

Southeast Asian Paper Tigers?

From miracle to debacle and beyond

Edited by Jomo K. S.

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Southeast Asian Paper Tigers?

Despite the rapid economic growth, structural change and industrialisation in the Southeast Asian region that the World Bank celebrated in 1993, the Asian crises that followed showed that basing a growth strategy on a system of attracting as much short-term capital as possible in as short a time as possible is somewhat foolhardy.

This timely and authoritative book examines and critically analyses the Southeast Asian economies over the last decade and into the future. The contributions from experts on Asian economies cover such themes as:

- the so-called Asian ‘miracle’
- manufacturing export growth in Southeast Asian economies
- technology and innovation
- education and economic development

Such a comprehensive and well-written book will be of great interest to scholars involved in international economics, business and finance as well as being an enlightening read for those involved in policy making in this important area.

Jomo K. S. is Professor in the Faculty of Economics and Administration, University of Malaya, Malaysia.

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Contributors

Anne Booth, Professor, Economics Department, School of Oriental and African Studies, University of London, London, UK.

Greg Felker, Assistant Professor, Social Sciences Division, Hong Kong University of Science and Technology, Hong Kong.

Natasha Hamilton-Hart, Assistant Professor, Southeast Asian Studies Programme, National University of Singapore, Singapore.

Jomo K. S., Professor, Faculty of Economics and Administration, University of Malaya, Kuala Lumpur, Malaysia.

Rajah Rasiah, Professor, Institute of Malaysian and International Studies (IKMAS), National University of Malaysia (UKM), Bangi, Selangor, Malaysia.

Acknowledgements

On 1 June 1997, some friends and I published *Southeast Asia's Misunderstood Miracle* in response to the World Bank's influential *East Asian Miracle* (1993). On the following day, the East Asian crisis began with the floating of the Thai baht. Our *Misunderstood Miracle* was then said by many to have predicted the Southeast Asian crises of 1997–98. In 1998, I published an edited volume, *Tigers in Trouble*, to identify financial liberalisation as the culprit. A second volume, *Malaysian Eclipse*, was published in 2001 to more carefully examine the Malaysian experience of crisis as well as recovery.

Nonetheless, a chorus of observers insisted either that the Southeast Asian miracle was still the superior model for emulation by other developing countries, or that it had led to the 1997–98 debacle. Two volumes have come of our efforts to set the record straight. In 2001, *Southeast Asia's Industrialization* underscored both the rapid industrialisation that had taken place in the region, including the contribution of industrial policy, as well as its limitations, particularly in terms of inferior industrial policy and weak resulting technological capabilities. This volume extends our attempt to introduce balance to consideration of the region's economic and social performance in other crucial aspects important to development.

I am grateful to all the contributing authors for their efforts, patience and co-operation, and to Brian Folk for his role in preparing the manuscript for publication despite his own difficult circumstances. As always, Foo Ah Hiang has been helpful. I am also thankful for Vani's help in various tasks, particularly with proofreading and indexing this volume. Our copy-editor Sarah Moore has also been very helpful.

Jomo K. S.
University of Malaya, Kuala Lumpur, Malaysia
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Abbreviations

ADB	Asian Development Bank
AFTA	ASEAN Free Trade Area
AOL	America Online
APDC	Asian Pacific Development Centre (Kuala Lumpur)
APEC	Asia Pacific Economic Co-operation
APITD	Action Plan for Industrial Technology Development (Malaysia)
ASEAN	Association of Southeast Asian Nations
ASEAN 4	Malaysia, Indonesia, Thailand, Philippines
BAFIA	Banking and Financial Institutions Act (Malaysia)
BAPEKSTA	Badan Pelayanan Kemudahan Ekspor dan Pengolahan Data [Agency for Export Facilities, Services and Data Processing] (Indonesia)
BKPM	Badan Koordinasi Penanaman Modal [Investment Coordinating Board] (Indonesia)
BNM	Bank Negara Malaysia [Central Bank of Malaysia]
BOI	Board of Investment (Thailand)
BoT	Bank of Thailand
BOT	build–operate–transfer
BPIS	Bahana Pakarya Industri Strategik [Indonesia Strategic Industries]
BPPI	Badan Penelitian dan Pembangunan Industri [Agency for Industrial Research and Development] (Indonesia)
BPPT	Badan Penerapan dan Pengembangan Teknologi [Agency for Absorption and Extension of Technology] (Indonesia)
BSP	Bangko Sentral ng Pilipinas (Central Bank of the Philippines)
BUILD	Board of Investment Unit on Industrial Linkage Development (Thailand)
CAD/CAM	computer aided design/computer aided manufacturing
CIPE	capital investment per employee

CKD	completely knocked down
CNC	computer numerical control
COLA	cost of living allowance
DOF	Department of Finance (Philippines)
DOST	Department of Science and Technology (Philippines)
DPB	Development Bank of the Philippines
DRAM	dynamic random access memory
DSP	Daftar Skala Prioritas [Priority Scale List] (Indonesia)
DTI	Department of Trade and Industry (Philippines)
EA	<i>Emerging Asia</i> (published by Asian Development Bank, 1997)
EAM	<i>East Asian Miracle</i> (published by World Bank, 1993)
EO	export-orientation/export-oriented
EPF	Employees Provident Fund (Malaysia)
EPconEP	effective protection conditional upon export promotion
EPTE	Entrepot Produksi untuk Tujuan Ekspor [Export Processing Entrepot] (Indonesia)
FDI	foreign direct investment
FIA	Foreign Investment Act (Thailand)
FMS	Federated Malay States (Malaysia)
FRA	Financial Restructuring Authority (Thailand)
FTI	Federation of Thai Industries
FTZ	free trade zone
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GERD	gross expenditure on research and development
GFCF	gross fixed capital formation
GIC	Government Investment Corporation (Singapore)
GM	General Motors
GNP	gross national product
GSP	generalised system of preferences
HD	human development
HICOM	Heavy Industries Corporation of Malaysia
HIID	Harvard Institute of International Development
HPAEs	high-performing Asian economies
HRD	human resource development
HRDF	Human Resources Development Fund (Malaysia)
IBRD	International Bank for Reconstruction and Development (World Bank)
IC/ASIC	integrated circuit/application specific integrated circuit
ICA	Industrial Coordination Act (Malaysia)
ICOR	incremental capital output ratio
IFCT	Industrial Finance Corporation of Thailand
IIA	Industrial Incentives Act, 1969 (Malaysia)

IMF	International Monetary Fund
IMP	Industrial Master Plan (Malaysia)
IPP	Investment Priorities Plan (Philippines)
IPTN	Industri Pesawat Terbang Nusantara [Nusantara Aircraft Industry]
IRPA	Intensification of Research in Priority Areas (Malaysia)
IS	import-substitution/import-substituting
ISO9000	International Standards Organisation 9000
IT	information technology
ITA	investment tax allowance
ITAF	Industrial Technology Assistance Fund (Malaysia)
KAPET	Kawasan Pengembangan Ekonomi Terpadu [Integrated Economic Development Zone] (Indonesia)
KIM	kalibrasi, instrumentasi, dan metrologi [calibration, instrumentation and metrology]
KLSE	Kuala Lumpur Stock Exchange (Malaysia)
LCD	liquid crystal display
LIPI	Lembaga Ilmu Pengetahuan Indonesia [Indonesian Institute of Sciences]
LMW	licensed manufacturing warehouse
LPND	Lembaga Pemerintah non-Departemen [Non-departmental Government Authority] (Indonesia)
M2	currency in circulation, demand, savings and time deposits of banks
M3	M2 plus banking-sector deposit substitutes
M&As	mergers and acquisitions
MASTIC	Malaysian Science and Technology Information Centre
MDC	Multimedia Development Corporation (Malaysia)
MEC	Malaysian Electric Corporation
MENRISTEK	Menteri Negara Riset dan Teknologi [Ministry of State for Research and Technology] (Indonesia)
MESDAQ	Malaysian Securities Dealer Automated Quotation
MFA	Multi-Fibre Arrangement
MIDA	Malaysian Industrial Development Authority
MIDI	Metalworking Industries Development Institute (Thailand)
MIGHT	Malaysia Industry-Government Group for High Technology
MIMOS	Malaysian Institute of Microelectronics Systems Research
MINT	Malaysian Institute of Nuclear Technology
MITI	Ministry of International Trade and Industry (Japan/Malaysia)
MNC	multinational corporation
MoF	Ministry of Finance (Japan)

MOI	Ministry of Industry (Thailand, Indonesia and Philippines)
MOIT	Ministry of Industry and Trade (Indonesia)
MoSTE	Ministry of Science, Technology and Environment (Malaysia)
MOSTE	Ministry of Science, Technology and Energy (Thailand)
MPEX	Manufacturing Productivity Extension Program (Philippines)
MSC	Multimedia Super Corridor (Malaysia)
MTDC	Malaysian Technology Development Corporation
MTS	managerial, technical, and supervisory
NAAP	National Action Agenda for Productivity (Philippines)
NAFTA	North American Free Trade Area
NBFI	non-bank financial institution
NEC	Nippon Electric Corporation
NECTEC	National Electronics and Computer Technology Center (Thailand)
NEP	New Economic Policy (Malaysia)
NESDB	National Economic and Social Development Board (Thailand)
NIC	newly industrialising (-ised) country
NIE	newly industrialising (-ised) economy
NIS	national innovation system
NRCT	National Research Council of Thailand
NSTA	National Science and Technology Authority (Philippines)
NSTDA	National Science and Technology Development Agency (Thailand)
OBM	own brand manufacturing
ODM	own design manufacturing
OECD	Organisation for Economic Cooperation and Development
OEM	original equipment manufacturing
OHQ	operational headquarters
OJT	on-the-job training
PABX	private automated branch exchange
PCB	printed circuit board
PDC	Penang Development Corporation (Malaysia)
PEZA	Philippines Export Zone Authority
PIA	Promotion of Investment Act (Malaysia)
PNB	Philippine National Bank
PS	Pioneer Status
PUSPIPTEK	Pusat Pengembangan Ilmu Pengetahuan dan Teknologi [National Centre for Science and Technology Development] (Indonesia)

PUSTAN	pusat standardisasi [Standardisation and Accreditation Centre] (Indonesia)
R&D	research and development
RD&E	research, development and engineering
RHQ	regional headquarters
RI	research institution
S&T	science and technology
SAP	structural adjustment programme
SDRs	special drawing rights
SEA3	Southeast Asian three (Malaysia, Thailand and Indonesia)
SEANICs	Southeast Asian newly industrialising countries
SGS	Société Générale de Surveillance (Switzerland)
SIJORI	Singapore–Johore–Riau
SIRIM	Standards and Industrial Research Institute of Malaysia
SME	small and medium sized enterprise
SMI	small and medium sized industry
SMIDEC	Small and Medium Industries Development Corporation (Malaysia)
SMT	surface mount technology
SOE	state-owned enterprise
STAMP	Support for Technology Acquisition and Mastery (Thailand)
STAND	Science and Technology Agenda for National Development (Philippines)
STDB	Science and Technology Development Board (Thailand)
TAPI	Technology Acquisition and Promotion Institute (Philippines)
TBA	Thai Bankers Association
TFP	total factor productivity
TISI	Thailand Industrial Standards Institute
TISTR	Thailand Institute of Scientific and Technological Research
TMDPC	Thailand Management Development and Productivity Institute
TNC	transnational corporation
TPA	Thai–Japan Technology Promotion Association
TRIMs	trade-related investment measures
TRIPs	trade-related intellectual property rights
TSG	technical services group
UK	United Kingdom
UKM	Universiti Kebangsaan Malaysia [National University of Malaysia]
UMNO	United Malays National Organisation (Malaysia)

UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Program
UNESCO	United Nations Economic, Social, and Cultural Organisation
UNIDO	United Nations Industrial Development Organisation
US	United States (of America)
USM	Universiti Sains Malaysia [Science University of Malaysia]
UTM	Universiti Teknologi Malaysia [Technology University of Malaysia]
VAT	value added tax
VDP	Vendor Development Program (Malaysia)
WDR	<i>World Development Report</i> (published by World Bank)
WIDER	World Institute of Development Economics Research, United Nations University (Helsinki)
WTO	World Trade Organisation

1 Introduction

Southeast Asia's ersatz miracle

Jomo K. S.

From the 1980s, and especially in the early and mid-1990s, there was growing international recognition of the rapid economic growth, structural change and industrialisation of the East Asian region, including four economies of Southeast Asia, namely Singapore, Malaysia, Thailand and Indonesia. There was a tendency to see East Asia as a much more economically coherent region than it actually is, and a corresponding tendency to see economic progress in the region as similar in origin and nature. Terms such as the 'Far East', 'Asia-Pacific', 'Pacific Asia', 'East Asia', 'Asian miracle', 'yen bloc', 'flying geese', 'tigers', 'mini-dragons' and so on have tended to encourage this perception of the region as far more economically integrated and similar than it actually is.

This volume mainly focuses on the three economies of Southeast Asia that have been considered part of the second generation or second tier of newly industrialising economies or countries besides Singapore, which is usually considered as one of the first generation or tier. It shows that although the economies of Southeast Asia, and hence East Asia, are quite heterogeneous, and at quite different levels of development, they have shared some policies that distinguish them from the other high-growth economies of the East Asian region.

Most importantly, the Southeast Asian high-growth economies have relied heavily on foreign direct investment (FDI) to develop most of their internationally competitive industrial capabilities. Government interventions in the region have, however, been influenced by a variety of considerations besides economic development and late industrialisation. Consequently, industrial policy has also varied in nature, quality and effectiveness. Yet, it will be shown that the economies in the region would not have achieved as much as they have without industrial policy.

The East Asian miracle and Southeast Asia

The most important and influential document recognising the rapid growth, structural change and industrialisation of much of East Asia in the last three

decades or more has been the *East Asian Miracle* volume published by the World Bank in 1993. As is now well known, the World Bank did not commission the study of its own volition, and with the East Asian financial crisis of 1997–98, there are many in the Bank who would now wish to disown the study. In fact, it appears that the study would not have been undertaken by the Bank if not for the initiative of Shiratori, the Japanese executive director – or government representative – on the Bank’s board.

Shiratori had pointed out the region’s rapid growth and structural change in sharp contrast to the Bank’s poor experience with structural adjustment programmes (SAPs) in Latin America, Africa and other parts of the world, and with the transitions it was trying to engineer in Eastern Europe. The SAPs and transitions had generally turned out to be very problematic, even resulting in severe recessions in several of these economies, and rather slow and unimpressive growth rates elsewhere, resulting in the so-called ‘lost decade’ of the 1980s. Shiratori suggested that the Bank should learn and draw lessons from the experiences of East Asia where, by the early 1990s, more than half a dozen countries had grown for at least a quarter of a century at rates exceeding 6 per cent per annum. Shiratori offered Japanese government funding for such a study, which the Bank then undertook.

In its *East Asian Miracle* (EAM) study, the World Bank identified eight high-performing Asian economies: Japan, the four first-generation newly industrialising economies (NIEs) or countries (NICs), dragons or tigers, namely South Korea, Taiwan, Hong Kong and Singapore, and the three second-generation South East Asian NICs, namely Malaysia, Thailand and Indonesia. Interestingly, of course, China was left out, perhaps because the Chinese experience would upset the analysis the Bank offers in that volume in very fundamental ways. The Bank study recognises that the likelihood of eight relatively contiguous economies growing so rapidly for such a sustained period of time is less than one in 60,000. Yet, it does not acknowledge the significance of geography – unlike the later 1997 *Emerging Asia* (EA) study led by the now defunct Harvard Institute of International Development (HIID) for the Asian Development Bank (ADB).

With the EAM study, the Bank seemed to have shifted its position from the sort of extreme neo-liberalism – or almost extreme economic liberalism – of the 1980s, to acknowledging an important developmental role for the state in the 1990s. The *Miracle* study appears to have had a lot to do with this shift, and this impression has been reinforced by other Bank activities and publications, especially the 1997 *World Development Report* advocating effective – rather than minimalist – states (World Bank 1997).

In the *Miracle* study, the Bank identifies at least six types of state interventions, which it saw as having been very important in East Asia. It approves of the first four, deemed functional interventions, and is more sceptical of the last two, deemed strategic interventions. Functional interventions

are said to compensate for market failures, and are, hence, necessary and less distortive of markets, while the latter two strategic interventions are considered to be more market-distortive. The two types of strategic interventions considered are in the areas of finance, specifically what it calls directed (i.e. subsidised) credit, and international trade, while the four functional interventions the Bank approved of are:

- a ensuring *macroeconomic* discipline and macroeconomic balances;
- b providing physical and social *infrastructure*;
- c providing good *governance* more generally; and
- d raising *savings* and investment rates.

It is very important to compare what has actually happened in East Asia with the way the World Bank has presented this.¹ Beginning with the importance of macroeconomic discipline, there is very little dispute that maintaining macroeconomic balances has been important in East Asia. But what the Bank considers to be the acceptable parameters of macroeconomic discipline may be disputed. One finds, for instance, that inflation was generally kept under 20 per cent in the high-performing Asian economies (HPAEs), but it certainly was not always kept below 10 per cent in all the economies. In other words, single digit inflation was neither a policy priority nor always ensured in some East Asian countries during their high-growth periods.²

Similarly, when considering other macroeconomic balances such as the fiscal balance and the current account of the balance of payments, one finds that the balances were not always strictly maintained in the way the Bretton Woods institutions now seem to insist on for much of the developing world. Malaysia and Thailand have had relatively high current account deficits throughout the 1990s, while other countries with much lower deficits were not spared the recent currency attacks and massive depreciation.

On physical and social infrastructure, until the 1980s, the Bank would probably have gone along with what the East Asians have done. However, since the 1980s, the Bank increasingly seems to be recommending private provision of physical infrastructure. With the exception of Hong Kong, most physical infrastructure in East Asia has been provided by governments until fairly recently, when there have been the beginnings of privatisation in the provision of physical infrastructure, which has become the basis for powerful private monopolies associated with 'crony capitalism'.

The role of government has been extremely important in providing so-called social infrastructure and services in East Asia. In some of its other documents, the Bank seems to acknowledge this, but nonetheless recommends a more modest role for government in the provision of social infrastructure. For instance, the Bank recommends universal and free primary education, but does not recommend the subsidisation of education

beyond the primary level, when the ‘user/consumer’ (student) should bear the full costs of education as far as the World Bank is concerned. This would have had very serious consequences in terms of human resource development, if one contrasts that recommendation with the actual experience of East Asia. To give some sense of how important government support for education has been beyond the primary level, in Korea today, over 40 per cent of young people of university age attend universities. Thailand has a percentage of close to 20 per cent, Indonesia has 10 per cent and most of the first-generation East Asian NIEs have well over 25 per cent, generally over 30 per cent.

The notion of good governance is quite ambiguous, and is often used rather tautologically. When things are going well, there must be good governance; otherwise, presumably, things would not be going well. So one does not really have much of an explanation of good economic performance by simply invoking good governance, although it is widely touted these days, sometimes *ad nauseum*. There have been important efforts to try to understand the factors contributing to good governance, and the *1997 World Development Report* has been important and useful in this regard. It seems from the East Asian experience that what was called ‘strong government’, in Gunnar Myrdal’s sense, has been important, though the notion of ‘strong government’ is often misunderstood and wrongly associated with authoritarian government.³

What Peter Evans (1995) calls ‘embedded autonomy’ has become a useful way to try to understand some conditions for good governance. Here, embeddedness refers to the institutional capacity and capability of the governments concerned to effectively provide the co-ordination necessary for rapid accumulation and economic transformation. Autonomy is primarily understood to be from ‘vested interests’, ‘special interest groups’, ‘distributional coalitions’ and ‘rent seekers’ who, in more favourable or conducive circumstances, would be able to influence public policy to their own advantage. This kind of autonomy is considered to have been very crucial in ensuring that regimes in East Asia could effectively serve as developmental states.

The role of the state in generating savings and encouraging investments is also generally agreed upon. However, much of the high level of East Asian savings actually comprises of corporate or firm savings, rather than just household savings. Household savings in East Asia are not spectacularly higher than in the rest of the world, except in Malaysia and Singapore. The difference in Malaysia and Singapore is due to the mandatory or forced savings schemes introduced in the late colonial period and the relatively high proportion of the working class or wage-owners as a proportion of the labour force. The latter is particularly true in the case of Singapore, but is also not insignificant in the case of Malaysia. The significance of coerced savings needs mention because of the popular view that the high savings and

investment rates in the region exist because East Asians are culturally if not congenitally thrifty.

The large contribution of high corporate savings implies that firms have often been able to enjoy very high profit rates due to government interventions, subsidies, tax breaks and other incentives for particular types of investments favoured by the governments, enabling the firms concerned to enjoy higher 'rents'. But what has been most important is that conditions (e.g. tax incentives and other inducements), largely created by governments, have induced high rates of reinvestment of these huge profits by these firms.

How have these high rates of reinvestment been assured? In some countries in East Asia, these have been assured by having very strict controls on foreign exchange outflows. Capital flight was made very difficult in some countries in East Asia, especially South Korea and Taiwan, during their high-growth periods. Also, by structuring laws so that reinvestment of profits has been subject to little or no tax at all, or by offering other incentives to undertake particular types of investments, high levels of reinvestment have been successfully induced.

In pursuing these supposedly functional interventions, the East Asian governments were not just market conforming, but instead played important roles which have been more than simply market augmenting, as suggested by the World Bank analysis. On the more controversial, so-called strategic interventions in finance and international trade, the Bank almost grudgingly concedes that financial interventions have been important and successful in East Asia, particularly in Northeast Asia – i.e. in Japan, Korea and Taiwan. However, the Bank implies that nobody else is capable of successfully pursuing the types of policies that the Northeast Asians successfully implemented because state capabilities in Northeast Asia have been almost unique and are non-replicable.

Creating the conditions for attracting investment, both domestic private investment as well as foreign investment, has had much more to do with reforming incentives and governance more generally to attract particular types of investments to generate specific sources of economic growth rather than liberalising financial markets as such. Southeast Asian governments, notably Singapore and Malaysia, have especially sought to attract FDI into areas where indigenous industrial capabilities were not expected to become internationally competitive. Venture-capital markets, rather than the usual stock markets, tend to be more supportive of developing new industrial and technological capabilities.

Attracting FDI should, however, be distinguished from capital account liberalisation. Chile, which has been very FDI-friendly, has imposed fairly onerous obstacles on easy exit, probably limiting capital inflows, especially of a short-term nature. Capital account liberalisation has come under renewed consideration after the East Asian financial crisis since mid-1997, precipitated by an eventually successful currency attack on the over-valued

Thai baht and greatly exacerbated by herd-like panicky withdrawals from the entire Southeast Asian region, inducing currency and stock market collapses (Jomo 1998).⁴ Since those who control financial assets usually enjoy disproportionate political influence in most contemporary economies, especially in most developing countries, liberalising financial markets alone, without offering sufficient inducements for a net inflow of portfolio investments, may well cause greater movements out rather than in.

Why did the Bank give a positive evaluation of financial interventions in Northeast Asia despite their clear violation of market norms? A few might suggest that this evidence offers no other possible conclusion, but most observers would dispute this, especially given the ongoing problems of the Japanese financial system. Another explanation is the influence and unorthodox analysis of current World Bank Senior Vice-President and Chief Economist, Joseph Stiglitz, then a professor at Stanford University, who is credited with being the principal author of this part of the Miracle study.⁵ The more cynical might point out that the study was funded by the Japanese Ministry of Finance (MoF), and it is hardly likely that the World Bank would bite the hand that feeds it by negatively evaluating the Ministry's record. Given the historic rivalry between the Finance Ministry and the bureaucratically weaker Ministry of International Trade and Industry (MITI), some Japanese suggest that it is not surprising that the Bank study did not criticise the role of the Ministry of Finance of Japan, but was less sympathetic to MITI and international trade-related industrial policy.

The Miracle volume's evaluation of the record of Japan's MITI and its counterparts elsewhere in the region is more predictable, arguing that government interventions have been trade-distortionary and, more importantly, generally unsuccessful in East Asia, with some minor exceptions. However, contrary to the impression given by the study, the Japanese, South Korean and Taiwanese governments did pursue import substituting industrialisation policies from the 1950s, but soon pursued export-orientation *as well* to ensure that their industries quickly become internationally competitive by requiring a rapid transition from import substitution to export-orientation.

In many cases, infant industries were generally provided with effective protection conditional on export promotion, which had the effect of forcing the firms and industries concerned to quickly become internationally competitive. By giving firms protection for certain periods, depending on the product being made, and by also requiring that they begin exporting certain shares of output within similarly specified periods, strict discipline was imposed on the firms in return for the temporary trade protection they enjoyed.

Quantitatively, such policies forced firms to push down their own production costs as quickly as possible, e.g. by trying to achieve greater economies of scale and accelerating progress up learning curves. Requiring exports has

also meant that producers had to achieve international quality standards quickly, which imposed pressures to progress technologically in terms of products as well as processes. With strict discipline imposed, but also some flexibility in enforcement, many firms managed to rapidly achieve international competitiveness.

The *Miracle* volume and its supporting studies have implied and argued that Southeast Asia began to take off after it reversed such trade interventions. Hence, the mid-1980s are portrayed by the Bank as a period of economic liberalisation and deregulation leading to economic recovery and rapid growth and industrialisation. In fact, while exports tend to rise with trade liberalisation in the short term, imports also tend to rise strongly, especially if the domestic currency appreciates in real terms. Thus, trade liberalisation tends to limit or only weakly supplement domestic effective demand. Hence, while increased international trade may enhance growth, the added stimulus tends to be much less than presumed by proponents of trade liberalisation. Despite efficiency gains from trade liberalisation, increased exports do not necessarily ensure stronger domestic economic growth, i.e. export-led growth.

Given international trends and pressures in recent years, trade liberalisation has become increasingly inevitable. But by proactively anticipating the apparently inevitable, some advantage may be regained by the deliberate sequencing and timing of trade liberalisation. Unfortunately, many trade policy instruments have been excluded by recent trends in international trade governance and are no longer available as options for governments. For example, local content requirements were phased out with the conclusion of the Uruguay Round of negotiations under the General Agreement on Tariffs and Trade (GATT). However, despite considerable diminution, there still remains some scope for trade policy initiatives in support of industrial policy.

It is instructive to consider some of the important differences among the East Asian economies, particularly to consider whether all of East Asia has been proceeding inexorably in the same basic direction in a similar manner. Although the Bank does not really tout an East Asian model as such, the Bank study has often been read as offering one, or perhaps two variants. However, more generally, as suggested earlier, there has been much talk about East Asia in the singular, as constituting a flock of 'flying geese' or even a 'yen bloc'. Many observers even speak of generic East Asian models, approaches or ways of doing things. In response to the financial crisis since mid-1997, as sentiment on East Asia has turned sour, there have been similar broad-brushed sweeping generalisations about East Asian 'crony capitalism'.

While there are many lessons to be drawn from the East Asian experience, they certainly are far from constituting a single model. Some of the major differences in East Asia are themselves very instructive. In the case of

the role of foreign direct investment (FDI), one finds tremendous contrasts, especially between Southeast Asia and the rest of East Asia. As Jomo *et al.* (1997) and Jomo (2001a) have shown, the facts are more complicated than suggested by the Bank. There certainly was some deregulation in Southeast Asia in the mid-1980s, for example, but there also was some new private sector-oriented regulation, more appropriate to the new industrial policy priorities of the governments of Singapore, Malaysia, Thailand and Indonesia.

In the case of Singapore, FDI has constituted about a quarter of gross domestic capital formation. In the case of Malaysia, the proportion has been about 15 per cent. At the other end of the spectrum, in the case of Japan and Korea, the percentage has long been below 2 per cent. Some of the other countries fall between these two extremes, with very few near the mean for developing countries of around 5 per cent. Those most successful in developing industrial capacities and capabilities in East Asia – namely Japan, South Korea and Taiwan – have hardly depended on FDI, which has only played a relatively small role.

The far greater importance of FDI in Southeast Asia has been due to a variety of reasons, which have not been entirely economic. One of the reasons for the major role of FDI in Singapore and Malaysia is political. After Singapore seceded from Malaysia in 1965, the regime decided that, to ensure its own survival, it would be best to attract foreign investment in massive quantities to Singapore, so that the major foreign powers would quickly develop a stake in the survival of the Singapore regime. Subsequently, of course, this preference has been justified in terms of improving access to the technology frontier. In other words, political considerations have been a very important reason for attracting, even privileging foreign investment in Singapore.

In the case of Malaysia, the country has long had ethnic rivalries and an ethnic affirmative action policy. This has encouraged some policy makers to try to limit ethnic Chinese control of the economy by encouraging FDI so that the proportion of ethnic Chinese control of the economy would be correspondingly reduced. Again, one finds a political motivation for the important role of FDI in Malaysia. Singapore and Malaysia are, in some sense, exceptions, and these exceptions need to be explained politically, rather than simply by economic considerations.

Clearly, there is considerable diversity in the role and performance of public investments, including state-owned enterprises (SOEs), in East Asia, including within Southeast Asia. In South Korea, Japan and, of course, Hong Kong, state-owned enterprises are hardly important today, but historically, state-owned enterprises were important in Japan at the end of the last century and early this century, before the World War II. Conversely, however, one finds that state-owned enterprises have been extremely important in Singapore and Taiwan more recently. Again, this is partly

explained by political factors, but there are also economic considerations. And very importantly, the performance of these state-owned enterprises has also been quite impressive.

In the case of Singapore, for instance, the single largest Singapore foreign investor, in other words, the biggest Singapore firm investing abroad, has been the GIC, the Government Investment Corporation. For quite a number of years in the 1990s, the average rate of return for the GIC's investments was higher than for all major financial investment firms in the City of London as well as on Wall Street, which is no mean feat. Such SOE success poses a challenge for those who insist that state-owned enterprises are bound to fail because of property rights and principal-agent arguments.

There is also tremendous diversity in the role of industrial and technology policies in East Asia. One extreme, of course, is Hong Kong, where there is relatively little industrial policy, although more than most opponents of industrial policy care to admit. It has been far more detailed and sophisticated in Japan and Korea at the other end of the spectrum. In Korea, industrial policy was largely oriented towards large firms, whereas in Taiwan, much more emphasis was given to medium and relatively smaller enterprises.

There have also been different orientations, emphases and instruments in industrial policy in the region. For example, the role of trade policy has been very important in almost all economies in the region except Hong Kong and Singapore, while financial policy has been important in all the countries, including Singapore, but again, with the exception of Hong Kong. Since Hong Kong's reversion to China in mid-1997, there have been many indications of the likely introduction of industrial policy for the territory, presumably in line with its new status and China's envisaged role for the de-industrialised financial centre. There have also been very important differences in the role of technology policy in the region.

As noted earlier, the World Bank recommends that the rest of the developing world emulate Southeast Asia, not Northeast Asia. There are very important differences between Northeast Asia and Southeast Asia underlying the Bank's recommendations. These differences compel us to recognise the achievement of the first-tier East Asian NIEs (including Singapore) – rather than the transformation of the second-tier Southeast Asian NICs – as far more impressive and superior in terms of economic performance. This volume looks at some of the major differences.

Despite the much greater resource wealth of Southeast Asia, one finds that growth performance has been superior in Northeast Asia over the long term. Over the period studied by the Bank, i.e. from the 1960s until the early 1990s, the average growth rate in the former was in the region of about 8 per cent, compared to about 6 per cent for the latter. A 2 per cent difference, compounded over a period of a quarter century or more, adds up to a lot. Very importantly, population growth – except in Hong Kong due to

immigration from China and, perhaps, Singapore – has been much lower in the former compared to the latter. The immigration into Hong Kong and Singapore involves a very high proportion of people in the labour force, thus raising the average labour utilisation rate. Political factors have also ensured far more equitable distribution of economic welfare than would otherwise have been the case in the first-tier NIEs, whereas such considerations have been less influential in the second-tier Southeast Asian NICs except perhaps for Malaysia owing to its ethnic ‘social contract’.

Hence, the improvements in per capita income and economic welfare have been much more significant in Northeast Asia, compared to Southeast Asia (with the exception of Singapore), despite the relative resource wealth of Southeast Asia. In other words, what Southeast Asia has achieved has been less impressive in some critical ways. Drawing from this contrast, some people now argue that resource wealth is not a blessing, but arguably, a curse, insofar as it postpones the imperative to industrialise.

As noted earlier, Northeast Asia has generally had much more sophisticated and effective industrial policy compared to Southeast Asia. This accounts, in no small way, for the very important differences in industrial and technological capabilities between Northeast Asia and Southeast Asia. Also, Southeast Asian industrialisation is still primarily driven by FDI, whereas Northeast Asian industrialisation is primarily an indigenous phenomenon.

It is now generally recognised that Japan and the first-generation NIEs began to industrialise in the very specific economic and political conditions of a particular Cold War historical conjuncture. Northeast Asia grew rapidly in the immediate post-war period under a ‘security umbrella’ provided by the Americans, especially after the Cold War began. Besides subsidising military expenditure and providing generous aid, the Americans were anxious for them to ‘succeed’ economically in order to be showcased as attractive alternatives to those under communist rule or influence. Hence, the Americans were quite happy to tolerate trade, finance, investment, intellectual property and other policies violating *laissez-faire* market or neo-liberal economic norms that they are now strongly opposed to, especially with the end of the Cold War. These favourable conditions are simply not available to others, and hence, their experiences are said to be almost impossible to emulate.

In arguing why other developing countries should not emulate the first-generation East Asian NIEs, it is now often argued that their state capabilities are almost unique and virtually impossible for any other regimes to emulate. The more cultural explanations suggest that this has something to do with the East Asian Confucian legacy of meritocracy. However, it is important to remember that the supposedly Confucian Kuomintang government of Taiwan was the same regime driven out of mainland China by the communists because of its incredible incompetence and corruption.

One could say the same of the Rhee regime in Korea in the 1950s as well as the Chun and Roh regimes in the 1980s. Japan has hardly been scandal-free in recent years and most observers would trace recently disclosed abuses to the nature of post-war Japanese political economy. The superior policy making and implementation capabilities of the Northeast Asian decision makers was, at least until recently, widely acknowledged, but this, in itself, does not prove the existence of thoroughly competent and incorruptible policy makers.

There is also the claim that East Asia cannot be emulated owing to its very different initial conditions. Such differences are real, but often exaggerated. There is no doubt that Japan and the first-tier East Asian NIEs are now distinguished by much higher levels of mass education. For example, however, the level of literacy in Korea in 1950 was lower than the literacy rate in contemporary Ethiopia, which has one of the lowest rates in Africa today. The level of education achieved by contemporary South Koreans reflects the tremendous investments put into developing human resources in East Asia in the post-war period as East Asia was not generally that far ahead in the immediate post-war period despite, or perhaps even because of its (elitist) Confucian legacy. But by the end of the 1960s, literacy rates had gone up tremendously for the first-generation East Asian NIEs after tremendous resources had been put into education in the preceding two decades.

In discussing initial conditions, some fortuitous circumstances must also be considered. Japan, South Korea and Taiwan all had relatively virtuous American-sponsored land reforms soon after the end of the war (e.g. see Hsiao 1996). In Japan, there also was significant redistribution of other non-land assets, most notably, of the pre-war and wartime *zaibatsu* industrial conglomerates. Much of the motivation for such redistributive reforms was, of course, anti-communist, i.e. to undermine and minimise support for the communists by those desiring asset redistribution.

The implications of asset redistribution in Japan were tremendous. Ironically, the Americans were not uninfluenced by the Left, partly because of the nature of the wartime anti-Axis alliance and the nature of the most influential scholarship available (Tsuru 1993). During the post-war American occupation of Japan, it was widely presumed that the *zaibatsu* 'military industrial complex' had been responsible for the militarisation of pre-war Japan. So the Americans decided to dismantle the *zaibatsu*, and forcibly broke family control of the *zaibatsu*, selling off the assets in interesting ways with important consequences. To ensure popular acceptance of this policy, first preference was given to employees, and then to local communities, thus developing worker and community stakes in the companies and the basis for what is now called a stakeholder economy. Thus, the stakeholder economy was created by deliberately redistributive policies that have had many outcomes now considered to be peculiarly Japanese.

Similarly, many now acknowledge the influence of the ‘human relations’ school of industrial relations on the post-war development of guaranteed life-long employment and the seniority wage system, both of which have effectively developed a strong employee commitment to the fate of their firm. There are many other ostensibly peculiarly Japanese features. Many of these were not features inherited from the Edo period or even developed autochthonously during the Meiji period. Quite a few are actually relatively recent innovations, with rather virtuous consequences.

There are important lessons to be drawn from East Asia, but clearly, there is no model as such, and most certainly, not one that cannot distinguish the different experiences of Southeast Asia. For a number of other reasons as well, it does not make much sense for anybody or any other country to think in terms of trying to emulate any particular economy in the region or East Asia more generally. There are also reasons why most other developing countries will find it impossible to emulate East Asia even if they want to. Nevertheless, some important lessons can be drawn from the Southeast Asian experiences, as the chapters of this volume show. Such lessons are best drawn from careful analysis rather than more cavalier broad-brushed generalisations about a rather diverse region.

From miracle to debacle

To sum up thus far, before the currency and financial crisis of 1997–98, the Southeast Asian second-tier newly industrialising countries (NICs) were being celebrated by the World Bank and others as the new models for emulation by other developing countries. In its influential 1993 publication, *The East Asian Miracle*, the Bank argued that eight high-performing Asian economies (HPAEs) – Japan, South Korea, Taiwan, Hong Kong, Singapore, Malaysia, Thailand and Indonesia – had achieved sustained and equitable export-led high growth and rapid industrialisation. Thus, the East Asian miracle was characterised as principally due to export-led growth.

The Bank and others suggested that owing to various exceptional characteristics of the first five HPAEs, the last three Southeast Asian HPAEs were the most appropriate examples for other developing countries to emulate. Implicit in this recommendation was the claim that the achievements of the Southeast Asian three (SEA3) countries of Malaysia, Thailand and Indonesia were similar to, and comparable with, the other HPAEs in terms of growth, structural change and industrialisation. Two earlier volumes (Jomo *et al.* 1997; Jomo 2001a) have argued that the SEA3’s industrialisation records have been significantly different from, and inferior to, those of the other HPAEs, especially Japan, South Korea and Taiwan, as well as Singapore.

Closer examination suggests that the experiences of the SEA3 as well as Hong Kong and Singapore more closely approximate this imagined export-

led growth model than those of Japan, South Korea and Taiwan. The latter appear to have promoted exports very actively while also protecting domestic markets, at least temporarily, to develop domestic industrial and technological capabilities in order to compete internationally. This strategy of temporary effective protection conditional upon export promotion (EPconEP) can hardly be equated with trade liberalisation. Recent criticisms (Baer, Miles and Moran 1999) of attempts by an earlier generation (e.g. Ian Little, Jagdish Bhagwati, Anne Krueger) to accommodate the Northeast Asian EPconEP experience within their fundamentalist free trade advocacy paradigm have exposed the intellectual sophistry of neo-classical trade economists in trying to explain away the Northeast Asian success in export promotion in conjunction with national market protection.

Besides more modest growth as well as industrialisation, the Southeast Asian HPAEs (including Singapore) have relied much more on FDI compared to Japan, South Korea and Taiwan. The much greater Southeast Asian dependence on FDI raises disturbing questions about the actual nature of industrial and technological capacities and capabilities in these countries, especially in their most dynamic and export-oriented sectors. This, in turn, raises concerns about the sustainability of their growth and industrialisation processes, especially if they are later deemed less attractive as sites for further FDI, e.g. as more attractive alternative locations become available.

Although critical of the Southeast Asian record and potential, neither volume actually anticipated the Southeast Asian debacle of 1997–98. Although some of the weaknesses identified did make the region economically vulnerable, neither volume addressed one crucial implication of the greater role of foreign capital in Southeast Asia, especially in light of some globalisation trends that became more pronounced in the 1990s. As previously noted (Jomo 1998), dominance by foreign transnationals subordinated domestic industrial capital in the region, allowing finance capital, both domestic and foreign, to become more influential in the region.

In fact, finance capital developed a complex symbiotic relationship with politically influential rentiers, now dubbed ‘cronies’ in the aftermath of 1997–98. Although threatened by the full implications of international financial liberalisation, Southeast Asian financial interests were quick to identify and secure new possibilities of capturing rents from arbitrage as well as other opportunities offered by gradual international financial integration. In these and other ways (e.g. see Gomez and Jomo 1999; Khan and Jomo 2000), transnational dominance of Southeast Asian industrialisation facilitated the ascendance and consolidation of financial interests and politically influential rentiers.

This increasingly powerful alliance was primarily responsible for promoting financial liberalisation in the region, both externally and internally. However, in so far as the interests of domestic financial capital did not

entirely coincide with international finance capital, the process of international financial liberalisation was necessarily partial. The processes were necessarily also uneven, considering the variety of different interests involved and their varying strengths in various parts of the region.

History too was not unimportant. For example, the banking crisis in Malaysia in the late 1980s served to ensure a prudential regulatory framework which checked the process from becoming more like Thailand's, where caution was thrown to the wind as early external liberalisation measures succeeded in securing capital inflows. Yet, in both countries, such flows were desired to finance current account deficits, principally due to service account deficits (mainly for imported financial services as well as investment income payments abroad) and growing imports for consumption and output of non-tradables, mainly in the property (real estate) sector. While financial flows into Thailand mainly went through the banking system, portfolio flows into the stock market were far more important for Malaysia.

Thus, the 1997–98 Southeast Asian debacle can be traced to poorly conceived and sequenced financial liberalisation that resulted in attracting massive, but easily reversible capital inflows into the region. As elsewhere in the region, capital inflows increased substantially with international financial liberalisation, especially just before the 1997–98 crisis. Capital inflows tended to raise foreign reserves, domestic credit availability as well as exchange rates.

