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Southeast Asia

*Indonesia's industrial policy and performance:
'orthodoxy' vindicated*

Hal Hill

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Key to symbols used in tables

n.a.	Not applicable
..	Not available
-	Zero
.	Insignificant

Hal Hill is a Senior Fellow in the Economics Department, Research School of Pacific and Asian Studies at the Australian National University. He is also Head of the University's Indonesia Project, and Editor of the *Bulletin of Indonesian Economic Studies*.

This paper draws on various pieces of research undertaken over the past decade, especially relating to industrialisation in ASEAN (Ariff and Hill 1985) and the Indonesian economy (Hill 1995). I have also benefited from comments at seminar presentations at the Universities of Columbia, East Anglia, Harvard, Nottingham, and Stanford, and from discussions with several colleagues in the Department of Economics at the Research School of Pacific and Asian Studies, The Australian National University, particularly Heinz Arndt and Heather Smith. I also wish to thank Neng Hartono for excellent computational assistance, Haryo Aswichahyono for providing me with his unpublished estimates of total factor productivity growth in manufacturing, Kelly Bird for supplying the manufacturing real growth data, and the staff of the International Economic Databank at the Australian National University for the provision of trade statistics.

Hal Hill

*a*bstract

This paper assesses Indonesia's industrial and export success since the mid-1970s, with special reference to the arguments that selective industrial policies have been the key to East Asia's economic success. According to this literature, which has focused mainly on the Northeast Asian economies, governments have guided the course of industrialisation, anticipated and shaped patterns of comparative advantage, and 'picked winners'. Through an examination of protection policy, state enterprises, subsidised credit programs, and a range of other selective interventions, this paper finds very little from the Indonesian experience in support of such a contention. Rather, the evidence points towards the importance of 'orthodox' strategies—macroeconomic stability, exchange rate policy, and supply-side, efficiency-enhancing investments—in the country's success.

Indonesia's industrial policy and performance: 'orthodoxy' vindicated

'Don't listen to 'comparative advantage' advice. Whenever we wanted to do anything the advocates of comparative advantage said, 'We don't have comparative advantage.' In fact, we did everything we wanted, but whatever we did, we did well.' (Governor Park of the Korea Central Bank quoted in Wade 1992:270)

'...not only has Korea not gotten relative prices right, it has deliberately gotten them "wrong". Nor is Korea an isolated case. It is part of a general group of...late industrializers.' (Amsden 1989:139-140)

'The policy of industrialization is still not properly integrated with trade policy. That is because the two camps, one favoring high protection and the other favoring more competition, are equally strong.' (Sadli 1988:364)

'I propagated the idea that it was time for the government to put all available resources into infrastructure and basic industries. But I did not have many supporters for this idea.' (Soehoed 1988:45)

'There is hardly an economic policy—whether for the levying of income tax or an urban real estate tax, or for tariff protection of domestic industry, or for subsidies to depressed industries, or for minimal regulation of foreign investment or of road traffic, or for conservation of forests or for provision of rural credit to farmers or for priorities in investment credit by state banks, or for social welfare services or development projects of every kind—which, whatever its economic or technical merits, does not need to be weighed—and often ruled out—almost wholly on grounds of its administrative impracticability in the face of corruption.' (Arndt 1978:28)

'The Indonesian state [is] decidedly less insulated from business interests by comparison with most accounts of the Northeast Asian NICs.' (MacIntyre 1994b:261)

Introduction

One of the most important economic phenomena of the second half of the twentieth century has been East Asia's dramatic economic success. A select group of seven developing economies from South Korea (hereafter Korea) in the north, to Indonesia in the south, has recorded historically unprecedented growth rates averaging at least 4 per cent per capita per annum for at least a quarter century. In addition to the core group, Japan of course initially set the example of high-growth East Asia. China joined the group from the late 1970s, when its leadership decided to engage the international economy seriously, and in the early 1990s. Vietnam appears likely to follow in the path of these economies, termed 'The East Asian Miracle' in a recent World Bank publication.

The spectacular East Asian record has had profound effects on economic development theories and strategies. These countries have little in common, apart from high economic growth, geographic proximity and a commitment to export orientation. They differ significantly in their size, factor endowments, history, ethnic composition, political systems and cultures. Their export success has demolished the earlier *dependencia* theories, that the path to successful industrialisation lies in at least partial 'delinking' from the world economy. It might have been expected, instead, that the experience would have constituted powerful empirical support for the advocates of liberal development strategies, of the type so meticulously researched by, for example, the multi-country studies of the Bhagwati-Krueger NBER project in the 1970s, or the more recent seven-volume World Bank project edited by Papageorgiou, Michaely and Choksi (1991).

However, according to an increasingly popular and influential school of thought, export orientation was the key to this success, but this in turn was achieved by a heavily interventionist strategy. The high-growth East Asian economies owe their achievements, according to this view, not to economic liberalism but to selective industrial policies, the flavour of which is illustrated in the first two quotes at the beginning of the paper: officials have targeted industries, picked winners, deliberately 'got prices wrong', and emphasised not static but dynamic comparative advantage. The works of Alice Amsden (1989) on South Korea, Chalmers Johnson (1982) on Japan, and Robert Wade (1990) on Taiwan have been particularly influential in this respect.

This literature is confined almost entirely to Japan and the industrially advanced Northeast Asian NIEs.¹ But there is an intellectual spillover, already evident, to the next tier of high growth, but lower income East Asian economies. Here there is a presumption in both sections of powerful policy circles and in some of the literature, that the path to success lies in following this popular interpretation of the Northeast Asian recipe. The purpose of this article is to test as rigorously as possible the empirical validity of the major assertions of this literature as they relate to the largest of the Southeast Asian 'followers', Indonesia.

There can be little doubt that, for all its problems and challenges ahead, Indonesia is one of the Third World success stories of the past quarter century. Viewed in influential circles as a 'chronic economic dropout' in the early 1960s², less than three decades later the World Bank had elevated it to membership of that most unique of clubs, the East Asian 'miracle economies'. Over the period 1965–92, its GDP per capita grew at an annual average rate of 4.5 per cent. In the mid-1980s it experienced a sharp adverse terms of trade shock, when the international price of oil (which, with gas, then constituted almost 80 per cent of merchandise exports) halved; the shock was in fact equivalent to some 15 per cent of the country's GDP over the period 1986–88. Yet through prompt and decisive reform it was able to achieve rapid and effective structural adjustment in the latter half of the decade. Our principal argument is that there is very little in the past 25 years of Indonesia's rapid industrial growth that can be attributed to this kind of selective industrial policy. Industrial policy has been interventionist, at times highly so. But there is no persuasive evidence that such intervention has been the key to success. In fact, selective policies have in most instances been costly failures. The country's industrial success, it is asserted, is the result primarily of the adoption of orthodox policies, in the realm of macroeconomic management, exchange rate policy, and the provision of public goods such as social and physical infrastructure, together with political stability and security.

Section 2 briefly outlines the major postulates of the Northeast Asian industrial policy literature. Particular emphasis is given to the case for a successful interventionist strategy, which in turn provides testable hypotheses to be investigated in our Indonesian case study. Section 3 summarises Indonesia's

1 Not including Hong Kong and Singapore, both thoroughly free trade in orientation, albeit in the latter case with extensive domestic regulation.

2 The quote is from Higgins' (1968) widely used text on economic development. The author himself had extensive first-hand experience in Indonesia dating back to the early 1950s.

economic record since the mid-1960s. Attention is given to the economic reforms of the 1980s, through which, for the first time, the country became a significant industrial exporter. This section looks at both the instruments used in the reform process, and the outcomes. The case for the proposition that a selective interventionist strategy explains these successful outcomes is assessed in section 4, which is the major part of the paper. Key instruments of selective industrial policy, in vogue especially from the mid-1970s to the mid-1980s, are examined and found to have made very little contribution to the 1980s industrial and export success. The conclusion summarises the major findings and considers some of the more general implications from the Indonesian experience.

A number of caveats are in order. First, it needs to be emphasised that this sort of exercise is not easily amenable to rigorous, quantitative investigation. The direction of causality is difficult to detect. Many variables, both internal and external, shape industrial development patterns, and it is impossible to discern the precise impact of most of these, particularly in a dynamic policy and commercial environment. Even where causality can be confidently asserted, it is difficult to determine the significance of various lags in the process. There are also serious data constraints in this sort of exercise, to be discussed shortly.

