast, when the model is run to simulate medium to long run effects, the timespan which it is supposed to track is the full adjustment period itself (i.e. 1983-88). Sectoral capital stocks are augmented by private and public investment flows during the whole period and cumulative government investment affects productivity. At least in one key sector (agriculture) econometric evidence suggests that private investment was positively correlated with public investment. This crowding in phenomenon was not observed in other sectors. Exogenous variables are updated and agents respond somewhat differently in the long run.

#### Policy Simulation

The following alternative policy scenarios were chosen for simulation purposes:

##### Experiment 0, Base Run:

All exogenous variables including exogenous policy variables under the control of the government are taken as observed during the adjustment period (1983-1988). The base run is the reference run reflecting the adjustment package actually implemented by the government against which all the counterfactual policy scenarios are confronted.

##### Experiment 1, Equiproportional Budget Retrenchment:

It is assumed that the government reduced its expenditures on each and every category (except for interest payment on the foreign debt and subsidies) by 20% compared to the base run. All other exogenous variables take their actual (observed) values during 1983-88 as in the base run.

##### Experiment 2, Increased Government Investment and Reduced Government Current Expenditures:

While total government expenditures are assumed equal to their actual level during the

adjustment period as in the base run, the composition of expenditures is changed. Government current expenditures are cut by 20% and government investment is increased by 27% (thus maintaining total public expenditures as in the base run).<sup>39</sup>

Experiment 3, Reduction in Government Investment and Increase in Government Current Expenditures:

Total government expenditures are kept equal to their actual (observed) level as in the base run and in Experiment 2. A sixteen percent increase in government current expenditures was postulated matched by a compensating twenty percent cut in government investment. All other exogenous variables remain as in the base run.

Experiment 4, Accelerated Devaluation:

This counterfactual scenario assumes that the foreign exchange rate would have been depreciated by 20% more than actually occurred during the adjustment period. All other exogenous variables remain as in the base run.

Experiment 5, Monetary Contraction and Expansion:

Even though the annual rate of growth of money supply during the adjustment period was modest (8.4%), Experiment 5-1 simulates further monetary contraction with money supply decreasing by 15% as compared to the base run. Alternatively, Experiment 5-2 simulates a monetary expansion where money supply increases by an additional 15% as compared to the base run. All other exogenous variables remain as in the base run.

The logic behind experiments 2 and 3 was to test the tradeoff over time between a pattern

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<sup>39</sup>Two variants of this experiment were run: Experiment 2-1 allocated public investment by sector proportionately to the base run allocation; while Experiment 2-2 raised the allocation of investment to agriculture by 50% and to other sectors by 23% (resulting in an overall rise in public investment of 27%). All other exogenous variables take the same values as in the base run.

of government expenditures emphasizing public investment projects vs. an alternative pattern favoring government current expenditure<sup>40</sup> (and, in particular, government consumption and a larger wage bill for civil servants). A larger share of total government expenditures allocated to public investment entails a lower stream of aggregate consumption in the short run in favor of larger streams of incomes and consumption in the long run. Alternatively, maintaining high levels of government current expenditures shelters household incomes in the short run but results in lower growth rates and a contraction of incomes and consumption in the long run.

The results of these policy experiments were summarized and consolidated in Tables 3 and 4. These tables show the impact in the short run and long run, respectively, of the five counterfactual policy scenarios (experiments 1-5) on key endogenous indicators, including the income distribution by socioeconomic groups. For each counterfactual scenario the results on key indicators is expressed as index numbers relative to the base run to facilitate comparisons among them in Panel 1. In addition, in Panel 2, the average annual values of some key variables over the adjustment period (1985-1988) are given.