The combination of increased capital inflows, credit expansion and exchange rate appreciation raised aggregate demand more rapidly than GDP, further increasing the current account deficit. While additional credit availability due to capital inflows may well have stimulated total spending due to increased domestic investments, such inflows also supported consumption booms (with high import contents) as well as speculative asset (stock or property) price bubbles. Such temporary increases in demand could not be sustained, as the consequently greater external deficit was not sustainable. Worse still, capital flight ensued as the bubbles began to collapse, and was accelerated by panic induced by regional contagion from the fall of the Thai baht. Weakened prudential regulation had increased financial fragility, whose manifestations encouraged panic, resulting in massive capital flight.

Increased private-sector demand growth due to trade and financial liberalisation in the absence of strong contributions from the public sector or from abroad has often contributed to import-led consumption booms. Such increased consumption was encouraged by cheaper imported goods due to import liberalisation and real exchange rate appreciation in the region before the 1997–98 crisis. It was also enhanced by domestic credit expansion due to increased capital inflows as well as domestic financial liberalisation.

There is little evidence that capital inflows into the region contributed significantly to accelerating the pace of economic growth, especially in the tradable sectors of the economy. Instead, it is likely that they contributed greatly to the asset price bubbles, whose inevitable collapses were accelerated by the advent of currency crises with such devastating consequences. Other likely consequences include consumption binges as well as poor and excessive investments, though the evidence for, and understanding of, these phenomena are somewhat exaggerated.

Book outline

In the aftermath of this regional debacle, this volume critically evaluates the Southeast Asian miracle record more broadly. Earlier volumes have focused on the origins and nature of the 1997–98 financial crises (Jomo 1998; Jomo 2001b) as well as the region's industrialisation record (Jomo 2001a). Thus, this volume suggests that the Southeast Asian achievement was more modest than suggested by the celebratory triumphalism before the 1997–98 crisis, and was promoted as a model for emulation by other developing countries instead of the other HPAEs, especially those in Northeast Asia, which offered experiences that fundamentally challenged the neo-liberal economic policy orthodoxy of the last two decades.

While this volume does not seek to explain the 1997–98 crisis, it suggests that the region's ersatz miracle created some of the conditions leading to the debacle. Even more importantly, the weak industrial and technological capabilities underlying the region's earlier high growth do not bode well for the future. Most significantly, this volume suggests that the conditions for the region's sustainable growth and development in the future may be inadequate, especially in the face of the growing competition from alternative production sites offering increasingly attractive investment conditions. While current public discourse focuses on the 'China challenge', there are, in fact, other sources of concern for the region. Thankfully, there is some recognition of the region's weaknesses, especially by the Mahathir and Thaksin administrations, though policy initiatives and implementation give little cause for relief.

The next five chapters of this volume consider the real economy, briefly revisiting, but also going well beyond, earlier critiques of Southeast Asia's economic achievements. The focus of the volume thus shifts to issues relating to the pre-crisis miracle and the problematic prospects for returning to, let alone improving upon the earlier high growth and rapid industrialisation trajectory.

Chapter 2, 'Manufacturing export growth in Indonesia, Malaysia and Thailand' critically reviews the SEA3's experiences with export-led industrialisation before the crisis. *Rajah Rasiah* thus extends themes developed in earlier critiques of Southeast Asian industrialisation (Jomo *et al.* 1997; Jomo

2001a). The issues raised are not only important for serious consideration of the suitability of the three as models for emulation, but also poses issues that will need to be addressed if the current economic recovery is to be sustained for a new episode of rapid growth and industrialisation.

In Chapter 3, on new investment policies in Southeast Asia, Greg Felker and Jomo consider the changed international investment environment, especially in the East Asian region, with accelerated globalisation and economic integration in the last decade. Taking into consideration the fresh constraints imposed by new international regulations as well as commitments and, also, the more sophisticated industries in some of these economies, they suggest that investment policy reform was already occurring before the 1997–98 crisis. However, the crisis and its aftermath, including the conditionalities imposed by the IMF on Thailand and Indonesia for emergency credit facilities, have also introduced new constraints. Attracting new ‘green field’ investments to restore and sustain growth as well as structural change is all the more urgent as so much more of recent FDI in the region has involved mergers and acquisitions.

Greg Felker, in Chapter 4, ‘Technology policies and innovation systems in Southeast Asia’ reviews the various official efforts to accelerate industrial technological progress in the region. Domestic political priorities have often neglected technology policies, while policy initiatives have also been constrained by the nature of the governments concerned. All too often, technology policies have not been sensitive enough to sector or industry specific conditions. Felker notes the increasingly limited scope for discretionary policies as global regulatory frameworks are defined by international organisations with enforcement capacities as well as effectively co-ordinated and articulated investor demands. Nonetheless, he also emphasises the continued scope for, and potential of, informed technology policies in the region.

Most accounts of the East Asian miracle have emphasised the key contributions of educational efforts in raising the quality of human resources throughout the region. Looking more carefully at the Southeast Asian record in this regard, Anne Booth finds not all that much to shout about. In Chapter 5, on education in Southeast Asia, she finds Southeast Asian educational achievements, including those of the SEA3, grossly inferior to those of the other HPAEs. According to Booth, there is little evidence that the region’s achievements in human resource development contributed crucially to the rapid growth and industrialisation it experienced.

Ironically, the country which has the highest share of tertiary educated in the region, the Philippines, has not had a particularly impressive economic growth record, admittedly for a complex variety of reasons. Booth’s findings and comparisons compel a reconsideration of the facile policy recommendation that governments should concentrate on enhancing human resources but subsidise only primary schooling. There is also considerable cause for

concern that rapid structural change, industrialisation and productivity gains might not be achievable in the future owing to the region's poor educational efforts.

In Chapter 6, 'Growth with equity in East Asia?', Jomo compares and contrasts the SEA3 with South Korea and Taiwan. He shows that the latter two economies not only achieved far more in terms of growth, industrialisation and structural change, but that inequality was significantly lower as well. He suggests that the latter two's better economic performances were due to more effective government interventions, especially selective industrial policy, while the lower inequality was due to significant asset (especially land) redistribution before the high-growth period. There is also evidence that economic liberalisation in recent years may well have exacerbated inequalities in both East Asian groups.

Chapter 7 focuses on the dangers of ill-conceived and poorly sequenced financial liberalisation, both at national and international levels. Natasha Hamilton-Hart and Jomo offer a longer view of the crisis by reviewing how the changing role of central banks in the region fell short of the new challenges posed by the ascendance of finance capital after the destruction of the post-war Bretton Woods system. National level central banking faced a new situation with the new international monetary system that emerged after the US abandonment of the Bretton Woods framework in 1971. Further international financial liberalisation from the 1980s added to the new problems to be dealt with by national monetary authorities precisely when the role of government was coming under more pressures for economic liberalisation. Thus, their chapter on financial governance and crisis in Southeast Asia underlines the failure of regulatory reform to rise to new challenges posed by the new international as well as domestic situations.

Thus, this volume argues that the Southeast Asian component of the East Asian miracle – as represented by Malaysia, Thailand and Indonesia – was inferior to the rest of the region's economic achievements in terms of growth, inequality, industrialisation, policy formulation and implementation, human resource development, as well as development of industrial and technological capabilities. Although the regional financial crises of 1997–98 were not a direct outcome of these factors, or even of cronyism or poor corporate governance as commonly alleged, the fragility and vulnerability of the region's national financial systems are not unrelated (also see Jomo 1998). However, the weaknesses identified in this volume were beginning to adversely affect growth and industrialisation in the region even before the advent of the crisis. Unless adequately addressed, both rapidly and on a coherent and consistent basis, these failings will limit the likelihood of rapid future growth and structural transformation associated with the East Asian miracle.

Notes

- 1 As Fernando Henrique Cardoso, now President of Brazil, showed in his article on what he called the 'consumption' of Dependency Theory, a very crude and mechanical version became influential in North America, which had very important intellectual and other implications. Similarly, recognising the institutional differences of East Asia can be obscured by the influence of a particularly dominant or influential perspective, such as the Bank's version of the East Asian difference.
- 2 For example, in South Korea and Taiwan, inflation rates were often in their teens, and this was conducive to, rather than disruptive of, investments, particularly in productive assets, and growth.
- 3 Authoritarian or repressive government may actually be an indication of weak government in the Myrdalian sense. The inability to secure legitimacy from among the population requires authoritarian regimes to resort to repressive measures.
- 4 After the Mexican crisis, with its so-called 'tequila effect', even the IMF seemed to back off temporarily from its previous, almost-fundamentalist advocacy of financial market liberalisation.
- 5 The more positive evaluation of the role of the state in the *1997 World Development Report* (WDR), the first since he took over as Chief Economist at the Bank, has strengthened this interpretation. However, Bank insiders point out that the theme of the 1997 WDR had been decided before Stiglitz joined the Bank after the untimely death of his predecessor.

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2 Manufacturing export growth in Indonesia, Malaysia and Thailand

Rajah Rasiah

The second-tier Southeast Asian newly industrialising countries (SEANICs) have recorded substantial manufacturing growth since the 1970s, which, especially since the 1970s in Malaysia and since the second half of the 1980s in Thailand and Indonesia, has been led by rapid export growth. Some economists have considered their achievement to be a result of following the sequence of rapid export-led growth in the Asian newly industrialised economies (NIEs) of South Korea, Taiwan, Singapore and Hong Kong. To proponents of Akamatsu's (1962) flying geese model, Southeast Asia forms the second follow-up group in a sequential process following the leading goose, Japan, and the first follow-up group of first-tier Asian NIEs (e.g. Kojima 1977). This pattern is assumed to have spread to other economies in Southeast Asia. Such a model also assumes that regional economies are unlikely to generate synergic effects in sites far from their borders.

To some traditional trade theorists, their success follows the pursuit of liberal export-oriented policies (e.g. Garnaut 1980; Krueger 1983; Balassa 1991). To the World Bank (1993), Southeast Asia's rapid growth is associated with market-friendly policies, ensuring good macroeconomic fundamentals. Some Southeast Asian authors echo the above sentiments arguing that the rapid manufacturing export-led GDP growth in the second-tier SEANICs from 1987 has been due to liberalisation efforts (Pangestu 1991; Ismail Salleh and Meyanathan 1993; World Bank 1993). It has been argued that the rolling back of the state, including controls constraining the market, has been the key to their success. If this argument is accepted, it follows that other developing economies should liberalise further in order to grow.

Given the rising tide of opposition to protection and subsidies, especially with the formation of the World Trade Organisation (WTO), these accounts of Malaysia, Thailand and Indonesia have led to perceptions that they offer better examples than South Korea and Taiwan. Also, unlike the resource-poor Northeast Asian first-tier NIEs, the second-tier SEANICs are major exporters of primary commodities and therefore offer useful lessons about the relevance of resource endowments for economic growth.

However, both approaches have come under intense criticism. The flying geese modellists did not examine in detail the specific factors that have stimulated rapid export growth. Work by Gore (1994), Rowthorn (1996) and Bernard and Ravenhill (1995) questions its relevance for explaining East Asian growth and structural change. As this chapter shows, the evidence does not support such patterns of structural sequencing: beginning with imports, followed by production for the domestic market, and continuing into exports, driven either by changes in relative prices or deliberate government policies. Importantly, flying geese proponents have offered little empirical support on the pattern of foreign direct investment in Southeast Asia. Rasiah (1995: chapter 2) points out the lack of careful firm-level scrutiny of foreign firms relocating from Japan as evidence of structural patterns across economies in East Asia. Internal pressures (e.g. from rising costs), external demand (e.g. access to foreign markets) and the specific advantages of particular host sites have been crucial to the relocation of foreign investment into Southeast Asia.

Doubts have also been raised over trade theory and market-friendly explanations of growth. In the case of Malaysia, arguably the most developed of the second-tier SEANICs, Rasiah (1996), Lall (1996) and Rasiah and Anuar (1998) contend that the lack of effective institutional development threatens to stifle technological progress.

This chapter takes a closer look at the export-oriented manufacturing experiences of Indonesia, Malaysia and Thailand with a view to elucidating the factors that have enhanced growth, and to see whether they are sustainable. The focus is on the shift to export-oriented manufactured exports. Since export success depends on broader supporting factors, this chapter also looks at the role of macroeconomic variables. It then reviews the long-term capacities of these economies to sustain manufactured export expansion by examining their institutional capabilities.

Macroeconomic fundamentals and structural change

At the heart of the debate is the macroeconomic environment of rapid manufactured export growth and structural change and the specific factors that have stimulated structural change and manufacturing growth in the second-tier SEANICs. Unlike the first-tier East Asian NIEs, the second-tier SEANICs enjoyed fairly strong macroeconomic fundamentals when rapid export manufacturing took off.

South Korea had little savings and high external debt, and faced high inflation during the rapid growth phase of the 1960s and 1970s. Its continued and sustained investment expansion, despite a low savings rate (only 1 per cent of GNP in 1960 – see Table 2.1) in the early phase, suggests a reversal of presumed causation, i.e. investment was the dynamic variable

Table 2.1 Domestic savings share of GNP, 1960–95 (%)

	1960	1970	1977	1991	1995
Indonesia	8	14	22	34	36
South Korea	1	15	28	36	37
Malaysia	27	27	31	32	37
Thailand	14	21	22	35	34

Source: ADB (1996, 1997).

generating high savings, in line with the Kaleckian (1976) and Kaldorian (1967) notion of cumulative causation. In addition, South Korea had high corporate shares in both investment and savings, suggesting the significance of particular types of investment and savings in engendering growth (You 1995). South Korean expansion has also revealed the significance of the investment–returns–savings nexus, in which high returns to investment-associated capital accumulation are central to expansion. High investment, in this case, results in high returns but relatively low after-tax profits, owing to reinvestment. Continued growth in investment and reinvestment eventually raises the share of savings. In South Korea, firms not only had to pay back high interests on loans (including royalties to licensors), but also had to reinvest profits for technology development (both process and product).¹ As shown in Figure 2.1, the share of fixed capital formation to GDP for South Korea shows a trend rise. Similar patterns can be observed from Indonesia, Malaysia and Thailand.²

Unlike most developing economies, the second-tier SEANICs managed to garner relatively favourable macroeconomic conditions at the time when rapid export-expansion began. Being resource-rich, the early macroeconomic situation of Indonesia, Malaysia and Thailand was certainly better than that

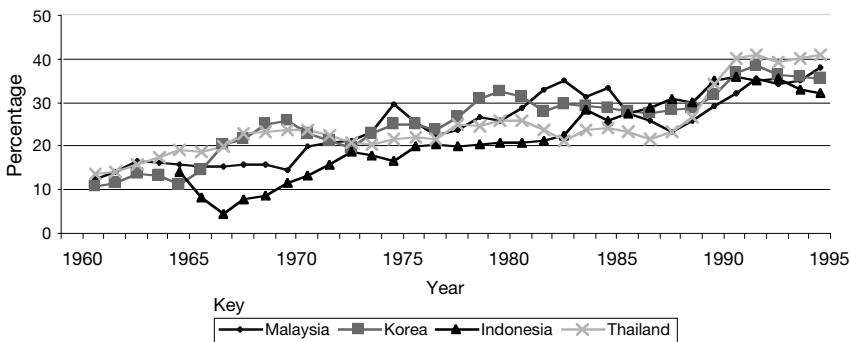


Figure 2.1 Gross fixed capital formation/GDP, 1960–95

of South Korea, where the government was more concerned with expanding output and exports rather than achieving macro-economic stability in the initial stages of rapid growth. In other words, South Korea's strong macro-economic fundamentals were results rather than causes of rapid growth. In contrast, macroeconomic policies in Indonesia, Malaysia and Thailand were designed to control inflation, and reduce unemployment and balance of payment problems. Once the New Order replaced the highly inflationary and debt-plagued Sukarno government, budget deficits and inflation in Indonesia gradually fell to manageable levels, until 1974, when the externally induced oil crisis pushed inflation up to 40 per cent (Wawn 1982: 13). Indonesia faced far higher inflation levels than even South Korea (see Figure 2.2). Heavy dependence on a narrow range of primary exports alongside a strongly inward looking manufacturing sector affected the Indonesian economy. Except for the minor blips accompanying the oil crises of 1973 and 1979, Malaysia and Thailand have enjoyed relatively stable prices.

Employment and investment were the bases of the initial export-oriented manufacturing thrusts in Malaysia and Thailand in the 1970s. Indonesia promoted a wide range of investment when export orientation gained momentum in the second half of the 1980s. However, given its significant factor endowments and lack of institutional development, FDI was generally in labour- and resource-intensive industries. The equity share of foreign capital, however, remained relatively low in Indonesia and Thailand; and, unlike South Korea and Taiwan, manufactured exports did not significantly alleviate balance of payment problems or raise competitiveness. Resource rents appropriated through massive commodity exports helped to solve balance of payment problems. Where heavy capital outlays were used to support government-led ventures, such as the heavy industrialisation drives in Malaysia and Indonesia, the consequent debts were serviced by expanding commodity exports. Large-scale commodity exports helped make Malaysia and Thailand natural high savings generators (see Table 2.1), while rapid growth from the 1970s helped expand Indonesia's savings ratios. Sustained investment and the subsequent emphasis on savings helped these SEANICs to raise their saving/GNP ratios to exceed 30 per cent in 1995. It should be noted that all three economies continued to expand exports while diversifying their commodity mix to reduce the impact of price fluctuations. The lack of effective institutional developments and domestic linkages has, however, enlarged trade imbalances. Hence, exports have continued to be driven by huge imports, which has seriously undermined the balance of payments in these economies in the 1990s. Unfettered deregulation, especially in the construction and real sectors, has diverted investment into unproductive sectors well beyond their complementary needs in the 1990s, thereby seriously weakening financial institutions.

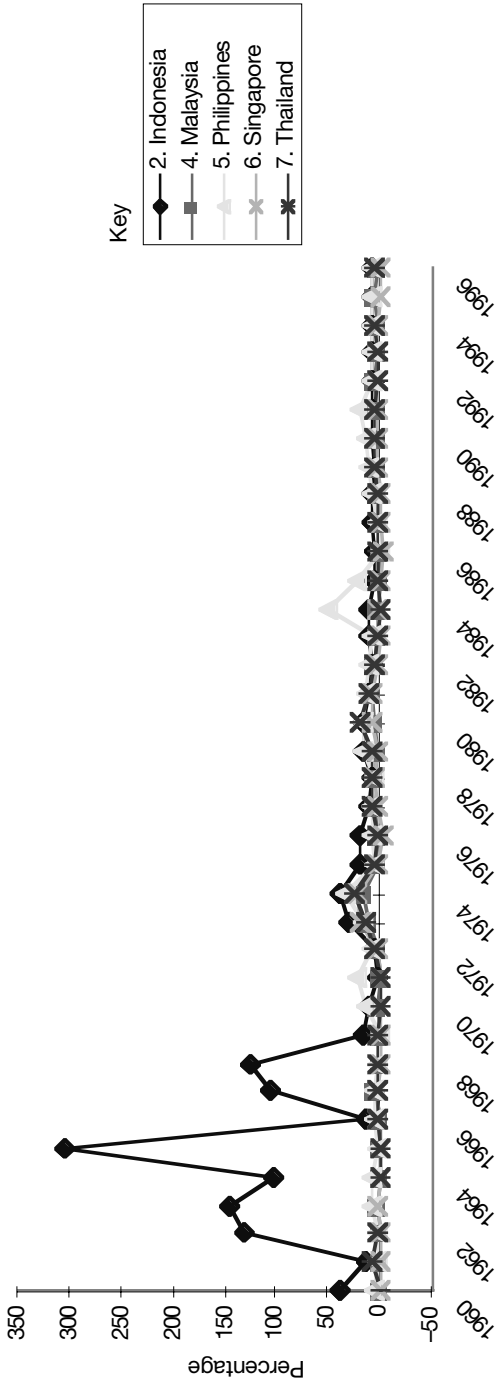


Figure 2.2 Consumer prices index

Table 2.2 Foreign direct investment in gross domestic investment, 1971–93 (%)

	1971–75	1976–80	1981–85	1986–90	1991–93
South Korea	1.9	0.4	0.5	1.3	0.6
Taiwan	1.4	1.2	1.5	3.5	2.6
Malaysia	15.2	10.5	10.8	10.5	24.6
Thailand	3.0	5.9	3.2	5.9	4.7
Indonesia	4.6	2.4	1.0	2.0	4.5

Source: UNCTAD (various issues).

All three economies have enjoyed strong investment growth, especially from the 1970s. The gross fixed capital/GDP ratios in these economies have shown a trend rise over the period 1960–95 (Figure 2.2). A significant portion of the GFCF in Malaysia has originated from foreign investment. Malaysia has sustained the colonial FDI momentum, i.e. the foreign share of gross domestic investment rose from 15.2 per cent in the period 1971–75 to 24.6 per cent in the period 1991–93, after levelling out at 10.6 per cent in the interim (see Table 2.2). Participation of foreign capital has been much lower in Indonesia and Thailand, although still significantly higher than in South Korea and Taiwan.

Manufacturing gradually displaced the primary sectors as the prime engine of growth in all three economies. The Southeast Asian economies have continuously emphasised export growth alongside diversification. In export-oriented plantation agriculture (particularly rubber and palm oil), timber and minerals (especially oil and tin) accounted for much of the export volume originating from Indonesia, Malaysia and Thailand. Malaysia, as a result, enjoyed an exports/GDP ratio of 56.2 per cent in 1960 (see Figure 2.3). As primary commodity prices fell, the overall export proportion of

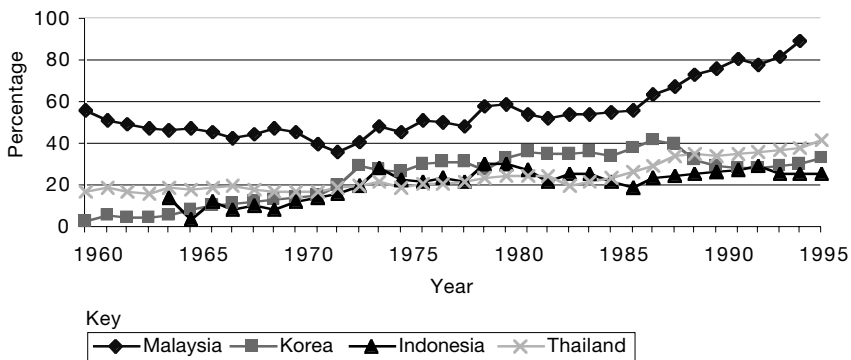


Figure 2.3 Exports/GDP, 1960–95 (%)

GDP gradually fell to 35.7 per cent in 1972, before rising rapidly as export-oriented manufacturing expanded. This rise was complemented by increases in commodity prices in the second half of the 1970s. Rapid manufacturing expansion pushed up the exports/GDP ratio to 89.9 per cent in 1994. Indonesia and Thailand, however, initially faced low export shares due to strong biases introduced against exports to support state enterprises since 1945. Indonesia and Thailand had export/GDP shares of 4.2 per cent and 17.5 per cent in 1965 and 1960 respectively, which rose to 29 and 22.3 per cent respectively in 1974. Both economies have since experienced a trend rise in export shares, initially dominated by agriculture, timber, tin, oil and gas. Manufactured exports became important from the second half of the 1980s. As manufactured exports expanded, Indonesia's exports/GDP ratio rose to over 24 per cent from 1987, and that of Thailand to over 34 per cent from 1988. It is noteworthy that these economies did not allow falling commodity prices to reduce exports, and thereby averted long-term balance of payments crises until the 1990s.

Following the abolition of the multiple exchange rates in the 1960s in Indonesia and Thailand, all three countries have streamlined their exchange rates. Following the unilateral withdrawal of the US from the Bretton Woods arrangements in 1971, their currencies were initially aligned with the US dollar, and later – in the 1980s – with a broader basket of major currencies. Despite active currency alignment policies, the Thai baht, Malaysian ringgit and Indonesian rupiah have faced considerable fluctuations (see Figure 2.4). Exchange rate fluctuations, including devaluations, particularly following the Plaza Accord of 1985 assisted Indonesia, Malaysia and Thailand in attracting FDI and speeding up export expansion. The value of the baht and the rupiah fell sharply from 1982–85, while the ringgit fell rapidly in the second half of the 1980s. Large reserves of oil and gas, and agricultural and forest commodities assisted these economies in keeping

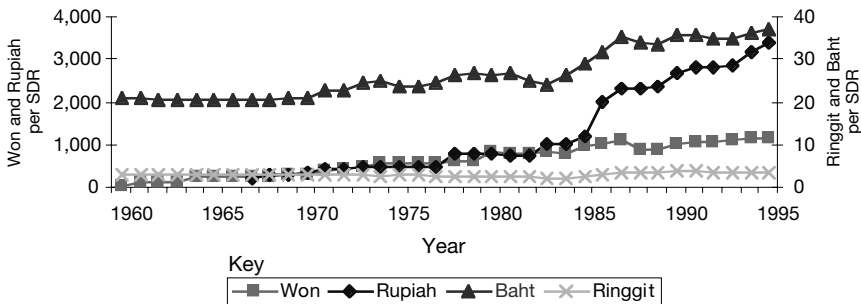


Figure 2.4 Exchange rate movements, 1960–95

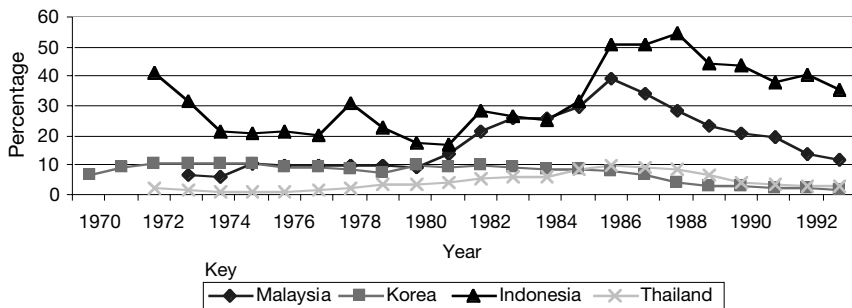


Figure 2.5 Foreign debt/GDP, 1970-93 (%)

their debt service/export ratios manageable, at least until the 1990s (see Figure 2.5). Indonesia and Malaysia experienced a massive increase in public foreign debt in the 1980s, but by the end of the decade, managed to reduce such borrowings. Serious exposure to short-term debt and financial intermediaries as well as to rising current account imbalances forced Thailand and Indonesia to seek IMF bailouts in 1997 (see Rasiah 1998).

The overall balance of payments in the three economies fluctuated considerably (see Figure 2.6). Thailand and Malaysia began to face chronic deficits after 1988 and 1994 respectively. Indonesia faced a similar problem from 1997 (see Rasiah 1998). Continued importing by the manufacturing and construction sectors in Indonesia, Malaysia and Thailand reduced their capacity to sustain the deficits in the 1990s. Owing to the lack of development in domestic capabilities, the rise in manufactured imports, especially intermediate and capital goods, has been aggravated by unsustainable massive imports by the construction and services sectors. Growth in these economies was generating more imports than domestic supplies.

External developments have also had a major impact on all three economies. The slowdown in the world economy from 1980 made a negative impact on investment, which was exacerbated by the foreign content of high profile state loans. Malaysia's savings-investment gap and debt-service ratios worsened in the first half of the 1980s. Falling commodity prices and a cyclical trough in electronics manufacturing slowed down investments and export revenue, resulting in the GDP of all three economies slowing or falling in the mid-1980s. Malaysia recorded a negative GDP growth rate in 1985. However, a combination of external capital inflows and domestic reforms helped revive growth in Malaysia, as well as Indonesia and Thailand. By 1987, all three economies – aided by fiscal and monetary reforms – received a major investment boost from Japan and the East Asian NIEs.

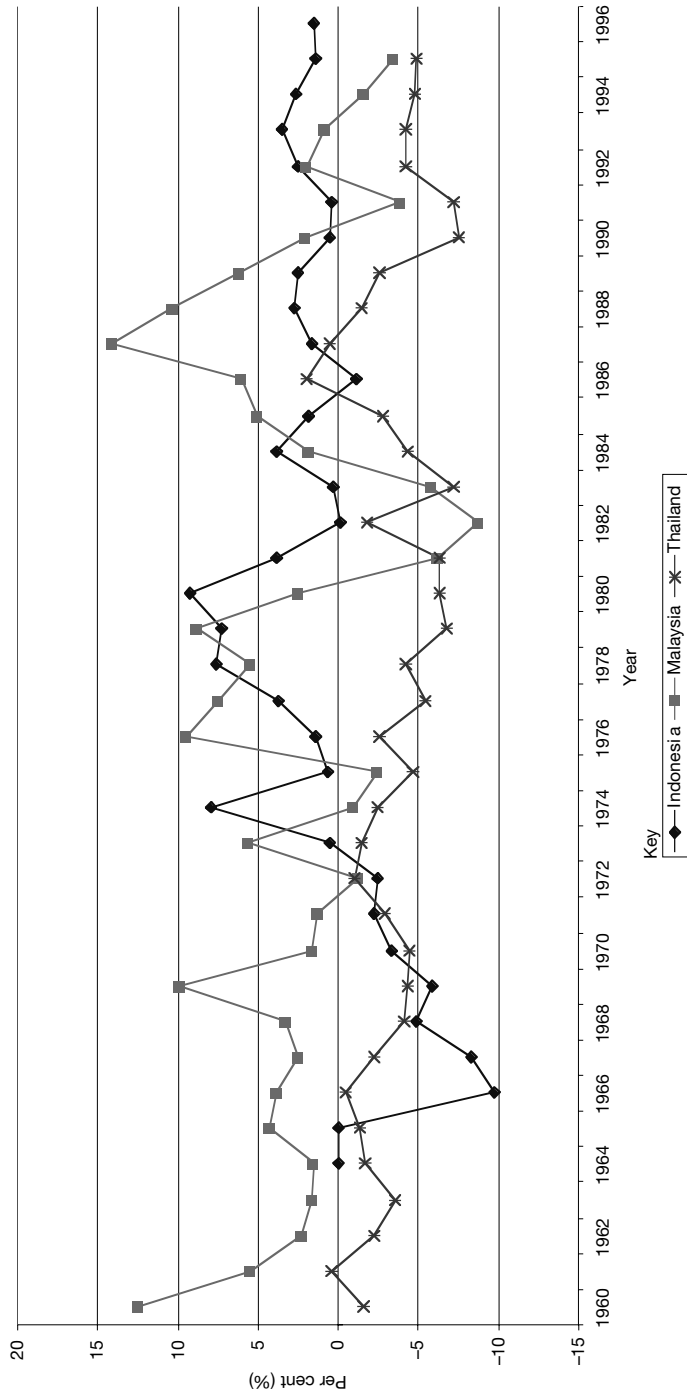


Figure 2.6 Trade balance/GDP, 1960–96 (%)

The Plaza Accord of 1985, which led to the appreciation of the yen, won and the currencies of Singapore, Taiwan and Hong Kong, the withdrawal of privileges under the generalised system of preferences (GSP) from the first-tier East Asian NIEs in February 1988, and punitive trade measures by Western developed markets against trade originating from these economies and Japan, all led to massive relocation of foreign direct investment into Indonesia, Malaysia and Thailand. The rapid growth of the East Asian markets as well as domestic efforts stimulated the growth of computer and related component companies in East and Southeast Asia. As a consequence, complementary industries such as disk drive manufacturing relocated major operations into Indonesia, Malaysia and Thailand. Good infrastructure, political stability, good trade links to major markets, and a potentially literate labour force obviously helped make these economies attractive.

Rich resource endowments had common consequences in the second-tier SEANICs; the primary sectors – agriculture and mining – initially dominated GDP, employment and exports (see Tables 2.3, 2.4 and 2.5). Thailand was the first of the three to experience the elevation of manufacturing to leading contributor to GDP, overtaking agriculture in 1980. Malaysia followed next when manufacturing overtook agriculture in the mid-1980s as the leading sector contributing to GDP. Manufacturing in Indonesia became the leading contributor to GDP in the early 1990s. Volatile price fluctuations, rising supply capacities from abroad and growth of the service sectors have also gradually reduced agriculture's significance, which has been abandoned rather than modernised in much of Peninsular Malaysia, thus raising the food import bill. Nevertheless, agriculture has remained the primary job generator in Indonesia and Thailand, accounting for more than half the labour force in 1994 (see Table 2.4), and also forming the main support for resource-based industries (e.g. food in Thailand, palm oil in Malaysia and Indonesia).

While foreign direct investment has been important for export expansion, the subsectors bolstering manufactured exports have differed slightly in these economies. The electric/electronics subsector has become the main export plank in Malaysia's manufacturing sector; generating 67.5 per cent of overall manufactured exports in 1995. Textiles, garments and footwear together with plywood have been the prime export components in Indonesia, contributing 38.4 and 18.6 per cent of overall manufactured exports, respectively, in 1991 (computed from Hill 1996: Table 8.3). Textiles and clothing, and food have been Thailand's main manufactured exports, accounting for 27.9 and 21.3 per cent of total manufactured exports, respectively, in 1985. In 1993, the share of textiles and garments in overall manufactured exports fell to 20.9 per cent, while that of electric/electronics rose to 22.1 per cent (see Table 2.11). Malaysia's electric/electronics industry – dominated by foreign ownership – remained labour-intensive until the mid-1980s, but has

Table 2.3 Second-tier SEANICs: sectoral distribution and growth of GDP, 1960–95 (%)

Sectors	Indonesia				Malaysia				Thailand			
	1960	1970	1980	1995	1960	1970	1980	1995	1960	1970	1980	1995
Manufacturing	9.2	10.3	13.0	24.1	8.1	12.4	21.6	26.4	12.5	15.9	21.5	28.2
Agriculture	51.5	44.9	24.0	17.1	34.3	29.4	22.6	12.9	36.4	25.9	23.2	11.2
Services	33.5	36.4	34.3	41.1	46.3	43.2	36.3	45.6	45.0	48.8	48.1	49.7
Mining and construction	5.8	8.4	28.7	17.7	11.3	15.0	19.5	15.0	6.0	9.4	7.2	10.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Computed from World Bank (2001)

Note: In this and following tables, where totals do not add up to 100%, this is due to rounding effects.

Table 2.4 Second-tier SEANICs: sectoral distribution of employment, 1971–95 (%)

Sectors	Indonesia				Malaysia				Thailand			
	1976	1980	1980	1995	1970	1980	1980	1995	1971	1980	1980	1994
Agriculture	61.6	55.9	55.9	52.3	53.5	39.7	39.7	18.0	77.8	70.7	70.7	55.9
Mining and construction	na	0.8	0.8	0.8	2.6	1.7	1.7	0.5	1.2	2.1	2.1	6.0
Manufacturing	8.4	9.1	9.1	10.7	8.7	15.7	15.7	25.9	5.6	7.9	7.9	12.0
Others	30.1	34.2	34.2	36.3	35.2	42.9	42.9	55.6	15.4	19.3	19.3	26.0
Unemployment rate	2.3	1.7	1.7	2.8	7.8	5.6	5.6	2.8	na	na	na	na

Sources: ADB (1994); Rasiah and Zulkify (1998); Somsak (1993; Table 3.3).

Table 2.5 Second-tier SEANICs: structure of merchandise exports, 1971–95 (%)

Sectors	Indonesia				Malaysia				Thailand			
	1971	1980	1990	1995	1971	1980	1990	1995	1971	1980	1990	1995
Manufacturing	1.4	2.3	35.5	50.6	7.5	18.8	53.8	74.7	6.6	25.2	63.1	73.1
Agriculture	31.4	14.1	5.0	6.6	46.0	31.0	13.8	6.2	21.0	11.2	5.1	5.4
Mining	67.2	83.6	59.5	42.8	46.5	50.3	32.4	19.1	72.4	63.6	31.8	21.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Computed from World Bank (2001).

since become increasingly technology-intensive. Microelectronics assembly and tests, in particular, have become highly skill-intensive (Rasiah 1996). Despite being resource-intensive, Indonesia's and Thailand's textile, garment and footwear industries rely on imported inputs and are highly labour-intensive. Indeed, within manufacturing, the key non-resource-based export-oriented industries such as electronics and textiles and garments have also been highly import-dependent, whether ownership has been foreign or local. Of these industries, only electronics is foreign-dominated in Indonesia and Thailand. In the former, the shares of foreign ownership in textile, garment and footwear industries in 1988 were only 24.8, 1.8 and 12.9 per cent respectively (Hill 1996: Table 8.3). Resource-based export-oriented industries in these economies, such as Indonesia's plywood industry, Thailand's food processing and Malaysia's palm oil processing industries are dominated by local owners and are less import-dependent.

While external developments were quite instrumental in reviving growth from the second half of the 1980s in Indonesia, Malaysia and Thailand, the extent of expansion is unlikely to have been as extensive, if it were not for domestic initiatives to overcome the recession. Counter-cyclical measures and policy reforms were adopted in these economies to stimulate investment. Much of these measures, however, at least initially were either short-termist (e.g. devaluations) or eclectic (e.g. wide range of incentives with little screening and performance standards). With large amounts of foreign capital already seeking foreign sites, internal efforts through incentives, lessening of administrative delays, large reserves of trainable labour and improvements in co-ordination mechanisms would have been helpful. Importantly, in the initial years there was little effort to develop the institutional base to enable long-term structural transformation towards higher value-added sectors. The next section examines the specific factors that helped stimulate export manufacturing in Indonesia, Malaysia and Thailand. It will show that much of the expansion has been in lower value-added stages of production, including technology-intensive industries.

Industrialisation efforts

This section attempts to unravel the forces that unleashed the shift towards export manufacturing in the second-tier SEANICs. It analyses the specific factors that advanced the shift to export manufacturing in these economies. To enable a careful analysis of the developments, it is necessary to evaluate the progress of import-substitution (IS), which continued to co-exist alongside export-orientation (EO) in some sectors in Indonesia and Malaysia, and also spawned a few export-oriented firms, albeit limited to original equipment manufacturing. Since EO in non-resource-based industries was largely propelled by foreign firms that relocated low value-added operations to the second-tier SEANICs, their capacities were generally not developed

through initial imports, subsequent development of domestic production capabilities and eventual exports, *à la* the flying geese model. Also, interventions characterised both IS and EO, suggesting important roles played by markets and government.

Unlike the resource-poor first-tier East Asian NIEs, the second-tier SEANICs enjoyed substantial natural resources. From primary commodity production, Indonesia, Malaysia and Thailand embarked on active industrialisation since independence. IS did not form the main basis for EO in the second-tier SEANICs. IS evolved largely by cutting off the EO sector. In labour-intensive industries such as textile and garment making, local firms which had initially evolved under the IS regime, began to export but only as subcontractors to foreign firms that controlled brand names, designs and markets. In fact, IS has been a major source of policy errors in these economies. It is thus useful to explain the specific nature of IS promotion pursued in the latter economies to highlight their differences from typical infant-industry promotions reminiscent of structuralist arguments (see Lewis 1955; Kaldor 1957; Myrdal 1957).³ Efforts to explain the failure of IS policies in these economies will also help unravel policy errors triggered by deviations from theoretical prescription.

Import-substitution

Under Sukarno, Indonesia pursued inward-oriented industrialisation with strong state ownership of manufacturing enterprises from the 1950s to the mid-1960s. Suharto's succession in 1965 was followed by immediate stabilisation programmes which helped restore economic order (Palmer 1978). Like Indonesia, the colonial state did not promote large-scale manufacturing activities in Malaya.⁴ The development of the primary sectors and infrastructure development and maintenance stimulated the growth of small-scale manufacturing activities in Malaya (Rasiah 1995: chapter 3). The Thai state historically enjoyed relative freedom from foreign powers to shape economic activities because it was never politically colonised. All three economies have undergone some measure of IS industrialisation. State ownership was significant in the early promotion of industrialisation in Thailand and Indonesia, and became important in Malaysia from 1981.

Early industrialisation just after the World War II in Thailand and Indonesia was state-led. It restricted foreign ownership, and its indigenisation efforts translated into the state bypassing the evolving small-scale firms, which were dominated by ethnic Chinese. The lack of local indigenous capabilities led to direct state participation in manufacturing. Serious government failure, however, debilitated manufacturing growth. Thailand, thus, deregulated the state-controlled manufacturing sector from the end of the 1950s, while Indonesia allowed private ownership in manufacturing

following the introduction of the New Order in 1966. Indonesia has, however, continued to retain state control of critical heavy industries.

Malaysia began industrialisation with IS in 1958, retaining it alongside export-oriented industrialisation after 1968. Although lacking indigenous capabilities and afflicted with strong inter-ethnic rivalries, the government did not impose ownership controls during the initial IS period that lasted until the late 1960s. State involvement in the equity market from the 1960s (Ismail Salleh 1995) was not very significant. Apart from tariffs on final consumer goods, manufacturing evolved largely under *laissez-faire* conditions during the early post-colonial period. State ownership in industrialisation only became important after 1981 when the government assumed direct ownership of heavy industries (e.g. motorcars, cement and steel). Heavy industries in all three economies have continued to import intermediate and capital goods for the assembly/processing of consumer and intermediate goods for domestic markets, but without gradually developing much capacity to produce them.