Second, it is important at the outset to emphasise what this paper is not about. First, it is not attempting to demonstrate that liberalisation explains Indonesia's economic success, in the wake of the country's two major liberalisation episodes of the mid-1960s and mid-1980s. There is now an extensive literature on this subject.³ The Indonesian experience is directly relevant to this literature and, I believe, would affirm the positive nature of the relationship. But that is the subject of another paper. Second, and related to the first point, nor is the paper attempting to use Indonesia as a case study of whether structural adjustment 'worked'. The evidence here, too, would be in the positive and, unlike many other attempts, the necessary reforms were driven by a domestic constituency rather than imposed by international donor agencies.⁴ Third, this paper is not about the political economy of Indonesian industrial policy-making. That also is the subject

³ The major recent work on the subject, referred to above, is Papageorgiou, Michaely and Choksi (eds) (1991). (Indonesia is included in these case studies (Pitt 1991), but the study confines itself to the late 1960s reforms, whereas the focus of this paper is the more recent, mid 1980s reforms.) For a critical review of the 1991 Bank volumes, see Greenaway (1993) and Greenaway and Sapsford (1994).

⁴ Greenaway and Morrissey (1993) and Mosley (1991) contain reviews of the structural adjustment literature and experiences.

of an extensive and important literature.⁵ Indeed, it is one of the strengths of the Northeast Asian literature referred to above that the three authors clearly have a foot in both the political science and economics camps. They attempt to analyse not only what happened and how, but also why. This paper essentially eschews the latter dimension. Fourth, the paper is not attempting to rebut the Northeast Asian interventionist literature as it applies to these economies. I do not have the requisite country knowledge, although it is worth mentioning that this is a subject of lively debate.⁶

Finally, to anticipate another strand of criticism, the paper is not advocating a version of what some of the interventionist Northeast Asian literature disparagingly refers to as the 'extreme neo-liberal position'. The use of the term 'orthodoxy' in the title admittedly invites such a reaction. Clearly the Indonesian government since 1966 has been 'unorthodox' in many respects. Its rice program has been highly successful, but highly interventionist.⁷ The government has intervened extensively in many other product and factor markets. Its poverty alleviation programs have generally been regarded as successful, especially during the difficult adjustment period of the 1980s (Ravallion and Huppi 1991), and at least some of this success follows from the targeted nature of public policies. It has invested considerably—although I would argue insufficiently—in the social sectors and physical infrastructure. For the purposes of this paper, I

⁵ See for example Bresnan (1993), Liddle (1991), MacIntyre (1994b), Mackie and MacIntyre (1994), and Schwarz (1994).

⁶ The literature is huge, and this is not the place to review it comprehensively. Much of it is cited in the three key references mentioned above. A very useful volume which airs both sides of the argument (though the editor's views are well known) is Hughes (1988); see in particular the overview chapter by Riedel (1988). Amsden (1994; a critique of World Bank in 1993), Biggs and Levy (1991), Chang (1993), Haggard (1988, 1990, 1994; all providing illuminating accounts of various aspects of the political economy of industrial policy). Matthews and Ravenhill (1994), and Wade (1992) adopt positions which to varying degrees endorse the efficacy of interventionist industrial strategies. Kim (1994), Smith (1994) and World Bank (1993) range from being sceptical to strongly critical of the case for intervention. Patrick and Meissner (1986) contain a number of careful case studies of Japan's industrial policy, which are on balance sceptical of the case for the interventionist approach.

⁷ It is worth noting in passing that this too is the subject of much debate among economists, with Pearson et al (1991) and Timmer (1993) sympathetic to the notion that the highly interventionist regime has been crucial to the strong output growth, while others have been critical of the welfare effects of intervention. Lest it might be thought that this topic is central to our discussion—for example, low rice prices constituting a subsidized 'wage good' into the industrialization process—it should be noted that domestic rice prices have never deviated significantly (more than 50 per cent) from international prices for prolonged periods.

employ the term 'orthodoxy' in the restrictive sense to refer to the absence of selectivity in the incentives regime across and among manufacturing industries.

Key postulates from the selective industrial policy literature

The literature examining the political economy of industrial policy in Northeast Asia—specifically Japan, Korea, and Taiwan—is vast, so I will not attempt to summarise it in this paper (see footnote 6 for a sample of the key references). Much of this literature is, appropriately, historically specific, and there have been obvious differences in strategy employed by the three governments. The intention here is merely to draw attention to some of the key postulates, which then provide the basis for a more detailed investigation of the Indonesian experience.

It is useful, first, to document areas of agreement among the contending camps. These are more numerous than is commonly supposed. In all three economies there was stable macroeconomic management. Even where there were departures from this norm, most notably the case of Korea, they were relatively mild, much more so than the serious cases of disequilibrium observed for example in parts of Eastern Europe nowadays, or in Latin America in the 1970s and 1980s. Second, while clearly there were cases of very high protection, by and large exporters were insulated from the industry-specific (though not necessarily economy-wide) effects of this protection through efficient drawback and exemption schemes. Third, exchange rates were never seriously misaligned, at least for any prolonged period. Fourth, there was a strong societal and government commitment to education. Education standards reached OECD norms at much lower incomes than was the case in most OECD economies. Average hours worked per year also appear to have been among the highest in the world. Governments were not immune from rent-seeking activities, nor were they free of corruption. But they seem to have been much more 'developmental' in orientation than the 'predatory' regimes one often observes in the third world. Specifically, when industry or firm-specific incentives were granted, there appears to have been a concerted attempt to link them to some sort of performance requirement.

These regimes were undeniably interventionist, and the differences centre on whether these interventions explain the extraordinarily high growth rates. Government officials, it is alleged, were engaged in the task of anticipating and shaping the evolution of dynamic comparative advantage, and 'picking winners' in the sense of supporting projects and activities where private agents would not otherwise invest (at least not on a scale or timing which coincided with the

government's wishes). The instruments of selective industrial policy identified in the literature include the following: First, control over the formal capital market, both in the rates set, and the allocation of funds between industries and even firms. One view of Korea, for example, is that the allocation of long-term credit in Korea was '100 per cent government-controlled'. Direct ownership of financial institutions was widespread. A second important instrument was trade and protection policy. This included such instruments as differential exchange rates, (widely dispersed) effective protection rates across industries, and frequent resort to absolute or exclusive import restraints. Third, the fiscal regime was employed to further the governments' industrial objectives. This took a variety of forms, ranging from extensive direct investments to tailor-made fiscal incentives. Finally, there was an array of additional instruments employed with more or less intensity over time and across these economies. These included a highly selective foreign investment regime (especially in the case of Japan and Korea), specific measures to encourage industrial agglomeration (notably Korea's *chaebol*) and industry associations, labour market restrictions (over wage increases and freedom of association), and training and support initiatives which were often firm-specific.

This literature consistently emphasises the 'results-oriented' nature of these interventions. Incentives were seen as being highly conditional. Export targets were imposed on firms, and general bureaucratic exhortation was alleged to be widespread. The high technical calibre of government officials is emphasised, as is the generally mild incidence of corruption. Governments were assessed as being disciplined and their interventions coherent and coordinated.

Indonesian economic policy and performance since 1966⁸

An Overview. There can be little doubt that Indonesia is one of the Third World's success stories since the mid-1960s. Indonesia in 1965 was a basket case. Its economy was contracting, inflation was approaching 1000 per cent, and the country was disengaging from the world community, including the United Nations. In the words of one knowledgeable observer:

A decade of ever-increasing economic mismanagement had brought a degree of economic breakdown with few parallels in modern history. The country was literally bankrupt, unable to meet payments due to foreign debt...Export earnings had fallen to a level where they

⁸ This section relies heavily on Hill (1995).

were barely sufficient to finance half the country's minimum requirements, excluding debt service. (Arndt 1984:29)

Its economic revival since then, following a horribly violent change of regime, is well known. The economy responded surprisingly quickly to the adoption of a prudent macroeconomic strategy and more liberal microeconomic policies. Inflation fell sharply, and at 15 per cent was effectively under control by 1969. Double digit GDP growth was recorded for the first time in 1968, and since then it has exceeded 5 per cent, except for a brief and relatively mild recession in the mid-1980s, induced by a sharp decline in the terms of trade. The economy's fortunes were transformed in 1973 when international oil prices quadrupled, and during the 1970s average annual growth rates approached 8 per cent. This rapid growth began to slow in the first half of the 1980s, when softening and then declining oil prices necessitated major policy adjustments. From 1982 to 1986, the economy still expanded at a respectable rate of 4 per cent per annum, although its terms of trade adjusted growth (the so-called 'gross domestic income') was negative. The prompt and decisive reforms, to be examined in more detail shortly, quickly bore fruit. Under the impetus of outward-looking policies, growth recovered strongly, and for the period 1987-93 averaged 6.7 per cent.