The first comparison is between the base run and Experiment 1. Not surprisingly, a drastic budget retrenchment (by 20% compared to the base run) would have been highly deflationary and GDP growth would have come to a standstill (in the short run, GDP annual growth would have been 2.5% below the base run and in the long run 4.1% below it). Likewise, all socioeconomic groups would have been worse off income-wise than in the base run and more so in the long run than in the short run.<sup>40</sup>

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<sup>40</sup>The two urban groups and the two non-agricultural rural groups would have suffered relatively the most. The rate of inflation would have fallen by 2.9% in the short run and by 6.7% in the long run relative to the base run. Because of the large cut in government expenditures, the government would have reduced its net foreign borrowing by about half.

Table 3 Short run simulation results (index numbers; billion Rupiah, million \$)

	BASERUN	EXP1	EXP2-1	EXP2-2	EXP3	EXP4	EXP5-1	EXP5-2
		Publ Exps Cut	Gov Inv Up Gov Cons Cut	Gov Inv Up Gov Cons Cut Ag Inv Up	Gov Inv Cut Gov Cons Up	Accel Deval	Monetary Contraction	Monetary Expansion
GDPFC(REAL)	100.00	97.49	99.16	99.24	101.09	100.87	99.60	100.54
AGEMPLOYE(REAL)	100.00	99.04	99.47	100.04	100.58	97.66	100.95	98.79
SMFARM(REAL)	100.00	99.35	99.76	100.27	100.27	98.38	100.76	99.02
MEDFARM(REAL)	100.00	99.21	99.60	99.80	100.35	101.18	100.01	99.92
LARGEFARM(REAL)	100.00	99.11	99.54	99.62	100.39	102.17	99.70	100.29
RURALLOW(REAL)	100.00	95.80	99.38	99.19	101.04	97.88	99.21	100.66
RURALHIGH(REAL)	100.00	93.60	94.71	94.75	105.48	99.64	100.01	99.93
URBANLOW(REAL)	100.00	94.56	98.51	98.32	102.01	97.54	98.94	101.04
URBANHIGH(REAL)	100.00	93.30	95.85	95.87	104.56	99.38	99.13	101.09
GFBOR(\$)	4266.56	2478.79	4500.46	4529.62	4128.58	3858.25	4256.80	4255.89
GOVSAV(REAL)	6026.90	6952.09	7064.94	7075.68	5007.19	6284.52	5958.19	6125.70
FBOR(\$)	2155.44	3084.88	2153.68	2125.29	2132.48	1679.61	1022.05	3461.62
CUR. BOP(\$)	-6422.00	-5563.67	-6654.13	-6654.90	-6261.06	-5537.87	-5278.85	-7717.51
EXPORT(\$)	19235.00	19474.94	19129.71	19129.19	19323.60	19699.46	19326.02	18795.36
IMPORT(\$)	22037.00	21472.32	22144.32	22145.61	21977.69	21639.66	21348.50	22809.34
PRIV.INV(REAL)	9074.60	9454.94	9001.39	8994.17	9171.58	8671.92	7713.31	10491.02
GOVT.INV(REAL)	9905.20	8871.93	10949.95	10949.95	8871.93	9905.20	9905.20	9905.20
GOVT.FOR.DEBT(\$)	25920.56	24132.79	26154.46	26183.62	25782.58	25512.25	25910.80	25909.89
PIINDEX	100.00	95.85	100.99	100.98	99.30	112.99	95.46	105.69

Experiment 1 : 20% cut in total government expenditures  
 Experiment 2-1 : 20% cut in government current expenditures and 27% increase government investment  
 Experiment 2-2 : 20% cut in government current expenditures and 50% increase in agricultural government investment and 23% increase in other government investment  
 Experiment 3 : 20% cut in government investment and 16% increase government current expenditures  
 Experiment 4 : 20% devaluation of foreign exchange rate  
 Experiment 5-1 : 15% point decrease of money supply  
 Experiment 5-2 : 15% point increase of money supply  
 The exchange rate(Rupiah/\$) is set at 1029 in the base run.