Indonesia

During Sukarno's regime, state-owned manufacturing enterprises enjoyed favourable access to subsidies, credit and foreign exchange. Strong anti-foreign sentiments – including anti-local Chinese feelings, limited state support to indigene-owned private business. Contradictions among the communist party, the bourgeoisie and the military precipitated the end of the Sukarno government (Robison 1987: 17). Following the demise of the populist-nationalist experiment, Suharto's New Order government liberalised foreign exchange controls, as cumbersome multiple exchange rate mechanisms were streamlined (Palmer 1978: 36–43). The extent of government failure suggested that any kind of liberalisation was for the better. The state began abolishing subsidies to state-owned enterprises and started promoting the private sector, which grew following the introduction of incentives. The lessening of protection in the domestic economy obviously undermined several firms, reflected by the slight fall in the share of manufacturing in GDP from 12 per cent in 1960 to 10 per cent in 1970. Primary commodity exports re-emerged strongly, propelled by foreign aid – particularly from the US and later from Japan – which helped reduce the high inflation and balance of payments deficits that plagued Indonesia in the late 1960s.⁵ Foreign investment was liberally promoted, though various weaknesses – including corrupt customs officials and ineffective co-ordination of infrastructural and administrative facilities – gradually undermined the inflow of FDI.⁶ Thus, the share of FDI in gross domestic investment remained low in the 1970s (see Table 2.2).⁷

Under Indonesia's first five-year plan (Repelita I 1969/70–73/74), the state stimulated large-scale, but labour-intensive resource-based import-

substitution (IS) industries (see Robinson 1987; Hill 1996). IS became stronger under the Repelita II (1974/75–1978/79), and following growing anti-foreigner sentiments, manifested in the January 1974 Malari anti-Tanaka riots, tighter controls on foreign capital were imposed. Ethnic Chinese Indonesian capital developed largely in alliance with politically connected pribumi interests (Robinson 1987) favoured by national development policies. Unlike most IS experiences, the Indonesian state also encouraged exports to generate foreign exchange. The subsequent five-year plans increasingly promoted labour-intensive exports. Indonesia saw a serious struggle between statist nationalists, led by the director of Pertamina, and more liberal technocrats working in the National Economic Planning Board (Bappenas). With its enormous oil revenue,⁸ Pertamina's management had the means to award contracts and concessions for the development of IS industries (e.g. Krakatau steel mill). When Pertamina's massive indebtedness was disclosed in 1975–76, the balance of power shifted. Rapid industrial capital formation through alliances linked to oil revenue-related concessions sustained support for the nationalists over the Bappenas liberals. The promoted IS industries included liquefied natural gas, oil refining, metals, petrochemicals, fertilisers and machine tools (Gray 1982). Large-scale undertakings in manufacturing, such as liquefied natural gas and petrochemicals, were dominated by state-controlled corporations. Habibie's grandiose high-technology projects later expanded the state's involvement in heavy industries, including aircraft making from the 1980s. Hence, manufacturing grew slowly so that the GDP share of manufacturing grew to only 13 per cent in 1980. Manufactured exports accounted for only 2.3 per cent of exports in 1980 (see Table 2.5).

There was a reduction of tariffs in 1979, while export-oriented subsidies were introduced from 1978, but the emphasis on IS industrialisation continued until the mid-1980s. The IS policies hardly involved performance standards, gradual reduction of protection and eventual export orientation. Global recession, bureaucratic inefficiency (including opaque and corrupt practices) and policies biased against exports, continued to stifle manufactured export expansion in the early 1980s. Tariff and non-tariff barriers to shield IS industries were, in fact, raised in 1983. As a consequence, the export-oriented (EO) sector grew little until 1986. The situation was worsened by vague foreign investment policies and cumbersome customs and administrative controls. Quantitative restrictions imposed in 1982 required imports of certain merchandise to be handled by approved importers. By the time the EO strategy took off in 1986, 28 per cent of total imported items, 26 per cent of import value and 31 per cent of value added were restricted under this system (Pangestu 1993: 12).⁹

Indonesian capital, especially state-owned enterprises, thus, dominated the manufacturing sector of Indonesian controlled firms. Pribumi, Chinese, and state ownership shares were 11, 22 and 62 per cent respectively in 1981.

Table 2.6 Indonesia: structure of manufacturing output, 1975–91 (%)

<i>Industries</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1991</i>
Food	36.6	25.3	18.8	20.8
Footloose labour-intensive	16.2	11.2	9.6	12.8
Wood and paper	6.6	8.1	9.2	14.6
Heavy processing	29.2	39.5	46.7	34.7
Metal goods	11.4	15.9	15.6	17.1
Total	100.0	100.0	100.0	100.0
Petroleum	11.2	20.3	27.7	17.5

Source: Hill (1996: Table 8.2).

Table 2.7 Indonesia: structure of manufacturing exports, 1970–92

<i>Industries</i>	<i>1980</i>	<i>1986</i>	<i>1992</i>
Clothing, woven fabrics, yarn and footwear	28.9	31.5	45.6
Electronics	18.8	1.1	5.8
Furniture	0.6	0.3	3.1
Toys and sporting goods	na	na	1.4
Glass and glassware	0.6	0.5	0.6
Plywood	13.6	42.7	21.8
Cement	5.2	1.6	0.7
Leather	1.2	0.6	0.4
Paper products	1.0	1.3	2.1
Steel	1.6	2.2	1.4
Rubber tyres	na	0.4	0.6
Fertiliser	7.0	4.8	1.1
Total of manufacturing	78.5	87.0	84.6

Source: Adapted from Hill (1996: Table 8.3).

Ownership in foreign-controlled joint ventures in 1981 were 9 per cent state, 13 per cent pribumi, 10 per cent Chinese and 68 per cent foreign (Balassa 1991: 125). IS industrial promotion in Indonesia lacked screening, monitoring, technology appraisal and time-bound performance standards. While the IS sector was the main source of manufacturing growth in Indonesia until the mid-1980s, Indonesian IS promotion differed substantially from South Korea and Taiwan. Lack of emphasis on performance standards and competitiveness resulted in heavy dead-weight rent losses. The IS sector not only failed to push technology to greater frontiers, but also sapped rents unproductively. Nevertheless, some local IS firms improved due to their production experience, and subsequently participated in export-oriented subcontracting, especially garment making, but only in simple low value-added manufacturing activities for foreign companies.

After Suharto took power, the liberalisation that followed allowed the emergence of private manufacturing enterprises. Considerable primary commodity exports – particularly oil – helped keep the balance of payments deficit down. The state had resumed IS policies in the 1970s to spawn local industry and reduce imports. IS development was, however, constrained by rent dissipation by powerful interest groups enjoying privileged control of much of the heavy industry. With political protection and oil revenues, most state-supported IS industries were under little pressure to perform. The IS sector not only created disincentives against exports in resource allocation, but also offered no strategy for technological development. These enterprises only expanded exports when provided with export incentives (such as subsidised credit refinancing and export abatement allowances) and corporate tax holidays for exporting firms from the late 1980s. IS industrialisation, nonetheless helped generate capabilities in light and resource industries, which subsequently facilitated subcontracting for export, albeit only in simple low-value manufacturing.

Malaysia

The Malaysian government began industrial promotion with the enactment of the Pioneer Industries Ordinance in 1958 after independence in 1957. The government offered pioneer status incentives, which exempted firms from corporate taxes for periods of between five to ten years. Intervention during the IS phase was limited to tariffs on imported final goods and tax holidays for new industrial enterprises. There was no ownership regulation and industry prioritisation. Hence, unlike in Indonesia and Thailand, the freedom to fully own their enterprises, regardless of size, was initially mainly enjoyed by foreign and ethnic Chinese capital. Pioneer firms were protected from unions. Thus, foreign firms relocated operations in Malaysia to circumvent tariffs, enjoy tax holidays and increase domestic market shares. Given the small internal market, industrial growth slowed down after the period 1958–60. The share of manufacturing in GDP, thus, stayed at around 9 per cent between 1960 and 1965. There was no emphasis on targeting, technology appraisal and performance standards.

In 1968 emphasis shifted to export-orientation when the Investment Incentives Act was enacted. As it gradually lost the earlier incentives, the IS sector continued alongside the EO sector, but declined in importance. The manufactured exports sector was initially dominated by resource processing industries which, given their proximity to resource supplies, usually enjoyed clear static comparative advantage over other processors further afield. Thus, other metals (particularly smelted tin) accounted for 65.8 per cent of manufactured exports in 1968 (see Table 2.9). The absence of dynamic industrial policy instruments limited the evolution of large-scale metal

and rubber using intermediate and final goods manufacturing, despite the imposition of export taxes on off-estate and off-mine processed exports.¹⁰

As noted earlier, Malaysia enjoyed high savings and very low inflation until the first oil crisis struck in 1973. There was, however, little effort to channel the high savings into supporting local infant industries during the early years of IS industrialisation. Instead, foreign companies relocated final 'screwdriver' activities in Malaysia to capture the protected market. However, saturation of the small domestic market mitigated against considerable expansion. With little pressure or incentive to enhance efficiency, e.g. through gradual exposure to external competition, the IS sector hardly expanded. Sluggish labour absorption by the sector exacerbated unemployment, contributing to growing ethno-populism and related political tensions in the country that culminated in the ethnic riots of 13 May 1969.

Following the promulgation of the Industrial Co-ordination Act (ICA) in 1975, ethnic ownership requirements were imposed on manufacturing firms depending on size and market-orientation. Licensing was required for firms with equity of over RM250,000 and employment size of 25 or more. The Minister of Trade and Industry often enforced the 30 per cent Bumiputera equity condition before approving applications for manufacturing licences. Since export-oriented companies were exempted from the legislation, there was no export disincentive. The registration floors were subsequently raised a few times; since 1986 it has remained at RM2.5 million equity and 75 or more employees. The neglect of efforts to promote technology development, institutional support and gradual exposure to competition left IS policy moribund. Given the ICA's emphasis on ethnic redistribution, ownership of IS industries generally became dominated by local capital. Beverages and tobacco were clear exceptions as foreign capital continued to own more than 60 per cent of the combined equity capital. While tariffs were continued, albeit in a declining trend, the government did not renew financial incentives to IS firms. Restrictive conditions on companies enjoying tax holidays hindered the development of inter-firm linkages between foreign and IS firms. The regulations required the orderly movement of goods to and from the FTZs/LMWs to minimise tariff evasion rather than linkage development. Thus, IS firms benefited relatively little from the export-oriented activities of foreign firms. Domestic industry, thus, gradually became peripheral to export-oriented manufacturing. The accumulated experience of some local IS enterprises nevertheless facilitated their subsequent involvement in export-oriented subcontracting – especially in knitting, garment making and wood-based products. However, their participation was limited to simple OEM activities which restricted their capacity to export to low value-added activities while higher value-added chains were controlled by foreign firms.

From 1981 following the introduction of the Heavy Industries Corporation of Malaysia (HICOM), state-controlled joint ventures with foreign

capital began to invest in heavy industries. For example, Kedah Cement, Perwaja Steel and Proton all launched from the early 1980s – experienced heavy losses following a sharp fall in domestic demand in the mid-1980s. Except for Perwaja,¹¹ which made a loss of RM2.9 billion in 1995, the others have made substantial profits, mainly rents from tariffs and quotas (Rasiah 1995; Rokiah 1996). Proton embarked on export promotion. While heavily subsidised credit and high tariffs were key to Proton's profits, ineffective rent management, including the apparent lack of performance standards, limited efficiency gains. After growth of exports in the period 1986–93, when they reached a high of 19.3 per cent of sales, they fell to 12.4 per cent in 1995. Within the domestic economy, Proton's prices continued to rise, until the financial slump of 1997 forced price cuts, while protective tariffs remained high (Rasiah 1997a). Hence, while Proton's profits have soared after 1989, they have largely been due to the high tariffs paid by other vehicle imports or Malaysian-assembled vehicles.

IS industrialisation in Malaysia has been characterised by government failures. Except for tariffs on final consumption goods, the phase between 1958–67 resembled *laissez-faire-ism*. There was little real emphasis on developing infant industries, and institutional support for such development was minimal. Ethnic redistribution requirements were imposed on IS firms from 1975. Some analysts believe these measures enhanced stability and thus helped to sustain growth (Rasiah and Ishak 1994), although they stifled non-Bumiputera SMI growth. From 1981, a second round of IS minimally involved state-led heavy industries. As in the earlier phase, IS continued to operate without effective institutional support or emphasis on technology management and competition. Some labour- and resource-intensive sub-sectors such as garment making and wood-based products, nevertheless, gradually developed to become international export subcontractors, but only in simple OEM activities.

Thailand

The Thai government started venturing into consumer and intermediate goods manufacturing after World War II. Considerable abuse of rents led to a shift in state emphasis, beginning in the late 1950s, away from manufacturing to infrastructure development. Investments in energy, transportation and communications helped construct an environment conducive for private firms to emerge and develop. The creation of the Board of Investment (BOI) and the enactment of the Promotion of Investment Act in 1960 stimulated private manufacturing investment. The government appears to have followed World Bank (1959) advice, which, *inter alia*, prescribed the improvement of infrastructure, promotion of private enterprises (e.g. through provision of low interest credit), promotion of IS industries and rational development planning. The state stringently avoided

competing against and nationalising private business (Hewison 1985: 279). Among other things, five-year development plans, starting from 1961–66 have continuously emphasised industrial development. State-led mobilisation of the financial sector was launched with the reorganisation of the financial and banking sector in 1959. The state offered subsidised credit to approved investors. Loans, at low or no interest, were extended to promote private investment. The Industrial Finance Corporation of Thailand (IFCT), formed in 1959, enjoyed state support and participation by Thai and foreign banks (Hewison 1985: 282–283) which largely funded big businesses. Agricultural exports were given major importance in the first development plan, but industrialisation – with particular emphasis on private IS industries – was strongly promoted as well. The government reduced its role in infrastructure development and in promotion of private industrial initiatives with credit support and tariffs. Government intervention, thus, had a pro-private-sector bias. Unlike Malaysia and Indonesia, the private sector in Thailand has had greater influence over the allocation of contracts and rents.

From a brief flirtation with indigenisation in the 1950s, the state's focus shifted to the broad promotion of national capital from the 1960s. Irrespective of ethnic background, Thai capital began to receive state support. Industrial promotion was complemented by state efforts to limit labour organisation, which restricted the cost of labour.¹² Although this draconian strategy adversely affected workers, it attracted both local and foreign investors. Thus, although no explicit industrial master plans were drawn up, the Thai state consciously sought to expand the share of manufacturing and industry in the economy through the promotion of private firms. The first and second five-year plans, lasting until 1971, emphasised the development of IS industries, albeit without clear targeting. Tariffs on final goods were raised, while export taxes were levied to meet domestic demand. There was no emphasis on technological screening, monitoring and promotion. In addition, the promotion of private IS firms appeared as a decisive way to overcome the weaknesses that afflicted state-owned enterprises. The anti-export biases and lack of effective institutional support restricted expansion so that the share of manufactures in overall exports was 7.1 per cent in 1961 and 13.3 per cent in 1971, while manufacturing's share of GDP was 13 and 16 per cent respectively in the years 1960 and 1970. Thai-controlled resource-intensive food and jewellery industries dominated manufactured exports in the 1960s (see Pasuk and Baker 1995) (see Table 2.11). Textiles and clothing – including exports, thanks to the Multi-Fibre Arrangement (MFA) privileges – also became a major export.

IS – the main source of growth in Thailand until 1979 – helped spawn several industries, but also increased costs. Tariffs raised the costs of capital goods and intermediate inputs, and were only clumsily offset by investment promotion concessions tied to exports (Pasuk and Baker 1995: 144–145).

While certain IS industries flourished, e.g. textiles, related export disincentives discouraged exports (Narongchai 1973). The IS phase was characterised not only by falling consumer good imports, but also by sharply rising capital and intermediate good imports. The latter did not result in the eventual development of domestic capabilities in the manufacture of intermediate and capital goods, and therefore as in Indonesia and Malaysia, did not facilitate their exports.

During the IS phase, buoyant agricultural performance helped subsidise expansion of the protected manufacturing sector. However, prolonged protection without substantial manufactured exports began to increase the trade deficit – causing a serious drain on commodity exports. The need for foreign exchange and reduction of the trade deficit led to the introduction of EO industrialisation from 1972. The third development plan propounded promotion of both EO and IS industrialisation. Unlike Malaysia, FDI was less important in Thailand's IS phase. Malaysia's colonial past with strong foreign capital participation contrasts with its reduced presence in Thailand. Direct foreign investment only constituted 2.1–4.2 per cent of overall gross fixed capital formation in the Thai economy in the period 1960–71 (Hewison 1987: Table 3.3). The decline of indigenisation policies from the late 1950s allowed ethnic Chinese capital to expand production into IS activities. Several such firms eventually managed to gain international export subcontracting capabilities (Rock 1996), but only in simple and low value-added OEM activities that relied on low wages and foreign-controlled market niches.

Ethnic considerations and subsequent ethnic-biased policies limited political support to emerging domestic industrial capital in Indonesia from 1945 and in Malaysia from 1971. In Thailand, however, the abandonment of such policies from the late 1950s allowed greater participation by Thai industrial capital, which has been dominated by ethnic Chinese. Swelling trade deficits in Thailand and Indonesia, and growing socio-economic problems in Malaysia were instrumental for the reduction of emphasis on IS strategies. Only in Malaysia and Indonesia, where state ownership is still important, has IS remained important. Even in these economies, export-orientation has become the main engine of growth. Unlike the dynamic experiences of Japan, South Korea and Taiwan, IS in Malaysia, Indonesia and Thailand lacked effective governance to raise infant industries' technological capabilities and eventually face international competition. In Malaysia, liberal ownership regulations and lack of effective discipline and institutionalisation of the risks to non-Bumiputera firms in the early years removed 'creative destruction' of local firms to enter IS activities. Subsidies and tariffs were offered that did not demand discipline from firms nor develop complementary institutions that would spur them to success. After some early expansion in all three economies, growth of IS industries slowed down until the emergence of the export-oriented sector, which

helped expand consumer demand. The protected sector has continued to remain in Indonesia, Malaysia and Thailand, but with few structural links between them. In Indonesia and Malaysia, massive injection of state capital has helped expand heavy industries. So far there is little evidence to suggest that these ventures are emulating the Northeast Asian experiences of eventually achieving international competitiveness. Nonetheless, the IS sector in all three economies has helped generate some local capabilities in light, low value-added labour- and resource-intensive activities such as wood and garments, to facilitate their participation in international export subcontracting. The lack of both institutional development and emphasis on technological deepening has, however, limited their involvement to low value-added and OEM activities. Thus, although the IS phase generated some local export capabilities, poor governance has limited technological deepening, which will not be sustainable in the long run as unit costs rise further.

Shift to manufactured exports

Export-oriented industrialisation in Indonesia, Malaysia and Thailand involved considerable state promotion and subsidies. As Thailand has no officially acknowledged industrial policy, its industrial sector has been by far the most liberal of the three, though government intervention has been crucial for its industrialisation. Malaysia's industrial drive from the early 1970s was led by manufacturing firms new to the country. Foreign capital has dominated all the leading non-resource-based EO manufacturing sectors in Malaysia, Indonesia and Thailand, though domestic capital has dominated resource-based industries in these countries. Selective promotion, influenced by resource endowments, helped achieve substantial exports of plywood and timber products from Indonesia, palm oil and timber products from Malaysia, and food and jewellery from Thailand. Apart from these resource-based industries, whose value-addition has not usually been very technology-intensive, foreign capital has generally dominated most other manufactured export sectors. Participation by domestic enterprises in non-resource-based products was largely limited to low value-added assembly and processing activities, with designs and markets mainly controlled by foreign firms. Substantial export promotion, with credit and tax subsidies, has helped domestic firms become subcontractors. Such exports expanded – especially since 1986 – and by the 1990s, production costs for such activities had escalated. There was also no effective regulatory framework to restrict capital flows to speculative and other undesirable investments.

As noted earlier, IS did not serve as the basis for EO in the second-tier SEANICs, unlike the first-tier East Asian NIEs. In South Korea and Taiwan, IS helped spawn widespread domestic export capabilities. Extensive

credit financing, through government-regulated and subsidised loans that discouraged speculation and targeted investment in productive activities, characterised the development of export-oriented manufacturing in the first-tier East Asian NIEs. The systematic promotion of domestic capabilities, e.g. by strictly enforcing stringent performance standards, helped move these enterprises quickly towards the technology frontier to achieve international competitiveness (Amsden 1989; Wade 1990; Chang 1994). Such deliberate sequencing was less urgent and did not take place in the resource-rich economies of Indonesia, Malaysia and Thailand. IS industrialisation did not form the basis for successful export-orientation in the latter. The initial IS phases in the SEANICs were characterised by incoherent strategies with little emphasis on the development of domestic technological capabilities for eventual international competitiveness. Export-orientation in these economies, thus, arose not as a follow-up phase in their development trajectories. Instead, it appeared as an attempt to alleviate pressing socio-economic problems that the IS phase failed to resolve. The IS sector coexisted alongside the EO sector in Indonesia and Malaysia with little structural link between the two. External developments and the flow of foreign direct investment largely accounted for export expansion, albeit from low value-added manufacturing, which largely relocated to the SEANICs because of favourable domestic political economy conditions. Growing demand, generated by EO manufacturing, helped stimulate growth in the IS sectors eventually, which grew as GDP expanded.

Export-oriented industries were grafted alongside the existing IS sector in Malaysia without any systematic efforts to develop linkages between the two. Agencies such as the World Bank (IBRD), Asia Productivity Centre, United Nations Industrial Development Organisation (UNIDO) and the Asian Development Bank (ADB) were instrumental for the emergence of export-processing zones in all three economies. Indonesia adopted the EO strategy in 1986, primarily because of falling export revenues as primary commodity prices nose-dived. Malaysia's EO industrialisation began with the IIA in 1968, but only got going after the free trade zones (FTZs) were opened in 1972. It took some time for the first major wave of EO manufacturing firms to relocate production in Malaysia. The special zones and incentives helped reduce infrastructural problems and offset the risks associated with relocating to unproven sites, Thailand's EO industrialisation was first launched with initiatives in the mid-1970s, but took off from around 1979.

The relocation of transnational corporations to Southeast Asia involved two massive spurts during the periods 1969–74 and 1986–93. The first period was driven primarily by transnational efforts to seek relatively sympathetic governments, relatively cheap and non-unionised labour, tax holidays, politically stable sites and good infrastructure (see Lim 1978; Rasiah 1993). Also important was the market access to North America and Europe the SEANICs enjoyed from GSP privileges and MFA quotas.

Singapore, the Philippines and Malaysia were the favourite investment sites in Southeast Asia in the first period. Singapore had abandoned IS completely in 1967 after seceding from Malaysia in 1965, while the Philippines and Malaysia launched export processing zones in the early 1970s alongside existing IS manufacturing. The regulatory frameworks in Thailand and Indonesia remained highly IS-oriented in this period so that EO firms locating there enjoyed little advantage over the other more EO-oriented ASEAN economies. In addition, anti-foreign capital sentiments discouraged investment flows to Indonesia in the 1970s. Unlike Singapore and, to a lesser extent, Malaysia, which offered liberal ownership conditions – especially for exporting firms in the latter – Indonesia and Thailand generally only allowed joint ventures in the 1970s. Transnational companies, thus, preferred to relocate labour-intensive assembly operations to Singapore, Malaysia and the Philippines in the 1970s phase. However, political instability undermined the Philippines' attractiveness by the late 1970s. Rising wage and other costs, space scarcity and deliberate state policy to promote higher value-added manufacturing operations drove labour-intensive firms away from Singapore from the late 1970s (Rasiah 1993; Henderson 1990). Thus, Malaysia became the most attractive site for labour-intensive manufacturing activities in the early 1980s. In the period 1972–85, electric/electronics and textiles/garments, both labour-intensive manufacturing activities dominated by foreign ownership, grew to account for 63.3 per cent of manufactured exports and over 30 per cent of manufacturing value-added. Much of this expansion involved massive imports of intermediate and capital goods.

The second period was characterised by massive relocation of foreign direct investment from Japan and the first-tier East Asian NIEs. The Plaza Accord of 1985, appreciation of their currencies, withdrawal of the GSP privileges in 1988 and rising trade barriers encouraged relocation of their export-oriented manufacturing activities. Indonesia, Malaysia and Thailand were important beneficiaries of this current. All three countries tuned their promotional policies to better attract FDI in EO manufacturing. Growing human resource scarcities and infrastructural bottlenecks in the major industrial locations began scaling down Malaysia's attractiveness as a low-cost production site from the late 1980s and early 1990s. Instead, Indonesia, Thailand and the Philippines have become important.

In some foreign-dominated export-processing industries, a regional division of labour emerged in the 1970s until the late 1980s. In electronics manufacturing, for example, high value-added and regional customisation activities were located in Singapore. Before its protracted political crisis worsened, the Philippines had a similar status to Malaysia in the early 1970s. Under the MFA, individual country quotas have been important in the textile and garment making industries and foreign production has hence been fairly equally spread among these economies (Rasiah 1990). Rising costs in

preferred locations, i.e. Malaysia, did not drive away foreign investors in electronics assembly operations to lower cost sites elsewhere. While experience, administrative efficiency and customs co-ordination have been important, the continued presence of assembly and test operations in Malaysia since the late 1980s has also been due to the changing dynamics of production driven by competition and technological evolution. Automation and in-house skill-deepening has become necessary to sustain miniaturisation in the microelectronics industry. Highly labour-intensive, low value-added activities such as printed circuit board (PCB) and audio assembly were partly relocated to Indonesia. Where such assembly has involved higher value-added functions/operations as with semiconductors, the enterprises have opted to automate production rather than relocate. In textiles and garment manufacturing, the MFA has also limited the extent of relocation from Malaysia to lower cost sites. The impending removal of such quotas under the WTO is likely to encourage relocation to cheaper sites that enjoy large labour reserves such as in China and India.

The unprecedented volume of foreign capital inflows in the second half of the 1980s and early 1990s, as well as increased efforts by host governments to attract them, intensified international and inter-regional rivalries and inter-firm rivalries to secure maximum advantage from incentives and other conditions. Serious labour and land shortages and infrastructural bottlenecks impelled Singapore to initiate regional co-operation strategies that would upgrade itself as the high value-added technology and services apex of the Singapore–Johore–Riau (SIJORI) growth triangle (Low and Tan 1996). Similar cross-border regional initiatives have sprung up in other parts of the Southeast Asian region. Growing regional co-operation has also helped Southeast Asian governments to co-ordinate their strategies vis-à-vis transnationals and to limit the bargaining power of the latter resulting from 'beggar thy neighbour' policies.

Controls on operations by foreign capital were gradually reduced and subsidies enhanced to further promote export-oriented manufacturing operations in all three economies. Laws on labour and industrial relations were tightened to restrict workers' wages, working conditions and mobility. Draconian labour legislation was introduced to control labour and limit unions (Robison 1986; Rasiah 1993, 1995; Jomo and Todd 1994; Sungsidh 1995). In Malaysia, for example, only enterprise unions have been allowed in the electronics industry and that too from 1989 (Rasiah 1996).¹³ Many labour leaders and activists have been threatened or even eliminated in Thailand and Indonesia (Sungsidh 1995; Rasiah and Chua 1997). Clearly, interventionist labour policies to promote export growth have undermined the bargaining power of workers. Therefore, real wages grew little in these economies at the initial stages; on average they fell by 1.2 per cent annually in Malaysia in the period 1963–73 before growing at 2 per cent per annum in the period 1971–81 (Rasiah 1994: Table 10). Thailand saw real wage

growth of 2 per cent per annum in the period 1973–81. Real wages only began to grow faster from the second half of the 1980s largely due to labour shortages in key industrial locations and in skilled work categories. Real wages in Indonesia grew on average, by 3.4 per cent in 1983–89, in Malaysia by 3.5 per cent in 1980–88 and in Thailand by 2.8 per cent in 1981–89.

Indonesia

As noted earlier, IS dominated manufacturing activities in Indonesia until the mid-1980s. High oil prices in the period 1973–82 gave the state the financial muscle to invest heavily in industrial infrastructure. Industrial growth, however, began slowing down from the end of the 1970s despite further oil price rises. Incentives to export began to emerge towards the end of the 1970s though the government continued to prioritise IS until the mid-1980s. From the late 1970s, a dual strategy of IS and EO industrialisation began to evolve, but without much connection between the two. Export subsidies were introduced in November 1978 to offset tariffs and taxes on imported inputs and overcome the high costs of protected domestic inputs (Balassa 1991: 122). Export credits followed in January 1982 under preferential credit schemes, which were phased out from March 1985; in April 1986, they were replaced by duty drawbacks on raw material and machinery imports used in manufacturing for export. Firms exporting at least 85 per cent of production were exempted from domestic content requirements from May 1986. Firms with lower export/output percentages were allowed duty drawbacks on imported raw materials and machinery if import prices were lower than domestic supplies. The cumbersome certification process, however, made this scheme unpopular. The list of products involving export bans, licences and quotas was reduced sharply in 1987.

The highest tariffs for most products fell from 225 to 60 per cent while the number of tariff lines was reduced from 25 to 11 in March 1985. Measures were taken to offer total duty drawback on inputs for exporters in May 1986. From the end of 1987, other anti-export biases were gradually eliminated (Tjiptoherijanto 1993: Table 5). Also, a Swiss firm replaced customs officials to control the import and export of goods, simplifying duty controls and eliminating unproductive rent seeking.¹⁴ Corrupt practices in Indonesia's customs department were virtually eliminated by Presidential Instruction No. 4 (Pangestu 1993: 13); as a consequence, holding and inspection periods decreased by several weeks. Such reductions in customs processing time and in wasteful rents also reduced uncertainties and costs. Thus, private business obviously helped reduce government failures that had inhibited the effective co-ordination of production and distribution. The government gave back jurisdiction to the Customs Department on 1 May 1997, which some business interests claim has undermined earlier

improvements achieved on cargo handling.¹⁵ A revamped Customs Department can of course, enhance bureaucratic efficiency, but if the old practices return, they can slow things down, raise costs and create uncertainties. Meanwhile, many firms have begun stocking up inventories in response, raising holding and other such costs.

Textiles, garments, footwear and wood-based products were among the early export-oriented activities that grew rapidly in Indonesia from the late 1970s. Some Japanese and East Asian NIE companies relocated production to Indonesia to reap the benefit from the country's MFA quotas. However, foreign equity ownership in Indonesia has been relatively low due to uncertain ownership regulations (though they improved in the second half of the 1980s), and the preference of Indonesian firms to serve as putting-out subcontractors. The labour-intensity and low technical content of many textiles, garments and wood-based products favoured relocation in Indonesia because of its abundant labour supply, low wages and natural resource endowments. A ban on log exports in the mid-1980s helped wood-based production (especially of plywood), adding low value-added downstream activities to the timber value-added chain (Table 2.6). Indonesia's output of over 50 per cent of the world's plywood has ensured some leverage in sustaining external demand. The share of plywood in overall manufactured exports grew from 10.8 per cent in 1980 to 37.1 per cent in 1986 (computed from Table 2.7). Due to the low value-added content of its production, limits to the sustainability of timber supply and similar promotion of downstream activities in competing economies through controls on log exports from the late 1980s, Indonesia's plywood manufacturing expansion has been overshadowed by the growth in textile and garment exports since the second half of the 1980s. Thus, the share of plywood in overall manufactured exports dropped to 18.4 per cent in 1991. Primarily Indonesian export-oriented resource-based firms began to expand into export-processing ventures. The share of textiles, garments and footwear in overall manufactured exports rose from 22.7 per cent in 1980 to 27.3 per cent in 1986 and 38.6 per cent in 1991 (computed from Table 2.7), much of which was dominated by foreign-operated joint-ventures and Indonesian subcontractors performing low value-added activities.

Although emphasis on export-oriented manufacturing began in 1978, it has only become important since the second half of the 1980s, when oil and agricultural commodity prices fell sharply. Active deregulation began in 1983 with the service sector, especially banking and education. Bapeksta was formed in that year to undertake export promotion (APDC 1987a), with new incentives as one of its major promotional instruments. Export processing zones, export credits, duty drawbacks (on imported inputs and machinery) and tax holidays helped attract foreign investment. A combination of foreign labour-intensive firms seeking cheaper workers and third country market-access, as well as domestic policy reforms helped stimulate

EO manufacturing from the second half of the 1980s. Consequently the share of manufactures in total exports grew from 2.3 per cent in 1980 to 50.6 per cent in 1992 (see Table 2.5).

The trade reform package of 1988 allowed imports of steel and plastic raw materials, which had previously been produced and supplied by state monopolies. However, the government left control of steel imports to the state-owned steelmaker, and of polystyrene and polyethylene to a state-owned trading firm so that only demand in excess of domestic production could be imported. Tariff ceilings on most imported products were reduced to 40 per cent in 1990. However, opposition by the politically well-connected has constrained some reforms. For example, the automobile sector experienced increased tariffs from 1990 to protect production by joint-ventures involving the President's family.

Gradual ownership liberalisation from the early 1980s led to a fall in the share of state-owned enterprises among manufacturing enterprises, from 28 per cent in 1975 to 20 per cent in 1983 (Balassa 1991: 125). State-owned enterprises have been primarily concentrated in heavy industries: oil refineries, petrochemicals, fertilisers, steel, aluminium and aeroplanes. In addition, state ownership has also dominated in cement, basic chemicals, capital goods and shipbuilding. The promotion of *pribumi* business led to the introduction of the Small Investment Credit and Permanent Working Capital Credit schemes, and the reservation of a long list of items for procurement to *pribumi* businesses. It is unclear if the liberalisation efforts from the 1980s have actually facilitated achieving international competitiveness.

Some heavy industry ventures have been profitable due to heavy tariff protection. Interviews suggest that the protected automobile industry, with its high prices, is far from achieving international competitiveness. There has nevertheless been a rise in Indonesian component suppliers, with some even exporting to neighbouring countries (Doner 1991). However, it appears that the component industry, which has benefited from foreign technology, has not gone beyond simple and OEM activities. These firms lack institutional support to progress to higher value activities, e.g. design and direct marketing.¹⁶ Ownership deregulation in manufacturing became more pronounced from 1986. Domestic equity requirements in high-risk export-oriented firms were lowered to 5 per cent from the 20 per cent previously required, while others were given a five-year grace period to achieve the 20 per cent Indonesian equity ownership requirement. The share of exports in output, initially set at 80 per cent to qualify for these generous equity conditions, was later reduced to 60 per cent (Pangestu 1993: 16). Companies locating in Batam, which operates as an export-processing zone, are allowed full foreign equity ownership. Firms exporting all output have been exempted from the 5 per cent divestment required over the five years. The divestment requirement for other firms was set at 51 per cent over 15

years. Foreign firms could be licensed for an additional 30 years. Investment licensing was further relaxed in 1987. The elimination of the requirement for approval for capacity expansion of less than 30 per cent and for diversification to related product lines has helped to reduce red tape. Private institutions, including foreign concerns have been allowed to set up industrial estates from 1989. These initiatives suggest a shift in ownership gradually to private concerns and reduced bias against foreign capital.

The mid-1980s also experienced three devaluations, most recently in September 1986, which amounted to a massive 50 per cent fall in the value of the rupiah. Unlike in the past when a fixed exchange rate policy was pursued after devaluation, from 1988, the government has depreciated the rupiah by around 5 per cent annually to stabilise Indonesia's real effective exchange rate (Pangestu 1993: 14). Coming just after the Plaza Accord of 1985, the rupiah's devaluation of 1986 appeared more significant than the 50 per cent devaluations in 1978 and 1983. The appreciation of the yen, won and Singapore and Taiwan dollars further lowered the costs of production and exports from Indonesia. Currency appreciation and rising trade barriers in developed economies against exports from Japan and the East Asian NIEs pushed manufacturing operations out from these economies. Indonesia became an important recipient of such foreign capital and of related international subcontracting opportunities. The share of FDI in total domestic investment, which had initially fallen from 4.6 per cent in 1971–75 to 1 per cent in 1981–85, rose again to 4.5 per cent in 1991–93 (see Table 2.2). The more advanced transnational corporate operations in Singapore and, to a lesser extent, Malaysia helped generate demand for the location of lower-end, labour-intensive stages of production, with the promotion of growth triangles boosting such operations in Indonesia. Hence, the shift in policy emphasis to export-orientation, along with increased FDI, helped to sharply expand the contribution of manufacturing to the economy. The contribution of manufacturing in GDP rose to 50.6 per cent in 1995 (see Table 2.5) and in the same year overall exports rose to 24.1 per cent (see Table 2.3).

Despite the increase in foreign direct investment, the share of foreign equity ownership in the manufacturing sector has remained well below half in all industries. The highest sectoral share of foreign equity control in 1988 still remained below 40 per cent of total equity – paper products (39.7 per cent), other chemicals (38.6 per cent) and non-electrical machinery (37.1 per cent) (Hill 1996: Table 8.4).¹⁷ These shares probably rose in the 1990s, following the exhaustion of labour reserves in Malaysia's key industrial zones. Also, the foreign share of manufacturing is likely to be much higher due to commercial arrangements (see Hill 1996: 165).

Policy reforms to promote export-oriented manufacturing in Indonesia have focused primarily on direct instruments to attract foreign investment and stimulate exports. There has been little emphasis on institutional devel-

opment to create the requisite capabilities for structural deepening – such as human resource development, technology absorption and development and performance assessment. Deregulation – rather than improved financial and educational (including training) services – appears to have further reduced the potential for expanding institutional support. Indeed, in Indonesia, no institutions exist to vet, monitor and appraise technology transfer agreements. Although rapid export-led growth has contributed to a steady rise in manufacturing and GDP, the lack of institutions to enable technological deepening, and of stronger linkages with the domestic economy, limits their potential for higher productivity, especially adversely affecting competitiveness. Consequently, Indonesian enterprises are still largely limited to simple processing activities, with the most advanced firms using original equipment manufacturing (OEM) capabilities to produce for transnational companies.

Malaysia

Export promotion in Malaysia began following the enactment of the Investment Incentives Act in 1968, but accelerated after the opening of the FTZs. Investment incentives have been particularly important in Malaysia. 48 per cent of the manufacturing investment projects approved by the Malaysian Industrial Development Authority (MIDA) in the period 1980–90 comprised of granted investment incentives (Ismail Salleh 1995: 49). Unlike Indonesia and Thailand, Malaysia has never imposed restrictions on manufactured exports. Export taxes have only been levied on primary – agricultural and mineral – products. Exporting firms, however, faced indirect barriers in the form of incentives going to IS firms in the 1960s, and to state-sponsored heavy industries since the 1980s. The FTZ Act removed all tariffs and customs controls involving export-processing companies located in the FTZs.¹⁸ Where individual firms have preferred location outside FTZs, similar incentives have been granted under the Licensed Manufacturing Warehouse (LMW) arrangements. Pioneer Status (PS) and the Investment Tax Allowance (ITA) have been among the most generous incentives given to enterprises operating in these zones. PS offered tax holidays for a period of five to ten years. The PS and ITA together accounted for 98 per cent of all incentives granted to the manufacturing sector in the period 1980–90 (Ismail Salleh 1995: 49). The government has also offered several other export-promotion incentives. The export credit insurance and export credit-refinancing schemes – both of which effectively subsidised export credit – were launched in 1977 to stimulate exports.

In the 1970s, firms were also offered locational, labour utilisation and accelerated depreciation allowances. From 1986, following the enactment of the Promotion of Investment Act (PIA), these incentives were scrapped,

but the PIA offered an array of other lucrative incentives to encourage exports. Amendments to the PIA in 1988 scaled down incentives for firms engaged in 'non-strategic' activities, and increased emphasis on training and research and development. Tax exemptions for firms granted with PS and the ITA were reduced to 70 per cent of taxable income for firms exporting not less than 80 per cent of production. Strategic investors, however, could apply for total tax exemptions. With the PIA, the government also offered double deductions on taxable income from approved exports, until this programme was scrapped in the mid-1990s. These export incentives were instrumental in boosting Malaysian business exports in conjunction with international subcontracting, which has gradually declined following their elimination.

The government also introduced several non-tariff instruments to promote exports. The export insurance and refinancing schemes were launched in 1977. By the end of 1989, the insurance scheme had 192 policies valued at RM1.12 billion with 26.7 per cent declared (Ismail Salleh 1995: 52). A revamp in 1988 allowed extensions to the insurance scheme to cover commercial bank losses against loans, advances to exporters and suppliers. The export credit-refinancing scheme offered subsidised credit, both pre- and post-shipment. Handled by Bank Negara, it has offered easy access to credit at preferential rates for firms with high value-added and local content.¹⁹ Pre-shipment financing grew at an average annual rate of 68 per cent to reach RM13.9 billion in 1989. The volume of exports refinanced under the export credit-refinancing scheme rose from 3 per cent in 1977 to 22.5 per cent in 1989 (Ismail Salleh 1995: 54).

Malaysia also devalued the ringgit and reoriented its incentives structure to attract the second wave of export-oriented foreign direct investment from the mid-1980s. The mid-1980s recession and rising foreign debt (accumulated as a result of increased government spending from the early 1980s, including a grandiose heavy industrialisation programme) induced the government to offer generous financial incentives as part of the enactment of the Promotion of Investment Act in 1986. Good infrastructure, successful export manufacturing experience of the 1970s and early 1980s, large reserves of unemployed labour, especially in the mid- and late 1980s, and political stability made Malaysia an attractive site for the second wave of foreign direct investment. Thus, the foreign share of manufacturing fixed assets rose from 35 per cent in 1985 to 50 per cent in 1990, with the share of foreign capital in the electric/electronics industry reaching 91 per cent in 1994.

Ownership regulations in Malaysia were far more liberal during the IS phase in the 1960s than from the mid-1970s as national control of equity was not yet a priority. Ethnic ownership conditions were imposed after the introduction of the New Economic Policy (NEP), and in the manufacturing sector with the promulgation of the Industrial Co-ordination Act (ICA) in 1975.

Firms with paid-up capital of RM250,000 and 25 or more employees were required to be licensed by the Ministry of Trade and Industry (now MITI). Ethnic ownership conditions were waived for enterprises exporting 80 per cent or more of their output. Export-oriented foreign firms, thus, faced no ownership requirements, while ethnic employment regulations were generally not strictly enforced. In fact, the government has usually only advised foreign firms applying to renew their incentives to absorb more Bumiputeras to reflect the national ethnic population structure (Rasiah 1993).