This is not the place to examine Indonesia's development record in any detail. But ample confirmation of its success is provided in numerous comparative studies. Its performance among the OPEC countries was arguably the best (Gelb and Associates 1988), especially so compared to Nigeria (Pinto 1987). In its record of macroeconomic management, Indonesia was grouped with Korea and Thailand as among the best performers, according to a recently published 18-nation World Bank comparative study.⁹ It has also compared favourably on social indicators, as for example in the OECD Development Centre study of the effects of macroeconomic adjustment policies on poverty and income distribution (published in a special issue of *World Development*, 1991, 11:19). In addition, the country has been accorded international recognition for its achievements in rice production and fertility reduction. Thus, while Indonesia's performance has not generally matched the dazzling record of the NIEs—China (since 1978), Malaysia, and Thailand—it is unquestionably one of the success stories of the developing world.

⁹ See Little et al., (1993), and the Indonesia country study on which it draws (Woo, Glassburner, and Nasution 1994).

The 1980s reforms: In its structural features, Indonesia entered the 1980s resembling the petroleum economies in many respects. It is a large, low-income, populous country. But the importance of oil and gas in the economy is revealed by the fact that they generated about three quarters of merchandise exports and two-thirds of government revenue. In contrast to its East Asian neighbours, manufactured exports were minuscule—some 2 per cent of merchandise exports. However, oil prices began to fall, gradually in 1982–83, very sharply in 1985–86. In the latter case, the decline in oil prices was equivalent to about 15 per cent of GDP over the period 1986–88. This marked the turning point in the country's development strategy. One of its major engines of growth collapsed, and with it the vision enunciated in Repelita IV (the Fourth Five Year Plan 1984–89) of state-led industrialisation financed by oil. Economic prospects in 1985 appeared rather bleak. In the event, however, high growth was restored, much more quickly than most observers expected. The key to this impressive turn-around was the bold and decisive series of liberal economic reforms introduced from the mid-1980s onwards. It is useful to examine briefly the major features of these reforms and their results.

In its macroeconomic management, the government's response to the initial softening in oil prices was swift and effective. In 1983, a number of major investment projects, many of them almost certainly uneconomic, were deferred and effectively cancelled. There was a large devaluation of the rupiah which, aided by tight monetary and fiscal policy, resulted in a significant boost in competitiveness for tradables goods industries. Tax and banking reforms were initiated.

But over this period there was a discordance between macro and microeconomic policies, reflecting divided authority in the realm of economic and in particular industrial policy at that time. The technocrats had control over the macroeconomic levers. But they were powerless to prevent the proliferation of much industry specific intervention. A good deal of the latter took the form of non-tariff barriers (NTBs)—especially in Indonesia's case, import prohibitions, quotas and exclusive import licences—in a wide range of industries. Many of these NTBs were quite blatantly political, being awarded to the sons and daughters of the politically powerful, and to leading conglomerates such as the Salim Group. In addition, over this period, the Minister for Research and Technology, Professor Habibie, began to have a strong impact on industrial policy. Large amounts of state resources continued to pour into his favoured 'high-tech' projects, even while fiscal austerity was the order of the day elsewhere.

It took the second round, of much more serious oil price declines, for the technocrats to be able to break the impasse and convince President Soeharto of the desirability of liberal reform in the microeconomic arena. At an intellectual level, economists at the University of Indonesia began a very public debate over the issue of the so-called 'high-cost economy', and the World Bank and other donors continued to push hard—albeit in a low-profile style—for reform. Thus, 1985–86 marked the watershed, when both macro and microeconomic policy began to pull in the same direction. It was over this period when, for the first time in the country's history, manufactured exports and the private (domestic) sector became the major engines of economic growth.

Effective macroeconomic management—manifested in modest fiscal deficits—moderate growth in money supply, and single digit inflation rates, continued to be the corner-stone of Indonesia's economic policy through the reform period. The government then introduced a number of measures which enhanced international competitiveness and reduced the regulatory reach of the bureaucratic apparatus. The major thrust of the reforms was not 'pro-export' and they did not generally involve government promotion in the sense of subsidy. Rather, they were designed to achieve a more straight-forward and predictable policy environment, in which firms were less encumbered by complex, costly, and often unenforceable business regulations.

The major features included the following:

- The effective removal of the corruption-ridden customs service in April 1985, its tasks being handled by the Swiss surveillance company SGS.
- A second large devaluation in September 1986, again accompanied by low inflation, and thus resulting in another large gain in competitiveness.
- The introduction, in May 1986, of a highly efficient, corruption-free customs rebate/drawback facility for exporting firms, which essentially placed them on a free-trade footing.
- The gradual removal, in a series of 'packages', of many of the NTBs which had been introduced in the early 1980s and before, and their replacement by tariffs. As a result, the percentage of imports (by value) covered by NTBs fell from 43 per cent in 1986 to 13 per cent in 1991.

- Financial reforms in late 1988, which for the first time exposed the large, cumbersome and generally inefficient state banking sector. The stock market was also opened up.
- A number of other reforms, affecting *inter alia* foreign investment (in which, by early 1992, the pendulum had swung back towards an open-door policy almost akin to that of the late 1960s), inter-island shipping, and tourism.

Response: reforms that worked

The response that followed these reforms surprised even their more optimistic proponents. Economic growth recovered and by the end of the 1980s was around 7 per cent, not too far short of its high growth East Asian neighbours, nor of the record in the oil-propelled 1970s. Indonesia avoided the looming debt default scenarios, although external debt piled up quickly in the 1980s, from \$21 billion in 1980, to \$37 billion in 1985 and \$85 billion in 1992.

At the heart of this recovery was the strong growth in non-oil and gas exports, particularly manufactures, but also including some commodities (notably coal and gold), cash crops (such as palm oil), and services (especially tourism). Manufactured exports grew from \$500 million in 1980, to \$2.6 billion in 1986. Then they more than doubled in 1986–88 (to \$5.5 billion in 1988) and almost doubled by 1988–90. Over 1993 they more than doubled again (to \$19.4 billion in 1993; see Table 1), although the growth rate began to decelerate in 1993–94. For the period 1980–93, manufactured exports grew in real terms at almost 30 per cent per annum. This was a most impressive record. The rate was maintained more or less throughout the period (except for the very recent past), and was not just the result of the small base-year figure.

Table 1 Major manufactured exports, 1980-93, US\$ million

	1980	1985	1990	1993
Labour-intensive				
Total	287	785	4,634	11,344
Major items				
Clothing	98	339	1,646	3,502
Woven fabrics	43	227	1,132	2,247
Footwear	1	8	570	1,661
Electronics	94	77	204	1,382
Percentage of all manufactures	57	38	51	58
Resource-intensive				
Total	119	992	3,324	5,364
Major item				
Plywood	68	941	2,791	4,586
Percentage of all manufactures	24	49	37	28
Capital-intensive				
Total	97	266	1,083	2,729
Percentage of all manufactures	19	13	12	14
Total, all manufactures	501	2,044	9,041	19,437
Three largest as percentage of total	52	74	61	53
Manufactures as percentage of total exports	2	11	35	53

Sources: BPS, *Ekspor*. [Exports], Jakarta, various issues.

Until the second half of the 1980s, however, there were still sceptics. They pointed out, correctly, that until the mid-1980s plywood dominated the picture, in some years contributing up to half the 'manufactured exports' total. This item was of course a special case. Its growth resulted from the prohibition on log exports introduced in the early 1980s, which meant that Indonesia's timber resources had to be exported in a processed form, most commonly plywood. Another basis for scepticism lay in the second major export item, clothing and textiles, which together accounted for another quarter of the total. In this case, Indonesian exporters actually benefited, in a perverse fashion, from the Multi Fibre Arrangement (MFA) which conferred unused export quotas on the country, enabling it to 'compete' internationally with the industrially more advanced NIEs.

But this factor proved to be of only temporary significance. By the late 1980s, Indonesia had hit MFA quotas, but clothing and garment exports were still growing impressively. Moreover, exports were broadening in composition as many new items emerged, among them footwear, electronics, furniture, toys and sporting goods.