Source: Thorbecke (1991, forthcoming), Table 4.6

Table 4 Long run simulation results (index numbers; billion Rupiah, million \$)

	BASERUN	EXP1	EXP2-1	EXP2-2	EXP3	EXP4	EXP5-1	EXP5-2
		Publ Exps Cut	Gov Inv Up Gov Cons Cut	Gov Inv Up Gov Cons Cut Ag Inv Up	Gov Inv Cut Gov Cons Up	Accel Deval	Monetary Contraction	Monetary Expansion
GDPFC(REAL)	100.00	95.89	100.94	101.08	98.82	100.19	98.88	101.29
AGEMPLOYE(REAL)	100.00	97.58	100.67	101.38	99.05	98.24	100.14	99.69
SMFARM(REAL)	100.00	98.03	100.77	101.38	98.95	98.82	100.05	99.82
MEDFARM(REAL)	100.00	98.50	99.96	100.05	99.77	100.94	99.68	100.30
LARGEFARM(REAL)	100.00	98.61	99.65	99.55	100.08	101.69	99.51	100.52
RURALLOW(REAL)	100.00	94.25	101.07	100.93	98.84	98.06	98.79	101.14
RURALHIGH(REAL)	100.00	92.29	96.25	96.26	103.58	99.26	99.24	100.78
URBANLOW(REAL)	100.00	92.72	100.69	100.59	99.23	97.51	98.40	101.64
URBANHIGH(REAL)	100.00	91.38	98.15	98.25	101.71	98.70	98.34	101.92
GFBOR(\$)	3892.51	2214.95	3908.45	3946.18	3987.15	3618.79	4000.47	3751.32
GOVSAV(REAL)	4009.70	4780.81	5208.14	5224.46	2794.54	4149.64	3859.52	4190.39
FBOR(\$)	-1161.82	-497.30	-916.93	-952.20	-1463.23	-1797.52	-2399.69	338.22
CUR. BOP(\$)	-2730.69	-1717.66	-2991.52	-2993.97	-2523.92	-1821.27	-1600.78	-4089.53
EXPORT(\$)	16071.37	16250.10	16179.49	16173.92	15907.58	16428.09	16330.79	15746.95
IMPORT(\$)	15551.92	14781.71	15892.32	15889.17	15210.65	15033.67	14750.31	16498.09
PRIV.INV(REAL)	9788.33	9849.38	10068.91	10049.37	9467.51	9142.62	8204.73	11578.47
GOVT.INV(REAL)	8053.10	7019.83	9097.85	9097.85	7019.83	8053.10	8053.10	8053.10
GOVT.FOR.DEBT(\$)	31385.28	25513.82	31441.07	31573.10	31716.53	30427.26	31763.12	30891.11
PINDEX	100.00	97.13	98.53	98.52	102.08	114.12	96.60	104.39

Experiment 1 : 20% cut in total government expenditures  
 Experiment 2-1 : 20% cut in government current expenditures and 27% increase government investment  
 Experiment 2-2 : 20% cut in government current expenditures and 50% increase in agricultural government investment and 23% increase in other government investment  
 Experiment 3 : 20% cut in government investment and 16% increase government current expenditures  
 Experiment 4 : 20% devaluation of foreign exchange rate  
 Experiment 5-1 : 15% point decrease of money supply  
 Experiment 5-2 : 15% point increase of money supply  
 The exchange rate(Rupiah/\$) is set at 1039 in the base run.

Source: Thorbecke (1991, forthcoming), Table 4.7

The next useful comparison is among experiments 2, 3 and the base run. Experiment 2 simulates a situation where the government emphasizes public investment relative to government current expenditures whereas experiment 3 simulates an even larger share of total government expenditures allocated to current expenditures than in the base run and, conversely, a significantly lower share going to public investment. Hence, a comparison of these two counterfactual scenarios with the base run reveals the short run vs. long run consequences during the adjustment period of sheltering public consumption and the wage bill of civil servants at the expense of a reduction in public investment and vice versa. In the short run, experiment 2 (emphasizing investment) results in a lower growth rate of GDP relative to the base run of respectively .84% and .76% in the two variants. (2-1 and 2-2). The incomes of the "rural high" and "urban high" groups are significantly reduced by between 5.3% and 4.2%, annually, depending on which variant is considered. Since both of these groups include the bulk of the civil servants, they are directly affected by the 20% cut in the wage bill. Other socioeconomic groups are only marginally touched. In contrast in the short run under Experiment 3 (emphasizing government current expenditures), the growth rate of GDP would have been about 1.1% higher than in the base run. All socioeconomic groups' incomes are higher than in the base run with the "rural high" and "urban high" households enjoying substantial improvement in their real incomes.