The ICA has particularly stifled Malaysian non-Bumiputera capital, which has to have 30 per cent Bumiputera equity to qualify for a licence. Given the limited Bumiputera capital in the 1970s, many non-Bumiputera capitalists had to virtually give away stock at heavy discounts to meet this condition. Foreign capital in the IS sector gradually experienced shifts in ownership. The ICA allowed only 30 per cent foreign ownership of equity for fully domestically oriented firms. But since the law was implemented with substantial discretion by the Minister of Trade and Industry, several non-Bumiputera enterprises operated without meeting these conditions. In the case of beverages and tobacco, Bumiputera equity ownership requirements in alcoholic breweries were relaxed because of Muslim reservations. Foreign ownership of fixed assets in the beverage and tobacco industry exceeded 60 per cent in period 1968–93 (Rasiah 1997: Table 5.3). Several firms have also avoided licensing by declaring lower equity levels and expanding their liabilities instead.

The equity level for companies exempt from the ownership condition was raised in 1979 and again in 1985, and in 1986 when it was defined at RM2.5 million following the Promotion of Investment Act. By the late 1980s, a growing Bumiputera bourgeoisie meant that non-Bumiputera controlled firms could now expect some contributions from their prospective Bumiputera partners. Bumiputera partners could also provide valuable connections and business options making such partnerships more mutually lucrative (Yoshihara 1988; Rasiah 1995: chapter 6). Also, a number of non-Bumiputera enterprises managed to obtain special waivers to operate without meeting ICA conditions, with some even successfully obtaining tax incentives. Sharing equity with Bumiputera interests seems to have been quite lucrative for several non-Bumiputera firms. Export-oriented foreign capital continued to enjoy total equity control. Ownership conditions for foreign export-oriented enterprises have, thus, remained very liberal in Malaysia. For some Malaysian firms, deregulation facilitated capacity expansion. Small and medium scale enterprises in Penang, with political links to the Gerakan-led Penang state government, have managed to attract capital from some leading Bumiputera holding companies (Rasiah 1997). The Malaysian Technology Development Corporation (MTDC), formed by the government in 1993, began capitalisation and promotion drives to support potentially successful high technology exporters (Rasiah 2001).

Given the official policy emphasis and the nature of process technologies associated with export-processing and assembly operations, Malaysia's manufacturing sector was dominated by highly labour-intensive activities between 1972 and the late 1980s. The share of electric/electronics, and textiles and clothing in manufacturing value-added, grew from 8.1 per cent and 6 per cent respectively in 1973 to 22.5 per cent and 6.7 per cent respectively in 1990 (see Table 2.8). The corresponding shares in manufactured exports rose from 0.7 per cent and 1.4 per cent respectively in 1968 to 50.5 per cent and 8.8 per cent respectively in 1990 (see Table 2.9). It was only in the 1990s that the share of labour-intensive textile and clothing exports began to fall, declining to 5.1 per cent in 1995. The switch to automated production in electronics helped raise the share of electronics exports to 67.5 per cent in 1995. Consequently, resource-based industries, which accounted for much of manufactured exports from Malaysia in 1968, declined gradually in significance. The shares of other metals and food in total manufactured exports fell from 65.8 per cent and 17.5 per cent in 1968 to 2.5 per cent and 1.8 per cent respectively in 1995. The dramatic fall in exports of other metals was precipitated by declining tin reserves, rising production costs and the emergence of new low-cost producers such as Brazil and China (Jomo 1990). While dominated by non-resource-based, technology-intensive exports, Malaysia's manufactured exports such as electronics has involved considerable capital-intensive resource processing,

Table 2.8 Malaysia: structure of manufacturing value-added, 1970–95 (%)

<i>Industries</i>	<i>1973</i>	<i>1981</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>
Food	15.7	9.8	8.7	6.4	4.4
Beverages and tobacco	8.2	6.8	7.3	3.8	2.0
Textiles and clothing	6.0	7.5	5.3	6.7	5.1
Leather	0.1	0.1	0.1	0.1	1.2
Wood	13.1	10.2	5.9	6.8	5.7
Furniture and fixtures	0.8	1.2	0.9	0.8	1.5
Paper, print and publishing	5.7	6.0	5.6	4.9	2.8
Chemicals	7.5	5.4	17.1	11.3	8.0
Petroleum and coal	2.2	6.4	3.5	2.7	3.2
Rubber	9.6	4.4	3.7	4.9	3.7
Non-metallic mineral	4.5	5.7	6.6	5.1	4.3
Basic metals	3.7	3.7	4.2	4.0	2.4
Fabricated metals	4.9	4.6	3.3	3.7	4.2
Machinery	3.7	3.9	2.2	4.0	5.0
Electrical machinery	8.1	14.5	16.5	22.5	28.9
Transport equipment	2.7	5.2	4.7	5.7	5.0
Other manufactures	3.4	4.6	4.4	6.7	11.9
Total	100.0	100.0	100.0	100.0	100.0

Source: BNM (various issues).

Table 2.9 Malaysia: structure of manufactured exports, 1970–95 (%)

<i>Industries</i>	<i>1968</i>	<i>1973</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>
Food	17.5	19.6	5.7	6.2	3.8	1.8
Beverages and tobacco	0.9	2.9	0.3	0.2	0.2	0.3
Textiles, clothing and footwear	1.4	6.1	10.5	11.9	8.8	4.6
Wood	3.4	9.7	5.7	3.2	3.4	4.4
Chemicals	3.0	5.2	2.0	3.8	2.9	4.0
Rubber	0.9	1.7	1.0	1.0	3.0	2.3
Non-metallic mineral	0.8	1.1	0.7	1.1	1.7	1.2
Iron and steel	0.5	1.9	0.4	1.2	1.4	0.9
Other metals	65.8	43.3	31.5	2.0	2.2	2.5
Machinery	2.5	3.8	2.6	5.8	8.1	7.0
Electrical machinery	0.7	2.1	32.8	51.4	50.5	67.5
Transport equipment	2.6	2.7	2.6	5.0	4.3	3.7
Other manufactures	*	*	4.2	7.2	9.7	*
Total	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Rasiah (1995: Table 5.7); Malaysia (1996: Table 1).

Note: * Other manufacturers were excluded for the years 1968, 1973 and 1995 because of differences in composition.

e.g. in palm oil processing, where the entire manufacturing value chain is located in Malaysia, the rest are mainly limited to low value-added processing and assembly activities. The vast majority of these industries did not evolve from IS to EO, as in Northeast Asia.

Manufacturing in the Western corridor of Malaysia became more skill- and technology-intensive from the late 1980s due to changing production dynamics and labour shortages. Microelectronics assembly became increasingly automated and skill-intensive from the second half of the 1980s following changes in production technology (Rasiah 1996). Rising skill emphasis in consumer and industrial electronics and textiles followed the exhaustion of labour in the key industrial locations of Penang, Klang Valley, Johore, Seremban and Malacca. Although some firms relocated to East Malaysia and Indonesia, the bulk of them have remained in the congested locations. Thus, escalating production costs from the second half of the 1980s have not substantially altered the composition of manufacturing. Instead, electronics assembly has expanded further its share in overall manufactured exports in the 1990s. Rising wage costs and labour scarcity, in the face of limited transformation in training and technology generating institutions, have led to an enlargement of the labour-intensive workforce through labour imports, primarily from Indonesia and Bangladesh.

Four Malaysian initiatives – two state-led heavy industries, the machine tool industry and one promoted process industry need mention in relation

to the development of domestic capabilities. There is little clear-cut evidence to suggest rising competitiveness in state-spawned heavy industries (Rasiah 1997). Even the profit making state-led car and cement manufacturers may not be moving towards the technology frontier and international isoquants. Export growth in the automobile industry has dwindled since its peak in 1993. Serious cement shortages forced the government to allow imports from 1995.

The machine tool industry servicing foreign electronics firms in Penang gained international competitiveness in low value-added activities through strong technology transfer from foreign clients, through both employee transfers and market and technology support (Rasiah 1995, 1997). Apart from the strong co-ordination role of the local Penang government, the lack of effective institutional support facilities has constrained its participation to simple and OEM manufacturing activities.²⁰ Hence, if the Northeast Asian infants negotiated the daunting technology trajectory effectively to reach the top, these potentially capable firms remain in low value-added niches.

The resource-based palm oil processing industry, which is at the technology frontier, has clearly enjoyed substantial promotional benefits to raise exports and technology development. Rich resource supply has obviously offered a natural comparative advantage to the industry.²¹ However, the palm oil industry was not only non-native to Malaysia, but its technological advancement has been influenced strongly by selective taxation and subsidies – e.g. duty on crude palm oil exports and exemptions on processed palm oil to promote technology development into higher value-added activities (Jaya Gopal 1996). Clearly, a combination of resource endowments and state support facilitated the growth of palm oil processing in Malaysia.

It can be seen that Malaysia's success in stimulating export manufacturing were influenced by both external and internal factors. The latter included incentives (financial and non-financial), effective administrative and customs co-ordination, infrastructure development and political stability. The extent of proactive industrial policy initiatives were generally limited to sweeteners, indirect subsidies (e.g. tariff and tax holidays and subsidised land and utilities) and co-ordinational activities, and controls on labour organisation initiatives to block the free movement of labour's relative prices, which were distortionary but co-ordinated alongside bargaining initiatives with foreign firms. Since the prime drivers of export participation were transnational firms – who accounted for 70 per cent of manufactured exports in 1990 (Ramstetter 1991, 1998) – the room for government failure was reduced. The lack of institutional support facilities, however, has restricted the complementary development of the indirect agents that support technological upgrading to sustain competitiveness in export markets. Foreign firms continue to access innovation capabilities from abroad but suffer from the lack of operational human resource in the country. Local firms lack technological capabilities, hence their operations have been characterised

primarily by simple OEM activities. Only a handful of local firms participate in original design manufacturing and even that with limited capacity to penetrate foreign markets. The only exception is in downstream palm oil products (Jaya Gopal 1996). To overcome these weaknesses and to enable a shift to higher value-added activities, the government has begun efforts to enhance the ancillary structure, through more proactive governance and co-ordination from the private sector to improve institutional support in the country (see next section).

Thailand

The Board of Investment's emphasis on manufacturing in Thailand began to change in the early 1970s. The emphasis on IS restricted export expansion so that the exports/GDP ratio in Thailand had been low even in the 1970s (see Figure 2.1). Export-orientation began in 1972 with the enactment of the Investment Promotion Act. Industries placed on the investment promotion list were eligible to apply for tariff and tax exemptions, and guarantees for the free transfer of profits internationally and against nationalisation and competition from state-owned firms (Warr 1993: 38). However, a combination of factors caused Thailand to be generally by-passed by foreign capital in the 1970s,²² including its cumbersome certification process and the lead then enjoyed by Malaysia and the Philippines due to their governments' greater commitment to attracting foreign capital, their labour forces' proficiency in English, and their relatively better infrastructures. Nonetheless, textile and garment firms from Japan and Hong Kong, in particular, began relocating substantially from the early 1970s, to access quotas allocated in the US and Western Europe. The Philippines began to lose its advantage from the late 1970s, as political instability became a serious problem. Escalating costs and spatial limits eliminated Singapore as a competitor for labour-intensive investments from 1979. As such, from the 1980s Thailand became Malaysia's main rival for labour-intensive export-oriented firms (Rasiah 1993).

A number of resource-intensive EO firms in Thailand started operations as IS firms. Jewellery, food processing and some garment firms initially evolved through import protection. While jewellery and food processing have gained international competitiveness through their resource support, textile and garment firms have operated as subcontractors to international firms that dictate the designs and control the markets. These firms have been operating simple OEM and low value-added manufacturing. Textiles and garments remained the biggest contribution to Thailand's manufacturing value-added between 1970 and 1991 (see Table 2.10).

Completely foreign-owned and joint-venture firms began to expand operations in Thailand from the 1960s, supplying the domestic market as well as exporting. American firms preferred to own their firms completely,

Table 2.10 Thailand: structure of manufacturing value-added, 1970–91 (%)

<i>Industries</i>	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1991</i>
Food	16.5	15.7	14.1	11.8	5.9
Beverages and tobacco	20.2	15.6	16.3	10.6	8.4
Textiles and clothing	18.2	22.9	23.6	22.1	21.7
Leather	2.5	2.4	1.8	3.2	3.9
Wood	4.1	3.5	2.1	2.2	1.0
Furniture and fixtures	1.9	1.2	1.3	3.0	2.9
Paper, print and publishing	2.8	2.5	3.4	2.9	2.3
Chemicals	3.6	3.4	4.2	3.2	2.6
Petroleum	5.7	7.6	5.2	7.9	5.6
Rubber	2.6	2.7	2.8	2.6	2.3
Non-metallic mineral	4.0	3.8	3.6	5.2	5.8
Basic metals	2.7	1.6	1.8	1.9	1.5
Fabricated metals	3.1	2.2	1.9	2.6	2.8
Machinery	3.1	3.1	3.4	3.0	5.5
Electrical machinery	1.9	2.0	2.9	4.8	6.8
Transport equipment	5.5	6.2	7.8	6.4	8.8
Other manufactures	1.5	2.7	3.9	6.4	8.4
Total	100.0	100.0	100.0	100.0	100.0

Sources: Somsak (1993: Table 3.4); Pasuk and Baker (1995: Table 5.6).

while the majority of Japanese firms formed joint ventures with local capital. Much of the foreign capital expanded in textile weaving operations to access the local market and quotas in developed economies; Toray, Teijin and Kanebo established 12 factories in Thailand in the period 1963–71 (Pasuk and Baker 1995: 138). Growing competition from foreign investment incited local businessmen to oppose this foreign encroachment. As a result, the state became less willing to offer tax and tariff holidays to attract foreign capital in the 1970s. Although the BOI promoted EO, import tariffs contributed 30 per cent of total domestic tax revenue in 1971 (Pasuk and Baker 1995: 145). Between 1974 and 1981, tariffs on 19 products fell, but those of another 54 rose. The effective rate of protection (ERP) between the years 1970 and 1980 doubled.

The saturation of the domestic market and a rise in the trade deficit largely due to falling agricultural commodity prices influenced a shift to export-orientation from the late 1970s, albeit limited to the reduction of export taxes and adjustments to reduce anti-export biases. The current account deficit increased from 1.5 per cent in 1970–74 to 5.1 and 4.3 per cent respectively in the periods 1975–80 and 1981–86 (Pasuk and Baker 1995: Table 5.1). The government responded by shifting emphasis aggressively towards export promotion from the mid-1980s. The baht devaluation in 1984 and its ensuing conversion to a managed float, caused it to depreciate by 34.7 per cent in the period 1984–87 (Pasuk and Baker 1995: 150;

see also Figure 2.4). Import duties on inputs and machinery used in export manufacturing were reduced in 1985. Many export taxes were scrapped. Export subsidies were introduced in 1986, and business taxes reduced to remove anti-export biases in labour-intensive exports. Special promotions intensified to attract export-oriented foreign investment, including trade and investment missions abroad. From 1986, the BOI allowed even non-American, completely export-oriented foreign manufacturing firms to own 100 per cent equity. Export processing zones were revitalised, and export-oriented manufacturing firms exporting less than 100 per cent were exempted from paying a huge slice of taxable income (see Appendix 1). Included among the specially promoted industries was agro-processing, which was given tax (corporate, value-added and export) breaks ranging from 3–7 years, duty drawback on machinery and material inputs, and subsidised power and transport rates (Hewison 1989; Suehiro 1992).

Local state efforts to stimulate export-oriented foreign manufacturing coincided with favourable external developments. Like Indonesia and Malaysia, the Thai economy benefited from pressures that drove several manufacturing firms to relocate operations out of Japan and the Asian NIEs. Large-scale relocation of labour-intensive operations and cheapening exports helped stimulate rapid growth in Thailand. Manufactured exports grew by around six times in the period 1985–91. GDP grew at an average annual rate exceeding 10 per cent in the period 1988–90. The strongest growth was recorded in Japanese-dominated manufacturing industries. Machinery, electrical machinery, automobile (mainly parts) and leather recorded average annual growth rates of 34.4, 26, 24.7 and 21.1 per cent respectively (Pasuk and Baker 1995: Table 5.6). The export to value-added ratios for these industries were 96.6, 74.3, 1.3 and 176.9 per cent respectively in 1988 (Somsak 1993: Table 3.11). Of these industries, only automobiles has been an IS industry with negligible amounts of exports. Increasing deregulation in this industry, however, is expected to gradually shift its trade orientation. The implementation of AFTA and the still high tariffs in the other main car markets in Southeast Asia are likely to enhance Thailand's emerging role as an export base for foreign transnationals.

The favourable external circumstances and the shift in trade policy towards export promotion expanded manufactured exports sharply. The share of manufactured exports in total exports rose from 38.1 per cent in 1981 to 49.4, 74.7 and 80.4 per cent respectively in the years 1985, 1990 and 1993 (Pasuk and Baker 1995: Table 5.9; also see Table 2.5). In manufacturing, the share of labour-intensive, low-technology exports grew from 41.3 per cent in 1981 to 43.4 per cent in 1985, before falling gradually to 34.2 per cent in 1993 as medium and high technology industries began to expand from the second half of the 1980s. The share of the latter – comprising of machinery, electric and electronic devices and transport equipment – in total manufacturing exports, grew from 14 and 13 per cent

Table 2.11 Thailand: structure of manufactured exports, 1970–93 (%)

<i>Industries</i>	<i>1970</i>	<i>1974</i>	<i>1981</i>	<i>1985</i>	<i>1993</i>
Food	26.0	38.9	29.0	21.3	*
Textiles and clothing	21.2	22.1	26.9	27.9	20.9
Leather	1.5	0.9	1.4	1.9	0.6
Wood	0.3	4.0	2.7	2.0	*
Furniture and fixtures	0.0	0.6	1.3	1.4	2.2
Paper, print and publishing	0.8	1.2	0.3	0.6	*
Plastic	1.1	0.8	1.3	1.3	*
Chemicals	7.5	4.4	0.7	1.2	*
Rubber	0.8	0.5	1.1	1.2	1.5
Non-metallic mineral	9.9	5.5	1.2	1.3	*
Metals	8.3	4.2	3.4	3.6	*
Machinery	0.5	0.3	0.6	2.6	12.1
Electrical machinery	0.4	1.8	12.4	10.0	22.1
Transport equipment	0.1	0.2	0.3	0.4	2.2
Jewellery	17.1	6.8	9.4	9.1	5.5
Other manufactures	2.6	7.6	6.0	13.2	33.0
Total	100.0	100.0	100.0	100.0	100.0

Sources: Somsak (1993: Table 3.4); Pasuk and Baker (1995); Chalongphob (1994: Table 1).

Note: * Included in other manufactures.

in 1981 and 1985 respectively, to 36.4 per cent in 1993 (see Table 2.11). The overall share of labour-intensive exports in manufactured exports rose from 55.6 per cent in 1981 to 57.4 and 70.3 per cent in 1985 and 1990, respectively, falling slightly to 69.4 per cent in 1993. Textiles was the prime export of Thailand in 1995 contributing 27.9 per cent of total manufactured exports, but was overtaken by electric and electronics in 1993.

The automobile industry has not developed enough capability to sustain exports. Much of the exports come from component producers (Kamaruding 2001; Rasiah 2001). Its limited success, however, owes much to effective state–business co-ordination. Earlier IS policies were instrumental in the expansion of joint ventures and component suppliers in the country. Even when the state deregulated the industry, state–business co-ordination continued to shape the development of the industry – including support for suppliers and worker training programmes (Doner 1991). Astra, for example, developed while benefiting from strong links with foreign assemblers in Thailand, has gained regional competitiveness in vehicle components manufacturing. The industry, however, does not foresee much expansion of exports in the long term, as its participation so far has been confined to low value-added assembly activities for foreign firms accessing the domestic market (Kamaruding 2001). Like its Indonesian subsidiary, it does not have capacity in design or control over marketing activities.

As can be seen from the foregoing discussion, governments in Indonesia, Malaysia and Thailand – whether through explicit policy declarations or otherwise – have pursued industrial policies. The extent of government interventions, however, has varied. Except for the earlier IS experience in Malaysia until 1980, the IS sectors have generally been dominated by far more extensive state involvement than the EO sectors. Import-substitution generally failed because of misapplication and the lack of performance controls. The shift to export-orientation became a necessity largely due to the failure of import-substitution and the prevailing socio-economic and political circumstances in these economies. In Indonesia and Thailand, rising trade deficits reached critical levels. EO was grafted onto IS without proper structural sequencing and thus generally evolved without much link with import-replacing production activities *à la* the flying geese model. EO was also introduced during periods when foreign capital was looking for offshore locations with attractive incentives. Malaysia was the first of the three to launch export-oriented manufacturing (1968–72), followed by Thailand (1976–80) and Indonesia (1984–86). Hence, the share of manufactured exports in overall exports has been highest in Malaysia and lowest in Indonesia.

All three economies have enjoyed political stability and relatively good infrastructure. In addition, pro-business legislation, such as guarantees against nationalisation, free profits repatriation, movement of goods and services, and tight controls on unions, worker boycotts and labour organisations have helped make these countries a haven for export-oriented firms. Both industrial strategies – IS and EO – faced serious institutional limitations. At least in the initial period EO was characterised by privileged benefits such as tax holidays, controls on labour organisation and subsidised access to infrastructure. Government failure was less apparent in the EO regime due to its reduced co-ordination role, which was more specifically to approve investments, allocate resources, offer incentives, and co-ordinate fiscal policies and customs. Established transnationals with developed external access to technology and markets helped alleviate the state from the burden of financing local capability building. The lack of effective institutional development – during both IS and EO – restricted the development of local capabilities. Thus, local firms' operations have largely been limited to simple and OEM activities for the export market. Most local exporting firms function as international export subcontractors. As will be argued in the next section, the lack of institution building to effectively co-ordinate growth and structural change has continued to hinder their capacity to sustain a shift to higher productivity sectors. Hence, while IS helped spawn some local capabilities, it has been limited to low value-added simple and OEM activities where the higher value-added activities of design and marketing have remained in the hands of foreign firms. It is only in resource-based plywood (Indonesia), food and jewellery (Thailand) and palm oil

(Malaysia) industries that these economies have achieved international competitiveness. While these industries can serve as important building blocks, resource limitations require wider and deeper structural transformation to sustain long-term growth.

Capacity to sustain export expansion

The second-tier SEANICs have managed to expand manufactured exports sharply due to both external circumstances, and their attractive domestic environments that favoured the relocation of foreign low value-added manufacturing and promoted development of local resource-based activities, especially after 1986. Some local firms also benefited from this expansion to eventually participate as subcontracted exporters. Domestic policies, however, have only favoured structural widening so that much of the exports have expanded in low value-added assembly and processing activities. With the exception of resource-based exports such as plywood, food, jewellery and palm oil, in which the entire value chains involved are narrow, the remaining industries have generally not gone beyond simple and OEM activities. Also, the entire export-oriented sector has not developed import-replacing linkages. Thus, heavily import-dependent exports (materials and machinery by non-resource industries and machinery by resource industries) – along with the construction and service sectors – have in the 1990s seriously undermined the current accounts of these economies, aggravating their short-term debts and savings–investment gaps. In addition, rapid expansion in exports has not been accompanied by a commensurate rise in technological capabilities to overcome the effects of rising factor costs. These two drawbacks threaten to undermine the capacity to sustain exports in the long run. Given the limited development of international competitiveness in higher value-added activities, the deregulation efforts necessitated by the World Trade Organisation (WTO) may further reduce their capacity to expand exports.

If industrial policy equipped the first-tier East Asian NIEs with strong institutional support for driving technical change (see Rasiah 1996; Lall 1996), its role in the SEANICs has generally failed to generate similar success. Japan, South Korea and Taiwan have successfully developed the institutions necessary not only to quicken absorption and development of technologies, but also to raise their potential to support new product development. For example, South Korea's Samsung ventured into DRAM technologies (64K DRAM and 256K DRAM) in the 1980s through licensing (Edquist and Jacobssen 1987; West 1995; Mathews 1996), but by the 1990s it had reached the technology frontier producing 16 Bit DRAMs. Along with NEC, Samsung is widely regarded as a pioneer in launching the 64 Bit DRAM in the market. With the exception of a narrow selection of resource-based industries, Indonesia, Malaysia and Thailand have yet to go

beyond OEM capabilities, and do not enjoy adequate institutions to generate the requisite manpower and technology support activities to support rapid technical change in all manufacturing activities. Continued expansion in lower value-added manufacturing niches will only drain out the resources and further weaken their capacity to expand exports.

As economies develop, production costs rise and the capacities of nations to sustain export expansion depends on their ability to raise productivity and quality. The long-term capacity to export, thus, will depend on the ability of nations to move up the technology ladder. As production costs escalated (including rapid rise in wages), South Korean and Taiwanese firms successfully negotiated the technology trajectory so that they were matched by ascending degrees of productivity. Malaysia and Thailand, in particular, have been forced by rising production costs and external competition to review their export strategies and domestic capabilities. Growth in foreign-dominated export processing activities enabled expansion into low value-added stages of production. As growth exhausted labour reserves – especially in the industrial corridor of Malaysia – firms started facing serious capacity expansion limits. In industries where the changing dimensions of production technologies has required a shift towards high-technology process tasks, such as in the microelectronics assembly and tests, the demand for skilled workers grew even before labour shortages gripped the Malaysian economy. The premium for skilled workers, thus, has gone up in Malaysia and Thailand, thereby creating a dual labour market (Rasiah and Osman 1995). This situation has been aggravated by the importing of cheap labour into Malaysia, from Indonesia and Bangladesh, which has suppressed unskilled workers' wages and slowed down labour-intensive firms' initiatives to upgrade their process technologies. Instead of deepening into higher value-added operations through technology development – either integrating vertically or lowering unit costs of assembly and processing activities (the latter has evolved generally only in microelectronics firms) – manufacturing continues to expand largely through widening by using cheap, unskilled labour.

At the outset, inflows of foreign direct investment were utilised primarily to generate investment and jobs in all three economies. This thrust has remained in Indonesia since the enactment of the Foreign Investment Law in 1967, but the extent of foreign equity ownership has been very low – rising substantially only from 1986. In Malaysia the massive influx of foreign capital from the second half of the 1980s pushed the government to filter investments targeted to industrial belts, leaving labour-intensive non-strategic investment access to only underdeveloped regions. Investment filtering only began in the 1990s after several displeased labour-intensive firms left the industrial zones of Penang and Klang Valley and relocated in less industrial locations. Some Taiwanese electronics firms even moved from Penang to Indonesia in the 1990s (Rasiah 1996). Also, several local plastic

and metal tool firms complained of crowding out following the relocation of Taiwanese small and medium scale firms in the second half of the 1980s. The occurrence of this crunch reveals the Ministry of International Trade and Industry's incapacity to anticipate crowding out let alone approve only technology-intensive firms. Effective planning – especially when the economy is facing full employment – is increasingly critical to facilitate a shift to higher productivity sectors. Interviews suggest that Thailand and Indonesia are poorly equipped to undertake such interventions.

Unlike the dirigiste approach employed by the first-tier East Asian NIEs, technology management in the second-tier SEANICs has been liberal. Governments have hardly dictated allocation, production and distribution of resources directly related to technology imports, utilisation and development. Liberal state policy on technology in these economies has been due to a lack of effective governance rather than a pursuance of the Marshallian marginal tenets that firms operate as passive recipients of exogenously evolving technologies. It has been convincingly established by neo-Schumpeterians that firms actively shape technical change, and by evolutionary economists that the accumulation of technology by latecomers follows a sequence dominated by technology imports and learning (Nelson and Winter 1977; Rosenberg 1982; Freeman 1994; Kozul-Wright 1995), and that adaptations and developments are critical in pushing latecomers towards the technology frontier. Only Malaysia – most prominently in the 1990s – has attempted to build the institutions necessary to stimulate structural upgrading in firms, many of which have, however, been eclectically implemented.

Using different proxies, it can be seen that official technology transfer channels have increased in these economies. The number of technology transfer agreements in the manufacturing sector in Malaysia rose from 144 in 1975–77 to a total of 2,224 agreements by 1993 (Rasiah 1996: Table 7). The share of fees involving technology transfer agreements in GDP in Thailand rose from 0.08 per cent in 1972 to 0.14 per cent in 1980 and 0.30 per cent in 1989 (Kamaruding, 1994: Table 5). However, institution building to facilitate effective technology absorption and local development has been weak. Also, none of them have secured effective mechanisms to manage technology transfer. In Japan, South Korea and Taiwan, governments established institutions to vet *ex ante* (assisting local licensees to strike favourable bargains with foreign licensors), monitor rigorously and appraise *ex post* to quicken absorption and development of promoted local capabilities (Johnson 1982; Fransman 1985; Amsden 1989; Wade 1990; Chang 1994). Similar governance mechanisms do not exist in Indonesia, Malaysia and Thailand. Malaysia began technology transfer agreements in 1975 and promoted high technology activities from 1988, but such efforts heightened from 1990, when the Action Plan for Industrial Technology Development (APITD) was launched. Its screening process – due to a lack of proficient

technocrats and the eclectic nature of planning – failed to integrate technology transfer agreements with local capability building (Anuwar 1992; Rasiah 1996a, 1997). Similarly, Indonesia and Thailand have yet to install proper screening, monitoring and appraisal mechanisms to ensure effective technology absorption from technology transfer agreements (Kamaruding 1994, 1999; Siregar 1995).

Structural transformation towards higher productivity sectors inevitably requires complementary developments in human resource capabilities. Given imperfections associated with labour markets, especially training/education that involves long gestation periods, and information asymmetries that typify underdeveloped markets, there is a strong need to stimulate state–business collaboration in creating and co-ordinating institutions to generate manpower for technological upgrading. In Japan, Taiwan and South Korea, the proportion of engineers and R&D scientists and technicians rose when these professions were offered strong incentives to expand. Indonesia, Malaysia and Thailand lack such a manpower base to facilitate a smooth transition to high-technology manufacturing. The share of technology-related human resource in Indonesia, Malaysia and Thailand has been substantially lower than that of the NIEs and developed economies. For example, Indonesia and Thailand had, respectively, only 12 and 1 scientist and technologist per thousand people in the period 1986–90 (see Table 2.12). Malaysia had four R&D scientists and technologists per thousand people in the period 1986–90, while Thailand had two. Malaysia launched several initiatives in the 1990s to redress these deficiencies (Malaysia 1990, 1994), but institutional initiatives in these economies, in general, have not been able to significantly enhance export competitiveness.

While governments intervened extensively in Japan, South Korea and Taiwan (such as in catching up and frontier R&D activities), conditions imposed (e.g. export targets) ensured that unsuccessful enterprises did not continue to sap rents for too long. Thus, such performance standards effectively eliminated under-performers over the long term. Hence, rents have been critical for the emergence of many latecomers (e.g. Hitachi, Mitsubishi, Hyundai and Acer) (see Freeman 1987; Amsden 1989; Wade 1990; Fukasaku 1992; Scherer 1992). The first-tier East Asian NIEs enjoyed effective institutions to minimise rent abuse. SEANICs generally lack performance standards and institutions to manage them. Instead, they have qualifying standards to access incentives, for example, investment and employment levels and industrial classification, and other incentives to access tax breaks, including export credit and refinancing loans at subsidised rates.²³ Export targets for local firms accessing rents – that were so important in South Korea (Amsden 1989) – have hardly been used in the SEANICs. As protection seems unlimited, the heavy industries of Malaysia and Indonesia have not been exposed to external competition. Official unwillingness to expose domestic firms to the discipline of the external

Table 2.12 Selected human capital indicators

<i>Countries</i>	<i>Scientists and technologists per 1,000 (1986–90)</i>	<i>R&D scientists and technologists per 10,000 (1986–89)</i>	<i>R&D expenditure as % of GNP (1987–92)</i>
Japan	110	60	2.8
United States	55	na	2.9
Sweden	262	62	2.8
Germany	86	47	2.9
France	83	51	2.3
Canada	174	34	1.4
United Kingdom	90	na	2.3
South Korea	46	22	2.1
Turkey	26	4	na
Brazil	30	na	0.6
Malaysia	na	4	0.4
Thailand	1	2	0.2
Indonesia	12	na	na
Jamaica	6	0	na
Kenya	1	na	na
Bangladesh	1	na	na

Sources: UNDP (1995); MASTIC (1994).

Note: na – not available.

market suggests that such industries have not achieved export capabilities even in the long term.

Significant value-added chains in the three economies extend to foreign economies. Meanwhile, high imports have aggravated current accounts and reduced domestic spin-offs. The most export-oriented industries in these economies – i.e. electronics and textiles – have very weak linkages with the domestic economy (Rasiah 1995). Only resource-based industries show strong linkages, but this is mainly due to material supplies, while capital goods still come almost entirely from abroad. Malaysian enterprises have not developed adequate technological capabilities to increase their participation in foreign firms' value-added chains. Industrial policies in these economies have generally not attempted to strengthen the capacity of local firms to take greater advantage of official domestic content stipulations. Only a few domestic suppliers have developed strong supply capacities, e.g. Penang's machine tool firms and component suppliers to automobile firms in Indonesia and Thailand. The achievements of such enterprises owe little to industrial policy, apart from attracting transnationals. As noted earlier, the lack of institutional support has limited their role to low value-added assembly and OEM activities. Hence, for example, imports of machinery to Malaysia rose from 40.7 per cent of all imports in 1973 to 61.1 per cent in 1992 (Rasiah 1996: Table 3).

The slow development of institutional facilities to support technological upgrading and more effective co-ordination does not mean that unfettered liberalisation is the solution. Instead, critical review and enhancement of industrial policy should widen its focus to include better institutional support and greater co-ordination with private firms. Liberalisation, especially tariff deregulation, seemed inevitable in these economies, given the roles of the World Trade Organisation, Asia Pacific Economic Co-operation (APEC) and ASEAN Free Trade Area. Industrial policy initiatives – including subsidies to support institutional development, e.g. human resource training and R&D development – will continue to distinguish successful developers. Subsidies for such institutional development activities are not disallowed by the WTO. Further liberalisation may be desirable to overcome government failures and to minimise rent abuse.

Conclusions

By most standards, the second-tier SEANICs have achieved rapid structural transformation, involving industrialisation, but mainly through relatively low value-added manufactured exports. Resource-intensive products dominated manufactured exports in Indonesia until the second half of the 1980s, in Malaysia until the early 1970s, and in Thailand until the early 1980s. Thereafter, labour-intensive items, mainly import-processing non-resource-intensive exports, became the main manufactured exports of Indonesia, Malaysia and Thailand. Being the earliest to expand large-scale labour-intensive manufacturing activities, a significant share of Malaysia's once labour-intensive electronics industry – which contributed 67.5 per cent of manufactured exports in 1995 – has become more skill-intensive since the second half of the 1980s. The rapid exhaustion of labour reserves from the late 1980s has also forced other labour-intensive firms to either automate and shift to higher skill activities or relocate in less developed locations in Malaysia, or in neighbouring Thailand and Indonesia.

Manufactured exports from Indonesia have been dominated by labour-intensive textiles/garments and labour- and resource-intensive plywood. The former is substantially foreign controlled, either directly through joint ventures or indirectly through control of higher value-added design and marketing activities, and is highly import-dependent. The latter is more locally controlled with mainly local material inputs, but its markets are narrow, and its terms of trade generally similar to that of minor processing industries, with dependence on imported machinery. Malaysia's manufactured exports are dominated by the technology-intensive and labour-intensive electric/electronic industry, and, on a smaller scale, by labour-intensive textiles/garments, and resource-intensive palm oil processing. The first and second are foreign dominated, heavily import-dependent and concentrated on

lower value-added, simple OEM activities. Only microelectronics firms generally involve the use of cutting edge assembly and test operations. Palm oil processing is locally controlled, using local materials but relying heavily on imported machinery. Thailand's manufactured exports are dominated by labour-intensive electric/electronics and textiles/garments, and resource-intensive food and jewellery. The first two involve low value-added assembly and processing activities, while the latter two are engaged in relatively narrow markets. In all three economies, local subcontracting export capabilities have evolved through links with foreign companies, but have generally been restricted to low value-added simple and OEM activities.

While the three economies have recorded massive export growth – especially after 1986 – structural weaknesses are likely to undermine their capacity to sustain expansion. Resource endowments were favourably used to avoid serious balance of payment problems and to expand manufactured exports initially. As import-dependent manufacture expanded and production costs began to rise sharply (exacerbated by massive imports for the construction and services sectors in the 1990s), these economies began to experience serious savings–investment gaps, current account deficits and short-term debt. The lack of institutional development to stimulate structural upgrading has confined much export expansion to low value-added activity, even those involving technology-intensive industries. Malaysia attempted to overcome these problems in the 1990s, but eclectic strategies have reduced its potential for long-term solutions. Both Malaysia and Thailand have relied on foreign labour to reduce wage rises, inadvertently delaying structural deepening.

The SEANICs used their resource endowments to avert serious budget deficits, so that the ratio of overall foreign debt to GDP has been kept relatively low by international standards. Favourable resource endowments have also differentiated them from the first-tier East Asian NIEs. Although it can be argued that substantial dissipation of rents has taken place, commodity exports helped raise foreign exchange and savings. They show a trend rise in gross fixed capital formation as a fraction of GDP. To avert balance of payments problems, all three economies expanded commodity exports, diversifying them to overcome downswings associated with price swings. Therefore, falling prices did not lead to chronic declines in export revenue in the SEANICs. Manufacturing, whether IS or (later) EO, enjoyed considerable subsidies, whether indirectly through infrastructural support from resource rents, or directly through incentives. The heavily import-dependent growth began, however, to keep the current account deficit high in the 1990s. The lack of emphasis on complementary institutional and linkage development has weakened their capacity to switch to higher value-added activities and to restrict imports.

Unlike the first-tier East Asian NIEs, IS industrialisation has played a very small role in the development of export capabilities in the second-tier SEANICs. The modest success has been restricted to labour-intensive activities. Even here, local firms only participate in low value-added assembly and processing activities. Serious government failures afflicted the initial IS phases. The lack of vetting, monitoring and emphasis on performance standards stifled the growth of competitiveness in both state-supported and private IS initiatives. State-owned ventures in Indonesia and Thailand, in particular, experienced serious failure. Subsequent efforts to stimulate private IS firms, especially in resource-intensive industries, only gained success in narrow markets e.g. food and jewellery in Thailand. This failure can be attributed to a lack of dynamic industrial strategies. Instead of offering rents to enterprises while imposing stiff performance standards, and supporting their technological upgrading through strong institution building, governments generally concentrated on raising tariffs and banning exports. The second-tier SEANICs experiences suggest specific IS paths, which others should avoid.

Foreign investment, either directly (TNC-dominated manufacturing operations in Malaysia) or through joint ventures (which dominated manufacturing operations in Indonesia and Thailand) played a major role in export expansion in these economies. Political stability, fairly good infrastructure, less bureaucratic red tape and incentives were instrumental in making Malaysia, and to a lesser extent Thailand, attractive sites for foreign firms to relocate labour-intensive, low value-added activities. Indonesia's circumstances improved greatly in the second half of the 1980s, as reforms reduced risks and tardiness.

The pattern of change in the composition of manufactured exports cannot be explained by neo-classical free trade or simple market friendly arguments. Considerable state involvement was necessary to attract and support firms in promoting export-oriented activities. Financial incentives – based on employment, investment, export and, in the case of Malaysia since the 1980s, technological criteria – were instrumental, at least in the initial years, in attracting FDI, which has been the backbone of manufactured exports in the second-tier SEANICs. Export expansion proved far more successful because of the operations of enterprises at the technology frontier, which generally only located low value-added assembly and test operations in the second-tier SEANICs. Unlike IS firms, EO ones faced fewer problems of government failure as they enjoyed sophisticated capabilities and competed in external markets.

It could, of course, be argued that a significant share of incentives in Southeast Asia may have been redundant and have therefore unnecessarily dissipated rents (Warr 1986; Rasiah 1992). However, the competition among states to attract enterprises has been so intense that it is difficult to write off incentives as irrelevant. Several firms actually noted being

influenced to relocate in these economies to benefit from, among other factors, tax differentials/holidays. Textile and garment firms also considered the MFA regulations as important in their decisions to relocate to these economies. More importantly, the suppression of labour organisation fettered the influence of labour in wage bargaining. The promotion of export manufacturing reached such proportions that non-resource manufactures (especially electric/electronics and textiles/garments) accounted for the bulk of manufactured exports in Malaysia from the 1970s, in Thailand from 1980s and in Indonesia from the late 1980s. Since the specific needs of foreign firms vary, effective strategies should involve screening tactics and individual approaches to eliminate uncertainties and link incentives usefully. Singapore and, to a lesser extent, the Penang government in Malaysia, have done well in this regard.

Given the low import requirements and static comparative advantages associated with resource-based industries, the success of Indonesia's plywood (at least initially), Thailand's food and jewellery and Malaysia's oil palm industries serve as good examples for emulation. The growth of resource-intensive industries received a boost from a ban on log exports, raw materials availability, and the imposition of export taxes on crude palm oil respectively. These controls and incentives to export and upgrade technologically helped Indonesia, Malaysia and Thailand expand the real value of resource-intensive manufactured exports. Like other export manufactures, resource-based industries have enjoyed strong support from all three governments. Selective interventions obviously distorted relative prices, both in the allocation of resources and in the co-ordination of production and distribution.

The performance of private local enterprises engaged in non-resource exports has fallen far short of standards achieved by their counterparts in the first-tier East Asian NIEs. While EO has increased through subcontracting activities, the lack of institutional development threatens to restrict its sustainability in the long run, as firms are generally entrenched in import-dependent, simple, low value-added OEM activities. Their inability to integrate vertically in the face of rising costs has restricted their capacity to sustain first-tier expansion. Development of local capabilities hinged largely on foreign investment. Similarly, subcontracted activities for export involving the textiles and garments was heavily dependent on foreign capital. Nevertheless, machine tool and automobile component suppliers can be promoted more effectively through better institutional support facilities. Systematic promotion of institutions and complementary linkage industries would help economies avoid the burgeoning current account deficits plaguing the second-tier SEANICs.