Why did the reforms work, in the sense that the economy recovered swiftly, and exports grew so rapidly, from the mid-1980s? The purpose of this paper is to address this question in the negative, by arguing that selective industrial policy was not central. But before focusing on this subject, in the next section, it will be useful to at least outline, but not attempt to demonstrate rigorously, the case for an 'orthodox' explanation of these successful outcomes. Such an explanation centres on the reforms themselves, together with several facilitating factors.

If one were to nominate the dominant factors propelling export growth, then exchange rate management and trade liberalisation for exporters would have to be central. The government devalued the rupiah sharply in March 1983 and September 1986. Accompanied by tight macroeconomic management, which resulted in low inflation over this period, there was a powerful competitive boost for Indonesian firms. Indeed, using as a measure of competitiveness the nominal effective exchange rate deflated by domestic inflation rates, Indonesia achieved the greatest increase (or largest real effective devaluation) during the 1980s among the Morgan Guaranty series of all major developing countries. A sample of these countries for the period 1981-92 is shown in Table 2.

Table 2 Indonesia's exchange rate management in comparative perspective, 1981-92 (1980-82=100)

	Indonesia	Malaysia	Philippines	Chile	Mexico
1981	100	99	101	108	114
1982	112	106	107	97	83
1983	96	114	96	89	79
1984	96	120	108	90	92
1985	95	116	115	80	91
1986	72	95	90	69	65
1987	57	89	88	66	67
1988	56	80	90	61	80
1989	56	83	96	62	77
1990	54	76	88	60	69
1991	54	76	87	65	75
1992	54	76	94	65	78

Note: The data refer to nominal effective exchange rates, adjusted for relative inflation rates domestically in comparison to those of major trading partners. The numbers are indices with base period 1980-82=100.

Source: Morgan Guaranty.

Trade liberalisation for exporters was achieved through a particularly effective, corruption-free duty drawback and compensation scheme operated through the Ministry of Finance. The agency, known by its Indonesian acronym Bapeksta, was adopted enthusiastically by exporters over the crucial 1987-89 reform period (Table 3). Of special note was the significance of the scheme for the country's two major export groups, textiles, clothing and footwear, and wood products, where by 1989, some 30 per cent and 45 per cent of total exports were coursed through the agency.¹⁰ In addition to these two specific reforms, other elements of the reform packages adumbrated above were important. But as immediate and proximate causes, these two deserve special emphasis.

¹⁰ Furthermore, the percentages in Table 3 actually understate the importance of Bapeksta, since exporters used the facility as a bargaining tool to extract competitive prices from domestic suppliers.

Table 3: Exports under Bapeksta, 1987-89 (per cent of total industry exports)

	Food and Beverages	Textiles, Clothing, Footwear	Wood Products	Paper Products	Chemical, Plastic, etc. Products	Basic Metals	Machine Goods
1987	1	9	15	9	1	1	3
1988	5	28	37	31	5	42	20
1989	6	30	45	43	8	31	36

Source: Bapeksta

Turning to facilitating factors, three in particular stand out as contributing to successful outcomes. First, Indonesia's external economic environment was at the very least benign, and more often favourable and supportive. Since 1966, Indonesia has enjoyed a close relationship with the international donor community. These donors rescued Indonesia from insolvency in the late 1960s, when it became evident that the new government was resolved to tackle the economic mess left by Sukarno. So too in the mid-1980s, this group—and most especially Japan and the World Bank—acted promptly to help avert a more serious debt crisis in 1985-86. Also over this period, the Asian NIEs began to restructure, shedding much of their labour-intensive industry to low wage countries such as Indonesia. Clearly, however, these factors could not have been decisive in Indonesia's turnaround. The country's domestic environment had to be congenial. The countries which did not reform quickly, or whose economic and political environment was inhospitable in other respects, such as the neighbouring Philippines, received much smaller flows of investment and less sympathetic treatment from donors.

The second and third facilitating factors have already been alluded to. Indonesia's macroeconomic management has been reasonably tight since the late 1960s, and it was especially so during the mid-1980s. For all the waste and corruption during the oil boom decade, the country was at least able to recycle more of its windfall oil revenue gains into productive investment, especially food crops and social infrastructure, than any other major OPEC country (Gelb and Associates 1988). Indonesia's productive capacities were thereby enhanced, and the reforms produced an immediate and effective supply-side response.

Two additional features of the reform process deserve emphasis. The first is what may be termed 'regime credibility', a topic perhaps accorded too little importance in the policy reform literature.¹¹ By the mid-1980s, the Soeharto regime had been in power for almost two decades. The regime had presided over a period of economic development unprecedented in the nation's history. It had maintained relatively tight macroeconomic management throughout. It had responded decisively to crises, most especially in controlling inflation and reviving the economy in the late 1960s, but also following the mid-1970s Pertamina debacle. Economic agents by then exercised a judgement that, when the regime was intent on enacting major policy changes, it had both the political will and administrative capacity to follow them through.

The second feature has to do with the political economy dimension of Indonesia's reforms in the 1980s.¹² The early successes, in terms of outcomes, generated their own momentum, easing the way for the technocrats to tackle the thorny microeconomic issues. The growth of exports and the removal of credit and other subsidies began to change the business sector's relationship with, and expectations of, the government. Exports and efficiency began to become more important arbiters of commercial success for firms, as contrasted to the oil boom period when access to government privileges and facilities was more often the crucial determinant. Of course, many instances of blatant rent-seeking remain, some of which are alluded to below. But it is important not to lose sight of the changes: the intellectual debate concerning policy reform is analytically stronger and better focused; there has been a reorientation in thinking at some senior levels of the bureaucracy (most notably in the Department of Industry); and the proponents of 1970s style special pleading for subsidies and favours have been on the back foot.

Indonesian reforms: selective or orthodox?

We now test as rigorously as possible the notion that selectivity was the key to the country's industrial export success from the mid-1980s onwards. This discussion places particular emphasis on the key instruments of industrial policy over this period, especially trade policy and state ownership.

¹¹ Dornbusch (1991) discusses this issue, from a largely theoretical perspective.

¹² Prominent Indonesian economists have written extensively on the political economy of these reforms. See for example Azis (1994), Pangestu (1991) and Soesastro (1989).

Protection policy

The pendulum of trade policy has swung quite sharply during the post-1966 period, from an open regime until the early 1970s, to a decade and half of tightening restrictions, to a more liberal—though still quite restrictive—regime from the late 1980s. At the same time the international capital account has been completely open since 1970, apart from a few minor restrictions.

The various studies of effective protection since the early 1970s, provide a bewildering array of figures, in which seemingly no pattern is clear other than huge inter-industry variations, even among apparently closely related product groups.¹³ Indeed, differences in coverage, methodology, concepts and data render these series broadly in comparable. But at the risk of heroic generalisation, a number of patterns do appear to emerge. Manufacturing, on average, does receive positive protection, implying that the other sectors are in effect taxed. Export-oriented manufactures have generally received low or even negative protection, although there have been a range of compensatory measures on offer since the early 1980s. Consumer durables, such as the automotive and electronics industries, have received above-average protection, according to most of the studies. Non-tariff barriers proliferated from the late 1970s, although from 1986 their incidence began to fall quite sharply.

Has protection policy been used as an explicit tool of industrial policy, in the manner conjectured by the interventionist Northeast Asian literature? The answer, with a small number of exceptions, is almost certainly no, for at least two reasons. First, authoritative official assessment indicates that this has not been the case. The statements of several key officials over this period are quite explicit. Consider, for example, those of Ir A. R. Soehoed, Professor Moh. Sadli, and Professor Suhadi Mangkusuwondo,¹⁴ two of whom are cited at the beginning of the paper. Their assessments clearly indicate the lack of cohesion in Indonesia's industrial policy making over the crucial oil boom period, when for a decade the government possessed the financial resources to fund a range of heavy industries. Throughout

¹³ These studies include Fane and Phillips (1991, for the year 1987), Pangestu and Boediono (1986, for 1975 and 1980), Parker (1985, for 1984), Pitt (1981, for 1971), World Bank (1981, for 1975), and Wymenga (1991, for 1989). Suhadi (1995), a key trade policy official for much of this period, provides an authoritative official view of trade policy making.