In the long run, a strategy of concentrating on public investment projects pays off in terms of higher GDP growth (.94% and 1.08% above the base run, respectively, in 2-1 and 2-2). There are relative gainers and relative losers among household categories.<sup>41</sup> Conversely, a pattern of

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<sup>41</sup>Agricultural employees, small and medium farmers benefit as do, to a lesser degree, the rural and urban poor (the first two groups above benefit, of course, most under variant 2-2 which concentrates on public investment in agriculture). On the other hand, the relative losers consist of the "rural high" and "urban high" groups and, to a very limited extent, the large farmers.

government expenditures emphasizing current expenditures at the expense of capital expenditures (Experiment 3) leads to a slowdown of GDP growth (1.18% p.a. below the base run), while contributing to inflation (1.71% p.a. above the base run) and entailing larger foreign borrowing. The only groups which are better off in this counterfactual exercise are the urban high and rural high (mainly through the wage bill received by the civil servants) and the large farmers.

Experiment 4 simulates an accelerated devaluation relative to the actual (observed) depreciation of the rupiah which is part and parcel of the base run adjustment package. As expected this scenario encourages exports and discourages imports. The strengthening of the balance of payments induces a fall in government foreign borrowing needs. At the same time, the rise in import prices induced by the accelerated devaluation is very inflationary. Interestingly, real GDP growth is marginally higher than in the base run in this experiment. The distributional consequences are mixed: large farmers and medium farmers (who produce much of the export crops) benefit from the increase in the prices of tradeables following the devaluation and all other household categories are unfavorably affected and particularly the non-agricultural rural and urban groups.

The final experiment reported in Tables 3 and 4 simulates a monetary contraction and a monetary expansion. Monetary contraction (Experiment 5-1) is very deflationary, the price level falls by about 4.5% p.a. in the short run and by 3.4% p.a. in the long run below that prevailing during the base run. GDP growth is practically not affected in the short run but is reduced by over 1% p.a. in the long run compared to the base run. The current account of the balance of payments (CUR BOP in Table 4) improves significantly mainly because of the slowdown in import demand. The distributional consequences are generally quite neutral.

A counterfactual policy of monetary expansion (Experiment 5-2) would have boosted slightly

real GDP growth in the short run (by 1.29% p.a.) and marginally in the long run (by .54% p.a.). Again its distributional impact appears quite neutral. The main disadvantages of this strategy are a) the inflation that it would generate; b) the dramatic worsening in the current account of the balance of payments compared with the base run; and c) the appearance of a net flow of private borrowing abroad instead of the traditional flow of net private lending abroad (see FBOR in Tables 3 & 4).

In comparing the outcomes of the various counterfactual scenarios with the adjustment package adopted by the government (the base run) the major conclusion which is reached is that the latter appears, not so surprisingly, most consistent with the multiple objectives of the government. In particular, it sheltered the incomes of the civil servants in both the short run and in the long run relative to each and every alternative counterfactual experiment simulated above except experiment 3 which called for an even greater level of government current expenditures than in the base run scenario. The problem with experiment 3 is that it would have entailed a conflict with GDP growth in the long run and required the government to borrow significantly more from abroad. In the interests of growth and fiscal stability (two important objectives of the government), the base run yielded outcome preferable to the expenditure pattern contained in experiment 3.