While government failures have been significant, they cannot be explained by neo-classical arguments. It is true that protectionist practices to support state-owned private firms – especially biases against exports and,

in Indonesia, controls on equity – restricted export growth. However, the removal of such obstacles and the stimulation of export growth also depended on the state co-ordinating industrial strategies with private businesses, from the second half of the 1980s. Especially in Malaysia and Thailand, state–business co-ordination via consultative committees, involving captains of industry and government officials, became important fora for the formulation and implementation of industrial projects. Also, prioritisation distorted relative prices so that export-oriented enterprises generating high investment and employment enjoyed special incentives in Malaysia from the late 1960s. Even if export subsidies helped correct earlier distortions created in Indonesia and Thailand, the state actively selected favoured sectors, and has been the principal agent in co-ordinating subsidy allocation and implementation. Tax holidays encouraged businesses to internalise transactions to reduce tax liability. All 85 of the 96 foreign firms operating in FTZs and LMWs interviewed in 1995 reported this as an important consideration in the relocation of production activities in Malaysia.²⁴

Weak institutions in the second-tier SEANICs have reduced their potential role for offering positive lessons. Some of the conditions and policies that buttressed the rapid development of the first-tier East Asian NIEs, have been lacking in the SEANICs. Indonesia, Malaysia and Thailand have neither sufficiently developed the requisite manpower, nor constructively implemented proactive technology governance that accelerates catching up. These factors, together with their scant emphasis on performance standards and eventual exposure to external competition, have limited firms generally to simple and OEM activities, during both IS and EO phases. The capacity of firms to expand operations in activities undergoing rapid technical change (e.g. electronics) will thus be limited.²⁵ Malaysia – the country which is furthest from the low-cost end of manufacturing – launched plans in the 1990s to help raise value-added in key export and strategic manufactures. Much will, however, depend on institutional support for the movement of enterprises towards the technology frontier. Thailand and later Indonesia, will likewise be better prepared to avert such problems if similar initiatives are undertaken now.

It may also be seen that the structural changes in the second-tier SEANICs have differed considerably from the first-tier East Asian NIEs. Not only did primary commodities help to generate the lion's share of foreign exchange during early growth, manufacturing growth was initially dominated by domestic-based resource processing. Subsequent expansion in the three economies has also differed. Electric/electronics became the main growth subsector in Malaysia, while textiles/garment, food and jewellery became the main export generators in Thailand. Wood-based products such as plywood and textile/garment became Indonesia's chief manufactured exports from the 1980s. The second-tier SEANICs were not supported by strong domestic expansion. Unlike the first-tier East Asian

NIEs, there is no concrete evidence of successful forays into heavy industries in the second-tier SEANICs. The external pressures that pushed FDI from Japan and later the East Asian NIEs to the second-tier NIEs were not just consequences of rising costs, or responses to deliberate government policies to engender structural sequencing. Indeed, the evidence suggests equally important influences stemming from the need to access developed markets (e.g. textiles and garments). Also, skill-intensive automated electronics assembly and test operations expanded in Malaysia from the mid-1980s, despite high levels of unemployment, in the period 1984–87. In Japan and the first-tier East Asian NIEs, industrial policy effectively generated internationally competitive manufacturers, which propelled industrial growth. With the exception of some resource-intensive industries – such as palm oil, jewellery, food and plywood processing – foreign capital accessing primarily foreign innovative sources have generally accounted for rapid growth in export manufacturing in the second-tier SEANICs. Also, much of the expansion in the second-tier SEANICs has been in low value-added segments of export manufacturing when compared to the first-tier East Asian NIEs, which experienced substantial integration into higher value-added chains.

In short, the second-tier SEANICs experiences do not appear as better examples for sustainable growth than the first-tier East Asian NIEs. Except for some resource-processing and governance structures that attracted FDI, others are likely to extract better lessons from the first-tier East Asian NIEs. Export manufacturing in the second-tier SEANICs expanded sharply, and in the case of Malaysia, grew strongly in technology-intensive electric/electronics. Unlike the first-tier East Asian NIEs, however, rapid export growth has not been matched by commensurate structural deepening in the second-tier SEANICs. Much export-oriented manufacturing has concentrated on simple and OEM activities. Export-oriented manufacturing in technologically narrow activities has grown rapidly. These economies have experienced substantial structural broadening or diversification within manufacturing operations, which has helped raise investment and employment opportunities. Resource-rich economies can attract FDI through more effective infrastructure, political stability, efficient bureaucracies and, in the initial stages, incentives to offset risks and uncertainty associated with underdeveloped industrial zones. There should, however, be effective institutional development to ensure rapid development of local firms, continued sustenance and upgrading of transnational operations, greater technology transfer and local enterprise development. While exports have grown sharply, the capacity to sustain them in the long term has not developed much. Indeed, the key export manufacturing sectors face potential slowdowns due to rising wage costs and a lack of skills supply. The second-tier SEANIC experiences therefore reveal strengths and weaknesses in this area.

Appendix

Table 2A.1 Indonesia, Malaysia and Thailand: key incentives for promoting export manufacturing, 1989

<i>Incentive</i>	<i>Benefits</i>			
	<i>Indonesia</i>	<i>Malaysia</i>	<i>Thailand</i>	<i>Thailand</i>
Export processing zones	Exports of at least 75%	Investment, employment, exports of at least 80% and promoted products	Employment, investment, foreign exchange earnings and promoted products	Tax exemptions of 50–90% of taxable income over 5 years. Subsidised infrastructure
Machinery import duty drawback	Non-competing machinery imports used in manufactured exports	Machinery imports for export use and in promoted activities	Non-competing machinery imports	Total duty exemption on machinery used for export production. Remaining in promoted activities granted partial duty exemption
Raw material import duty drawback on exports	Direct inputs used for export manufacturing	Direct inputs used for export manufacturing	Direct inputs for export manufacturing	Import duty drawback
Tax exemptions for exports	Exports of 85% or more	Exports to free zones and abroad	Manufacturing export based on export value, tax rates and price	Import duty and related business taxes drawback of at least 90%
Tax holidays	Investment, employment and foreign exchange generation capacity	Investment and employment levels. From 1993, employment levels only used for Eastern Peninsular states and East Malaysia	Investment and employment levels	Tax rebate of not less than 50%, including expenses incurred in export promotion

Table 2A.1 (continued)

Incentive	Eligibility			Benefits		
	Indonesia	Malaysia	Thailand	Indonesia	Malaysia	Thailand
Export credits	Manufactured exports	Manufactured exports	Manufactured exports	None	Subsidised credit and refinancing for approved exports	Special discounts on credit offered for exports. Insurance guarantee included through the export guarantee scheme
Tax exemptions for training	None	Approved investment on training from 1988-92. For firms with employment exceeding 50 employees replaced with Human Resource Development fund since 1993, which required firms to pay 1% of payroll to the fund	None	None	In 1988-92, approved expenses granted double deductions from taxable income. Since 1993, approved expenses can be claimed from the 1% payroll contributed to HRDF	None
Tax exemptions for R&D	None	Approved investment on R&D	None	None	None	None
Reinvestment and adjustment allowance	None	Approved reinvestment and adjustment activities	None	None	60% of approved expenses incurred in reinvestment can be exempted against 70% of taxable income. 100% of expenses incurred in adjustment can be exempted from taxable income over 5 years. Also subsidised loans offered	None
Infrastructure and building allowance	None	Building expense approved for storing and handling manufactured exports	Installation of infrastructural facilities	None	!0% exemption of taxable income in the first and an additional 2% a year over the remaining 10 years	10-25% exemption of taxable income over a period of 10 years

Sources: APDC (1987, 1987a, 1987b); Pangestu (1991); MIDA (1995).

Notes

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- 1 The accounting and engineering characteristics of firms in American and South Korean firms (also Japanese and Taiwanese) have tended to reflect the former more, emphasising short-termist profit margins compared to the latter's emphasis on reinvestments, technology development and market shares (see also Singh 1996).
- 2 The relative expansion of investment vis-à-vis GDP obviously suggests lower productivities if one uses either the Harrod (1939)–Domar (1946) incremental capital output ratio (ICOR) or Solow's (1957) Hicks neutral residual total factor productivity (TFP). The Harrod–Domar model, *inter alia*, obviously failed to take into account labour absorption and huge reinvestments to capture scale economies necessary when economies grow rapidly. If technology is assumed to include inputs embodied in physical capital as contended by Kaldor (1957), then the Alwyn Young (1994) – Krugman (1994) paradox explaining low levels of total factor productivity in the East Asian NIEs would not have arisen, though the observation would generally hold with the second-tier SEANICs. Although Kaldor (1966) presented a more robust model to go beyond the weaknesses apparent in the Harrod–Domar as well as Solow's neo-classical model, his two simultaneous growth equations linking output, employment and labour productivity suffered from serious specification problems (Rowthorn 1975, 1979).
- 3 Krugman (1989) has elegantly shown the role of IS in EO promotion.
- 4 The only state effort to promote manufacturing then was limited to cottage and small-scale processing activities in rural areas through the Rural Industrial Development Authority (Rasiah 1995: chapter 3).
- 5 The inflation rate was 600 per cent in 1966.
- 6 Many firms pulled out of Java after several years of operation.
- 7 Much of the FDI went to resource-based activities such as oil and gas mining.
- 8 Rising oil revenue from the massive 2.5 times price increase helped keep the debt service ratio within the 20 per cent limit set by the state (Pangestu 1993: 11).
- 9 Some of the major administrative requirements under this scheme included licences (a) to import; (b) to become sole distributors for particular brands; (c) for the import of certain items such as steel, scrap metal and tin plate, limited to producers in Indonesia; and (d) for goods manufactured by state-owned firms; e.g. polystyrene and polyethylene (Pangestu 1993: 12).
- 10 Minor manufacturing activities involving metals and plantation agriculture, such as tin cans and slippers for the Asian market, emerged in Malaysia.
- 11 The Malaysian steelmaker, Perwaja Steel, has continued to operate for more than 10 years despite accumulating huge losses. Even Proton, which has been recording profits from 1989, has enjoyed high protection. Initiatives involving steel and aircraft production in Indonesia have not approached international competitiveness (see Rasiah 2001).
- 12 After legalising unions in 1956, the Thai government banned them in 1958, though only 82 strikes were reported in the period 1958–68 (Hewison 1985: 284).
- 13 Even so, workers in several firms have faced management pressure to either disband or limit their roles.

- 14 The word unproductive here is used to distinguish them from the productive Schumpeterian rents. Using Marshall's (1930) definition, a rent exists whenever the transactions rate is lower (to purchasers) or higher (to sellers) than the market-clearing rate (i.e. opportunity costs). Since scale economies as well as risky and uncertain innovative activities involve rents, it becomes necessary to distinguish them (see Khan 1989; Rasiah 1997).
- 15 Based on interviews by the author.
- 16 Based on interviews by the author in 1997.
- 17 Eighteen foreign and Malaysian transnationals with subsidiaries in Malaysia and Indonesia reported that serious customs irregularities had frustrated their expansion plans in Indonesia (based on interviews by the author in 1993).
- 18 The free trade zones were renamed free industrial zones in the early 1990s following the redefinition of exports and imports that no longer included movement of merchandise and services involving FTZs as international trade.
- 19 The criteria for approval in 1993 were 20 per cent value-added and 30 per cent domestic content. Crude rubber, vegetable oils and textile products have been excluded from the criteria. Pre-shipment conditions also require 80 per cent of export value, or 70 per cent of value of eligible exports (Ismail Salleh 1995: 53).
- 20 Six firms reported having ODM capability, but not the requisite market potential to support production (Rasiah 1998a).
- 21 Malaysia is the world's chief exporter of palm oil.
- 22 Based on interviews conducted by the author with nine foreign transnationals having subsidiaries in Malaysia, Thailand and the Philippines in 1990.
- 23 Export subsidies in these economies have been scaled down substantially from 1995, necessitated by deregulation required by the WTO.
- 24 In an earlier interview conducted in 1990, a German firm noted that it preferred to transfer in its profits to Malaysia so that the bulk of it would be subject to a value-added tax of 14 per cent rather than a German corporate tax of 56 per cent (according to author interviews in 1990). Similarly, an American company executive showed the author its income statement for 1990, in which it had recorded its highest profits in 1985, when it had, in fact, recorded overall losses. What the firm had done was to record profits in its subsidiary in Malaysia, where it had enjoyed a tax holiday in 1990.
- 25 A number of local export subcontractors in garment and knitting industries in Malaysia and Thailand have shifted operations to property development following the scrapping of export incentives and rising labour costs. Others have relied on imported foreign labour.

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3 New approaches to investment policy in the ASEAN 4

Greg Felker and Jomo K. S.

Southeast Asia's economic crisis of 1997–98 prompted major changes in economic policy, including the lifting of barriers to foreign investment in previously sheltered industrial and service sectors. According to conventional analysis, the crisis and ensuing reforms have spelled the demise of government efforts to use strategic industrial policies to promote and guide industrialisation. Having surrendered their discretionary powers to regulate entry into key economic sectors, Southeast Asian governments must now allow international markets to guide them toward their natural comparative advantages.

This popular narrative is incomplete and significantly misleading. Liberalisation – voluntary or otherwise – has indeed narrowed the scope for traditional industrial policies, including import protection and investment restrictions to nurture locally controlled infant industries. Southeast Asian governments have not, however, abandoned efforts to influence sectoral or micro-economic trends in industry. Some of them have matched the dismantling of trade and investment barriers with new measures to encourage investments in more technology- and skill-intensive production. In this regard, post-crisis policy reforms are less revolutionary than they might appear. The 'ASEAN 4' – Thailand, Malaysia, the Philippines and Indonesia – undertook gradual liberalisation during the 1980s and 1990s, and foreign direct investment (FDI) was crucial to their manufactured export growth. Yet, their governments actively promoted and managed FDI inflows, combined export promotion with more traditional infant-industry policies in specific sectors, and attempted to foster production linkages and technology transfer from foreign-dominated export sectors to local supporting industries. The recent crisis has accentuated their search for new forms of industrial policy appropriate to an era of deepening international integration.

This chapter substantiates these arguments by examining a key dimension of industrial policy in the ASEAN 4. Industrial policy refers to all government efforts to influence an economy's sectoral composition or structural characteristics, and includes a variety of instruments, including trade,

credit, human resource and technology policies. While other recent works on Southeast Asia (Lall 1995; Rock 1995; Jomo *et al.* 1997) review the spectrum of relevant policies, this chapter focuses on *investment policies* proper, which are measures that regulate or otherwise influence the investment process. Southeast Asian governments have long used equity restrictions, tariff exemptions and tax incentives to influence the composition of investment flows. As they eased broad regulatory *barriers* in recent years, they increasingly deployed *positive* incentives, infrastructure and services to encourage desired forms of investment. These changes are more advanced in some of the ASEAN 4 than in others, yet the elements of a new investment policy paradigm are evident throughout the region. They suggest that the scope for positive investment policy in a liberal ownership regime is far greater than commonly assumed.¹

The changing context and content of investment policy in Southeast Asia

Most studies characterise industrial and trade policies in terms of their degree of ‘openness’, as defined by policy-derived entry barriers, and the extent as well as sector- or firm-specificity of government intervention. Policy regimes fall along a continuum from highly closed and interventionist regimes towards more liberal and incentive-neutral ones. Viewed in these terms, the dominant trend in Southeast Asian investment policies over the past 15 years has indeed been to relax foreign ownership restrictions and mandatory trade-related investment measures (TRIMs) like local content, foreign-exchange balancing and technology transfer requirements.

Three broad issues have complicated the regional trend towards open investment regimes, however. First, liberalisation has progressed unevenly across sectors and among the individual countries of the ASEAN 4. As general investment barriers have fallen, the differential incentive effects of remaining restrictions have grown, thus signalling strategic priorities or political sensitivities more clearly. Second, prior to the crisis, liberalisation was usually tied to export promotion, and sometimes to other more specific policy goals such as industrial decentralisation or technological upgrading. Export-oriented industries were accorded liberal foreign ownership rights and exemptions from import duties, for example, while domestic-market production remained more regulated. Thus, ASEAN economies’ integration into global manufacturing networks in the 1980s and 1990s did not signal a commitment to allow markets to determine their industrial specialisations, but rather involved state efforts to respond to opportunities presented by the rapid globalisation of manufacturing.

Third, in several of the ASEAN 4, the major deviation from a neutral incentive regime has derived, not from entry barriers, but from investment *subsidies* like corporate income tax holidays, exemptions and deductions.

Such subsidies are usually viewed as by-products of socially inefficient competition among different jurisdictions to attract investment. Chia (1993: 69) highlights these competitive pressures in arguing that 'the significance of the tax incentive now lies more in its absence than presence, as countries without the incentive are perceived to be less friendly towards FDI'. Even if investment incentives are significantly redundant at a regional level, however, they may still result in durable advantages for individual host economies if they attract investments with scale or agglomeration economies, or if positive investment externalities exceed subsidy costs. They may also compensate MNCs for search costs and extra risks involved in transferring advanced production activities to new geographic jurisdictions.²

A distinct but related criticism holds that targeted incentives are simply ineffective in influencing investment patterns (Yeung 1996). Far more important are a country's economic and policy 'basics': factor endowments and costs, macroeconomic conditions, trade regime, human resources, infrastructure, and the efficiency and reliability of financial and legal systems, as well as investors' calculations of the security of their property rights, policy stability and other political risks. While these fundamentals are indisputably crucial, more specific aspects of the 'investment environment', including incentives, have been manifestly important at the margin for investors' decisions regarding initial location as well as reinvestment for expansion. Most manufacturing investments in Thailand, Malaysia and the Philippines, including a majority of FDI projects, have received promotional incentives of various kinds. In part, this reflects the fact that 'because of distortions in the rest of the economy such as high trade barriers, most investors require some form of incentives if they are going to be able to produce profitably' (OECD 1999: 17). To this extent, broader liberalisation will diminish their importance. Yet, investment incentives have also become important symbols that ASEAN governments have used to signal their commitment to welcome and support foreign and local investors, particularly in priority areas (Yeung 1996: 510). Moreover, ASEAN governments have broadened the scope of investment policy beyond fiscal inducements to embrace multi-faceted investment facilitation and service roles. Finally, even though 'fundamentals' (e.g. the base of skills and technology) are crucial to industrial success, they are difficult to alter in the short run. Indeed, late-industrialising countries seek FDI precisely because of its potential to augment those endowments, and thus remain interested in influencing the investment process to enhance technology and skill transfers. Investment policies may be ineffective when poorly conceived or implemented, but their potential contribution to local capability building is substantial (UNCTAD 1999). In the case of the ASEAN 4, efforts to enhance the investment environment have often provided the impetus for new initiatives in skill development and technology extension.

Over time, investment policies in the ASEAN 4 have, to varying degrees, embraced new goals, instruments and institutional frameworks. In terms of new investment policy goals, two themes are now prominent. First, recent investment policies take explicit note of the globalisation of production through multinational corporations' (MNCs') international operations. Instead of fostering locally integrated, nationally controlled industry structures, they aim to position the local economy in advantageous roles within MNCs' own internationally dispersed divisions of labour. Infrastructural and policy support for efficient import and export are of particular importance, but governments have also refined investment incentives to encourage the location of particular corporate functions, such as procurement, management, R&D and design. This shift in orientation from traditional national infant-industry policies towards an embrace of FDI-led integration into regional and global production systems distinguishes the ASEAN 4 from their late-industrialising predecessors, Japan, South Korea and Taiwan. The latter restricted FDI to varying degrees even while avidly acquiring foreign technology through arm's-length mechanisms like licensing (Dahlman and Sananikone 1990; Mardon 1990; Hobday 1995).

The second change in the goals of investment policy follows from the earlier discussion. The traditional criteria for evaluating investment performance, such as capital formation, employment generation and foreign exchange earnings, have been joined by a focus on investment projects' dynamic effects on industrial structure – market access, technology transfer and human resource development. The accent on positive investment externalities has, in some countries, shifted the target of investment promotion policies from encouraging discrete industries to fostering the growth of dynamic industrial 'clusters' of complementary assembly, component production, producer-services, skill-development and technology support. In addition to attracting new green-field FDI, this goal draws attention to the importance of encouraging established producers to reinvest in deepening their local operations, upgrading skills, forming local linkages and undertaking a higher profile in their parent companies' global operations. This, in turn, suggests the need to provide post-investment services. In pursuing these goals, the ASEAN 4 have followed in the footsteps of their regional neighbour, Singapore, which adopted an FDI-led path to industrialisation early in its history, in large part for strategic reasons. Despite its liberal investment rules, the Singaporean state has actively shaped the investment environment to a remarkable degree of detail by providing an array of subsidies, infrastructure and complementary public investments (Lall 1996).

As the goals of investment policy have shifted in the ASEAN 4 countries, the instruments of investment policy have changed accordingly. Negative restrictions, including foreign equity limits and local content requirements, have been, or are currently being, phased out in most sectors, though significant exceptions remain. Tax holidays, while controversial in economic

welfare terms, have also become less of a differentiating factor among host countries because most governments offer them. In their stead, some ASEAN governments have begun offering a range of services designed to enhance the local investment environment, attract desired forms of investment, and induce positive externalities. These include:

- targeted investment promotion;
- one-stop facilitation of administrative approvals for investment;
- provision of specialised physical, customs-related and technical infrastructure;
- financial and other support for skills and technology development;
- matchmaking between investors and local suppliers; and
- other post-investment services relating to investors' routine operations, such as trouble-shooting administrative problems with other government bureaucracies;
- ensuring that new technology-based start-ups have access to finance and other business support.

Comprehensive investor service packages have become particularly important in some governments' efforts to stimulate the development of information (and communications) technology (IT), particularly since tax incentives are generally less relevant to encouraging new IT start-ups.

These investment policy reforms involve daunting political and administrative challenges. Contrary to popular understanding, they demand that government investment agencies develop *greater* expertise and flexibility – rather than a sector-neutral and minimally active policy stance. Tailoring the local investment environment to the needs of globally-linked production requires an understanding of the widely varying technological properties of specific industries, the logistical and strategic concerns of multinational businesses, and the rapidly evolving international investment environment. More broadly, changing the mission of investment policy from *regulation* to *promotion* to *service* requires the transformation of deeply embedded organisational cultures within the relevant bureaucracies. This is a primary reason that new investment policies have often involved the creation of special agencies, authorities or administrative zones.

These new approaches to investment policy confront important challenges and contradictions. Chief among these is what might be termed the 'enclave syndrome', in which comparatively sophisticated foreign operations have limited impacts on the host economy in terms of production linkages, skill formation or technological externalities. Ironically, enclave industrialisation partly reflects the dualistic investment policy regimes employed by ASEAN governments during the boom years: export-oriented investments were promoted by granting special exemptions from the restrictions that continued to protect domestic-market oriented industries

(OECD 1999). At a deeper level, however, the question hinges on local 'absorptive capacity', i.e. the adequacy of local skills and technology levels to benefit from the foreign presence. This poses difficult policy challenges for countries such as the ASEAN 4, which bring few complementary capabilities to the bargaining table. The ASEAN 4 have few medium-sized, technologically advanced subcontractors able to integrate into MNCs' regional or global supply chains. Similarly, MNCs' efforts to build internally integrated regional divisions of labour may pose a structural constraint on host-countries' efforts to foster local linkages and spill-overs. Even as multinationals have devolved key functions – like marketing, procurement, as well as design and R&D – to their Southeast Asian operations, they have tended to centralise such functions in regional co-ordinating units in Singapore or Hong Kong. These considerations highlight the potential role, as well as potential challenges, for host-country policies to enhance the benefits from FDI.³

The next sections of this chapter review the evolution of investment policy in each of the ASEAN 4, focusing in particular on the tension between national control and international integration. The case studies will also examine the use of incentives to implement industrial strategy goals, including sectoral targeting, technological upgrading and regional decentralisation. ASEAN governments' responses to the limitations of export-enclave development will also be considered, in particular their efforts to encourage linkages and technology spill-overs under the broad rubric of 'industrial clusters'. Finally, each national review will assess the institutional framework for investment policy, and detail efforts to reform those institutions in response to new challenges posed by the changing investment policy paradigm.

Investment reform in the ASEAN 4

Thailand

Evolution of the statutory investment regime

Investment incentives have played an important general role in stimulating Thailand's industrialisation, and despite a widespread perception that the government was particularly non-interventionist, sector-specific policies were important in a limited number of cases (Rock 1995). During the 1980s, Thailand adopted distinct investment policies for export manufacturing while continuing to protect its domestic markets. These changes enabled Thailand to attract large FDI inflows and emerge as a leading manufactured goods exporter, but the dualistic policy regime frustrated technological upgrading in export industries as well as the formation of linkages and spill-overs to domestic industry.

Thailand's investment policy regime has long been comparatively liberal towards foreign investment and encouraging of domestic private investment. The Investment Promotion Act of 1977 superseded earlier legislation empowering the Thai Board of Investment (BOI) to grant a range of privileges, including income tax holidays of three to eight years, exemptions from duties on imported machinery and production inputs, and, in some cases, temporary tariff surcharges on competing imports. The Act codified Thailand's long-standing insistence on Thai-majority ownership in domestic-market industries, which meant that most foreign investment took the form of joint ventures.⁴ The Alien Business Law of 1972 excluded foreign investment in 'sensitive' industries such as agriculture and media, but this and other restrictions posed few obstacles to most foreign investors, particularly in manufacturing, since BOI-promoted projects were exempted from most of their provisions.⁵ Moreover, without clear criteria for promotion, the Board awarded the status liberally to projects in a wide array of sectors.⁶

If Thailand did not seek to rigorously control foreign investment, however, neither did it attract large inflows or stimulate manufactured exports until the mid-1980s, despite the adoption of an Export Promotion Act in 1972.⁷ Rather, investment promotion policies were clearly geared to support the expansion of domestic business interests. The BOI's joint-venture requirement helped Sino-Thai business groups to diversify from commercial and distribution roles into manufacturing, in partnership with foreign investors, to capture the rents available from the expanding domestic market (Suehiro 1989). Given the loose eligibility criteria for promotional status, established investors in resource-based and low-technology industries, like food processing and textiles and garments, could enjoy subsidies for expansion. By the mid-1980s, a number of family-owned Sino-Thai industrial conglomerates had emerged in these fields and begun to penetrate global export markets. Also, during the 1970s and 1980s, the government imposed local content requirements on a growing number of industrial sectors, including agricultural machinery, certain electrical appliances, as well as automobile and motorcycle production. These provisions facilitated the growth of Thai-owned engineering firms, including small and medium-sized parts producers and larger electrical motor, compressor and foundry operations (Doner 1988). Finally, during the 1980s, the government orchestrated a large-scale import-substitution programme in intermediate industries like chemicals, cement and fertiliser under its Eastern Seaboard Program (Muscat 1994: 205–216).

With a 1983 reorganisation, the BOI published specific criteria for investment promotion for the first time, together with a wide-ranging list of promoted activities. A second reform package in 1987 firmly emphasised *decentralisation* of investment away from Bangkok to outer provinces by establishing three investment zones. New investments in Bangkok would no

longer receive tax incentives, while those projects locating in the most remote zone were eligible for maximum benefits: full eight-year tax holidays, exemption from import duty on machinery and an automatic 75 per cent reduction on import duties for raw materials for five years. The decentralisation thrust was paralleled, however, by new incentives for *export-oriented* manufacturing investments. Such projects received three-year tax holidays and were exempted from equity restrictions, thus enabling multinational corporations to establish wholly owned subsidiaries for their export operations. As FDI flows into Southeast Asia surged in the late 1980s, the government relaxed foreign equity restrictions to allow 100 per cent foreign ownership of projects exporting 80 per cent of output and of those locating in the outer provinces.

These changes were modest by the standards of more export-oriented economies in the region like Singapore and Malaysia, but they marked a significant shift in the relative positions of domestic and foreign enterprise in Thailand's industrialisation. Thai investors continued to enjoy access to the BOI's promotional privileges for both domestic market and export-oriented projects, but they protested granting even limited domestic-market access to wholly foreign-owned firms (Lim and Pang 1991: 46–47). By the early 1990s, however, the growth boom had muffled objections to a more liberal regime. Thai businesses were themselves divided on the question of investment and trade liberalisation, and large local companies involved in downstream assembly responded to the new competition by pressing for reductions in tariffs on raw materials and intermediate goods.

In contrast to earlier periods, then, the bulk of new FDI during the period of Thailand's growth boom (1987–97) flowed into the export-manufacturing sector and took the form of wholly foreign-owned subsidiaries. Foreign investment was also encouraged in the infrastructure and transport sectors, particularly several large build–operate–transfer (BOT) mass-transit schemes in the traffic-choked capital. In anticipation of signing the WTO protocol on TRIMs, Thailand reduced the total number of industries with local content requirements from eighteen to four, although the most important local content programmes for automotive and motorcycle assembly were retained until the WTO's year-2000 deadline.

Since its financial collapse triggered the regional economic crisis, Thailand has undertaken substantial efforts to remove remaining restrictions on foreign equity investment. The major focus of attention has been on financial sector restructuring, where the special-purpose Financial Restructuring Authority (FRA) has supervised the disposal of assets taken over from failed banks and finance companies. At the end of 1997, Thailand passed legislation allowing foreign ownership of banking and finance groups, and by 1999 had auctioned four collapsed commercial banks to foreign investors. Other reforms enabled foreigners to own the land under their factories, up to one *rai* (1,600 sq. m.) of land when investing Bt25

million or more. The IMF-backed restructuring programme called for other changes to the Alien Business Law, which was replaced by a new Foreign Investment Law on 21 October, 1999 after a one-year legislative review. The new law retained the apparatus of a negative-list system and established a special approval committee for sensitive sectors, but it mandated greatly simplified approval procedures and opened important sectors such as domestic transport, retail trade, as well as financial and legal services, to foreign ownership.

In the industrial sector, the Board of Investment launched several initiatives to encourage greater foreign investment inflow. In September 1997 the BOI waived equity limits for existing joint-venture projects enjoying its promotion, thus permitting foreign partners to increase their stakes without reference to limits on foreign ownership. The change was widened to new investments in November 1998, when the BOI suspended the long-standing requirement for majority-Thai ownership in domestic-market projects.⁸ These conspicuous efforts to relax foreign investment barriers resulted in an influx of new capital in the form of merger and acquisition (M&A) investment. In fact, the BOI established an M&A unit to provide matchmaking services and to co-ordinate necessary approvals. According to a study by Brimble and Sherman (1999), 253 companies applied to the BOI to increase their foreign ownership share between November 1997 and March 1999, of which 135 projects had been implemented worth a total US\$570 million.

The liberalisation of Thailand's investment regime has been a gradual and contested process. The controversies that have occasionally slowed changes did not reflect an unalloyed form of economic nationalism, as foreign investment has long been welcomed by both government and most domestic business interests. Rather, the key political issues revolved around the terms for foreign access to the formerly booming domestic consumer market and, more recently, control over insolvent assets. Historically, limits on foreign participation in the service sector and the joint-venture mandate for manufacturing projects nurtured the growth of an influential domestic business class. The government has thus been compelled to negotiate many liberalisation initiatives with the leading business associations like the Federation of Thai Industries (FTI) and the Thai Bankers Association (TBA). The final version of the Foreign Investment Law, for example, contains several limiting amendments passed by non-elected Thailand's Senate, which had become dominated in the 1990s by business figures.⁹

Strategic deployment of investment incentives

A second important consequence of Thai business' political influence is that investment subsidies have been applied liberally to a wide range of industries – ranging from high-tech electronics to mature sectors like agriculture and hotel and tourist projects – rather than as an instrument for

implementing focused strategic industrial policies. In October 1999, the BOI Secretary-General lamented that the political influence of domestic investors had meant the Board could not reject applications for promotional privileges even in industries facing serious over-capacity problems. Attempts to withdraw non-strategic sectors from the eligible list provoked allegations that established investors had influenced the Board to exclude new entrants.¹⁰

Within these constraints, however, the BOI has sought, in limited ways, to encourage higher value-added and technology-intensive investments. While failing to focus the list of promoted activities on technology or skills-related criteria, the BOI has granted maximum benefits, regardless of location, to specific high-technology activities like wafer fabrication, precision or automated machinery and software parks. In 1989 the BOI began offering incentives for the establishment of R&D facilities, and by 1994 had granted incentives to 26 projects worth more than Bt1,500 million, and including both local Thai firms and foreign investors. The Board has co-operated in granting promotion to projects affiliated with the National Science and Technology Development Agency (NSTDA), a quasi-government body set up in 1991 to sponsor and conduct applied research in electronics, biotechnology and materials. The BOI promulgated special promotional privileges for software development in 1997 in conjunction with NSTDA's opening of a software park project; by late 1999, the park's incubator had nineteen start-up tenants. In 1995, the Agency's electronics institute became involved in an ambitious effort by the leading Thai-owned subcontract assembler of semiconductors, the Alphatec Group, to push Thailand into wafer fabrication, yet the entire project collapsed with the price of memory chips and financial markets in 1996–97.¹¹ The Agency also spearheaded the launching of a ten-year IT strategy in late 1999 that focused on using the government's own electronic systems upgrading to nurture the local IT industry. NSTDA has also developed the country's first science park north of Bangkok near the Asian Institute of Technology, though the financial crisis delayed its opening. The park's prospective tenants included some of the country's leading multinational manufacturers, including design and development centres for auto-makers Toyota and Ford.¹²

In the wake of the crisis, the BOI refocused its attention on assisting the restructuring and upgrading of Thailand's existing industries. In conjunction with special Ministry of Industry funds for capital equipment acquisition in the textiles, footwear, food processing and other industries, the Board granted special duty exemptions on imports of capital equipment 'using higher technology'. The Board has also broadened its efforts to encourage established foreign investors to deepen their investments in Thailand. In 1995, it established a non-profit Investor Club Association to serve as an organisational interface for providing post-investment services to promoted companies, which has since enrolled 800 BOI-promoted

companies. The Association's 60 staff operate an electronic raw materials tracking system, linked to the Customs Department through electronic-data interchange, which manages the documentation necessary for companies to avail themselves of import-duty drawbacks. In 1997 the BOI also co-ordinated the establishment of a one-stop office with the Immigration Department to process applications for work permits.¹³

In 1996, the Board also announced non-tax incentives for the establishment of regional headquarters operations, i.e. multinational corporate offices established to provide managerial and technical support to affiliates throughout Southeast Asia. Investors in these activities are automatically accorded five expatriate work permits and allowed to import capital equipment duty-free. The criteria were liberally defined to include consulting, exporting, wholesaling and equipment maintenance, and by 1999, the BOI had approved some 102 trade and investment support offices, with cumulative investment of more than Bt3.2 billion. The incentive was extended in August 1999 to international procurement offices, which co-ordinate sourcing of components and other production inputs from local and regional suppliers.

It is difficult to assess the differential impact of these measures, but a growing number of multinational companies have, in recent years, selected Thailand as their regional production and export base. Notable among them are Japanese electronics producers Fujitsu and Minebea, US disk-drive maker Read-Rite, German engineering firm Siemens and automakers Toyota, Isuzu, Honda, Mitsubishi, Mazda/Ford and General Motors. In the case of Thailand's auto sector, the Ministry of Industry used accelerated relaxation of local-content policies as a bargaining chip to lure a US\$1.5 billion investment by GM in 1995. Similarly, when the recent crisis crippled domestic auto sales, the government bargained with foreign auto assemblers to lower import duties on parts, assembly kits and built-up vehicles in exchange for commitments to refocus their production plans on export markets.

The BOI's rather indiscriminate promotional policy received greater scrutiny after the crisis struck. As part of its short-term response to the collapse in investment, the Board relaxed export and regional decentralisation criteria for investment promotion, offering optimal terms for all new projects until the end of 1999. In late 1998, it extended its import-duty exemption privileges to non-promoted firms operating in priority industries. These efforts considerably reduced the element of discretion and selectivity in Thailand's already lax investment policy regime. Yet, the IMF preferred to increase the incentive neutrality of Thailand's business environment by curtailing investment incentives in favour of broad-front reductions in tariffs and foreign investment barriers. In fact, the Fund recommended disbanding the Board or at least removing its powers to award tax holidays.¹⁴

Instead, the Thai government decided to revamp the agency once again, and a Cabinet-level committee drew up a new set of guidelines in mid-1999. The proposed reforms would universalise national treatment, doing away with virtually all foreign equity restrictions, in line with provisions of the IMF adjustment programme, but would also focus the criteria for investment promotion more tightly in two ways. The prior policy of investment location decentralisation, suspended during the crisis, was to be revived with more generous tax and import-duty exemption privileges for projects located in outlying provinces. Second, companies applying for promotion would be screened according to their investments in R&D, technology improvement and human resource development and would also be required to obtain ISO9000 quality-system certification for most industries. Rather than sectoral targeting, therefore, the proposed guidelines would link incentives to the goal of improving investment quality as measured by positive externalities-producing investments in technology and skills. It is not yet clear how these criteria will be measured and whether they will be implemented rigorously; similar decisions in the past produced little discernible change to the allocation of incentives. If implemented strictly, the new guidelines would narrow domestic Thai industries' access to investment privileges. More certain is that the BOI will continue to strengthen its investor service functions.

The enclave dilemma, linkage promotion and technology diffusion

Thailand's manufactured export boom was driven in part by Thai investors in resource-based and labour-intensive industries like food-processing and textiles, but a new wave of wholly foreign-owned multinational subsidiaries in the electronic and automotive sectors has led industrial expansion since the late 1980s. A key argument for the liberalisation of FDI rules was the need to encourage technology transfer. This term is typically used, often implicitly, in two very distinct ways. In the first sense, technology is transferred when foreign subsidiaries introduce improved technologies in their own operations. It is often presumed that this will lead to a second form of technology transfer – the diffusion of technology to local enterprises through a number of mechanisms. The most important of these are the training of local staff and knowledge-diffusion through subcontracting or other backward production linkages to local components suppliers, assembly subcontractors and providers of specialised tooling or engineering support. As research in advanced industrial countries has shown, such networks can create dynamic *industrial clusters* by allowing inter-firm co-operation in upgrading skills, technologies, and quality standards (Porter 1990; Storper 1997).

Through its local-content programmes in automotives and agricultural machinery in the 1970s and 1980s, Thailand had developed a relatively

large base of supporting industries in metalworking, tool and die, plastic products, printed circuit-board assembly and electrical components.¹⁵ Yet, these firms still operated as protected domestic-market industries, displaying relatively low levels of productivity and quality. Before the introduction of VAT in 1992, Thailand's business sales tax created a cascading tax burden on inter-firm transactions. Finally, potential suppliers to multinational exporters were forced to pay considerable tariffs on their own imports. These *indirect exporters* were technically eligible for import duty drawbacks, but often found it difficult, in practice, to provide the necessary detailed documentary proof of the incorporation of imported components and raw materials into export products. Therefore, when new foreign investors set up export operations during the boom years, they formed relatively few local production linkages. Instead, they sourced inputs with imports or from foreign suppliers who had also migrated to Thailand.¹⁶

In response to this concern, the Thai Board of Investment launched a BOI Unit on Industrial Linkage Development (BUILD) in 1992. The BUILD programme attempted to play a matchmaking role between large assemblers and small and medium industrial (SMI) suppliers by providing procurement guides to new and existing promoted investors. Little progress was made during the programme's initial few years; the BOI lacked sufficient staff numbers and expertise to provide important technical or financial assistance to prospective suppliers, while most large foreign and local companies displayed little interest. In 1997, the BOI revamped and enlarged its linkage-promotion effort by initiating a 'buyers-meet-vendors' programme, in which the Board vetted and escorted potential suppliers on factory visits to large assemblers. A companion programme involved procurement fairs in which large companies displayed the type of parts they would be willing to consider subcontracting locally. By 1999, the BOI had arranged visits to 18 large companies involving a total of 491 potential suppliers, and claimed that 58 contracts worth nearly Bt1 billion had resulted from the meetings, though the importance of the Board's intervention is unclear.

The Board also used its main promotional incentives to develop supporting industries in order to deepen the export structure. In 1993, investments in several activities, including forging and casting operations and the production of mould and die or jigs and fixtures, became eligible for full tax holidays regardless of their location (i.e. even if located in the Bangkok area). The same exemption was broadened in 1994 to include other supporting industries and manufacturing services, such as precision machining, engineering plastics and several types of tool-making, and widened again in subsequent years. Promotion of supporting-industry investment, however, was not targeted to encourage indigenous enterprises to form linkages with foreign export firms. Rather, it explicitly sought to encourage Japanese and other East Asian SMIs to follow their assembly

customers to Thailand. To the extent that industry clusters would emerge, therefore, they were not guaranteed to result in technology transfer to indigenous industry.

The problem of developing Thai supplier industries has become particularly acute in the wake of the economic crisis, which devastated SMIs dependent on contracts with large auto and electronics assemblers. Perhaps half of Thailand's 1,200 auto parts suppliers had gone bankrupt by early 1999 (Brimble and Sherman 1999: 21). Some of the leading parts producers were forced to ask their Japanese joint venture partners to increase their equity stake under BOI's special rules. Many such deals included special buy-back options should the Thai partner recover financially within a specified time period. However, even Thailand's giant Siam Cement Group, a leading player in the BOI-co-ordinated efforts to localise components production in the automotive and electrical appliance sectors during the 1980s, declared its intention to hand over its auto-parts subsidiaries to its Japanese partner, Toyota.¹⁷

While the BOI has been active within its sphere of authority, Thailand's overall efforts to foster industrial clusters have been hampered by an inadequate infrastructure for providing financial, skill, and technical support for SMIs. Many small suppliers lack access to commercial bank lending, and they have been largely frozen out of formal credit markets since the onset of the crisis. A Small & Medium Industry Finance Corporation was set up in the early 1990s to provide subsidised loans for technical upgrading by supporting industries, but has been widely criticised for an overly bureaucratic operating style and poor financial performance. Other dedicated financial programmes for supplier industries have foundered due either to bureaucratic obstacles or the unwillingness of private banks to assist in implementing government credit-subsidy schemes. Industrial and technical extension services have likewise been meagre, though a few exceptions exist, including the Industry Ministry's Metal Working Industries Development Institute (MIDI), which has provided quality-control and automation technology training to the tool and die industry. The National Science & Technology Development Agency forged research and technology extension linkages with a number of indigenous industries, though the scope of its outreach to industry remains limited.¹⁸ In late 1999, the government opened a new SME (small and medium enterprise) Financial Advisory Centre with branches in nine provincial universities to consult smaller firms in drafting restructuring plans and accessing government support programmes.