¹⁴ These were, respectively, Head of the Investment Board and Minister of Industry, 1976–83; Head of the Investment Board, Minister of Manpower, and Minister of Mines and Energy, 1967–78; and Director-General of Foreign Trade and Senior Adviser to the Minister of Trade, 1976–88.

this period, there was continuing tension between the 'technocrats' and those favouring a more interventionist strategy.^{15,16} It would be a mistake to cast the disputes between the two camps as being over a 'free market' versus a 'state-led' approach, as some have done. The differences had more to do with shades of emphasis than sharp ideological disputes. But it is sufficient for our purposes simply to verify that there was no consistent, coherent approach to industrial policy in Indonesia, in contrast to the claims of the interventionist literature that such an approach existed in Japan, Korea, and Taiwan.¹⁷

It should be added that there was one case of unanimity across the broad spectrum of key policy makers on trade policy. This relates to the policy response to the 'Dutch Disease' effects on non-oil tradables sector, particularly manufactures, during the oil boom period. For most of the 1970s, the government maintained a constant nominal peg, fixing the rupiah to the US dollar. Since inflation consistently exceeded that of its major trading partners, the rupiah effectively appreciated, the result of the familiar inter-sectoral effects of the resource boom. There was much concern in official circles that this appreciation was damaging the still infant manufacturing sector. This concern was manifest particularly in the large November 1978 devaluation which, to underscore the argument just advanced, restored the currency to pre-1974 purchasing power

¹⁵ As Minister Soehoed notes (see initial quote), many of his ambitious industrial project plans were rejected. As Professor Suhadi (1995) observes, trade policy over this period was primarily *ad hoc* in nature, responding to approaches from a plethora of special interest groups. The principal exception was a small number of 'strategic' industries, such as rice, fertilizer, and cement, where there was a concerted effort to develop a consistent policy of assistance.

¹⁶ A variant of the latter group, which was to become increasingly dominant from the second half of the 1980s, was the so-called 'technologists', a group centred around the Minister for Research and Technology, Professor B.J. Habibie, who favoured government support of a range of initiatives with an explicit emphasis on technological development.

¹⁷ As noted earlier in the paper, it is not the intention here to analyze the political economy of Indonesian industrial policy. But it would be remiss, in a paper which draws on Northeast Asian comparisons, not to mention one crucial distinction between the two cases, namely the ethnic divide. With a few minor exceptions, the Northeast Asian states are culturally homogeneous. By contrast, the ethnic divide in Indonesia (and most other nations of Southeast Asia) is pronounced. Sino-Indonesians and other 'non-indigenous' groups—termed *non-pribumi*—dominate Indonesia's commerce and industry, yet they account for only about 3 per cent of the population. One of the puzzling features of Indonesia's political economy is why, as in Thailand, such an ethnic divide did not lead to low protection outcomes, on the assumption that a *pribumi* polity would not want to bestow public largesse on a tiny but financially powerful minority. Mackie (1988) discusses these issues.

parity relativities¹⁸. However, this case does not provide evidence in support of the interventionist school, since the devaluation by definition was non-selective, that is, it affected all industries.¹⁹

One of the criticisms of the interventionist literature is that it relies too heavily on personal assertions and quotations, and too little on a rigorous analysis of explicit policies and outcomes. It is therefore relevant to examine this issue in more depth by attempting to assess the impact of protection policy. Suppose that protection policy was targeted to specific industries, and further that such targeted protection was a key explanation for Indonesia's rapid industrial and export growth. One would expect there to be a positive correlation between protection and, for example, output growth, efficiency, export growth, and productivity growth. That is, the purpose here is to test the extent to which government 'picked winners' in an *ex post* sense. Certainly, there are lags and identification problems in any such relationship, but since the interventionist strategy commenced in the mid-1970s, the period under examination is long enough to test for any discernible effects of such intervention. We focus here on three of these variables: output growth, export performance and total factor productivity growth.²⁰ The variables selected for this exercise (Table 4) are as follows:

Protection. Effective rates of protection (ERP) for 1987, as estimated by Fane and Phillips (1991), are used. These figures are the most comprehensive available. Ideally, one might have selected figures from one of the earlier studies. But the Fane and Phillips' figures are the most comprehensive, especially in their treatment of non-tariff barriers. They reflect, moreover, the effects of the protective regime over the 1980s, since no major reforms of the system of protection (as distinct from the export incentives scheme) had been undertaken by the time the estimates were prepared. In any case, they correlate reasonably well with the earlier estimates in most cases. There are good reasons why the numbers have to be used cautiously: there is incomplete allowance for the effects of

¹⁸ In the event, the devaluation, which occurred just prior to the second round of sharp oil price increases, was overtaken by subsequent events, and had little lasting impact.

¹⁹ Warr (1992a) provides a general assessment of the Dutch Disease theory as it applies to Indonesia. For more detailed assessments of the late 1970s exchange rate management, and the issue of compensating devaluation, see McCawley (1980) and Paauw (1978), the latter writer a proponent of such a strategy.

²⁰ No suitable efficiency variable is available. Ideally, domestic resource cost (DRC) would be used, but the most complete set of DRCs for Indonesia are strongly correlated with—in fact are directly derived from—EPRs (see Warr 1992b).

compensating incentives (most importantly export drawbacks and exemptions), and there are formidable problems associated with price and quality comparisons in the presence of non-tariff barriers. But these figures are unambiguously superior to any alternative set of estimates. For the purpose of comparison, 1990 ERP estimates have also been included.

Real output growth. This refers to the growth of manufacturing output for large and medium firms, deflated by the relevant wholesale price index, for the period 1980–90.²¹

Exports. This variable in some respects duplicates real output growth. But it provides a more accurate indicator of international competitiveness, except in cases (some of which are noted below) of subsidies or international market power. The measure used here is the percentage increase in the index of export specialisation of the relevant industry. The percentage increase in real export values could have been used, but the results are very similar.

Total factor productivity growth. These figures refer to the annual growth in total factor productivity 1982–91, kindly made available by Haryo Aswicahyono from his forthcoming doctoral dissertation.

To assess the impact of protection, we have computed a series of correlation coefficients between ERP for 1987 (and 1990 for comparison) and each of the above three variables for 72 industries, principally at the 4-digit ISIC level.²² We would hypothesise that, for industry policy to have been successful,²³ protection and growth in all three variables would be positively and significantly correlated. Table 4 presents the coefficients. In no cases, for either ERP estimate, are any of

²¹ The output data are from the annual *Statistik Industri* (Industrial Statistics) series released on tape by the Indonesian Central Bureau of Statistics, Jakarta. The data used here are from the 'backcast' series, as yet unpublished, which are a more comprehensive set of estimates, for all firms with at least 20 employees. I am most grateful to Kelly Bird for providing these data.

²² There were 119 industries separately identified in Indonesia's industrial statistics over this period. However, several had to be dropped owing to incomplete output data, concordance problems between the SITC based export data, and because the input–output codes (the basis for the erp estimates) do not correspond to the ISIC classification in all cases. However, the industries used in the study cover all major industry groups, and account for at least 75% of non-oil manufacturing value added in all years. I am most grateful to Neng Hartono for the computational work in this section of the paper.

²³ 'Success' in this context has an ambiguous connotation. Protection could mean 'successful' in the sense of stimulating output growth, but of an inefficient variety behind high tariff walls. For this reason, the export and productivity variables are more important in the results, although neither of these variables is really an unambiguous indicator of 'efficient success'.

the variables significant. In half the cases, the sign of the coefficient is as expected. But importantly, the coefficient for the export variable is negative in both instances. Various alternative configurations were attempted, especially lowering the very high ERP numbers (for example reducing those greater than 100 to a maximum benchmark of 100), on the assumption that widespread smuggling renders such protection irrelevant. But in all cases, the results were essentially similar to, or even less convincing than, those presented in the table. Notwithstanding all the limitations associated with this sort of exercise, the results provide little empirical support for the notion that selective industrial policy through protection 'worked', in any sense of the term.

Table 4 Correlation coefficients: effective protection and industry performance

Variable	ERP 1987	ERP 1990
Output	0.017	-0.032
Exports	-0.046	-0.088
TFP	0.073	0.064

Note: Variables and data are explained in the text. None of the variables are significant (with ERP) at 10 per cent or less.

To complete the story, ideally, one would want to corroborate the statistical analysis with a series of industry level studies. It is beyond the scope of this paper to provide them, and there is in any case an acute shortage of detailed research on this topic for Indonesia. But it will be appropriate to add, as supporting evidence, brief snippets from some of the key industries, defined here in terms of size or intensity of intervention.