Experiment 2 (emphasizing public investment) is potentially attractive in the long run in terms of higher GDP growth, lower inflation and higher incomes for most agricultural household groups,<sup>42</sup> but these advantages have to be weighed against significantly lower standards of living (particularly in the short run) for the urban and rural high groups. Given the political power of civil servants, this

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<sup>42</sup>Public investment benefits those socioeconomic groups whose employment opportunities depend, at least partially, on construction and public works projects, i.e. rural low, urban low, agricultural employees and small farmers. These groups provide the bulk of the unskilled and manual labor required in the construction phase of investment projects and later enjoy the fruits of increased productivity.

cost could not be borne by the government.<sup>43</sup>

The other two counterfactual experiments (4 and 5) would have yielded outcomes clearly inferior to those resulting from the base run. In the case of an accelerated devaluation, the cost in terms of a much higher inflation rate and lower standards of living for most socioeconomic groups would not have been sufficient to compensate for the improvement in the balance of payments. The size of the actual devaluation (reflected in the base run) appeared sufficient to constrain capital flight within a tolerable level while providing the necessary price incentives to encourage the production of tradeables. In particular, because of the greater relative importance of agricultural exports, compared to manufactured exports, at the outset of the adjustment period, and the larger proportion of output consisting of tradeables goods in the rural areas than in the urban areas, it seems that devaluation per se benefitted the rural households more than the urban households. Finally, the monetary contraction scenario would have been so deflationary as to be quite unpalatable; conversely, monetary expansion would have threatened external equilibrium and fueled inflationary pressures with very little income or equity gains compared to the base run.

In conclusion, it is clear that the adjustment strategy which was, in fact, adopted and implemented contributed to the restoration of internal and external equilibrium. Even though it entailed an unavoidable slowdown in economic growth during the adjustment period, this strategy reinforced some of the desirable distributional trends which were underway in the preadjustment period and allowed them to continue after the oil crisis. The vulnerability of the Indonesian economy to external shocks has been reduced as judged by the higher share of renewable resources (e.g. manufacturing goods) exports in total exports and the declining relative importance of oil revenues

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<sup>43</sup>The three year wage freeze for government employees was as far as the government could go; any further move could have been politically explosive.

in total government revenues.<sup>44</sup>

## 5. Conclusions

A comparison and confrontation of the Indonesian adjustment episode with the broader and diversified experience of the developing world, yield some revealing insights which, in general, support many of the propositions reached by recent multi-country analyses and surveys of SSA while adding some additional specificity and, in some instances, local color.

In the political economy domain the following features appear to have provided a policy environment conducive to the formulation and implementation of a consistent and credible set of adjustment measures and reforms. First, the political stability inherent in a (one party system) regime, in power since 1967, and enjoying a record of sustained economic growth, rural development and poverty alleviation, provided the necessary public credibility and confidence to initiate and carry out the reform package. Secondly, the fact that the land distribution was relatively even in a predominantly rural country combined with the impact of the rice boom on rural employment and incomes meant that the degree of societal polarization was limited. Even in an autocratic, non-democratic regime, opposition to the SSA program could have developed, but did not, largely because the key socioeconomic groups (the rural nonagricultural households, small farmers and civil servants in both urban and rural areas) were relatively sheltered under the adopted policies (see 4.3).

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<sup>44</sup>At the same time it should be underlined that the adjustment process is a continuing one. Some of the recent cuts in current and capital expenditures may have a delayed negative impact on the observed trend towards poverty alleviation. Even though the adjustment experience of Indonesia between 1983 and 1988 appears to have been a successful one, it is still too early to pass any definitive judgment.

Thirdly, a number of institutions were firmly in place at the outset of the adjustment phase that had been designed to reduce discretionary actions by the government and insure a high degree of built in monetary and fiscal discipline.<sup>45</sup> The most important of these institutions is the constitutional mandate to maintain a balanced budget. Project aid from abroad had to bridge any gap between total public expenditures and total domestic revenues. This meant that the flow of foreign aid was channeled directly into investment (largely infrastructure) rather than consumption. It is only towards the end of the adjustment phase (1987) that Indonesia received program assistance in the form of a relatively small trade liberalization loan from the World Bank.