Efforts to address the low level of workforce skills have likewise lagged behind the demands of industry, though the skill development infrastructure has recently expanded. The Thai-Japan Technology Promotion Association, set up in 1973 by Japanese and Thai business associations, offers a range of courses in quality control subjects and, in 1997, opened a separate training institute to train workers in automation skills. In 1998 a new joint

industry–government skills training institute was opened in partnership with the German government. In 1998, the Ministry of Industry began to spin off several of its internal offices and industrial extension operations into sector-specific extra-bureaucratic institutes charged with co-ordinating technical assistance programmes, including training assistance, equipment upgrading and ISO9000 quality certification. The institutes, ranging from electronics to automotives, textiles, food and agro-industry, are organised as public–private corporations, to be jointly run with their counterpart industry associations. While it is too early to assess their prospects, their corporatisation, independence from civil service and close links with relevant private-sector associations (several institute directors were appointed from the private sector) bodes well for an enhanced technical extension effort. An overall evaluation thus reveals the system of technology-extension and skills-development institutions in Thailand has been poorly funded and unresponsive to the needs of industry. Yet the crisis has given new impetus to efforts to strengthen technical and financial support for small and medium-sized manufacturers.

The institutional framework for investment policy

The key actor in Thailand's investment regime is the Board of Investment. Whereas its counterpart agencies in most countries are primarily implementers with little policy role, the BOI's status as a semi-autonomous agency under the Prime Minister's Department gives it a high degree of influence over a broad range of investment issues. For many years, the BOI was empowered to grant not only tax incentives and import-duty exemptions, but also special tariff protection, bans on new entrants into particular sectors and approvals for expatriate employment. The BOI has also co-ordinated local content programmes in several sectors and, in recent years, has taken the lead in seeking new ways of promoting linkage formation and providing investment facilitation and post-investment services.

The BOI's wide powers do not signify exclusive authority, however. Its incentive programmes overlapped and often conflicted with the functions of the Ministries of Industry, Finance, Commerce and others. The Board of Investment proper, which oversees the BOI agency, is an inter-ministerial committee chaired by the Prime Minister, but most policy co-ordination is worked out through lower-level inter-agency committees involving the BOI and its counterparts in other ministries. The relationship with the Ministry of Industry (MOI) is particularly important, as the MOI has juridical authority over all industrial policies. The MOI has bureaus charged with supervising the growth of particular sectors, as well as several offices with policy and licensing functions. For example, a special MOI policy committee manages local content and tariff policies for the key automotive sector. Frequent government changes and cabinet reshuffles have

hindered the MOI and other line ministries from following through on perennial proposals to invigorate industry-support programmes.

The BOI's autonomous powers have made it the target of criticism from turf-conscious bureaucracies as well as economists critical of its incentive programme as unfocused, redundant or even distorting. As military-appointed technocrats reoriented Thailand's development strategy during the 1980s towards an export focus, the Board spearheaded moves to liberalise entry conditions for new FDI inflows. Partly as a result, the civilian Chatichai government in 1989 and 1990 considered disbanding the Board, and in 1992, several of the Board's discretionary powers over tariffs were removed, including the power to grant duty exemptions for imports of capital equipment. Moreover, the BOI's duty-exemption incentives have become less potent as Thailand's trade regime has lowered tariffs on a range of intermediate inputs in the 1990s. Given that most inputs and capital equipment imports still face residual tariffs, however, the Board's ability to grant total duty exemptions and assist with processing the required paperwork remains valuable to most industries.¹⁹

The erosion of its tariff powers and criticism of its tax incentives have prompted the Board to emphasise its role in providing a range of non-pecuniary investor services, as described above. In 1992, the Board reorganised its internal structure and established seven sector-specific investment promotion divisions, though it still lacks sufficient personnel and technical capacity to evaluate the technical or skill content of projects, tie incentives closely to strategic criteria and monitor the productivity performance of promoted industries. The Board came under renewed criticism in the wake of the economic collapse in 1997, but the Thai business community came to the agency's defence, arguing that it remained the most credible and accessible interlocutor for much of the private sector. Despite the promulgation of new foreclosure and bankruptcy laws, the BOI has been a critical player in facilitating the flow of merger and acquisition investment in the industrial sector, and its new guidelines suggest an intention to leverage its information resources to remain a key player in future investment deal-making.

Malaysia

Evolution of the statutory investment regime

Malaysia was the most active among the ASEAN 4 in reshaping its investment regime to capitalise on the regional boom in manufacturing FDI during the 1980s and 1990s, though it has resisted pressures to liberalise other sectors in the wake of the crisis. Malaysia launched its industrialisation programme with the 1958 Pioneer Industries Ordinance, which granted tax holidays and import duty exemptions to import-substituting investments in

a wide range of consumer and resource-based manufacturing goods. Unlike Thailand, however, foreign corporations captured the majority of benefits from the investment incentives in the manufacturing sector, as foreign-majority joint ventures were widely tolerated. When domestic consumer markets became saturated in the late 1960s, the government refocused its incentive regimes on export-oriented manufacturing with the Promotion of Investments Act of 1986. The Federal (later Malaysian) Industrial Development Authority (MIDA) implemented new promotional measures including ten-year Pioneer Status tax holidays and import-duty exemptions for exporting firms.

For a variety of reasons, Malaysia was far more successful than the other ASEAN 4 in attracting foreign manufacturers seeking a base for low-cost assembly and re-export of electronics products. Besides the country's proximity to Singapore, a key factor was the creation of ten Free Trade Zones (FTZs) by Malaysia's state governments. The FTZs offered multinationals an environment perfectly suited to internationally linked export processing, with controlled labour, subsidised infrastructure, expedited customs administration and freedom from import duties and export taxes.²⁰ From 1972 to 1979, total manufactured exports grew from RM723 million (about US\$300 million) to RM4,860 million, while the share of FTZ firms in total manufacturing exports increased from a mere 1 per cent to 75 per cent (Rasiah 1993: 137). With the government's priorities fixed on employment generation, MIDA focused on investment promotion and made little or no attempt to screen foreign investment proposals, target incentives on particular sectors (electronics dominated FTZ production and general exports), or impose performance requirements for technology transfer or local content.²¹

The domestic investment policy regime became highly regulated during the 1970s. As part of its New Economic Policy, the government promulgated a comprehensive industrial licensing system under the Industrial Co-ordination Act (ICA) of 1975. The ICA's primary purpose was to serve as an instrument for regulating the expansion of ethnic-Chinese business and to foster inter-ethnic redistribution of corporate wealth by guiding new investment opportunities to the indigenous Bumiputera (primarily ethnic Malay) communities.²² The Act also established a similar rule of thumb for employing workers from indigenous groups. In the early 1980s, a new government under Prime Minister Mahathir Mohamad launched a second round of import substitution in intermediate and heavy industries. The programme took the form of new joint venture projects between state-owned enterprises and foreign (mostly Japanese and Korean) partners in automotives, motorcycle assembly, steel, cement, fertiliser, petrochemical and other industries. For the first time, government bureaucrat-managers engaged in detailed negotiations over the technical content of investment projects with their foreign technology suppliers. The heavy industries drive

resulted in several costly failures, as when the Perwaja steel plant's prototype technology failed to operate successfully (Chee 1994). A mid-decade recession caused the programme to be restructured drastically, but the auto sector project in particular was sustained (and later expanded) by government subsidies and import protection. The heavy industries push was soon followed by the promulgation of a ten-year Industrial Master Plan (IMP) for 1986–95, which laid out a programme of detailed sectoral intervention inspired by Korea's industrial policy model. The IMP recommended more stringent screening of foreign investment, including an expanded negative list of sectors prohibited for foreign ownership, mandatory export requirements on all new FDI and detailed targets for both technology transfer and local content.

Established multinational exporters operating in the FTZs were largely unaffected by the changes in domestic investment policy during the 1970s and 1980s. For the most part, they were exempt from the new equity-sharing guidelines, and found little difficulty in complying with government directives to employ a large percentage of Bumiputera workers, who were mostly young unskilled female school-leavers. Mahathir's more interventionist approach in the early 1980s combined with global recession to slow FDI inflows. A mid-decade recession caused the government to shelve the IMP's proposals for more rigorous FDI screening and instead move to overhaul its investment regime to attract greater FDI inflows. A new ruling permitted foreign investors to set up wholly-owned subsidiaries in all projects exporting at least 80 per cent, and majority foreign-ownership in projects exporting at least half, of their output. In 1986, these and other changes were codified in a new Promotion of Investments Act. The Act offered a new round of Pioneer Status tax holidays and widened the scope of investment tax allowances for expansion projects for existing investors. Indirect exporters, including suppliers selling to firms in the FTZs, were exempted from the Industrial Co-ordination Act's equity-sharing guidelines and granted access to export tax incentives. The broad impact of these changes was to generalise many of the liberal rules obtaining in the FTZs to the wider investment regime, and to forcefully commit Malaysia to an FDI-led industrialisation strategy.

The decisive embrace of foreign investment met with tremendous success over the ensuing decade. FDI flooded into Malaysia from Japan and East Asia, along with US and European electronic and chemical firms and Singaporean-based manufacturers. In response to this influx, the government moved during the 1990s to revise the investment regime in order to place greater emphasis on investment quality as measured by technology content and value added. Mahathir's 1991 Vision 2020 manifesto spoke of the need to deepen and upgrade the industrial structure. In 1996, the Ministry of International Trade and Industry (MITI) issued a Second

Industrial Master Plan (IMP2), which emphasised the goal of transforming assembly-dominated export industries into more locally integrated industrial clusters. The plan promised to stimulate backward integration by encouraging investments in component production, design and R&D, as well as forward integration into trading, marketing and local brand development. These ambitious industrial policy goals did not, however, signal a general tightening of the investment regime, although the government did intervene to promote indigenous infant-industries in a few sectors. Rather than exclude undesirable investment or impose performance requirements on foreign investors, the government primarily sought to influence investment quality through an array of positive incentives, as described below.

As the economic crisis swept Southeast Asia in 1997 and 1998, the Malaysian government took additional steps to liberalise conditions for manufacturing FDI. The National Economic Recovery Plan issued in mid-1998 lifted all restrictions on foreign equity in new manufacturing projects, regardless of export orientation, for a period of two years (though the relaxation was unlikely to be reversed after that time). As in Thailand, pre-existing joint ventures serving the domestic market were permitted to increase their foreign shareholdings, while wholly foreign-owned firms, previously required to export 80 per cent of output, were now permitted to sell up to half their output locally. By April 1999, some 49 joint-venture companies had increased their foreign ownership ratio with capital injections totalling RM3.45 billion.²³ The government granted blanket exemptions from import duties to all machinery and equipment imports, as well as to all inputs used in export production. Beyond all these adjustments to the rules, the recovery plan explicitly declared a 'hands off' attitude towards existing foreign investors' compliance with the terms of their investment licenses. The automotives sector continued to be the most salient exception to Malaysia's generally open regime for manufacturing investments. In late 1999, the government announced that it would postpone implementing its commitments under the ASEAN Free Trade Agreement (AFTA) to tariff reductions on auto-parts, kits and built-up units.

Since the advent of the crisis, Malaysia's liberal policies towards manufacturing FDI have been overshadowed by the controversy surrounding its imposition of selective capital controls. So far, it has also refused to follow its neighbours in removing barriers to foreign investment in the financial sector, where a 30 per cent limit remains the rule. The government observes that wholly foreign-owned banks licensed in earlier decades account for more than one-third of commercial bank assets. Unlike Thailand, Malaysia has resisted selling off most of the vast assets that have been nationalised under its aggressive financial restructuring programme, though some large foreign merger and acquisitions projects have been approved, as in the cement and telecommunications industry. In 1999, the government

launched a plan to consolidate the banking industry through forced mergers in lieu of foreign acquisitions, but suggested that the ultimate goal of restructuring was to prepare the sector for liberalisation.

The strategic deployment of investment incentives

While according foreign investors a leading role in industrialisation, the Malaysian government has sought to use discretionary investment incentives to shape the composition and quality of investment inflows. Since 1986, the primary goals have been to lure investments in higher-technology activities and to encourage the deepening of the industrial structure from assembly activities to more integrated industrial clusters. In the mid-1980s, tax deductions were offered for firms' approved expenditures on training as well as research and development (R&D). These had relatively little impact since many large companies already enjoyed tax relief, while difficult application and post-expenditure reimbursement procedures have deterred many small companies. In 1990, tax incentives were extended to MNCs that set up regional Operational Headquarters (OHQs) to provide management services, logistics, and co-ordination for subsidiaries in Malaysia and the broader region.

More changes were initiated in 1991 after a broad review of MIDA's investment policy regime. These reforms moved the incentive regime a step towards neutrality by phasing out tax incentives for exports and reducing the scope of the core tax incentive, Pioneer Status tax holidays. Henceforth, 'ordinary' Pioneer Status would exempt only 60 per cent of corporate profits (instead of the previous full exemption), and would normally be granted for only three to six years (instead of ten). This change created 'room' for the government to use full tax exemptions to induce investments in specific higher-technology sectors. MIDA announced that it would screen applications for pioneer status more rigorously using four broad criteria: value added of 30 to 50 per cent, local content levels of 20 to 50 per cent, depth of technology (as measured by the proportion of managerial and technical staff), and linkage effects (largely a qualitative assessment of how the project complements Malaysia's industrial structure).

In 1995, MIDA's parent ministry, MITI, elaborated the shift in investment policy by announcing new criteria for general investment promotion along with special incentive programmes for 'high-technology' and 'strategic' investment projects. A baseline criterion for pioneer status was established based on capital investment per employee (CIPE). Proposals involving less than RM55,000 (at that time, US\$21,568) CIPE would henceforth be turned down unless they met other criteria: value added of 30 per cent or more; 15 per cent of workforce in managerial, technical or supervisory (MTS) positions; location in outlying states; or activities deemed strategically beneficial to Malaysia's industrial progress. Separate incentive

programmes were launched for high-technology projects, defined as those committed to incurring R&D expenditures equal to 1 per cent of sales within three years of start-up, and having 7 per cent of the workforce comprised of employees holding post-secondary certificates or diplomas in technical subjects. Accompanying these general criteria was a list of specific activities to be promoted under the high technology designation, including: computers and computer peripherals, LCDs (liquid crystal displays), medical equipment, biotechnology, automation equipment, advanced materials, opto-electronics, software, alternative energy and aerospace. High-technology projects would receive a ten-year tax holiday on 100 per cent of corporate income, and would be allowed greater freedom to employ expatriate researchers or scientists as well as to hold unrestricted foreign exchange accounts in local banks. Finally, a catch-all category of 'strategic' investment projects allowed the government to grant full ten-year tax holidays to individual projects at its discretion.

In the crucial semiconductor industry, the government long sought to lure foreign investments into wafer fabrication without much success. More recently, it has followed Singapore's lead in making direct investments in joint-venture wafer fabrication plants. The government's Malaysian Institute of Microelectronic Systems (MIMOS) has opened a pilot facility to develop circuit designs, though its commercial impact has yet to be demonstrated. The Sarawak State Development Corporation has backed a joint-venture wafer fabrication investment, while the Ministry of Finance's strategic investment arm, Khazanah Holdings, has also taken a stake in a planned wafer fabrication plant in the Kulim Technology Park in Kedah.

Recognising that an acute shortage of skilled labour was a basic constraint on technological upgrading, the government also reformed incentives related to human capital formation. In 1993, the government replaced an existing tax incentive for corporate training expenses with the Human Resources Development Fund (HRDF), an industry sector-wide payroll levy and training subsidy scheme. Firms employing more than fifty workers²⁴ were required to contribute 1 per cent of their payrolls to the Fund, and could apply for reimbursement of a percentage of expenses on approved training programmes or submit their in-house annual training plans for approval. In 1996, approved reimbursements rose to US\$63 million and the number of trainees grew to 518,710.²⁵

Besides revamping its investment incentives, the government created a series of direct funding mechanisms for high-technology industries during the 1990s. In 1993, the Ministry of Finance established Khazanah Holdings as a special-purpose vehicle to invest in strategic and high technology projects, which by 1999 numbered 33, and ranged from the government's 'national car' companies to high-technology start-ups and investment partnerships with foreign venture-capital companies. The Malaysia Technology Development Corporation (MTDC) was set up as a public corporation

under MITI the same year. Initially charged with financing the commercialisation of public-sector R&D, the MTDC soon evolved into a conglomeration of technology-related programmes. Chief among these was MTDC's effort to stimulate the growth of Malaysia's venture-capital industry. By 1999 the group managed six separate venture-capital funds itself, and controlled 26 companies in advanced materials, biotechnology, electronics, fine chemicals, IT and multimedia. For the Seventh Malaysia Plan (1996–2000), several other new technology funding mechanisms were announced, including venture funds linked to the Multimedia Super Corridor and Technology Park; a matching grant scheme for joint public–private R&D under the Science Ministry; and two RM100 million matching-grant funds administered by the MTDC for technology acquisition and commercialisation. However, uptake of these funds has been modest, and the administering agencies are still groping for a way to utilise them effectively.²⁶

Specialised infrastructure for technological upgrading

The new incentives for industrial upgrading were further linked to the federal government's provision of new infrastructure for higher-technology investment. Seeking to emulate successful policy thrusts in Taiwan, Korea and Singapore, Malaysia's Ministry of Science, Technology and the Environment established a Technology Park in 1988. The unit operated in temporary premises before moving in 1994 to permanent facilities, which included a National Testing Centre, laboratories for advanced materials and flexible manufacturing and a design and automation technology training centre. By 1997, 40 companies had occupied the park, many of them information technology or software companies. Another such park was set up in Malacca in 1993 to house government-backed ventures in advanced composite materials and aerospace components.

MITI soon followed suit, and in 1995, opened the Kulim High-Technology Park in partnership with the Kedah state government. The Kulim Park was primarily reserved for MNCs qualifying for MIDA's new high-technology incentives, including planned wafer fabrication plants, and also sought to absorb spill-over investments from nearby Penang. The Kulim park was designed to offer an integrated environment for R&D and technology-intensive production, with supporting facilities such as an IT centre, integrated manufacturing lab, CAD/CAM centre, skills training centre, incubation facility; on-site presence of the chief public technology institutes and universities; special infrastructure (toxic waste disposal, fibre optics, redundant power supplies); and dedicated lots for small firms in ancillary or supporting industries. Meanwhile, individual state governments in Penang, Malacca, Johor and Sarawak followed the federal government's lead and created specially equipped parks for high-technology industry.

Responding to multinational corporations' complaints, the government acted to build a network of industrial skills institutions responsive to the changing needs of high-technology investors. In 1989, the Penang State government helped to found a very successful MNC-supported Penang Skills Development Centre. Using this as a model, the federal government encouraged other states with industrial concentrations, including Selangor, Kedah and Johor, to set up similar industry-managed training centres. The federal government matched these initiatives by negotiating with the German, French and Japanese governments to set up specialised training institutes, as Singapore had done a decade earlier.²⁷

Malaysia's high-technology policy ambitions crested in 1996, when Mahathir unveiled his costly blueprint for a Silicon Valley-style information technology zone on a vast green-field site south of Kuala Lumpur. The Multimedia Super Corridor (MSC) arrived as the apotheosis of Malaysia's efforts to refocus its investment regime to promote MNC-led high technology industrialisation. The MSC offered a raft of generous incentives, including tax holidays and subsidised high-technology infrastructure, to attract investments in new-product development and R&D from leading global IT, multimedia and other software companies. Mahathir convened an international advisory panel of CEOs of the world's leading software multinationals to guide the development of the MSC. Charter corporate members of the MSC have participated in the governance of the zone, helping to design a special legal framework suited to the needs of technology-based enterprises. A government-owned Multimedia Development Corporation (MDC) has administered the corridor's development and screened applicants according to detailed criteria centred on R&D and new-product innovation. The MDC wields independent power to approve investments and grant incentives, including an RM200 million matching-grant scheme and RM120 million venture-capital fund for new technology start-ups. By the end of 1999, the MDC had approved 300 'MSC-status' companies, of which 177 (59 per cent) were Malaysian-majority owned and the remainder were from Europe, the US, Japan, Singapore with a few from other countries.

The actual impact of targeted incentives and infrastructure on the content of foreign and local investment activities is, of course, difficult to assess. Throughout the 1990s, however, a growing number of electronics MNCs announced their intention to locate regional production headquarters in Malaysia, introduce advanced product lines and begin undertaking design and R&D activities. The prototype for this trend was the massive complex of 18 Matsushita assembly, components, tooling and R&D subsidiaries supporting the production of air-conditioners and colour televisions for regional and global export markets.²⁸ Penang, in particular, saw the emergence of a cluster of supporting industries surrounding the integrated circuit assembly industry and newly arrived disk drive assembly operations.

The government's 1994 National Survey of Research and Development reported that 29 wholly owned and 29 foreign-majority MNCs engaged in formal R&D in that year. In fact, their spending (US\$30 million and US\$16 million respectively) accounted for almost two-thirds of all manufacturing sector R&D.²⁹ The OHQ scheme met with modest, but respectable results. Twenty-seven MNCs employing 326 expatriates had acquired the designation by May 1997. By mid-1999, incentives had been awarded to 45 OHQs and 39 international procurement offices (IPOs). Between 1994 and early 1998, MIDA granted 'high technology' status and incentives to 22 projects worth RM2 billion (approximately US\$800 million before the 1997–98 crisis) in capital investment, and 21 'strategic' projects (15 wholly foreign, one majority foreign, two majority Malaysian and three wholly Malaysian) worth almost RM14 billion from 1992 to early 1998. The government's promotional policies undoubtedly reinforced the MNCs' own strategic decisions to undertake greater intra-firm technology transfer as part of their elaboration of regional production systems. Nevertheless, it appears that the Malaysian government – by broadly linking incentives and infrastructure to skills and technological upgrading – was able to exploit changes in MNCs' international production strategies to advance Malaysia's position in an evolving regional division of labour.

The enclave dilemma, linkage promotion and technology diffusion

Malaysia's heavy dependence on export-processing FDI has long raised concerns about the extent to which multinational companies have, in fact, diffused technology to local personnel and industrial firms. In the early phases of Malaysia's export-led manufacturing growth, foreign export processing in the Free Trade Zones generated negligible linkages or spill-overs to the local economy.³⁰ The FDI boom of the late 1980s and early 1990s considerably expanded the multinational production base in Malaysia, yet the overall growth of local value-added and production linkages was painfully slow. The import ratios for non-resource based manufacturing fell slightly from 55 per cent in 1986 to 47 per cent in 1992, indicating a slight increase in local content. Progress was greatest in the auto sector, where the government intervened directly to localise production, but trends in other sectors were ambiguous, and import dependence in the key electronics sector remained stable at around 70–75 per cent. The 1986 reforms extended incentives and foreign ownership exemptions to indirect exports, i.e. sales from suppliers to export assemblers. As a result, much of the subsequent growth in local content came from the relocation of Japanese and East Asian supplier firms to serve their major assembly customers' Malaysian operations. Guyton's (1996) detailed study of 40 Japanese consumer electronics firms revealed that 30 firms sourced at least half of their components (by value) from other Japanese firms (including 11 which sourced exclusively from Japanese sup-

pliers), while only one firm sourced more than 40 per cent of its inputs from Malaysian-owned suppliers.

In seeking to remedy the problem of low linkages and technology spill-overs, however, the government avoided strict local content or sub-contracting mandates, for fear of damaging Malaysia's reputation as an investment host. A symbolic 30 per cent local content policy was set in 1990 for the electronics sector, but was loosely monitored and rarely, if ever, enforced. MITI also announced a Domestic Investment Initiative in 1993 in response to criticisms that its new, more stringent criteria for investment incentives were biased toward foreigners. The programme slightly expanded access to pioneer status incentives for small and medium sized industries (SMIs), but amounted to little more than a repackaging of existing facilities.

Instead, the government has tried to foster local content and linkages through two means: targeted infant-industry policies and a comprehensive linkage development programme. The 'national car' company, Proton, was launched in 1983 as one of Mahathir's earliest high-tech visions. Besides undertaking backward integration from assembly into component production, one of Proton's chief missions was to give birth to a local auto-parts industry with significant Bumiputera participation. In 1988, the government began subsidising the direct costs of Proton's vendor-assistance programme, which claimed a supplier base of 162 firms in 1993. A similar project was launched in late 1996 to create a fully integrated electrical appliance industry under local control. The Malaysia Electric Corporation (MEC) was set up with government support and charged with nurturing the growth of an indigenous base of competitive component suppliers. The timing could not have been worse, and the highly leveraged MEC was swiftly bankrupted by the economic downturn. Both projects suffered from the double burden of achieving their own infant-industry development while simultaneously supporting the growth of a population of new infant supplier industries. After years of protection, it was doubtful that many of Proton's new vendors had begun to approach internationally competitive levels of efficiency (Leutert and Sudhoff 1999).

In a second policy thrust, the government sought to nurture linkages by playing a direct intermediary role between foreign corporations and local supplier firms. In 1993, the Ministry of International Trade & Industry (MITI) launched a Vendor Development Program, under which multinational and local 'anchor companies' would provide guaranteed purchasing contracts and technical assistance to local vendors, who would also receive subsidised finance from local banks and technical support from government institutes. Though wary of interference in their supplier chain management, foreign companies joined when the government signalled that participation would be rewarded with favourable treatment in other incentive and administrative decisions. Seven MNCs joined in 1993, over 30 in 1994 and, by the

end of 1995, 45 MNCs had signed formal agreements with MITI along with nine large Malaysian firms. Together, these anchor companies had designated 59 vendors to supply a broad spectrum of components. In 1995, MITI established a Small and Medium-Scale Industries Development Corporation (SMIDEC) as a one-stop co-ordination agency for all assistance programmes to SMIs; SMIDEC re-launched the VDP in a new Industrial Linkage Programme. Despite its high profile, the programme has grappled with several weaknesses. The implementing agencies lack sufficient technical expertise and manpower required to monitor progress, while the anchor companies themselves are often uncertain as to the extent of their responsibilities. Still, the programme – with its comprehensive scope combining matchmaking, financial and technical support for vendors – has offered a promising model, and can point to at least a few successes in encouraging linkage formation with Malaysian-owned suppliers.

Linkage development has been most evident in Penang, where a number of US semiconductor multinationals had sponsored the growth of a handful of locally owned machine tool suppliers by the late 1980s (Rasiah 1994). This successful example was followed by the establishment of several assembly subcontractors who formed long-term supply relationships with local audio and computer electronics multinationals. The Penang Development Corporation (PDC) has played a pivotal mediating and supporting role in encouraging linkage growth. As MNCs' local sourcing has grown, the PDC has surveyed likely supplier firms, published sourcing guides, helped suppliers locate in the FTZs and assisted them in winning investment incentives from the federal investment agency, MIDA. The federal government has sought to encourage the positive trends in Penang and to emulate them in the country's other major industrial areas. By providing a neutral and politically influential investment partner, the MTDC has enabled several Penang-based subcontracting firms to observe the ethnic equity distribution rules of Malaysia's Industrial Co-ordination Act (ICA) and thus to raise capital on the local stock market. Beyond the venture funding mechanisms of the MTDC, Technology Park and Multimedia Super Corridor, successful technology-based start-ups could hope to list on a new special-purpose automated exchange, the MESDAQ, set up in 1997.³¹

Other support for technology diffusion has come from Malaysia's system of public technology institutes and universities. Several of these research and technology extension institutes played important research and extension roles in earlier decades to support the growth of Malaysia's primary product export industries, such as rubber, palm oil and forestry-based products. Technology support for manufacturing industries has been less effective, but a handful of institutions have been transformed from insulated bureaucratic outfits into more industry-focused and service-oriented organisations. The most important is the Standards & Industrial Research Institute of Malaysia (SIRIM), which aggressively promoted the spread of ISO9000 quality

systems certification in the early 1990s, particularly among multinational subsidiaries and their local suppliers. Following its corporatisation, SIRIM has established several subsidiaries to provide subsidised testing and calibration services. Several of Malaysia's public universities have also become quite active in recent years in providing training, testing, consultancy and research services to local industries. The Science University in Penang and the Technology University in Johor have probably formed the most successful university–industry linkages in these fields. Meanwhile, the MTDC has worked with three universities to establish incubator facilities for the commercialisation of academic research results. MITI and MIDA have provided financial support to SMIs to avail themselves of these technology extension services in the form of a matching grant scheme called the Industrial Technology Assistance Fund (ITAF). Over the six years from 1990 to 1996, however, the fund disbursed a modest RM36 million (about US\$14 million).

For all Malaysia's vigorous efforts, the growth of technologically dynamic linkages between mainly export-oriented foreign industries and their local counterparts has been limited. Reform of the public-sector technology and industrial extension agencies has improved their operation and effectiveness, particularly in areas such as standards, testing, metrology, skills training and ISO9000 system diffusion. These agencies have nonetheless been hampered, to some degree, by poor relations between the Malay-dominated bureaucracy and the mainly ethnic Chinese medium-sized manufacturers. Perhaps more importantly, Mahathir's huge high-tech ventures have diverted attention and scarce bureaucratic and other resources from the vital, but mundane tasks of nurturing linkages and technology diffusion.

The institutional framework for investment policy

Malaysia's investment policy is comparatively well co-ordinated by the standards of the ASEAN 4. MIDA implements investment policy and serves as the primary locus of interaction for both foreign and domestic investment. Over the years, MIDA has built considerable expertise in its core investment promotion role, and is considered a reliable and neutral interlocutor by foreign and most local investors. MIDA's seven sector-specific divisions have enabled staff to develop considerable familiarity with the varying concerns and needs of investors in particular sectors, though the agency still lacks sufficient staff and expertise to monitor investor performance and compliance with incentive provisions. This weakness has become a more serious issue as the formal regime has shifted from general investment promotion to focus on higher-technology sectors and industrial clusters. The new, more discriminating investment incentives thus have not been strictly tied to reward firm performance. Yet, by spelling out objective criteria for the desired types of investments and administering them in a neutral fashion,

MIDA has at least been able to implement some degree of *ex ante* screening. This, in turn, appears to have served as an important device to signal foreign investors about the types of activities that will gain priority treatment in administrative matters. Like the Thai BOI, MIDA has pursued a new emphasis on post-license investor services in recent years. In May 1999, it opened an Industry Support Division charged with several functions: to facilitate support activity from all federal and state government agencies, especially for infrastructure issues such as water, electricity, telecommunications and transport; to extend support to existing companies planning expansion, diversification or industrial linkages; and to achieve a higher rate of implementation of approved projects.

At the same time, MIDA lacks the policy influence as well as broader investor service and linkage-promotion roles of Thailand's BOI. These are performed by MITI and a number of corporatised government agencies, including the MTDC, SMIDEC, as well as productivity and export promotion agencies. MITI often negotiates directly with foreign investors over the terms of investment, including the government's desire for greater R&D activity and vendor development, and an inter-ministerial Foreign Investment Committee authorises acquisitions of major listed companies. In the end, however, major industrial policy initiatives remain closely controlled by the Prime Minister's office. Proton's corporate strategies for technology and vendor development, for example, were inspired and monitored by Mahathir himself.³² And despite the bureaucracy's relative success in coordinating industrial strategies, there has been a tendency to proliferate new special purpose agencies with autonomous powers as the high-technology agenda has grown. For example, the Multimedia Super Corridor is managed by a wholly autonomous development corporation, the MDC, which undertakes its own investment promotion activity, approves foreign and local investments in the zone, awards its own incentives and sets its own performance conditions. Viewed as a whole, Malaysia's high-technology investment policies reflect a relative strategic coherence on the one hand and a degree of disconnection from ground-level industrial realities on the other. In both respects, the investment policy regime contrasts with Thailand's investment incentives, which lack strategic focus (and are terribly redundant in the eyes of many economists), but are widely supported and accessed by Thai industry.

Philippines

The Philippines came late to the region's FDI-driven export boom. Powerful domestic business interests combined with weak and fragmented state authority to hamper policy reforms in the immediate post-Marcos period. Early export-promotion policies lured a few investments in the 1970s, but the institutional conditions for the rapid growth of export-processing invest-

ment were not put in place until the Ramos administration (1992–98). Having only recently tasted the fruits of major FDI inflows, and with unemployment still a pressing problem, the Philippines has not been much concerned with refining its investment policies to encourage technological upgrading and linkage formation. Yet, investment authorities have begun to demonstrate an understanding of the need to continually enhance infrastructure and skills in order to sustain the country's attractions as a site for globally linked production.

Evolution of the statutory investment regime

The Philippines' post-independence investment regime was initially bound by constitutional provisions to grant US companies national treatment, or *parity*, in access to the country's agricultural and mineral resources, while American products also enjoyed import tariff preferences. In the 1950s and 1960s though, the Philippines followed the global vogue for import-substitution industrialisation by encouraging industrial investment behind high tariff walls. Investment regulation was haphazard, but in the majority of cases, companies producing for the domestic market were required to have 60 per cent majority Filipino ownership. The Investment Incentives Act of 1967 deepened import substitution by extending tariff protection and investment incentives to capital and intermediate goods industries, including steel, cement and chemicals. The Act also created the Board of Investments (BOI), and vested it with licensing, planning and co-ordination roles. The BOI encouraged domestic investments through tax holidays and non-tax incentives such as exemptions and drawbacks on import duties for imported inputs. The following year, the Foreign Business Regulations Act established a positive-list system that specified the particular industries open to foreign investment and the conditions for investment approval. The express intent of the law was to reserve most growth opportunities for Filipino industry. Local content programmes were imposed on the automotive sector as well as in animal feed, laundry soap, copper mining, and certain pharmaceuticals.

In 1970, the Philippines followed the regional fashion in passing an Export Incentives Act to attract some of the new export-oriented electronics and textiles FDI then entering Southeast Asia. The government set up four Free Trade Zones, and many of the same semiconductor companies that opened plants in Singapore and Malaysia also located branches in the Philippines. Yet, unlike those countries, the Philippines did not successfully nurture the growth of export production. Tax incentives for exporters were limited in duration, administrative provisions for import–export were inefficient, exchange controls were burdensome, and most of the zones were remote from Manila, all of which discouraged the expansion of export-processing investments. Corruption and bureaucratic obstacles continued to

discourage investment inflows during the long Marcos administration, even as FDI picked up in other countries.

In 1987, the new Aquino government rationalised the investment regime by compiling all relevant laws into one Omnibus Investment Code. Like Thailand's Alien Business Law, the Philippines Investment Code switched the foreign investment regime to a less restrictive negative-list system. 'List A' banned foreign ownership outright in industries like mass media, retail trade, as well as rice and corn trading, because of constitutional or other legal barriers, while imposing low ceilings on foreign ownership in air transport, public utilities and public works. 'List B' restricted foreign ownership to 40 per cent in a variety of sectors relating to 'public health and morals', including pharmaceuticals, entertainment establishments and gambling. 'List C' set a similar bar for domestic-oriented industries with 'sufficient capacity to meet domestic demand'. Finally, a range of craft and light manufacturing industries was set aside for small and medium sized industries (SMIs). At the same time, foreign investment in banking was restricted by separate legislation administered by the central bank. Land ownership was also constitutionally restricted to Filipino nationals.

The Omnibus Investment Code charged the Board of Investment with drawing up an annual Investment Priorities Plan (IPP) listing priority industries for investment incentives. Investors in the priority industries would receive tax holidays of varying durations, depending upon several criteria: use of local raw materials, high capital-labour ratios, and net foreign exchange saving/import substitution. Promoted firms would also receive import duty exemptions on capital equipment imports, while those not enjoying tax holidays could avail themselves of a range of tax credits for labour expenses and training expenditures. In principle, FDI was permitted in priority or 'pioneer' industries, even when selling on the domestic market, and was allowed for all projects that exported more than 70 per cent of output. In practice, however, the BOI used its discretionary powers to interpret regulations in ways that restricted access to the domestic market for foreign-majority owned firms. The rule of thumb was that any new investments should not harm existing producers.

Recognising that the regional FDI boom of the late 1980s was bypassing the Philippines, the government amended the Code with a new Foreign Investment Act in 1991. The new law trimmed the foreign investment negative list and suspended minimum capital requirements for FDI, and affirmed the acceptability of wholly foreign-owned subsidiaries, even in domestic-market industries, so long as they did not seek investment incentives and providing they introduced advanced technology or employed at least 50 workers. The FIA opened the door for more foreign entrants, but domestic-market oriented projects still often faced considerable delays and bureaucratic obstacles unless allied with a domestic joint-venture partner.

The Ramos administration mounted a concerted effort to attract export-oriented FDI and to join the regional manufacturing boom. In 1992, foreign exchange controls were lifted for current-account transactions. A special law converted the former US military bases at Subic Bay and Clark Field into autonomous free investment zones outside the national customs territory. In 1994, the government passed the Export Development Act to set up a distinct set of criteria, incentives and procedures for export projects. Subject to the Foreign Investment Act's negative list, projects exporting only half their output could be wholly foreign-owned. The new system attacked the administrative barriers to export production by establishing new zones outside the national customs territory and enlarging the programme of bonded-warehouse manufacturing, which permitted exporters to import components duty-free without undertaking the cumbersome duty drawback scheme. Export promotion programmes (trade missions, fairs, etc.) were to be privatised to the leading private-sector exporters' federation, PhilExport.

In 1995, a Special Economic Zone Act upgraded the Trade and Industry Department's Export Processing Zone Authority into a semi-autonomous Philippine Export Zone Authority (PEZA). PEZA was empowered to grant investment incentives and tariff exemptions to investors in several categories of free trade and export processing zones. In addition to streamlined Customs procedures, investors in the zones would enjoy tax holidays of up to eight years, duty-free import of capital equipment, spare parts, materials and supplies, and exemption from the pre-shipment inspection required for most classes of manufactured imports. Following the expiry of tax holidays, investors would pay a flat 5 per cent tax rate in place of all national and local taxes.

The Act's major innovation was to privatise zone development. Private zone developers themselves receive income tax holidays and exemptions on other national and local taxes, including those related to land acquisition and sales. In several cases, large, blue-chip Filipino real estate conglomerates partnered Japanese trading companies or Singaporean industrial estate developers to open new export zones. More than all the tinkering with investment incentives over the previous decade, the new PEZA-sponsored zones, together with the autonomous Subic and Clark Zones, unleashed the potential for substantial investment inflows. In particular, PEZA was granted the power to override virtually all other administrative barriers to investment, including local taxes and regulations.³³ The PEZA zones accounted for the great majority of new export-oriented manufacturing foreign investments into the Philippines after 1995.

Meanwhile, the Ramos administration made steady progress in its efforts to liberalise the broader investment regime. In 1996, the foreign investment negative list was amended once again to abolish List C restrictions on industries with 'sufficient capacity'. This had long been a major regulatory justification for limiting new entrants. The government progressively

loosened restrictions on foreign banks and allowed foreign-majority ownership of finance companies. The Build–Operate–Transfer (BOT) Law of 1994 opened wide swathes of the infrastructure, power, transport, water, telecommunications and construction industries to foreign participation. The law established a new agency, the BOT Centre, to prepare projects and undertake pre-selection, joint-venture matchmaking and competitive bidding exercises. In 1997, the law was amended along with the foreign investment negative list to permit wholly foreign-owned construction companies to bid for most BOT projects.

The Philippines did not mount any dramatic changes to the investment regime in the wake of the economic crisis. Although investment inflows declined, export growth continued to be robust, led by zone production. Domestic deregulation and privatisation became increasingly controversial, however, and the liberalisation drive has slowed since the crisis struck. The introduction of competition into the oil refining industry in 1996, which saw a sharp price rise, sparked considerable protest and was struck down by the Supreme Court as violating constitutional provisions. Likewise, draft laws for opening the advertising industry, retail sector and other service industries to foreign investment were tied up in legislative debate. President Joseph Estrada called in 1999 for constitutional amendments to expressly permit foreign investment in land, public utilities, mining and professional services, but the move was widely seen as inspired by other, political motives and he was forced to shelve the proposal. Under pressure from the IMF, the government passed additional laws in April 2000, to open the banking and power industries to full foreign ownership. Despite this, mounting controversies surrounded the Estrada administration's erratic economic policies and negatively affected the investment environment.³⁴ In a bid to shore up investor interest, the government in 1999 proposed legislation to overhaul the Investment Code and expand the range and duration of incentives.

Strategic deployment of investment incentives

Despite issuing an Investment Priorities Plan each year, the BOI has not effectively used its investment incentives as a tool for implementing a discernible industrial strategy. The list of investment priorities is exceptionally wide, and embraces a host of resource-based and labour-intensive sectors in addition to 'advanced' manufacturing industries. The wide scope of investment incentives in part reflects the Philippines' lower level of industrial development and large labour surplus. Yet, even if broad sectoral coverage is appropriate, investment incentives have not been tied effectively to criteria reflecting market failure (high risk, long return), positive externalities (skill-intensive) or social development (decentralisation) goals. The Board's incentive scheme distinguishes between pioneer investments, which ostensibly introduce new technology or products, and non-pioneer investments,

which comprise 'ordinary' investments in favoured industries. In recent years, the categorisation of priority industries has become more complex, reflecting new investment policy concerns: (1) export-oriented industries; (2) 'catalytic' industries, or domestic industries that have the potential of being competitive in the export market; (3) industries undergoing adjustment due to the effects of tariff cuts and the general opening of the Philippine market; (4) industries that support the priority projects of the government, such as infrastructure, environment and R&D projects; and (5) activities or industries afforded incentives by various laws, such as the mining, iron and steel industries, and projects as defined under the Build-Operate-Transfer Law. In practice, however, the criteria distinguishing pioneer from non-pioneer industries and 'catalytic' from other industries are determined and applied in ad hoc fashion.³⁵ The indiscriminate approach drew criticism from the Department of Finance, as the Ramos government sought to increase tax collection in line with IMF-sponsored fiscal reforms, and the DOF has pressured the BOI to pare down its wide list of promoted activities. An inter-agency Task Force on the Rationalisation of Fiscal Incentives proposed eliminating income tax holidays, but instead the government proposed new legislation to extend tax holidays to up to 12 years and provide new tax credits and import duty exemptions. Ostensibly, these more generous incentives would apply only to projects involving the manufacture of products 'distinctly and completely new' in the Philippines and exporting at least 70 per cent of output, either directly or indirectly through OEM subcontracting.