One of the most intensely regulated has been the automotive industry. By the late 1980s, after 20 years of such regulation, in the Jakarta financial press it had earned the sobriquet *bayi yang sudah tua* ('an old baby') in reference to the fact that it had not graduated from its 'infant industry', high protection phase. At various stages the government has imposed local content rules, entry barriers, and foreign ownership restrictions. Throughout the period 1974–93 there was an absolute ban on the import of CBU autos, finally replaced by tariffs (at extremely high rates, in the range 175–275 per cent) in June 1993. Not surprisingly, the industry has been characterised by extreme plant fragmentation and model proliferation. In the mid-1980s, for example, Indonesia possessed one of the most fragmented industries in the world: with total annual sales in the range 150–200,000 units, there were more than 40 assemblers, with technology tie-ups with firms from 12 countries,

producing about 50 makes and 140 models! In some cases annual model output was as low as 150 units per year. In no case does production yet exceed 60,000 units per year, a figure still far below that commonly regarded as necessary to approach minimum average cost levels.²⁴ Moreover, one looks in vain for examples of industry using this 20 plus year period to rationalise itself and move up the technology learning curve. Exports are minuscule (about 1 per cent of the total for manufactures), being confined to small volumes of components, motor cycles, and utility vehicles. The assemblers are, in some respects, just as dependent on foreign technology suppliers as they were in the early 1970s. Not only has the government been unwilling to lower industry protection significantly, but it has also explicitly excluded automobiles from the nascent ASEAN Free Trade Area, even though the neighbouring countries also have high-cost industries. It is not possible to sustain any plausible argument that this instance of extremely high protection has amounted to a 'picking winners' strategy.

Another case of heavy intervention has been the steel industry, centred on the state-owned Krakatau Steel complex. The firm has a chequered history, commencing as a Russian aid project, languishing for a decade, then revived in the mid-1970s when oil prices rose. Until 1988, it not only received very high protection, but also had the sole import monopoly for steel products. Over this period, steel prices were 40–50 per cent above world levels, and quality and service were generally inferior. The company also received extensive state subsidy through concessional power prices and credits, and equity injections. The firm has acquired an outmoded technology which will prevent it from becoming internationally competitive. Its capacity utilisation has been low (frequently less than 50 per cent), and it has been unable to exploit scale economies. Modest exports have been achieved, on a marginal cost and subsidised basis, when the local market has been in recession. Krakatau Steel's off-shoot, Cold Roll Mill Indonesia, has been even more of a disaster. Its capital costs were estimated to be more than double what they should have been for a plant of its size and type. Capacity utilisation has averaged 50 per cent, and the major domestic partner (the Salim group, Indonesia's largest business conglomerate) bailed out at inflated prices to the state banks when reduced protection adversely affected

²⁴ Industry estimates are that these scale economies are reached at over 200,000 units, depending on local content assumptions.

profitability.²⁵ Here also there is no evidence of significant learning occurring behind protection. Krakatau Steel is now grouped under the Strategic Industries Board, controlled by the Minister of State for Research and Technology.

Another case of unsuccessful state intervention in industry has been the plywood industry. During the 1980s, the industry dominated Indonesia's manufactured exports—in the peak year (1987) accounting for half the total. The reasons for this dominance are not hard to discern. In the early 1980s, the government introduced a program of enforced export substitution, by banning the export of unprocessed timber. The ostensible reason for the ban was to exploit Indonesia's market power in the industry, to extract higher domestic value added, and to meet environmental management objectives. However, all available evidence indicates that the government was unsuccessful in these objectives. Through poorly devised and executed programs, there was tremendous rent dissipation, with some studies suggesting that the government was collecting as little as 30 per cent of the rents that might have been collected under an efficient fiscal regime. Efficiency levels in the plywood plants were also very poor, since for the operators these plants were an incidental by-product of their primary objective, namely obtaining the rents from their forest concessions. According to some estimates, the industry generated negative value added at international prices.²⁶

A detailed examination of several other industries would reveal a similar pattern of counter-productive or ineffectual intervention. Electronics exports were significant until 1986, when the major producers' frustration with import-export procedures led to plant closures and export collapse. It was only around 1990, when these problems were addressed, that exports recovered and began to grow strongly again. The garment industry, by far the most important of the footloose manufactured exports, grew rapidly until 1992. But here there was no case for the

²⁵ For more details, see Chapman (1992). A number of confidential World Bank reports (especially the 1993 report) have provided detailed assessments of the steel industry, and other heavy industries in financial distress. These reports cannot, however, be cited. It is well known in Jakarta that, despite official requests, the Bank has chosen not to be involved in the steel industry because Krakatau Steel has been unwilling to open its books to serious scrutiny.

²⁶ There is an extensive literature on this topic, much of it still unpublished, owing to its highly sensitive political nature, a factor which derives from the identity of many of the powerful concessionaires. Important studies include Fitzgerald (1987) and Lindsay (1989). The export bans were rescinded in May–June 1992, mainly out of fear that such bans may jeopardize Indonesia's international trade negotiating position, but they were in any case replaced by prohibitive export taxes.

argument that an early protection regime boosted the industry; indeed, it consistently received negative protection owing to the protection afforded to the weaving industry. Footwear was also a case where there was practically no industry until 1986 (the large Bata plant accounted for about 75 per cent of factory sector output until then), when the trade and investment reforms induced firms to relocate from the NIEs, then rapidly losing comparative advantage in labour-intensive activities (Chapman 1992).

The one industry where there might be a case for the argument that protection had some beneficial effects was weaving, a long established industry which underwent a technological revolution from the late 1960s as the old hand-loom technologies were quickly replaced by mechanical looms (Hill 1983). Yet only the most generous interpretation of the facts would support such a conclusion. Weaving employs a mature, labour-intensive technology, and it is not obvious that 15–20 years was required to move up this learning curve. Scale economies are unimportant, and so this most frequently advocated basis for infant industry protection could hardly have been invoked. The major shortcoming in the case of this industry was the *absence* of any government initiative to overcome the only plausible market failure which then existed, namely the weak state of industry-based training and development schemes.²⁷

State enterprises

A large state enterprise sector has been an article of faith for a significant section of the Indonesian population, inspired by socialist ideas, a mistrust of capital markets, and a desire to promote *pribumi* business development. Throughout the post-1966 period the policy pendulum has swung between a larger and smaller state enterprise sector. But these firms have been a consistently prominent feature of the economy. The real issue is whether they have been spearheads and catalysts of industrialisation, or whether they have merely been maintained to appease a domestic *pribumi* constituency and have in turn been captured by vested interests,

²⁷ There has been a long-established government institute, the *Institut Teknologi Tekstil* (Institute of Textile Technology), recently reconstituted as the *Sekolah Tinggi Teknologi Tekstil* (College of Textile Technology) and the *Balai Besar Penelitian dan Pengembangan Industri Tekstil* (Institute for Research and Development of the Textile Industry). But these bodies have always been poorly funded, lacked clear assignment of objectives, had little contact with the private sector, and had virtually no impact on the industry's development.

thereby serving essentially 'non-developmental' ends. This section argues that the latter interpretation is the more persuasive.²⁸

The New Order regime inherited a ramshackle, but large, state enterprise sector, including Dutch and other foreign firms nationalised over the period 1958–64. The new government announced its intention to improve the efficiency of these firms, and to hand some back to their original owners. Some attempts in this direction were indeed made, especially with the major reorganisation which occurred in 1969. However, resistance was powerful, especially from the 'technical' ministries who were reluctant to surrender control to the Department of Finance, let alone private owners. Military opposition was also strong, a factor of particular significance since many of these enterprises were managed by current or former senior military officials. The huge oil price windfalls of 1973 then pushed reform—and certainly privatisation—off the public agenda. Nevertheless, the Pertamina scandal of 1975–76 tempered, but by no means curbed, the government's headlong rush into a massive program of state-led industrialisation.²⁹ Government equity investments in state enterprises rose sharply in 1972–76, by almost 10-fold in nominal price terms, but then declined 1977–78. However, major new investments were initiated beginning in 1979, and high spending continued until the mid-1980s. It took the sharp oil price decline of 1985–86 to force the government's hand. A review of state enterprises was announced in 1987. In the following years, new investments were curbed, and attempts at increased efficiency introduced. But not a single major enterprise was privatised.

What of the development impact of state enterprises? As with trade policy, here also one encounters major problems of theory, identification, and measurement. But the limited evidence concerning both the aggregate financial record and micro, firm-level performance generally points in the same direction. The long-run financial performance of most of these enterprises has been poor, and it is difficult to discern any compensating features in this record, either in the

²⁸ This is a huge topic with an equally large literature. It is not possible to delve into all the complexities, nor to refer to all the major references. Good overviews of the sector are provided by Mardjana (1993) and Pangestu and Habir (1989).