A fourth feature that greatly facilitated the design and implementation of SSA policies is that the latter were undertaken voluntarily rather than being prompted, and, at the limit, imposed from outside through a whole set of conditionality requirements formulated by bilateral and multilateral donors.

Turning now from the political economy environment to the policy response per se, the following features deserve to be highlighted. First, as most countries enjoying a commodity boom and rising international terms of trade, Indonesia during Repelita III (1978/79-1983/84) reacted by spending significantly more than had been programmed at the onset of the Five-Year Plan (recall that in 1983/84 the government spent almost twice the amount, in real terms, which had been initially planned on public investment). However, in contrast, with other OPEC countries, Indonesia contracted only a much milder form of the "Dutch disease", because a considerable part of the windfall profits generated by rising oil prices was reinvested in agriculture. This benefitted the non-

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<sup>45</sup>The existence of sound institutions in both the fiscal and monetary arena with clear rules of the game (such as the Central Bank) provided an important lubricant to the system. Following the new political economy approach to macroeconomic policy a favorable institutional environment generates the right mix of policy instruments since the latter are endogenously determined within a given institutional context (see 2.1).

boom agricultural tradable sector and was largely responsible for the highly successful import substitution of rice. Also, in contrast with most other developing countries, a reverse adaptive process occurred after the oil prices started to collapse; the proportion of actual to planned total government expenditures fell sharply and monotonically from 90 percent in 1984/85 to 69 percent in 1988/89.

Secondly, the speed and intensity of the transformation from an inward looking import substitution industrialization strategy to outward orientation and export promotion was truly remarkable. Within a few years, starting with trade liberalization in 1985, Indonesia was able to diversify substantially the commodity composition of its exports towards manufactures and away from non-renewable resources. The adjustment response to the oil shock provided the right set of incentives for an industrial takeoff--fueled by a large flow of foreign investment directed to export industries.

Finally, a strong case can be made that the package of SSA measures adopted by the government was close to optimal under the political and other prevailing constraints. A comparison of alternative counterfactual policy scenarios within a computable general equilibrium model (see 4.3) indicated that the adopted reform package (i.e. the base run) was superior to practically all other alternatives in its impact on growth, income distribution and the restoration of internal and external equilibrium, in both the short run and medium to long run. A counterfactual scenario that would have reduced public investment relatively less than in the base run (and conversely cut government expenditures more) would have contributed to a somewhat higher growth rate, lower inflation and higher incomes for most agricultural household groups in the long run. However, the tradeoff would have consisted of significantly lower standards of living, particularly in the short run, for the urban and

rural high income groups consisting largely of civil servants. Since this group constituted a crucial constituency in support of the government, this last policy scenario was politically infeasible.

This positive critical evaluation of the Indonesian adjustment episode should be toned down by pointing out, and touching very briefly on a few potentially dark clouds on the horizon. The doubling of the foreign debt (denominated in US\$) has brought about a very large burden on Indonesia's public finances and balance of payments (the ratio of debt service to exports went up from 17 to 41% between 1982 and 1987). Such burden reduces greatly Indonesia's flexibility and maneuverability in its development policy as it competes with and precludes other desirable government current and capital programs.

The creation of productive employment opportunities outside of agriculture, particularly in the rural areas, is becoming absolutely essential now that the agricultural sector on Java is starting to shed labor. The informal sector has played a role in absorbing some of the workers released from agriculture and new entrants into the labor force but more dynamic and productive outlets need to be designed.

Finally, the modernization of agriculture and the trend towards industrialization bring about environmental concerns relating to their impact on natural resources and water quality, among others. These environmental effects combined with the past depletion of natural and non-renewable resources (eg. tropical forests and oil) raise serious questions about the long run strategy Indonesia should embark on to insure a sustainable development path.

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