Existing legislation also offers incentives to foreign investors establishing regional headquarters (RHQs) to provide managerial support to affiliated companies abroad. The scheme met with little response and so, in 1997, eligibility was extended to a wider range of managerial activities and relaxed to permit RHQs to generate sales revenue in the local market.³⁶ Another major thrust was to decentralise investment planning and promotion to provincial governments. Since the Investment Code of 1987, projects locating in Metro Manila have generally been ineligible for tax holidays, while projects locating in remote provinces are given the most generous terms. In preparation for the 1999 Investment Priorities Plan, the Board helped provincial governments to identify their comparative advantages in supporting investment based on their endowments of resources, infrastructure, transport links and workforce availability. The BOI also offered tax deductions for R&D and training expenses, but the uptake for these incentives was also weak. Many BOI-promoted firms enjoyed tax holidays and thus did not require additional tax breaks, while very few undertook formal R&D in any event. In 1998, the Board did initiate some post-investment service programmes through a new Office of External Affairs. Its most notable effort was a drive to encourage all promoted firms to attain ISO9000 quality certification status, yet even here, its role has been limited to providing

information. President Estrada's first Secretary of Trade and Industry proposed a concerted government effort to lure an investment in wafer fabrication, but his successor shelved the plan, citing the exorbitant cost of the associated specialised infrastructure and the need to 'concentrate on intermediate technologies'.³⁷

As noted above, the Philippines' belated response to Southeast Asia's export-oriented FDI boom came via the creation of a distinct set of investment incentives rather than by a thorough-going reform of the BOI and its policies. The PEZA and Subic and Clark zone authorities have been far more proactive in marketing the Philippines' attractions as an investment site, and hence have become more attuned to international investment trends and the requirements of multinational producers. Zone growth itself has been striking: from sixteen zones in 1994, the total reached 40 in 1998 with 20 more under construction. Investments in the zones between 1995 and September 1999 totalled P600 billion (approximately US\$22 billion), of which some 45 per cent comprised developers' investments in zone infrastructure, and the rest actual manufacturing projects by zone tenants. The leading growth sector in the zones was electronics assembly, which accounted for 55 per cent of zone investments during 1995–98, with another 22 per cent in electrical machinery. Not coincidentally, Japanese investors accounted for a similar 58 per cent of manufacturing investments. Spurred by this influx, electronics' share in the Philippines' total manufacturing exports rose from 24 per cent in 1990 to 51 per cent in 1997.

The zone authorities' overriding mission has been investment promotion, and unlike the Board of Investment, they shunned attempts to screen investments or impose performance conditions on zone investors. Eligibility guidelines simply referred to a minimum export level of 60 per cent, while the PEZA could authorise exceptions, as when it provided incentives to a domestic-market auto assembly project by Ford Motor Company in exchange for a promise to bring in parts suppliers who would also export. At the same time, the Zone Authority's promotional efforts have become tailored to specific sectors. Electronics was pre-eminent, but the authorities sought to create conditions for cluster development by encouraging investments in plastics and metal components, specialised chemicals and auto-parts. Some zones were dedicated to agro-export processing. In 1999, the PEZA sponsored the Philippines' first two information-technology parks; unlike all other zones, these were permitted to locate in Metro Manila near the country's leading universities. Perhaps most interesting, the new zones attracted major investments in value-added services. The most well-known was Federal Express's choice of the Subic Bay Free Trade Zone for its regional logistics and flight operations headquarters in 1994. In 1998, America On Line (AOL) set up a customer call centre in the Clark zone, citing the low costs and high English language proficiency of the work force. The zone authorities and the Department of Trade and Industry (DTI)

reacted by formulating a promotional drive to consolidate the Philippines' status as a primary regional centre for 'back-office' operations like customer services, accounting and computer coding and data processing.³⁸

The Philippines offered little in the way of special physical infrastructure or skills to nurture higher-technology investment, apart from the superior transport facilities at Subic Bay. The shift towards private zones meant that private developers with their foreign (Japanese, Malaysian, Singaporean) partners were responsible for assuring the quality of infrastructure support. In the core Cavite-Laguna industrial zone south of Manila, a few of the private parks style themselves as 'Techno' or 'Science' Parks due to their higher-quality infrastructure, including redundant power supplies, purified water and waste disposal facilities. In a few cases, zone associations have contracted with private and state community colleges to provide short training courses in quality control, CNC programming and other skills. In short, with the export-processing trend still immature, the Philippines' policy and institutional framework had not yet come to grips with the question of whether and how to lure investments with technology or skill-creating content.

The enclave dilemma, linkage promotion and technology indigenisation

For similar reasons, the desire to attract foreign export investment largely overrode questions of linkage formation and technology spill-overs. The BOI lists a 20 per cent local content level as a benchmark for evaluating applications for its main incentive programmes, but has rarely if ever withdrawn licenses for failure to comply. Like other Southeast Asian countries, the Philippines pursued automotive localisation under its Car Development Program. The programme both specified a local content level of 40 per cent and mandated the subcontracting of specific sets of auto-parts to locally owned suppliers, while also imposing a foreign-exchange balancing requirement that would offset components imports with exports. The localisation programme compelled 'satisficing' investments in local auto-parts production, but failed to induce either significant indigenous participation in the industry or technology transfer to locally owned industry (Hill 1985; Doner 1992). Many auto-parts producers are themselves foreign investors who have followed their principal assemblers to the Philippines, while local companies supply mostly simple plastic, metal or rubber parts. Auto-parts exports have lagged, though some have come through the official ASEAN-wide brand-to-brand complementation scheme, in which auto makers Toyota, Honda and Isuzu exchange parts with their affiliates in Thailand, Malaysia and Indonesia. In fact, the primary pressure to maintain the localisation programme has come not from local companies, but from established Japanese assemblers, who have objected when new American

entrants have been allowed to bring in completely knocked-down assembly kits (CKDs) rather than meet full local sourcing requirements.

As the WTO's year-2000 deadline for lifting local content rules approached, the BOI was prompted to initiate a modest linkage promotion effort. In 1998, it launched a 'Reverse Investment Fair' programme in which large assemblers (like Toyota) displayed components eligible for local sourcing to invited potential suppliers. The BOI has lacked the resources and ability to better co-ordinate its new outreach to suppliers with financial or technical support programmes, as in Malaysia and Thailand's vendor development efforts. It was hampered, even in its modest matchmaking role, by the lack of comprehensive information about potential supplier firms; a database is only now being compiled to provide sourcing guides to large investors. The Car Development Program has only been used strategically to promote further foreign investment, rather than for technology transfer to indigenous industry. The Ministry of Trade and Industry has sought to trade waivers from full compliance for commitments by new assemblers, notably Ford and GM, to bring in their own suppliers, who are expected to export as well as supply local assembly.

Most new export zones are production enclaves par excellence, and foreign investors have little incentive or opportunity to build local linkages. In part this is due to the fact that import exemptions from import duties, and even access to bonded warehouses associated with export zones, are not available to indirect exporters. Prospective local suppliers must thus pay import duties on their own inputs, with their sales incurring value-added taxes. Although they are eligible for import-duty drawbacks and VAT 'zero-rating', the documentation requirements and procedures for both incentives are so onerous as to deter most local firms. At the same time, MNCs operating in the zones are able to import inputs duty-free. The PEZA authorities recognise that few of the multinational manufacturers located in the Philippines' zones have autonomy in procurement matters, but instead rely on their parent companies or on regional headquarters in Singapore or Hong Kong for procurement decisions and supply-chain management. The PEZA has sought to lay the groundwork for more integrated production by encouraging foreign investments in components and supporting industries, whether they produce for direct export or as part of local supply linkages.

Hopes for linkages and technology transfer to indigenous suppliers are thus modest, perhaps due to a realistic appreciation of the large gap in scale, technical capacities and quality standards between the new exporters and the majority of local SMIs. There are, however, some provincial zones populated by Filipino agro-processing and textile firms; some of these have access to the four regional bonded warehouses managed by the private PhilExport federation and the textile federation. There is also a small cadre of Filipino-owned semiconductor assembly subcontractors. These

instances remain small exceptions to a general rule – Filipino companies accounted for only 7.5 per cent of zone investments by value during 1995–98. The PEZA has also recently initiated ‘reverse investment fairs’ in conjunction with the electronics industry association, representing firms in the ‘Calabarzon’ provinces south of Manila. Yet, the agency lacks the resources and authority required to implement a comprehensive programme for linkage development, such as detailed sourcing information, matchmaking, technical, skills or financial support; in any event, it remains heavily focused on its core investment promotion mission.

The institutional framework for investment policy

The Philippines political system features a fragmented bureaucratic structure with considerable administrative overlap and often-contradictory policies. This general character is reflected in the evolution of the investment policy regime. Even as statutory barriers to foreign investment were dismantled, the BOI remained largely embedded in the regulatory approach of the import-substituting era. The 1987 and 1991 foreign investment reforms set performance parameters for BOI approval of investment applications, with a targeted two-week turnaround time. In the fashion of all such investment agencies, the BOI established a one-stop action centre to handle investor relations in the early 1990s. Yet this has served more as a consultant in the often complex approval process rather than as a powerful expediter. The Board lacked the power to compel prompt attention from the wide range of government departments typically involved in checking investment proposals. Most export applications were accorded neutral if often laborious treatment, yet in cases of large-scale foreign investments in the domestic market, such as in the automotive or agro-processing industries, the investment approval process could become politicised as the proposal circulated among various departments for approval.

The BOI remains an important point of contact for investors serving the domestic market, and retains its core tax incentive powers. Like Thailand’s equivalent, the BOI’s semi-autonomous status has enabled it to play a significant policy role, as when Board officers represent the Philippines in international negotiations over investment policy. Yet the Board’s previously formidable power to shape the overall investment environment has been steadily eroded and bypassed in the 1990s. In 1992, the power to administer the import-duty drawback scheme was removed from the BOI and given to the Department of Finance.³⁹ Likewise, PEZA and PhilExport assumed control over the regional bonded-warehouse programme associated with the zones. In 1996, the law authorising the BOI to grant duty-free imports of machinery and equipment expired and was not renewed. PEZA, by contrast, is able to offer zone investors complete duty-free import privileges, even for those zones that are within the national customs territory.

In fact, the new export-oriented manufacturing infrastructure operates with virtual autonomy.⁴⁰ In 1999, the various investment-promotion agencies (BOI, PEZA, Subic, Clark and four other bodies) began negotiations to harmonise their incentive policies, but it is unlikely that an integrated incentive system will soon emerge.

This acute fragmentation reflected the larger difficulties of bureaucratic reform in the Philippines. Rather than transforming the regulatory missions embedded in the traditional bureaucracy, and strengthening the BOI's analytical and administrative capabilities, the Ramos administration often fostered reforms by establishing entirely separate administrative agencies. So long as the Philippines' export manufacturing development remained enclave in nature, administrative fragmentation did not pose an immediate constraint on expansion. However, integrating investment promotion more effectively with investor services, specialised infrastructure, skill development, and supplier-base development requires a higher degree of coordination. It is doubtful that the Philippines' existing administrative infrastructure is positioned to address these challenges.

Indonesia

Indonesia's investment policy regime was transformed through a protracted reform process during the decade of Southeast Asia's growth boom. To a greater extent than any other country in the region, Indonesia's regulatory policies resulted in a profound dualism between those for the often cartelised domestic heavy and other manufacturing industries, and the increasingly liberal posture towards export-oriented FDI. Neither the goal of nurturing technological upgrading and diffusion from the manufactured export sector, nor the maturation of strategic infant-industries into internationally competitive exporters, were well served by the investment policy regime. The devastating economic collapse in 1998 made the restoration of investment and employment the paramount challenge, superseding issues of investment quality and linkage formation.

Evolution of the statutory investment regime

Indonesia's investment regime has swung through several cycles of opening and tightening. Rising nationalist sentiment and internal rebellions supported by outside powers prompted founding-President Sukarno to nationalise all Dutch-owned enterprises in 1957, accounting for the bulk of the modern commercial and industrial sectors. Subsequently, the government pursued a relatively determined (by Southeast Asian standards) import substitution programme involving the expansion of state-owned enterprise. Following a period of growing economic chaos, including

collapsing trade and hyperinflation, a change of government led to a reorientation of economic strategy.

The core elements of President Suharto's new policy were macro-economic stabilisation, a rationalisation of exchange rate policy, and trade liberalisation implemented by an elite cadre of Western-trained technocrats. In line with these priorities, the government promulgated a new Foreign Investment Law in 1967, subsequently amended in 1970. The law provided basic guarantees for the security of foreign investments and offered a range of incentives, including two- to six-year tax holidays, duty and sales tax exemptions on imported capital goods and provisions to carry forward losses. 100 per cent foreign ownership was permitted in many industries, though domestic distribution was reserved for domestic enterprise. At the same time, however, the law maintained a negative investment list of sectors closed to foreign investment, set a US\$1 million minimum investment threshold, and called for eventual divestment towards majority-Indonesian ownership after a thirty-year period.

The comparatively liberal investment regime was short-lived. When the first oil price hike flooded the state's coffers in the mid-1970s, Indonesia advanced its import-substituting programme into heavy and intermediate industries, and SOEs were set up to produce fertiliser, steel, cement, paper and petrochemicals. A contemporaneous surge in economic and political nationalism (including student riots directed, in part, against Japanese penetration of consumer goods markets) caused the government to tighten formal and informal restrictions on foreign investment. In 1973, the government set up the Investment Co-ordinating Board (BKPM) to issue investment licenses for investments in all sectors excluding oil, forestry and banking. Where FDI was neither banned nor restricted to a minority shareholding, the new investment regulations mandated a general principle that foreign equity be progressively diluted over ten years until it reached a minority position. In 1977, a new investment law sought to restore investor confidence after the collapse of the state oil company, Pertamina (Hill 1988: 31). The law simplified the investment approval process, ostensibly made the BKPM a one-stop approval agency, and introduced a priority investment list to make the licensing process more transparent.⁴¹ With the second oil boom of 1979, however, more sectors were closed to FDI, and apart from a few large investments in mining and oil exploration, foreign investment levels remained minimal until the late 1980s.

When oil prices declined in the mid-1980s, however, Indonesia again shifted direction and actively courted new FDI in an effort to diversify exports away from an overwhelming reliance on petroleum products. In addition to a more concerted investment and export promotion drive, the Suharto government undertook decisive steps to clean up the notoriously inefficient trade administration system. In April 1985, Customs administration was contracted to the Swiss consulting firm SGS to cut the Gordian

knot of corruption. A May 1986 reform set up a more effective import-duty drawback scheme for exporters under the state agency BAPEKSTA, and exporters were allowed to bypass the government-licensed import agents that had cartelised wide swathes of the trade sector. Exporters were allowed to sell up to 15 per cent of output locally (later increased to 35 per cent), and foreigners permitted to hold up to 95 per cent equity at the time of company formation (gradual divestiture was still required unless 100 per cent of output was exported). The reforms also enabled joint ventures with 75 per cent Indonesian equity (later reduced to 51 per cent) to avail themselves of export credit facilities and loans from state banks. Investment and capacity licensing were significantly deregulated in 1987 to facilitate expansion or diversification projects by existing producers. In 1986, and again in 1989, the BKPM pared down the negative investment list to 64 restricted sectors, most of them in agriculture, mass-media, resource-based, food or craft industries or activities related to national security (such as ammunition and explosives). The change effectively opened a wide range of manufacturing sectors to foreign investment, albeit with equity limits and divestment requirements. Fully foreign-owned enterprises were permitted for the first time, but only in the special Batam FTZ near Singapore, and only on condition that 100 per cent of output was exported and at least 5 per cent of the investment stake would eventually be divested to Indonesian partners.

This series of reforms firmly launched Indonesia's non-oil exports. Plywood led the growth of non-oil exports after the government banned raw log exports, but textiles, garments and footwear soon followed. As the regional boom in FDI-led trade matured, Indonesia moved to reduce tariffs and non-tariff barriers on a variety of inputs, and to liberalise entry barriers for foreign investors. In a 1992 decree, wholly foreign-owned subsidiaries were allowed to invest in 100 per cent export-oriented projects in Customs-bonded zones, in eastern Indonesian provinces, or when investing at least US\$50 million, though some eventual divestment was still required.⁴²

In June 1994, a major liberalisation package was issued, marking a turning point in FDI policy. Foreign investors could either set up a wholly owned subsidiary, with a proviso that a nominal amount be divested later, or else, a joint-venture with a 5 per cent minimum Indonesian holding, with no further divestment required. Unlike previously, wholly foreign-owned subsidiaries had no export condition, but were required to meet one of three conditions: US\$50 million minimum, location in an outlying province, or production of intermediate or basic materials used in a wide range of existing industries. The package also opened nine previously closed 'strategic' sectors to foreign participation, subject only to a minimum 5 per cent Indonesian ownership. These included big-ticket investment areas such as ports, electricity, telecommunications, shipping, air transport, railways and mass media. The same decree initiated a programme whereby the Ministry of Finance would grant bonded-warehouse status (known as an

export-oriented production *entrepôt*, or EPTE in Indonesian) to large investors, thus enabling exporters to avoid the cumbersome import-duty drawback scheme. The negative investment list was pared down even further in 1995.

A January 1996 reform package reduced tariffs on imports of capital goods and inputs used for export production. In June of that year, another reform eliminated minimum capital investment thresholds, and the requirement that foreign investors progressively dilute their share-holdings was removed. Henceforth, joint ventures with a minimum 5 per cent Indonesian shareholding would be exempt from further divestment requirements. The bonded-warehouse status programme was extended to privately developed industrial zones, and the BKPM began guiding new foreign investment into these designated zones, which totalled 21 by 1998. Meanwhile, compulsory inspections of export commodities by the government auditing agency, Sucofindo, were suspended for exporting firms. By the time the crisis struck in 1997, a combination of FDI liberalisation, tariff reductions and duty-exemption programmes had brought Indonesia's investment regime into close parallel with its ASEAN compatriots in terms of institutional and policy conditions for export-manufacturing FDI. Barriers were still significant in domestic retailing, banking, transport, natural resource extraction and commercial agriculture, though foreign retailing chains began to enter the market through franchising agreements.

Much of Indonesia's foreign investment also flowed into infrastructure, utilities, telecommunications and transport projects beginning in the late 1980s. The foreign investment negative list was amended to permit and require joint ventures in these formerly closed sectors. The presidential palace became the functional equivalent of the Philippines' BOT Centre, insofar as most such projects were allocated to joint ventures involving Suharto's friends and relatives. Indeed, the President personally signed off on all foreign investment projects before a 1998 reform allowed the BKPM to grant permits for investments of less than US\$100 million on its own authority.

Running parallel to this progressive liberalisation, however, were illiberal trends in domestic manufacturing and non-tradables. In the industrial sector, great controversy attended the promotion of eight 'high-technology' industries under the direction of the Minister for Research and Technology, B. J. Habibie (later Vice-President briefly and then President for a year and a half). Habibie had built his economic fiefdom under Suharto's patronage from the late 1970s, and by the 1990s, it encompassed shipbuilding, armaments, land transportation, telecommunications equipment, agricultural equipment and an infamous multi-billion dollar project to produce civilian aircraft. In 1996, the government announced its intention to launch a 'national car' project, similar to Malaysia's Proton venture, under the direction of President Suharto's youngest son, Tommy. Another Suharto

son controlled the giant Chandra Asri petrochemical complex, which was controversially granted tariff protection in 1996 at the expense of downstream plastics industries.

The massive devaluation of the rupiah from late 1997 led to the swift collapse of Indonesia's financial sector, with devastating knock-on effects in the real sector. The strategic aircraft and national car projects were among the first casualties of the IMF restructuring package, which also mandated that Indonesia remove its remaining restrictions on foreign ownership and introduce an investment regime based on national treatment for foreign investors. The Indonesian government committed to open infrastructure, utilities, retailing, finance and other non-tradable sectors, and to privatise major state-owned industries. In October 1998, Parliament passed a law allowing 100 per cent foreign ownership in the banking sector. Monopolies in supply and downstream industries linked to the national oil company Pertamina were to be dismantled and opened to foreign bidders. A raft of other liberalisation measures were announced throughout 1998 and 1999, including the lifting of bans on foreign ownership in mining, oil palm and other plantation industries, as well as retail trade. The only major sectors remaining on the negative investment list for FDI are forestry, gambling and casinos, aircraft production, cinemas, taxi and bus transportation.

As it now stands, Indonesia's investment regime is the most liberal and neutral in statutory terms, and in early 2000 the government was preparing a new foreign investment law to enshrine a national-treatment principle. Yet, foreign investment has yet to return in a significant way, and privatisation has proved contentious and slow. An initial sale of insolvent Bank Bali to Britain's Standard-Chartered was scuttled by opposition from the bank's management, for example, while in another case, regional authorities exploited the ambiguous decentralisation policy to temporarily shut down a major foreign mining operation to press demands for higher royalties. In a more successful instance, the leading auto-assembler, Astra, was disposed to a Singaporean-led investment consortium. Yet the politicised character of the early M&A cases suggests that Indonesia's liberal investment regime might become even more compromised in terms of implementation and enforcement, especially as growth resumes and domestic investors regain access to credit.

Strategic deployment of investment incentives

Indonesia pursued the most interventionist industrial policy of any of the ASEAN 4. Yet, it relied far more on regulatory barriers and state-guided credits and public enterprise than on policy-driven investment subsidies. In the language of Indonesia's investment policy, 'strategic' sectors indicated areas reserved for state control, rather than activities designated to receive special incentives for investment. On the other hand, in periods when

policies moved in a more market-oriented direction, Indonesia's liberal-minded technocrats also shunned using investment incentives to influence private investment flows in strategic ways. In fact, as liberalisation got under way in the early 1980s, the government suspended the use of tax holiday incentives during the period 1983–96 and focused instead on pruning restrictive regulations.⁴³ In evaluating applications for investment licenses, the BKPM administered a complicated Priority Scale List (*Daftar Skala Prioritas, DSP*) for investment from 1977 until 1990. The list served more as an instrument of discretionary control over both foreign and domestic private investors than as a tool for guiding investment incentives into potential high-growth areas. Expanding on the statutory negative investment list, the DSP banned foreign participation in particular sectors on three grounds: (1) sufficient capability among domestic entrepreneurs; (2) strategic activities reserved for state enterprise; (3) sectors set aside for small-scale enterprises or co-operatives. The list also regulated capacity and the number of licenses granted in given sectors. The Board could grant exceptions enabling foreign investment in closed sectors, however, for projects that located in Indonesia's outer islands, were 100 per cent export-oriented, or generated significant employment (Pangestu 1996: 156–157). In theory, these exceptions might influence foreign investment patterns towards their desired goals, but the differential impact of less unfavourable treatment was mitigated by general deterioration in the investment environment.

In 1996, tax holidays were restored for up to 12 years and by the time Suharto's government collapsed two years later, 11 foreign and domestic investment projects had applied for the incentive, with six receiving approval. In the absence of clear criteria, and with the President exercising personal approval power, the incentive programme was viewed as a setback for transparent investment policy, particularly as several of the awardees were connected with the First Family. The programme was suspended pending the eventual issuance of objective criteria, and it was reported that incentives would, in future, entail shorter tax holidays, varying in duration according to investment location. Using investment incentives to encourage industrial decentralisation was rather belated in Indonesia's highly centralised economic policy system. In 1995, the government announced 15 provincial 'integrated investment zones' (*KAPETS*), in which investors would receive exemptions from VAT and dividend taxes, be free to employ expatriates, and enjoy import-duty exemptions on capital goods and inputs, though little new investment appears to have resulted.

The Investment Co-ordinating Board's (BKPM) main incentives have been import-duty exemptions on capital goods, and two years of duty-free imports of raw materials. Use of raw materials has, however, been audited by a special government agency in a procedure that often requires onerous documentation. These incentives were granted to all successful applications

for an investment license, rather than to those matching a list of priority industries. Likewise, the incentives were available in principle to all foreign and local investors, subject to the negative foreign investment list and its equity guidelines, and to a minimum investment of US\$1 million for foreign investors. In practice, the BKPM (or perhaps the President, who approved foreign investments) appeared to favour larger-scale foreign projects and joint ventures.

Reforms in the late 1980s added new incentives tied to exports, in the country's bid to attract export-oriented manufacturing investments. Firms exporting all of their output were granted import-duty exemptions, though this required them to negotiate the duty-drawback system administered by a government agency (BAPEKSTA), with evidently low efficiency. The EPTE system, launched in 1994, gave exporting firms licences to operate bonded warehouses. This system proved extremely popular, and facilitated the influx of new manufacturing investments in electronics exports. Later, under a scheme known as PET, investment incentives were used to promote private development of industrial parks. These, in turn, would receive Customs-bond status, thereby obviating the need for individual firms locating in the zones to obtain EPTE permits.

While Indonesia thus created the policy framework to support export-oriented manufacturing, it did little to influence the quality of FDI to attract or induce technologically-advanced or skills-intensive activities. In part, this reflected Indonesia's status as a labour-surplus economy. Simply put, manufacturing export development had not matured to the point of requiring substantial technical inputs to remain competitive. On the other hand, concern for fostering technological deepening and structural upgrading was the hallmark of B. J. Habibie's controversial programme of import-substitution in heavy and engineering industries (Thee 1998). It appears that Indonesia's technology development efforts were heavily concentrated in the activities under the minister's direct control, but he was not permitted to exert much influence on the broader investment policy regime. The system of public science and technology institutions remained disconnected from the industrial sector generally and from the new export-oriented manufacturing industries in particular (Lall 1998; Thee 1998). Preoccupied with the struggle for economic recovery after the recent crisis, the Indonesian government has not articulated a coherent set of policies to foster investments in the IT field.⁴⁴

There was one intersection between Indonesia's manufactured export growth and Habibie's high-tech mission, however, and this was the industrial park on Batam Island near Singapore. Habibie was given control over the Batam FTZ in 1978, but his insistence on reserving the island for indigenous high-tech production resulted in stagnation until he agreed to integrate the zone into the Singapore-led growth triangle linking Batam, Singapore and Malaysia's Johor state (Smith 1998). Batam did soon become

linked to Singapore's technologically dynamic manufacturing development, but primarily as a site for the relocation of labour-intensive assembly operations by electronics multinationals. The IMF pressed Indonesia to remove the VAT exemption granted to Batam, a move which drew vociferous objections from the island's 370, mostly Singaporean, investors.

The enclave dilemma, linkage promotion and technological indigenisation

Habibie's ventures were the primary thrust of Indonesia's effort to indigenise advanced industrial technologies. Unfortunately, one of the chief criticisms of his ambitious state-owned engineering industries was that they lacked linkages to local private-sector suppliers. This might have been excusable if the projects had shunned linkage development to source competitively priced inputs through imports. But in fact, it reflected an emphasis on vertical integration and a curious lack of concern with the practicalities of technology diffusion through subcontracting linkages and other spin-offs to local industry, ostensibly the projects' primary rationale. In the late 1970s and early 1980s, the Ministry of Industry implemented a series of local-content programmes in automobiles, heavy equipment assembly, diesel engines and electronics. Indonesia's drive to localise auto-parts production met with considerable success in encouraging the quantitative growth of production, but the technological benefits of local subcontracting appeared limited. The programme was suspended in June 1999 as part of its IMF-sponsored adjustment package.

Small and medium sized industries have important political significance in Indonesia's economic policies, as they bear the standard of *Pribumi* economic interests in an economy dominated by ethnic Chinese conglomerates and state-owned enterprises. During the New Order regime, banks were mandated to set aside 15 per cent of their credit for SMIs. The Small Enterprises Development Program provided subsidised credit to *Pribumi* SMEs from 1973 to 1990 under the supervision of the central bank, though manufacturing firms received less than 13 per cent of the funds disbursed under the scheme (Thee 1994: 103). A long list of craft and light industries were reserved for small firm production. On several occasions, Suharto issued directives for large conglomerates to 'adopt' SMIs through subcontracting linkages. Most of these programmes were highly political in intent, and focused on the domestic controversy over the spread of large conglomerates through government monopoly favours. As such, they had little bearing on the question of fostering industrial clusters or technology diffusion. The Ministry of Industry's small industries development programme operates an extensive network of technology extension service centres, but these have had little impact (Berry and Levy 1994: 47). Finally, Indonesia launched in 1989 a 'Foster-Father-Business Partner Linkage' programme in emulation of the subcontracting promotion schemes seen in

many countries in the region. The programme, widened in 1991, sought to pressure state-owned and private large firms to assist SME subcontractors with financial and technical assistance. Suharto's personal emphasis on the programme resulted in 4,698 'large foster-father firms' (the majority of them state-owned firms) signing agreements by the end of 1991, yet the programme faded from view in subsequent years with few measurable achievements (Thee 1994: 106–107, 114).

Like its counterparts in other ASEAN countries, the chief investment agency, BKPM, sought to deepen the import-reliant foreign export sector by promoting investment in supplier industries. In October 1993, the Board allowed wholly foreign-owned subsidiaries to invest in critical supplier and intermediate industries, subject to a minimum US\$2 million capital threshold. Among indigenous industries, meanwhile, clusters of dynamic SMIs were observed in such labour-intensive industries as the production of furniture, batik and crafts. However, Indonesia's formal SMI extension programmes were largely irrelevant to these successes. SMIs are clearly slated to receive greater emphasis in Indonesia's new political environment, however, and a new decree in 1998 set forth a new list of sectors reserved for small-scale industry.

Indonesia's offer of duty-free imports to promote export industries also created some disincentives for local linkage formation. In 1996, however, regulations were amended to exempt from VAT taxation the local purchases made by EPTE-status firms and their counterpart Customs-bonded zones. This gave local indirect exporters an added advantage, and was particularly useful to agro-export processing industries.

The institutional framework for investment policy

The Indonesian governmental system suffered simultaneously from excessive centralisation and bureaucratic fragmentation. Though jurisdiction over investment in petroleum, finance, forestry and other sectors, as well as taxation and tariffs, was distributed across different government agencies, President Suharto would issue the final decisions on most major investment matters. The main investment co-ordinating agency, BKPM, has exercised considerable authority over investment trends, primarily by enforcing controls and restrictions. The Board did have the power to review the mandatory biennial production performance reports of promoted firms, but mainly used these powers to monitor compliance with equity, production and export goals. The BKPM has not wielded much independent policy influence, and as its power stemmed from its ability to enforce or exempt the application of restrictive regulations, its incentives have been largely superseded as tariff reductions and equity restrictions were relaxed in the 1990s. Although organised along sectoral lines, the BKPM lacked interest in developing detailed expertise in particular industries, or in taking on the

range of new functions (such as post-approval investor services, match-making and vendor development) taken on by its sister agencies in other ASEAN countries. The agency simply had no real mandate to nurture structural or technological change in the industries under its purview.

As the economic reform package has moved ahead, the IMF has suggested removing the Board's remaining discretionary powers – in particular, the ability to grant VAT exemptions to purchases by firms with EPTE or PET Customs-bonded licenses – in an effort to plug tax loopholes and to increase the neutrality of the incentive regime. The Board has responded to the post-crisis drop in investment in several ways. First, the power to approve investment applications has been decentralised to BKPM offices in Indonesia's overseas missions. Second, the Minister for Investment has declared that each province will, in future, be empowered to approve or reject investment proposals, though the power to grant Customs-bond licenses will remain a central prerogative. If fully implemented, decentralisation is likely to create a highly uneven and inconsistent set of investment rules, and foreclose the possibility of a comprehensive and integrated approach to refocusing the investment policy regime on national developmental strategies.

In sum, Indonesia's economic collapse has put a halt to efforts to engineer industrial transformation through strategic intervention. For the foreseeable future, the country will be preoccupied with reforming its financial and governmental institutions and restoring investment inflows. Yet, the continued elaboration of infrastructure and incentives for promoting export-manufacturing investment is likely to remain an important tool for whatever investment policy emerges from the current economic chaos.

Conclusions

ASEAN's experience with investment policy reform points to the considerable complexity – administrative, economic and political – of developing countries' integration into the expanding international division of labour in manufacturing. As their reform histories show, liberalisation is only one element, albeit a crucial one, of the process by which developing countries adjust to the forces of globalisation. Countries' comparative advantages as hosts for globally-linked production increasingly depend upon a range of qualitative factors that affect the costs and competitive advantages of multinational corporations and create conditions for the emergence of dynamic local supporting industries able to locate supply niches in MNC-dominated manufacturing industries. Beyond political stability and investment security, multinational corporations are increasingly responsive to the quality of physical and administrative infrastructures, skill endowments and proximity to quality suppliers. For host countries, shaping a productive investment environment demands considerable public expertise,

institutional flexibility and judicious investments in the quality of local skills and technical capacities.

Investment incentives and other efforts by Southeast Asian governments to shape the investment environment have had partial success at best, and are often constrained by the limited technical expertise of implementing agencies, not to mention the constraints of the broader political and policy environment. Yet, in aggregate, they have complemented MNCs' changing strategies and investment patterns to shape the unfolding regional division of labour. Inasmuch as current reform programmes, e.g. as prescribed by IMF agreements, exclude a priori the possibility that government investment policies can have positive impacts, e.g. in encouraging technology transfer, linkage formation, skill development and other externalities, they overlook an important dimension of sustainable recovery, namely the strengthening of expertise and flexibility in public agencies that supervise industrial development.

Meanwhile, it is evident that, as the ASEAN 4 return to growth, authorities are pursuing new ways to encourage industrial and technological progress, even as their ability to pursue infant industry-style ventures is severely curtailed. In so doing, they face a new international investment environment. Over-capacity in a range of manufacturing sectors, together with the slow recovery in Japan, suggest that the volume of new manufacturing FDI will not quickly resume the dizzying rates and totals recorded earlier in the 1990s. A more fundamental issue is the related shift in FDI flows towards mergers and acquisitions and away from new green-field investments. The implications of this trend for the development of locally rooted skills as well as industrial and technological capabilities are urgent issues for research and policymaking (UNCTAD 1999). Though facilitating such investments has become a central aspect of broader reform and re-capitalisation throughout the region, it may also have significant downside risks. For example, to the extent that managerial autonomy is significantly reduced throughout the industrial sector, opportunities for localised learning and expansion into more value-added activities, such as design and R&D, might be constrained by the wider regional strategies and divisions of labour fostered by MNCs.

Even if this pessimistic interpretation is dismissed, it is likely that active and nuanced policies to shape host-country investment environments will remain important determinants of new investment trends. As described above, the ASEAN 4's opening to export FDI in the 1980s and 1990s did not result in the same sorts of linkages and technology spill-overs evident in Taiwan and South Korea at equivalent levels of development, particularly because of Southeast Asian economies' poorer co-ordinated policy and institutional support for linkages and technology diffusion. In the same way, whatever the potential advantages of M&As in modernising finance, retailing, transport and other non-tradable sectors, it is doubtful that the

ASEAN 4 will derive their full benefits without appropriate institutional support, skills and policy incentives, together with the ability to effectively link these to the evaluation of foreign acquisition proposals.

Indeed, the crisis has, ironically, forced ASEAN governments to assume greater discretionary powers to screen and approve investments, inasmuch as special government restructuring agencies control the fate of a vast amount of assets taken over from insolvent financial institutions. Yet, consideration of how to use such powers to maximise investment quality and positive externalities has been pre-empted by more basic concerns with ensuring transparency. Assisting the region's governments to regulate foreign investment in positive ways is low on, if not absent from, the agenda of the international financial institutions as well as many domestic reformers, given the general discrediting of discretionary interventions by the abuses of various Southeast Asian political leaders. In Indonesia, the need to restore investor confidence is likely to constrain government policy activism for some time, no matter how well-conceived and 'market-friendly' proposed policies might be. Likewise, the Philippines' recently dynamic export manufacturing growth only thinly disguises the wariness of many international and domestic investors about the potential for governmental interference and damaging policy shifts. In Thailand, there are a few more positive signs of emerging public-private co-ordination in fostering skills and technology development as the domestic economy is opened to more foreign competition. Yet, a considerable share of the indigenous industrial capacities built up in recent decades has been lost through the financial recklessness and subsequent liquidation of many large and medium-sized manufacturers. In Malaysia, Mahathir's defiance of orthodox prescriptions for economic restructuring has proved politically successful for the time being, as the government rejected the IMF prescriptions imposed on the rest of the region. The government thus retains important policy instruments to set terms for investor entry. If used judiciously in conjunction with appropriate 'supply-side' support for technical and skill development and linkage growth, Malaysia might retain an ability to adjust to the new international environment on more advantageous terms. Yet, politics will ultimately determine how such capacities are used. The recent heavy-handed drive to restructure the financial system by policy fiat does not inspire confidence that the leadership has learned either caution or subtlety in its efforts to guide structural change.

Finally, the prospects for the ASEAN-4 to rebuild their investment-management capacities are clouded by the current multilateral efforts to proscribe most forms of discretionary government interventions and regulations affecting investment flows. If current negotiations result in a multilateral investment regime more restrictive of national governments, the scope for abuses of investment policy might be reduced, but only with the loss of the important potential contributions of such policies to long-term industrial development.

Notes

- 1 For a general discussion of global investment policy trends, see UNCTAD (1998).
- 2 See the discussion in UNCTAD (1998: 97–106).
- 3 Meanwhile, the evolution of ASEAN investment policies is also influenced by trends at the international level. Existing WTO provisions do not proscribe many investment subsidies and equity restrictions, though they do prohibit most TRIMs along with direct export subsidies. Discussions of a potential multilateral investment policy regime have recently been pursued, first under the auspices of the OECD's Multilateral Agreement on Investment (MAI), and latterly under the WTO's Working Group on the Relationship between Trade and Investment, which is drafting a Multilateral Investment Agreement (MIA). In its restructuring programmes in Asia, the IMF has sought to persuade client countries to dismantle or reduce such subsidies. However, as they lose other policy instruments to shape industrialisation, it appears doubtful the ASEAN countries will readily surrender their ability to hone their attractions to investors in the name of global or regional efficiency. They have made some efforts to co-ordinate their investment policy regimes at the regional level. The ASEAN Investment Area (AIA) was launched in 1998 to promote a gradual harmonisation of investment regimes and encourage greater intra-regional FDI flows across Southeast Asia. Even this effort remains compromised by individual governments' desire to use investment policies to advance their national economies within the regional division of labour.
- 4 During 1960–85, for example, only 5 per cent of all capital in BOI-approved projects was invested in wholly foreign-owned ventures, and this amounted to only 18 per cent of total foreign direct investment. The balance took the form of joint ventures with Thai investors.
- 5 The Alien Occupation Law of the same year regulated foreign employment in a range of professions, including the law, medicine, architecture, etc. A moratorium on new commercial banking licences largely closed the financial sector to foreign investment (as well as most new domestic entrants).
- 6 According to one prominent Thai economist, the BOI was 'extremely promiscuous in giving away promotion certificates . . . The end result was . . . higgledy-piggledy growth of Thailand's industrial sector with spotty performance in terms of efficiency' (Amar Siamwalla, cited in Doner and Ramsay 1997: 252).
- 7 Exporters were eligible for import-duty exemptions, but they were required to furnish the government with production formulas and detailed documentation of the use of imported inputs for export production. Legislation authorising the creation of free-trade zones had resulted in only one functioning zone by 1985.
- 8 Under decentralisation incentives, domestic-market projects locating in the remote Zone 3 were already permitted majority-foreign ownership.
- 9 Prior to the 1990s, the appointed Senate included many military officers. Thailand's 1997 Constitution mandated an elected Senate in the year 2000.
- 10 *The Nation*, 21 October, 1999.
- 11 In 1999, NSTDA and the Ministries of Science and Industry mounted a new push to attract foreign investment in wafer fabrication with government equity support. The BOI initially opposed the project on the grounds that Thailand lacked sufficient capacity to make it a success (*Bangkok Post*, 25 March 2000), but eventually agreed to provide maximum eight-year tax holiday incentives to wafer fabrication projects regardless of investment zone.
- 12 The NSTDA negotiated directly with Ford and advocated on its behalf in winning additional incentives for its proposed investment from the BOI (*The Nation*, 21 April 2000).