²⁹ In 1976, it was revealed that the state oil company, Pertamina, had accumulated debts of over \$10 billion, equivalent then to almost 30 per cent of the country's GDP. A rescue program was quickly introduced, many of the company's assets disposed of, and its operations were focused more tightly on the oil and energy sectors. Otherwise, the changes were relatively minor. See McCawley (1978) for an analysis of the crisis and its repercussions.

form of a nascent 'infant industry' stage in their development or other spin-offs and externalities not captured in the aggregate financial data.

Table 5: The state enterprise sector, 1979-92, Rp billion

	Assets	Sales	Profit	Dividend	Rate of Return	Sales (per cent of GDP)
1979	26,316	6,522	1,179	38.0	4.5	20.4
1980	34,514	9,796	1,422	69.6	4.1	21.6
1981	40,409	11,404	1,628	96.5	4.0	19.6
1982	48,268	14,533	1,329	153.5	2.8	23.3
1983	70,185	20,891	2,296	171.2	3.3	26.9
1984	87,368	25,920	2,200	266.0	2.5	28.8
1985	98,715	29,539	2,525	625.0	2.6	30.5
1986	118,966	28,269	1,811	583.7	1.5	27.5
1987	140,100	37,293	3,036	932.9	2.2	29.9
1988	124,013	40,065	5,170	636.4	4.2	28.2
1989	144,455	47,687	6,613	958.0	4.6	28.5
1990	179,153	60,990	8,300	1,096.0	4.6	31.2
1991	201,068	62,113	6,844	1,311.2	3.4	27.6
1992	231,232	68,446 ^a	6,290	1,053.2	2.7	26.2

Notes: The profit data are pre-tax and 1992 data are preliminary. The rate of return refers to profits as a percentage of assets, the latter measured at book value. Some series are presented on a calendar year basis, while others are financial years. Beginning in 1989, state enterprises in which the government has a minority share-holding are excluded. No data are published before 1979. The data are approximate: coverage is incomplete, and there are occasionally large revisions in the series.

^a This figure compares with 1993 turnover of the country's leading private conglomerates (see Table 6.7) as follows: Salim group Rp 18 trillion; 10 largest conglomerates Rp 51.2 trillion; 20 largest conglomerates Rp70.6 trillion

Sources: *Lampiran Pidato Kenegaraan* [Attachment to the [President's] Address of State], various issues; and BPS, national accounts.

Table 5 provides an overview of the size and performance of Indonesia's state enterprise sector over the period 1979-92, when such data are readily available. Several features stand out immediately. First, the sector is very large. Accurate value added estimates are not available, but sales as a percentage of GDP have exceeded 25 per cent consistently since 1982. Second, as argued above, the relative importance of the sector rose significantly during the oil boom period and its immediate aftermath, and thereafter declined, but not at anything approaching the pace of countries which undertook major privatisations. Third, the rate of return on assets has been consistently poor, never exceeding five per cent, and

frequently in the range two or three per cent. Moreover, even these figures overstate performance in some respects. The averages are pulled up by the higher returns of the state banking sector. The average for non-financial state enterprises is lower still, in some years as little as one per cent. In addition, assets are measured conservatively, generally at book value, and so the rate of return on market based valuations would be lower still. Finally, the figures make no allowance for a plethora of implicit and explicit subsidies.

This record might be defensible if state enterprises were generating significant positive externalities, such as subsidised inputs to other sectors of the economy, superior non-price service, training, or technological acquisition during some infant industry phase. But none of the numerous enterprise case studies (see Hill 1995, Chapter 6) has found much evidence of such externalities. The much vaunted 'high-tech' projects of Minister Habibie, for example, have yet to earn a profit, despite over a decade of operation and a range of implicit subsidies.³⁰ Direct public-private comparisons in industries as diverse as textiles, land transportation and hotels point consistently in the direction of inferior state enterprise performance without any of the compensating features mentioned above. This is, of course, not to deny the possibility that these enterprises could play such a role in Indonesia and elsewhere. But there is virtually no evidence that they have contributed to Indonesia's rapid industrialisation in terms of superior financial or technical performance, or in some long term catalytic sense.

Credit policy

The control and selective allocation of credit occupies centre stage in the interventionist Northeast Asian literature. In Indonesia, too, the government has intervened extensively in the formal credit sector. State owned banks have in the past dominated the formal finance sector, providing at the peak of the oil boom over 80 per cent of commercial credit. The government also controlled the interest rates of state banks, setting them below market rates, subsidising them through central bank rediscount facilities, and instructing banks to lend to preferred customers and sectors. Major liberalising reforms were introduced in 1983 and

³⁰ Since the mid 1980s, these enterprises, and particularly the aircraft factory IPTN, have been the most controversial component of the state enterprise sector. It has been notoriously difficult for anyone—researchers, international agencies, even on occasion the country's Department of Finance—to garner reliable information concerning these projects. McKendrick (1992) is the most complete study to date. Several confidential World Bank reports contain useful financial data corroborating the above conclusions.

1988, which saw the removal of most of these interventions—deposit and lending rates were deregulated, subsidised credit programs almost entirely abolished, and the state banks' privileged position eroded. In the new competitive environment (domestic) private banks responded aggressively: their share of deposits rising rapidly, from just 8 per cent in 1977 to 25 per cent in 1987 and 45 per cent in 1992.

Intervention in the formal credit market was much less extensive from 1983. Since this was the period of dramatic export success, the efficacy of subsidised credit programs must be called into question. But, to concede that there may have been lags in the process (between interventions and outcomes), the really important period for examination is 1973–83, which coincides with the oil boom when the government's capacity to direct resources through the banking system was the most powerful. Two competing hypotheses might be advanced to characterise this period. The first is that the government, through the state banks, systematically and selectively promoted industrial projects and sectors in accord with some sort of long term strategy. The second school of thought would agree with the notion of selectivity, but would contend that the primary basis for allocation was political patronage, that there was very little 'performance based' lending, and that many of the potential gains from preferential lending rates were simply dissipated through outright corruption.

Which school of thought is correct? Unfortunately, there are no comprehensive records of lending by sector, much less by firm, so it is not possible to test rigorously the proposition that the government picked winners by subsidising activities which subsequently became successful, in the sense of being internationally competitive. Therefore, we are left with a variety of pieces of information, which together constitute a fairly cogent argument in support of the second school but which, in the absence of crucial lending data, leaves the issue somewhat unresolved.

The first piece of information is that there were never any systematic, industry based guidelines for the allocation of subsidised credit, nor were there specific 'performance compacts' between the government and the credit recipients. It is true that the central bank prescribed, and subsidised, a range of concessional credit categories. However, these rarely distinguished *between* manufacturing sectors. 'Essential' or 'strategic' activities usually received the largest subsidy, but typically these categories referred to rice and other agricultural programs,

fertiliser distribution, and exports.³¹ The absence of any finely differentiated categories of credit allocation illustrates clearly that credit policy was not an instrument of selective industrial policy, although subsidised credit did have distributional objectives.

A second piece of information regarding the limited impact of targeted credit programs comes from an analysis of the subsidised small credit programs, which were a central feature of government programs to support its *pribumi* small business constituency, until the subsidy element was phased out in the late 1980s. A number of studies of these programs have concluded that they have had no discernible effect on small industry development. A comparison of recipient (of small credit) and non-recipient firms, by Bolnick and Nelson (1990), for example, found instances of success, but no systematic, positive correlation between program participation and firm performance. McLeod's (1980) detailed case studies of small firms in Yogyakarta and Central Java also concluded that the programs had little effect on small firm development, although the individual recipients certainly benefited.

Finally, and related to the second point, the various subsidy schemes have frequently failed to support even their very broad sectoral priorities, owing to loan substitution and outright corruption. With (domestic) private bank lending rates being at least double those of the high priority sectors, and rates in the large informal finance sector being four or more times higher, the incentives for such practices were powerful. This was particularly the case since the state bank staff frequently lacked the technical training to evaluate and monitor their loan portfolios, nor were their lending operations subject to rigorous financial scrutiny.³²

³¹ The lending rates and classifications varied over time, but those cited by McLeod (1984:65) are indicative. The abbreviated categories (nominal lending rates in parentheses) were rice and maize (9 per cent); small scale credits (10.5 per cent); special agricultural programs, salt, wheat flour, other agriculture (excluding plantations), exports, fertilizer and insecticide for smallholders (12 per cent); medium-scale credits, manufacturing, most services (13.5 per cent); imports (18 per cent); others (21 per cent).

³² McLeod (1980) in his study of small-scale finance in the late 1970s, found extensive evidence of both these practices. MacIntyre (1993) provides a more recent assessment, from a political science perspective.

Other interventions

No other instruments of selective industrial policy were in use consistently and forcefully over this period. From 1967 to 1983 the government offered a range of fiscal incentives to new investors, with criteria (for incentives) variously including exports, geographic dispersion, development of *pribumi* or small enterprise, or the introduction of new products and processes. The entry system was, however, opaque, complex and costly, so much so, that firms frequently by-passed the system and did not apply for incentives.³³ Beginning in 1984, the government wisely chose to abolish virtually all incentives, by introducing much lower and simpler income tax rates. Thus, discretionary fiscal incentives were absent over the period of very high export growth.

Similarly, in the case of foreign investment, the government sought to direct foreign firms to certain preferred sectors, by closing some activities entirely and through its incentive regime. There is no doubt that, during the height of the oil boom period, the government's increasingly restrictive posture deterred the entry of foreign firms (Hill 1988, Chapter 3). But there is no evidence of the government demanding and receiving a 'compact' from foreign firms, in which favours were distributed in exchange for these firms meeting certain performance criteria. As noted, discretionary fiscal incentives were abolished in 1984, while a much simplified 'negative list' for prospective investors was introduced in 1987. This is not to deny that foreign firms made a significant contribution to Indonesia's industrial technology development. Rather, the evidence that the government has systematically extracted these benefits through industry or firm-specific negotiations is largely absent.

Political economy: soft or hard state?

Overriding all these interventionist strategies have been two key inter related features. First, as already noted, the regime has an enviable record of macroeconomic management, and a capacity to respond swiftly in the face of looming crises. Indeed, it could be considered a 'hard' state in this respect. But in its micro interventions, it has been decidedly less hard. Indeed, it displays all the hallmarks of a 'soft' state in this arena—corruption-prone (as the Arndt quote at

³³ Hill (1988, Chapter 8) summarizes some of the studies over this period.

the beginning testifies) and vulnerable to capture. In the 1970s, the military and senior government officials were seen as the villains in various anti-corruption campaigns. In the latter part of the 1980s and the early 1990s, attention has switched to powerful individuals connected to the highest levels of the regime, particularly the children of President Soeharto.³⁴

In part, as a consequence of this hard-soft dichotomy, there has been no consistent and cohesive industrial policy in Indonesia since 1966, as the initial quotes by two influential policy makers, Professor Sadli and Ir Soehoed, illustrate. Rather, policy has varied depending on the government's major policy preoccupations and on which policy group is in the ascendancy. Thus, during the late 1960s and early 1970s, those favouring a more liberal approach (but by no means free trade) were more powerful, as the government sought to revive the economy and restore the nation's battered international credibility. Again, from the late 1980s, a similar approach was in the ascendancy, albeit with some notable exceptions—powerful cronies and a few 'high-tech' projects. During the oil boom period, as fiscal constraints were relaxed, groups favouring a more interventionist strategy were more powerful. But it was a circumscribed power, constrained by both the aftermath of the Pertamina debacle and by the fundamental imperative of reasonably sound macroeconomic discipline. The swinging of the pendulum, and the constant tension between the two dominant—though rather amorphous—policy groups, are the key to understanding why Indonesia's industrial policy has lacked coherence, in marked contrast apparently to the Northeast Asian success stories.

The 'soft' nature of the state also explains the absence of 'compacts', or performance criteria more generally, between the government and major enterprises. It is true that some incentives pre-1984 were conditional in nature (for example, based on plant location, *pribumi* assistance) and firms were expected to contribute to a wide variety of government designated schemes (for example, quasi-official *yayasan* (foundations), bail-outs of distressed firms and financial institutions, military projects). But these were generally opportunistic and *ad hoc* arrangements. Firms and individuals making such contributions were usually amply rewarded, but the pattern of exaction was rarely systematic and cohesive. For example, there have been no instances of industry or firm-level output and export targets, or even systematic bureaucratic exhortations. Nor have there been

³⁴ For recent, illuminating accounts of the politics of economic policy, in addition to those in footnote 12, see Bresnan (1993), Liddle (1991), Mackie and MacIntyre (1994), and Schwarz (1994).

instances of private firms deliberately investing in low profit, long-gestation projects (such as the widely cited Korean ship building project) in exchange for cross-subsidised government patronage elsewhere.³⁵

Numerous additional examples could be adduced in support of the proposition that industry policy has lacked coherence and that incentives have not been performance related. An example of the former is that industry associations remain poorly developed in terms of a capability to develop far-sighted policy prognoses, an organisational capacity to implement government initiatives, and in some cases an ability to articulate industry-wide views on relatively simple matters.³⁶ An example of the latter proposition is that the Investment Coordinating Board (the BKPM), which operates under an Act introduced in 1967, is still unable to provide reliable data on realised foreign investments, such as the absence of follow up scrutiny of approved projects. Indeed, in an effort to update its listings of firms in operation, the Board periodically advertises in the national press, requesting firms to report their existence.³⁷

Conclusion

The main arguments may be summarised as follows. Though not rivalling East Asia's super-performers, Indonesia is unquestionably one of the developing world's success stories. Its capacity to respond effectively to crises is particularly laudable, as was demonstrated in the mid-1960s and mid-1980s. Relating these developments to the country's regional context, there is now an influential

³⁵ Sato (1993) provides an illuminating account of Indonesia's (and Southeast Asia's) largest business conglomerate, the Salim Group, the sales of which are about 6.5 per cent of Indonesia's GDP. She stresses in particular the opportunistic behaviour and short-term orientation of the group. It has, for example, quickly shifted out of loss-making activities, as noted above—in some instances handing them over to the government by converting its arrears on loans with state banks into government equity. Yoshihara (1988) provides a wide ranging analysis of conglomerates in Southeast Asia, including his well-known characterization of them as 'ersatz capitalists'.

³⁶ The major official body, the Indonesian Chamber of Commerce and Industry (*Kadin*) is regarded as little more than a government mouth-piece, and it possesses little in the way of policy, research or organizational capacity. An illustration of the underdeveloped state of industry associations has been the acrimonious decade long dispute among competing industry groups in the textile and garment industries. The dispute has centred on the allocation of textile quotas, the use of export levies for promotional purposes, and broader questions of policy strategy. See MacIntyre (1990). Despite Presidential intervention, it is still simmering.

³⁷ As another illustration, a major program to improve the country's industrial data base which began in the late 1980s, found many instances of unenumerated firms across all size, ownership, and regional groups.

literature which asserts that the East Asian—especially Northeast Asian—industrial successes owe much to governments selectively intervening to overcome alleged market failure. The purpose of this paper has been to argue that there is very little evidence to support such a proposition as it applies to Indonesia. I have surveyed the country's major instruments of industrial policy, and found no firm evidence of selectivity having a significantly beneficial effect. As a corollary, the evidence in support of the notion that the general economic policy environment—macroeconomic management, exchange rate management, regime credibility, political stability, large investments in physical and social infrastructure—is circumstantially very powerful, if unproven in any rigorous sense.

It is, however, appropriate to conclude with a number of caveats. It has not been the intention of this paper to argue that markets are everywhere and always superior to government interventions. It is inherently difficult to demonstrate beyond doubt the link between policy reforms and economic performance. Such an attempt at association suffers acutely from the counterfactual, 'what if' question. The mechanisms of causality are still not well understood, nor are the various lags. It is easier to prove the negative case than it is to demonstrate the positive one. Notwithstanding all these qualifications, the issue under discussion is of such importance that a foray into the realms of second or third best methodology seems worthwhile.³⁸

³⁸ One additional caveat might also be mentioned. The period under examination extends through to 1992. Since then, Indonesia's rate of economic growth has been broadly maintained, but manufactured export growth has slowed down. It is beyond the scope of this paper to explore the reasons for this slowdown, except to note that it has no implications for the merits, or otherwise, of selective industrial policy. Indeed, the most likely explanations for the slowdown are: looser exchange rate management (resulting in a real effective appreciation of the rupiah); less efficient administration of the export drawback schemes; and at the ports, serious supply-side bottlenecks, large increases in minimum wages, and increasingly intense competition from China. See the 'Survey of Recent Developments' in the *Bulletin of Indonesian Economic Studies* through 1993 and 1994 for further discussion of these issues.

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