- 13 The BOI claims the Centre can facilitate approval of work permits within three hours.
- 14 A World Bank study estimated that the Board's tax holidays had far exceeded the long-term revenue benefits, a conclusion disputed by the Board (*Business Day* (Bangkok) 20 March, 1998).
- 15 A 1995 study by the Japanese International Co-operation Agency (JICA) identified 402 electrical and electronics parts suppliers, of which 97 were primary suppliers to major assemblers, 30 (31 per cent) wholly Thai-owned, 47 (48 per cent) joint-ventures and 20 (21 per cent) wholly foreign-owned. The study found 374 auto-parts suppliers; of 134 primary suppliers, 72 (or 54 per cent) were wholly Thai-owned and 58 (43 per cent) were joint ventures.
- 16 Local content data is relatively scarce, particularly for the 1990s, but Tambunlertchai and Ramstetter (1991: 98–99) showed that the import-intensity of foreign-owned exporting firms grew over the period from 1974 to 1986, e.g. electrical machinery (73 per cent to 85 per cent), apparel (73 per cent to 76 per cent), and textiles (58 per cent to 66 per cent). Other case studies report that foreign export firms have found it difficult to find acceptable local suppliers (FIAS 1991; Dahlman and Brimble 1990: 24).
- 17 In the end, the Siam Cement Group retained a small minority stake at Toyota's request.
- 18 From 1992 to 1996, the NSTDA performed some 417 consultancy projects, and gave matching grants worth a mere Bt1.13 million to 10 companies for technology acquisition projects. From 1988 to 1997, the Agency approved 31 loans worth Bt26.65 million and 10 grants worth Bt4.10 million to support private-sector research projects.
- 19 In its 1999 reform, for example, the BOI proposed restoring the duty exemption for machinery imports. Investors have complained that the standard tariff rates of up to 5 per cent still hinder investments to upgrade their capital stock.
- 20 In 1975, the Licensed Manufacturing Warehouse (LMW) programme extended similar treatment to individual factories set up outside the zones.
- 21 The automotive sector was subject to a separate local-content programme managed by an inter-agency committee housed in the Ministry of Trade and Industry.
- 22 Firms above a minimum equity threshold were required to share equity, usually 30 per cent, with Bumiputera partners. The 30 per cent rule was not explicitly mentioned in the ICA itself. Rather, it was the overall target for Bumiputera ownership of listed corporate wealth by 1990.
- 23 Figures quoted in *The Star*, 6 April, 1999.
- 24 The HRDF's coverage was extended in 1995 to companies with more than ten employees but with a minimum investment capital.
- 25 *Utusan Melayu*, 25 August, 1997. A World Bank (1997: 61) study concluded, 'HRDF has had a significant role in increasing training among medium and large firms . . . but not small firms . . . Among purely domestic firms, HRDF has only been effective in increasing the training of large firms with over 250 employees'.
- 26 The MTDC has disbursed its funds somewhat more vigorously; by June, 1999 it had approved RM34.6 million (US\$9.5 million) to 23 companies for technology acquisition and RM16 million to 21 companies for the commercialisation of public and private R&D. The effectiveness of these funds' use in terms of sales generated or any other measure is not known.
- 27 The German-Malaysian Institute opened near Kuala Lumpur in 1992 with a capacity to train 450 students in industrial electronics and automated manufacturing. Its French counterpart accommodated 600 trainees in electro-mechanical

- systems. In 1995, the government signed an agreement with the Japanese government and Keidanren, Japan's leading business federation, to set up the Japan-Malaysia Technical Institute in Penang to provide advanced training in electronics and automated manufacturing technologies.
- 28 By 1995, Matsushita's Malaysian operations accounted for 25 per cent of its parent group's overseas production, and a similar proportion of its global (including Japan) production of air conditioners and televisions.
- 29 Figures from MASTIC (1996) *1994 National Survey of Research and Development*, Table 5.5. Excludes petroleum products and refining.
- 30 Warr (1987) found that in 1982, net value-added in the zones was a mere 23 per cent, while only 3.6 per cent of total material inputs was sourced within Malaysia's principal Customs area.
- 31 The exchange developed slowly after its launch, with only a single listing in its first two years.
- 32 At the Prime Minister's behest, the company has pursued expensive engine-design and manufacturing capabilities throughout the 1990s. In 1997, the company acquired Britain's Lotus corporation, and in 2000 was scheduled to launch a car model based on its own engine and transmission designs.
- 33 The fact that the private investors in zone development were often powerful commercial and property companies with close ties to local power structures had something to do with this success.
- 34 In May 2000, Taiwanese computer maker Acer, one of the largest investors in Subic Bay, suspended expansion plans because of the government's abrogation of an air-access agreement with Taiwanese airlines.
- 35 News reports suggested that half of the BOI's incentives in 1999 were given to government-linked projects associated with the BOT programme (*Today* (Manila), 7 February, 2000).
- 36 As in other countries, the original exclusion of in-country revenue generation was designed to distinguish genuine RHQs, with their skill-intensive managerial control and co-ordination functions, from mere representative offices, which simply arrange local sales.
- 37 *Today* (Manila), 7 February, 2000.
- 38 In April 2000, Amazon.com announced it would locate distribution, accounting and data-coding operations in the Philippines.
- 39 In 1997, a scandal erupted when it was disclosed that the Department of Finance had issued tax credits for millions of dollars worth of bogus export invoices over several years.
- 40 The degree of administrative fragmentation became glaringly evident in 1998 when the founding head of the Subic Bay Economic Zone, Richard Gordon, refused to vacate his post for weeks after being dismissed by the new President, Joseph Estrada. Only the threat of armed clashes between police and his own security force persuaded him to vacate the zone.
- 41 Though, as Pangestu (1996: 156) relates, 'The problem with the list was that there is [*sic*] a lot of room for interpretation since it was not comprehensive and accurate. The product definitions were not precise enough so that it was not always self-evident which sectors were open for foreign investment.'
- 42 Pangestu (1996: 162–163), from which the next paragraph also draws.
- 43 As Winters (1996: 168–184) narrates, the removal of tax incentives did indeed create a perception among some private investors that Indonesia was less keen to attract foreign investment. Even wholly export-oriented foreign investors began to desert Indonesia in the early 1980s, culminating in the exit of long-time semiconductor assemblers Fairchild and National Semiconductor in 1985 and 1986,

respectively (Pangestu 1996: 157). This was despite survey evidence, (often cited in discussions of investment incentives), that incentives are low on the list of private investors' priorities in deciding where to locate new projects. After an initial decline, investment flows recovered in the late 1980s, but it is not clear whether the lack of incentives created significant opportunity costs in terms of Indonesia's position in the unfolding, MNC-created regional division of labour.

- 44 Private initiatives for IT parks have been floated. In 1999, Indonesian tycoon Edward Soeryadjaya announced a CyberCity project to be built at Jakarta's old Kemayoran airport, though the proposal has been met with widespread scepticism. The project's plans include a multimedia training academy, business incubator, redundant power supplies and commercial and residential buildings.

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4 Technology policies and innovation systems in Southeast Asia

Greg Felker

In most post-hoc analysis, Southeast Asia's economic crisis of 1997–98 appears over-determined by a combination of poor domestic governance and volatile international capital flows. Though the financial turmoil was preceded by a regional export slump, the structural dimensions of the crisis were largely overshadowed and are far less clear. Did the crisis point to a decline in Southeast Asia's structural competitiveness, or worse, expose the region's FDI-led industrialisation as lacking any real local foundations? Well before the crisis, critical observers noted that Southeast Asia's vigorous manufactured export growth rested on a weak local base of technological capabilities (Yoshihara 1988). Heavy dependence on imported technology is natural, indeed essential, for late industrialising economies, which typically develop technical mastery in cumulative stages that involve local innovation only after extended periods of production-based learning (Amsden 1992; Kim 1997). Even allowing for the evolutionary nature of latecomer technology development, however, Southeast Asia's aspiring NICs lagged in building capacities to adapt and improve imported technologies. Locally owned enterprises concentrated in labour-intensive and resource-based industries; few ventured into own-design or own-brand manufacturing. Whether deliberately or because their host economies lacked 'absorptive capacity', multinational corporations (MNCs) generated few technology spill-overs to the local industrial structure, even as they deepened their regional investments.

Southeast Asia's weaknesses in technology development are easily seen as symptomatic of broader syndromes of policy failure. Prior to the crisis, neo-liberal accounts held that Southeast Asia prospered because its states largely *refrained* from guiding industrialisation through strategic interventions (World Bank 1993: 3–5). By contrast, the dominant theme in post-crisis analysis is that Southeast Asian states had in fact *misgoverned* their economies and were excessively interventionist. The long growth boom emboldened political leaders to sponsor monumental infrastructure projects and launch dubious high-technology industrial ventures. Even when infant-industry programmes were economically plausible, rent-seeking subverted

managerial accountability and undermined incentives for genuine technological learning. While pursuing high-tech fads, many governments failed to provide more basic public goods for technological upgrading, particularly in reforming and expanding educational systems and vocational training.

The actual record is more complex. Southeast Asian governments did attempt to stimulate and guide technology development as part of broader industrial policy efforts (Jomo *et al.* 1997).¹ They recognised the need to augment their FDI-driven exports with greater local technological input, and strove to build comprehensive ‘national innovation systems’ comprised of new incentives, public investments and technology support institutions. These efforts met with limited success at best. The reasons have less to do with rent-seeking per se than with inadequate public-sector technical expertise and weakly institutionalised networks between state agencies and private business sectors (Haggard 1994; Doner and Hawes 1995).

In the absence of effective mechanisms for government–business co-ordination, Southeast Asia’s technology policies focused predominantly on ‘supply-side’ strategies aimed at boosting government technology spending and expanding public technology institutions. ‘Demand-side’ technology policies, those aimed at nurturing the growth of innovation capacities within industry itself, received less emphasis. Underlying this imbalance was a basic mismatch between newly ambitious S&T strategies and the region’s changing industrial policy environment. Although technology planners made industrial relevance a touchstone of technology policies, they emphasised formal research and development (R&D) and new-product innovation far more than the diffusion of existing best-practice technology. The MNCs who led the region’s export booms usually had little interest in accessing local support for strategic R&D, while locally-owned manufacturers were primarily concerned with the need to achieve competitive levels of productivity and quality. Not surprisingly, then, even those government programmes which subsidised industrial innovation directly, such as R&D incentives, generated a poor response. Faced with a disjuncture between their strategic technology goals and the private sector’s seeming disinterest, some governments implemented mission-oriented technology policies through state-owned or -linked corporations, usually with little success in terms of building competitive industries. More successful technology policies, however, were those that oriented public technology institutes towards the task of fostering technology diffusion through metrology, testing, standards and certification services.

Innovation systems and Southeast Asian industrialisation

Technological change lies at the heart of industrial policy debates.² The belief that latecomer economies face pervasive learning economies is

a major rationale for augmenting market resource-allocation with deliberate industrial strategies. Private investments in technological learning are beset by a range of likely market failures, including imperfect information, high and highly variable risk, large fixed costs and scale economies and reciprocal externalities that pose co-ordination problems. These challenges confront industrial latecomers even though they can acquire proven technologies from more advanced economies through various channels of technology transfer. Commercially relevant technological mastery involves the accumulation of tacit, experiential knowledge as well as codified or embodied information. For this reason, technology is imperfectly tradable. Much like firms pursuing innovation through new knowledge-creation, latecomers must make deliberate and risky investments of human and financial resources to master and improve foreign technology (Bell and Pavitt 1995: 75).

Technological change in industry is driven by the broad incentives and capabilities derived from an economy's macroeconomic environment, competitive pressures and human resource endowments. Yet, technology development is not entirely endogenous to broader growth processes. Even as many governments have surrendered the traditional tools of industrial policy, such as state-owned enterprise and trade protection, in favour of privatisation and trade liberalisation, they have displayed a growing interest in directly manipulating technological change by creating conducive institutional environments for innovation. The literature on *national innovation systems* (NIS) depicts the ways in which universities, training institutes, specialised financial mechanisms, public research laboratories and providers of technical services nurture and diffuse specialised knowledge to complement private industry's technology investments. The premise of the NIS approach is that the mix of technology-related institutions, and the linkages and knowledge-flows between them, vary significantly across economies, with important effects on innovation performance.

The prospect of boosting national innovation by selecting proper institutions has obvious appeal to policy makers seeking to enhance national competitiveness, particularly to officials in late-industrialising economies who wish to play a developmental role. In advanced industrial economies, many elements of innovation systems operate on a commercial basis, but developing economies typically lack a broad range of sophisticated market institutions such as technology information brokers and engineering consultants, venture capitalists, inter-firm networks for subcontracting and technical collaboration, and corporate R&D laboratories.

In seeking to emulate the first-generation NICs of Northeast Asia, Southeast Asian policy makers encouraged industrial innovation in the form of special incentives, funding mechanisms and technology support institutions. They understood the crucial importance of co-ordinating public and private sector efforts, and knew that practical industrial needs – rather than

scientific curiosity – should guide public technology investments.³ However, the image of an integrated innovation system that guided Southeast Asia's new technology policy activism overlooked major governance challenges, particularly in forging genuine public–private co-operation.

In a seminal comparative study, Nelson and Rosenberg (1993) offered three important caveats about the NIS concept: the relevant institutions and resources can differ tremendously by sector; key linkages and resource flows may be transnational, rather than national, in scope; and most crucially, innovation 'systems' cannot be assumed to function according to central designs or deliberate strategies, but may instead evolve in an ad hoc and path-dependent way.⁴ Sectors differ greatly in their sources of technology and the focus of innovation efforts (Pavitt 1984). Public agencies seeking to support technological change in industry must therefore deploy specialised expertise, but few Southeast Asian governments were equipped to tailor their technology support programmes to the needs of different sectors. In most countries, most public sector technology capacities were in the agricultural sector, and in some countries included world-class research programmes. Government agricultural institutions employed a research and extension model that involved technology that could be developed through discrete research projects, then embodied and codified, and finally, transferred to the field, an approach less relevant to most industrial sectors. The generalist civil service systems found throughout the region were also ill suited to nurturing specialised industry-relevant expertise. Finally, clientelist government–business relations made many businesses, especially small and medium-sized enterprises (SMEs), wary of collaborating with government agencies and sharing detailed company information.

The scope for public technology support varies not only by sector, but also by industry structure and strategy. Wong (1999) shows that corporate technology strategies differed among East Asian NICs, ranging from the progressive OBM strategy of the Korean *chaebol*, to the specialised subcontractor and OEM roles of many Taiwanese firms, to the 'applications pioneering' of Singapore entities. Government technology policies reflected this variation. The Korean state channelled subsidies directly into the *chaebols'* internal RD&E (research, development and engineering) efforts. Taiwan's government institutes absorbed foreign technology and designs, and diffused them to small and medium-sized subcontracting firms. And the Singaporean government deployed new technology in government functions and infrastructure like customs clearance. Particularly in the first two cases, nationally owned firms were the primary constituency for government technology policies. In Southeast Asia's second-tier NICs, however, most advanced manufacturing industries are dominated by foreign multinationals (MNCs). In de facto terms, then, Southeast Asia is embedded in regional and global innovation systems, and its primary linkages to sources

of innovation are through MNCs' internal technology transfers. The scope for local innovation depends greatly on the strategies of foreign corporations, and few MNCs vest their local subsidiaries with major *product* innovation roles. Given the region's status as an offshore assembly platform, however, Southeast Asia might hope to stimulate innovation in *process* technology and to facilitate the diffusion of technical knowledge from MNCs to local suppliers and subcontractors. The key to such a strategy is to provide incentives, infrastructure and skills that complement MNCs' internal technical upgrading, and aggressive support for quality improvement in potential supplier industries (Felker and Jomo, this volume). The region's technology policies rarely explored the implications of an FDI-based industrial policy in a cogent way. Instead, they focused on promoting R&D for new product innovation, often in emerging high-technology industries where indigenous firms were notably absent.

Finally, Southeast Asian efforts to build innovation systems often overlooked the evolutionary nature of technological change in late-industrialising countries. Latecomer firms usually spend extended periods of time enhancing technical knowledge through simple learning mechanisms like quality management programmes, information exchange with buyers and suppliers, selection and optimisation of equipment, and so on (Dahlman *et al.* 1985; Lall 1992; Bell and Pavitt 1995). Gradually, these routine technical functions may develop into distinct engineering or design programmes that target specific improvements in products or processes. Only when such tasks have been mastered and technical change has become integral to business strategies do some firms launch formal R&D programmes. Public incentives and resources can complement private investments if they are gauged to the level of capabilities within the industry at any particular point and the particular challenges that arise at each stage. If local firms in a given industry have acquired only production capabilities, public institutions might best focus on training, testing and disseminating best-practice production techniques. As firms begin to adapt and improve imported technology, public institutions might provide information services and technical consultancy. Finally, as firms develop independent design and engineering work, technology support institutions may offer applied, adaptive research, help develop detailed technical specifications, and assist in financing the commercialisation of new design ideas. In contrast, while Southeast Asian technology policies ostensibly emphasised industrial relevance, they envisioned public-private co-ordination in terms of a vertical or sequential division of labour in a complete innovation cycle. Public sector funding and organisations would conduct R&D, albeit guided by industrial priorities, and then commercialise the resulting knowledge to industry. Few locally owned firms engaged in new product or process innovation, however, and hence government agencies were typically frustrated in their commercialisation efforts.

Technology strategies and development planning

One of the major challenges for Southeast Asia's technology policy makers has been to articulate strategies that could guide increased investments in technology towards industrial development goals. As Lall (1996: 103) writes, 'Technology policy has to be guided by a strategic "vision" rather than being confined to countering market failures in a static sense', since investments in capability building aim primarily at effecting medium- or long-term changes. While public technology investments should thus lead industry in the sense of anticipating its future needs, they must also remain grounded in realistic assessments of industrial trends and opportunities. Striking this balance is not a matter of precise forecasting and elaborate pre-planning, but nonetheless demands well-structured information exchange between government planners and the private sector.⁵

All the ASEAN 4 governments created science and technology ministries in the 1970s. For all practical purposes, science policy was equated with support for basic research in the universities and, in some cases, applied research in support of commercial agriculture. Several countries also had specialised institutes reflecting colonial era scientific priorities in fields such as tropical medicine, botany and forestry. The region's science ministries typically had small budgets and, with some exceptions in commercial agricultural research, were considered marginal to economic development programmes. As non-resource manufacturing took off in the mid-1980s, however, Southeast Asian governments began to articulate distinct technology policies aimed at supporting their drive towards newly industrialised country (NIC) status. The chief motivations for these strategies were to galvanise a rapid expansion of national investments in technology while harnessing them to industrial development goals. From a governance standpoint, however, these two tasks were in partial tension to each other and posed considerable challenges for effective implementation.

Enhancing the powers of science ministries was a logical way to implement the higher priority for technology goals and expand public spending on S&T programmes. Moreover, the desire to target technology programmes to match industrial development priorities seemed to demand an effort to centralise the government's disparate research and technical functions, typically spread across numerous agencies, under a single planning and budgeting authority. On the other hand, vesting technology policies in a separate ministerial bureaucracy risked detaching them from industrial promotion programmes in the line or sectoral ministries, thus giving rise to bureaucratic co-ordination problems. Over-centralisation also moved the locus of technology decision making further from the intended private sector clientele, and from the varying needs and challenges of specific industrial sectors. Finally, the creation of distinct S&T strategies was a mixed blessing insofar as such efforts usually focused government attention on promoting

formal R&D as the chief technological contribution to the industrial agenda, overshadowing more mundane tasks related to improving the technical performance of industry. In some cases, Southeast Asian governments created inter-ministerial science policy councils to allocate S&T budgets, often with representation from the private sector. These bodies' independence from bureaucratic constraints varied, along with their ability to articulate a detailed industry-relevant technology strategy and impose it on the public system.

Malaysia

Malaysia created an inter-ministerial National Council for Scientific Research and Development in 1975 and a Ministry of Science, Technology and Energy in 1976.⁶ Their primary remit was to supervise existing government research institutions in commercial agriculture and to sponsor university research. Despite their nominal role in laying out coherent S&T strategies for the entire government, these bodies had little influence on other ministries, and operated with minimal input from the private sector. The country's first Industrial Master Plan for 1986–95 laid out Malaysia's first sector-by-sector industrial strategy and stressed the need for technology support for each of its priority areas. The National Science Council was reinvigorated in 1987, when it consolidated the government's research budget under a central allocation and review mechanism called the Intensification of Research in Priority Areas (IRPA) programme. IRPA was intended to serve as the paramount instrument of national technology strategy, defining a detailed research agenda in consultation with private industry and imposing these priorities across the government machinery through a monopoly of the research purse. In actuality, the Council's nominal private sector representation gave little practical guidance to national technology planning, and most allocations continued to be driven by an aggregation of proposals from public research institutions (RIs).

In 1990, a special task force issued a National Action Plan for Industrial Technology Development (APITD) after extensive consultations with government agencies and private industry. The Plan identified five basic weaknesses in Malaysia's innovation system and offered 42 specific recommendations for strengthening the public S&T infrastructure and enhancing its impact on industrial development. In addition, the APITD contained detailed sector-specific Action Profiles for technology improvement in six sectors (ceramics, chemicals, machinery and engineering, plastics, wood, textiles, food, rubber and electronics), and identified five strategic generic technologies that merited government R&D (automated manufacturing, advanced materials, biotechnology, electronics and IT) (Table 4.1). MoSTE and the National Council for Scientific Research and Development were given added authority to implement the plan, and several ministerial

Table 4.1 Malaysia: APITD R&D goals and sectoral action profiles

<i>R&D goals</i>	
GERD/GDP*	From (estimated) 0.8% to 1.5% in 1995 and 2% in 2000
Public:private ratio	From (estimated) 80:20 to 40:60 by 2000
<i>Sector</i>	<i>Technology priorities</i>
Ceramics	Isostatic and hydraulic press, pressure casting, modern kiln technologies, technical ceramics
Chemicals	Promote automation process technologies; chemical synthesis, separation, purification of local chemicals; master specialty chemicals and high performance polymers
Machinery and engineering	Promote CAD/CAM, precision machining, tool and die, metal finishing technology; mechatronics, instrumentation, robotics
Plastics	Engineering plastics, compression moulding, R&D in raw materials, high temperature and resistance polymers
Wood	Upgrade design capabilities, kiln management, R&D into plant processing, forest-based drugs and chemicals, waste utilisation
Textiles	Computer-aided layout, plasma and water-jet cutting, computer-controlled cloth spreading, shuttleless looms, air jet looms
Food	Mechanisation, post-harvest handling, steriliser, extrusion, filtration, enzyme technologies
Rubber	Upgrade quality control, product design, process automation
Electronics	IC/ASICs design, radio frequency engineering, SMT, digital signal processing, design capacity for printers, disk drives, fax machines

Source: Malaysia (1990) *Industrial Technology Development: A National Plan of Action*.

Note: GERD: Gross Expenditure on Research and Development.

research institutes were transferred to their direct control. Finally, the government created a new consultative technology forum chaired by the Prime Minister and including senior ministers and top private sector representatives. The new body, Malaysian Industry-Government Group for High Technology (MIGHT), organised sector- and technology-specific interest groups in an effort to mobilise private-sector consensus on necessary technology investments.⁷ By the late 1990s, then, Malaysia had created powerful instruments for strategic technology planning. Despite conscious efforts to appoint private-sector individuals to S&T planning bodies, however, these were far more effective in communicating the state's goals to industry than

in systematically assessing the sector's potential technology strengths and needs for external support. National technology strategies usually represented government wish lists more than private-sector consensus on feasible pathways of advance.

Thailand

Thailand established inter-ministerial National Research Council in 1956 to co-ordinate research policies, but its meagre budget rarely topped US\$1 million a year, and it had no power over line ministries. The government created a Ministry of Science, Technology and Energy (MOSTE) in 1979 by gathering together most of the government agencies dealing with scientific matters from various other ministries. However, its effectiveness as a national policy body was hampered by internal weaknesses. Though nominally subordinate to the same minister, its various agencies guarded their operational autonomy and resisted co-ordination.⁸ Thailand's sixth five-year development plan (1986–91) noted the 'Lack of a policy and master plan' and 'Lack of an effective central co-ordinating agency in science and technology', and called for an expansion of funding and information services to the private sector. In 1987, the government created a semi-autonomous Science and Technology Development Board (STDB). Though primarily an operational body charged with sponsoring applied research, it was also hoped that the Board would articulate a coherent, industry-relevant technology development agenda. Armed with independent funding and drawing on close industry contacts, it was to provide some of the priority-setting and strategic influence over public S&T activities that the fractious bureaucracy was unable to muster. These ambitions were only partly realised. Even when the Board was given permanent status in 1991 as the National Science and Technology Development Agency (NSTDA), it did not have sufficient authority to co-ordinate the activities of other ministries, and focused instead on its own research and industry outreach programmes. Thailand has comparatively well-organised business associations, and these have played a strong role in consulting with the government on economic policy measures, especially during the late 1980s and early 1990s (Laothamatas 1992). These consultations rarely focused on technology issues, however, and have done little to shape coherent public technology strategies, although a more extensive priority-setting exercise was carried out in the Seventh Plan (1992–96). The Kingdom's chief planning agency, the NESDB, together with the STDB sponsored a series of sectoral technology studies, some conducted by consultants and policy think tanks in collaboration with the Federation of Thai Industries (Table 4.2).

Table 4.2 Thailand: R&D goals and technology priorities by industrial sector, 1991–96

<i>R&D Goals</i>	<i>From 1991 to 1996</i>
GERD/GDP*	From (estimated) 0.20 to 0.75
Public:private ratio	From 87:13 to 66:34
RSEs/10,000 population	From 1.4 to 2.5
<i>Sector</i>	<i>Technology priorities</i>
Machinery and metal working	Strengthen quality of metal parts subcontractors; promote use of high-precision machinery for mould and die industry; develop design skills in machinery industry
Electronics	Promote investment in IC wafer fabrication, PABX; public/private design collaboration for personal computers, mobile telephones, and ASICs
Textiles	Promote use of modern machinery in spinning and weaving; develop finishing technology – dyeing and bleaching
Food industry	Basic R&D into raw materials; post-harvest technology; processing technology; sterilisation and hygienic technology; waste recycling
Plastics	Compounding technology for intermediate products and engineering plastics; enhance efficiency of machinery
Iron and steel	Improve melting quality and furnace technology; develop alloyed steel production and casting
Gems and jewellery	Basic R&D on materials; promote colour and clarity certification

Source: Thailand NESDB 7th National Economic and Social Development Plan.

Notes: *GERD: Gross Expenditure on Research and Development. RSE: Research Scientist and Engineer.

Philippines

The Philippines technology policy system originated during the colonial era, when a National Research Council was established to guide public sector R&D, most of it carried out in the universities with a strong emphasis on agricultural, medical and public health research. After independence, a National Science Development Board (NSDB) sought to co-ordinate the administration of research in government laboratories and universities, but wielded little policy influence. In 1982, President Marcos upgraded the NSDB into a National Science and Technology Authority (NSTA) in an attempt to invigorate S&T policy making and co-ordination. The NSTA organised five sectoral policy councils for agriculture and natural resources,

aquatic and marine R&D, public health, industry and energy, and advanced science and technology fields. However, no comprehensive strategy for integrating technology policy into mainstream development efforts were articulated until the Aquino administration, which elevated the NSTA into a ministerial-rank Department of Science & Technology (DOST) in 1989.

Also in 1989, a special Presidential Task Force issued an S&T Master Plan that identified weaknesses in the national infrastructure for technology development, noted the absence of linkages between academia and industry, and specified 15 target technologies for public R&D, ranging in sophistication from construction materials to food, marine and fisheries, and electronics. This plan was superseded three years later by the Science and Technology Agenda for National Development (STAND), which integrated S&T policies into the new Ramos administration's medium-term economic development plan focusing on the twin objectives of export promotion and meeting basic needs (Table 4.3). The DOST's system of five sectoral planning councils has inter-ministerial membership, but in practice has minimal power to co-ordinate the technical activities of line ministries. In particular, the agriculture ministry supervises a large research effort through its own laboratories and the university sector.⁹ The councils also have nominal private-sector representation, yet neither this mechanism nor broader consultations with private-sector representatives during each of the major planning exercises has served as an effective channel for making technology policies more relevant to the private sector.

Table 4.3 Philippines technology plans – sectoral priorities

<i>1990 DOST S&T master plan</i>	<i>Sectoral priorities</i>
'Leading edge' technologies	Aquaculture and marine fisheries; forestry and natural resources; process industry; food and feed industry; energy; transportation; construction; information technology; electronics; instrumentation and control; 'emerging' technologies; pharmaceuticals
<i>1993 STAND R&D priority plan</i>	
Export winners	Computer software; fashion accessories; gifts, toys, and household ware; marine products; metal fabrication; furniture; dried fruits
Support sectors	Packaging; chemicals, metals
Domestic basic needs	Food; housing; health; clothing; transportation; communication; disaster mitigation; defense; environment; energy
Strategic priority	Coconut industry

Source: Cororaton (1999).

Indonesia

More than other Southeast Asian countries, Indonesia's technology development efforts exemplified the 'mission-oriented' policies characteristic of large developing countries during the era of import-substitution industrialisation (Adler 1987). They also illustrated the policy failures that arise when state officials' developmental ambitions are pursued untrammelled by the influence and concerns of the local private sector.¹⁰ Indonesia's S&T policy system evolved under the personal guidance of B. J. Habibie, the long-time Suharto protégé who succeeded to the Presidency in 1998. Habibie, a German-trained aerospace engineer, played multiple roles as head of the Agency for the Assessment and Application of Technology (BPPT), Agency for the Management of Strategic Industries (BPIS), and the Ministry of State for Research and Technology (Menristek), which succeeded an earlier Ministry of Research. The first lead agency in research policy was the Indonesian Institute of Science (LIPI), established in 1967 with responsibility for advising the government on public-sector and university research. The BPPT was set up in 1978, ostensibly with a focus on technology application in industry and the provision of diffusion services. With its remit explicitly focused on applied technology issues, the BPPT is organised into 21 technical directorates that include a number of sector- or service-specific activities. In 1984, the government established a National Research Council with tripartite membership (government, university and private sector) to carry out detailed S&T policy and research planning, and to recommend priorities to the Minister for Research and Technology. In practice, however, public-sector S&T policies were dominated by Habibie's own well-publicised strategies and sectoral priorities.

The disarticulation of S&T planning and industrial strategies found in other Southeast Asian countries posed less of a problem in Indonesia, for the simple reason that Habibie also controlled a large component of Indonesia's industrial policies in the form of ten strategic industries under the BPIS. These were capital- and engineering-intensive projects – ranging from ship-building to armaments to the aircraft manufacturer, IPTN – established as state-owned enterprises. The ten strategic industries were 'archetypal mission-oriented project[s]' designed to transform Indonesia's comparative advantage in a dynamic fashion through accelerated technological learning (Lall 1998). Habibie's policies attracted much interest and controversy, in part because they offered a comprehensive theory of technology development based on cumulative stages of capability building and the central importance of production-based learning (Rice 1998). In concrete terms, however, the model focused on entire sectors as units of progress, giving far more emphasis to Indonesia's need to leapfrog into high-tech industries than to deepening innovation capabilities in established industries. Moreover, despite their declared mission of developing national innovation capacities,

the BPIS industries remained classic statist enclaves dependent on continuing government subsidies and import protection. They developed few linkages with Indonesia's private manufacturing sector and had no organised programme for diffusing skills and information throughout the industrial structure, and thus contributed little to capability building in the broader industrial sector. In the wake of the crisis, the Menristek issued a new Strategic Policy of National Science and Technology Development 2000–04 that explicitly embraced the NIS concept and refocused policy goals on human resource development, extension services for SMEs, and the creation of conditions conducive for private-sector technology development.

R&D promotion – public funding systems and private-sector incentives

An important flaw in Southeast Asia's technology policies has been a disproportionate emphasis on formal research and development (R&D) as a gauge of national technological development. Each government's technology action plans set specific targets for the growth of R&D expenditure, and the public R&D budget was seen as a chief instrument for new, developmentally conscious technology strategies. The focus on R&D partly reflected the greater ease of measurement as compared to less formal mechanisms of technological learning. Moreover, rising R&D expenditures did indeed characterise successful industrial catch-up in the first-generation East Asian NICs, and Southeast Asian officials realised that their countries' low levels of research activity were inadequate to support a transition towards a more technology-intensive industrialisation pattern (Table 4.4).¹¹ Yet, while successful technological development usually results in rising R&D expenditures, the reverse is not always true.

Science policy officials knew that public R&D spending could not autonomously drive technical change in industry. Indeed, national technology policies constantly stressed the need for the public research infrastructure to be guided by practical industrial challenges and recognised the desirability of boosting the private sector's own R&D. Although government spending was explicitly geared to industrial development goals, integrating public research activities with the industrial sector proved exceptionally difficult in practice. The bureaucratic management of public research institutions (RIs) was a major obstacle. In most cases, government and university laboratories continued to rely on government allocations and remained bound by civil service personnel regulations, which blunted their incentives to develop an industrial clientele. One response, seen in several Southeast Asian countries, was an effort to separate technology planning and funding, executed by the policy bodies discussed above, from the actual implementation of R&D by government research labs, which were

Table 4.4 ASEAN 4: financial and human resources for R&D

	Indonesia		Malaysia		Philippines		Thailand	
	1992	1994	1992	1998	1992	1996	1991	1995
GERD* (million national currency)	623,149.7	244,843.0	550.7	1,127.0	2,940.5	3,403.6	3,928.1	5,174.2
GERD (US\$ million)	292.1	113.37	215.1	287.9	115.3	129.9	154.0	207.0
GERD/GDP (%)	0.16	0.07	0.37	0.39	0.22	0.15	0.16	0.13
R&D personnel**	26,169	na	4563	12,127	15,610	15,242	15,721	24,574
Researchers/10,000 labour force	3.2	na	5.9	7.0	3.3	na	4.8	na

Sources: ASEAN (1997); UNESCO (1999); MASTIC (2000); Thailand NRCT (1997); Patalinghug (1999).

Notes: * Includes researchers, technicians, and support personnel. Figures are headcounts, except for Malaysia 1992, which is calculated on a full-time equivalent (FTE) basis. ** Gross Expenditure on Research and Development.

pressured to become more dynamic and industry-focused in their research programmes. To the extent that some governments made progress in reforming public RIs and launched explicit efforts to commercialise their research findings, however, they typically found that the private sector had little appetite for research collaboration or contract R&D services. Likewise, incentives offered to the private sector to increase its own R&D spending were largely ineffective. Notwithstanding efforts to make their innovation systems 'demand-driven', therefore, Southeast Asia's technology policies remained overly fixated on formal research and disconnected from the industrial mainstream.

Malaysia

Malaysia's 1990 Technology Action Plan set a target ratio for R&D expenditure of 2 per cent of GDP by the year 2000, and recommended shifting the balance of public and private R&D spending from 80:20 to 40:60. The creation of a centralised R&D allocation mechanism (IRPA) facilitated a rapid growth in the public R&D budget, from RM414 million during 1985–89 to RM588 million in 1990–95 and to RM1 billion in the 1996–2000 plan period. IRPA ostensibly made industry-relevance the chief criterion in allocating public research funding. Its decision making committees were organised along broad sectoral lines and had tripartite representation from government, academia and the business sector. Reviews of IRPA-funded projects in the mid-1990s, however, found little change in the low number of research findings licensed to industry (Thiruchelvam 1999). Unsatisfied with the meagre commercial impact of the growing public R&D investment, the government launched the Malaysian Technology Development Corporation (MTDC) in 1993. The MTDC's mission was to bridge the 'commercialisation gap' between the public research system and private industry by providing venture-capital investments in companies willing to develop public-sector research findings. After scouring the universities and government RIs for viable projects, the MTDC found comparatively few opportunities for commercialisation ventures.¹² While continuing to work with public-sector laboratories, the agency soon turned most of its attention to providing bridging or 'mezzanine' finance, investment capital for already-established technology-based companies moving towards a corporate listing.

Meanwhile, the government created a number of financial mechanisms designed to stimulate the private sector's own R&D capabilities. A double tax deduction for approved R&D spending was begun in 1984, but the uptake was limited, and the bulk of benefits went to the agricultural sector, rather than industry. Other fiscal measures include tax holidays for private contract R&D firms or new innovation-based companies, allowances for capital expenditures on R&D facilities, and double deductions for expenditures on externally contracted research. As with most tax incentive

programmes, the chief beneficiaries were large firms, since few small and medium-sized enterprises (SMEs) practised formal R&D, and others found the application process cumbersome. In recognition of the need for dedicated assistance to SMEs, in 1989, the Industry Ministry established an RM50 million Industrial Technology Assistance Fund (ITAF), which provides matching grants to small and medium-sized industries for feasibility studies, market research, quality and productivity improvement projects, and product development and design projects. Like R&D tax incentives, the ITAF programme initially met with negligible response, though subsequent efforts to streamline and publicise the scheme increased the number of awards annually. The 1990 Technology Action Plan proposed opening the IRPA allocation system to proposals for joint public-private R&D projects. However, no direct subsidy programme for private R&D was launched until 1997, when the MTDC was charged with administering an Industry R&D Grant Scheme and a Technology Acquisition Fund, each with RM100 million allocations. Despite their comparatively small scale, these financial incentive programmes have met with limited response, and the administering agencies have found it difficult to identify sufficient numbers of qualified applicants.

The low uptake of R&D incentives has been attributed to the complexity of the application procedures, but a larger lesson was that private industry had comparatively little interest in direct R&D support or public-sector research collaboration. Two policy thrusts were far more influential for the growth of private-sector R&D. The first involved mission-oriented programmes implemented by government-linked corporations, often recently privatised entities in which the government retained a controlling managerial interest. The 'national car' company, Proton, was charged with indigenising automotive technology and was directed to invest in designing exterior auto bodies and, later, entire engines.¹³ Along with the national oil company, Petronas, the former government telephone monopoly (Telekom) and power company (Tenaga) were each pressed to expand their R&D establishments and to take up tenancy in the Science Ministry's Technology Park. Both also upgraded their internal training institutions into universities offering engineering degree programmes. Another government-backed initiative aimed to create an aerospace industry with components production, light-aircraft manufacture and aircraft engineering services. Finance for these ventures came primarily from the enterprises themselves, but occasionally involved equity investments by the MTDC, or the Finance Ministry's special investment arm, Khazanah Holdings. No definitive assessment of these ventures' technological achievements has been made, but most of them remained dependent upon government subsidies.

A more influential government programme aimed to lure foreign investment projects with an R&D component by providing specialised complementary infrastructure and incentives (Felker and Jomo, in this volume). The

investment promotion regime was revised to give optimum tax holiday terms only to projects spending a certain percentage of their revenues on R&D. The Science Ministry set up and eventually corporatised a Technology Park, which offered special electronic infrastructure and services, ranging from incubation for new start-ups to expensive test equipment available at subsidised rates to park tenants. In 1994, the industry ministry opened a high-technology park in Kedah, northwestern Malaysia, with specialised infrastructure suitable for wafer fabrication and other advanced electronics projects, as well as branches of the two leading government technology institutes. This combination of infrastructure and investment incentives appears to have supported a respectable trend in business-sector R&D, to the extent that the private sector accounted for two-thirds of national research expenditures in 1998 (Table 4.5). Although the modest overall total qualifies its significance, the rise in business enterprise R&D bodes well for the efficiency of Malaysia's research effort.

Thailand

Like their Malaysian counterparts, Thai policy makers viewed the role of public technology institutions primarily in terms of R&D and new-product innovation. The Sixth Development Plan (1986–91) set an ambitious target for the growth of national expenditures on R&D, from 0.3 per cent of GNP in 1986 to a full 1 per cent in 1991, with a rise in the private-sector share from 10 per cent to 30 per cent. Taking into account the failure of these goals, the subsequent Seventh Plan set a more modest goal of boosting the ratio from 0.2 per cent to 0.75 per cent by 1996. The nominal research policy authority, the National Research Council (NRCT), was largely bypassed as the government boosted its R&D spending during the boom era. A major turning point in the strategic allocation of R&D funding was

Table 4.5 ASEAN 4: gross expenditure on R&D by sector (%)

	<i>Indonesia</i>		<i>Malaysia</i>		<i>Philippines</i>		<i>Thailand</i>	
	1992	1992	1998	1992	1996	1991	1995	
Government	62.0	46.1	21.9	58.8	51.2	65.3	48.8	
Business enterprise	33.0	44.7	66.2	21.8	25.8	9.4	11.7	
Higher education	na	9.2	11.9	14.7	15.6	20.2	36.0	
Private non-profit and other	5.0	0.0	0.0	4.7	7.3	5.1	3.5	

Sources: ASEAN (1997); MASTIC (2000); Thailand NRCT (1997); Patalinghug (1999).

the establishment of the STDB in 1986. Charged with sponsoring commercially relevant R&D in both the public and private sectors, the STDB/NSTDA was organised into three sectoral institutes reflecting strategic priorities: electronics, biotechnology and new materials. As noted above, the agency was intended to play a policy role by laying out a detailed research agenda for its funding programmes and transmitting industry priorities to government and university laboratories. The Designated RD&E (research, development and engineering) programme targeted specific technologies in the three priority areas, while the Competitive RD&E Program was intended to be demand-driven, supporting – through competitive evaluation of projects’ commercial potential – applied research in the universities and government public research institutions (RIs).

In practice, however, the Board had limited ability to plan a highly detailed research agenda, and most of its sponsored projects were based on research institutions’ own proposals (Dahlman and Brimble 1990: 93). By the early 1990s, the NSTDA had opened its own internal research laboratories, and these began to occupy the bulk of the agency’s attention and resources. The NSTDA’s linkages with the private sector were modest, but in the period 1988–94, it claimed to have commercialised 33 research findings to industry and to have another 44 innovations under negotiation with private licensors. During the same period, the agency’s electronics research institute (NECTEC) registered 48 research contracts with 43 different companies. In 1992, the NSTDA was joined by a second R&D funding mechanism in the form of the Thailand Research Fund (TRF), which was funded by a permanent endowment, rather than annual budget allocations. The TRF’s resources and bureaucratic autonomy made it a potentially powerful technology agency, yet the Fund chose to focus its mission on bolstering basic and academic research in Thailand’s university system, thus encroaching on the NRCT’s original functions. The combined efforts of the NSTDA and the TRF strengthened university research infrastructure (Table 4.6), although the resulting commercialisation of public-sector results remained modest.

The Thai government provided a number of fiscal and financial incentives for private-sector R&D, but like similar programmes in Malaysia, these have had limited effects on private-sector innovation. In 1988, the Board of Investment decided to allow promoted projects to import machinery for use in R&D duty-free. The following year, the Board launched a 150 per cent tax deduction for R&D spending, designed to benefit firms not already enjoying tax holidays. Through 1993, the BOI approved 26 R&D projects totalling over US\$60 million (Brimble and Sripaipan 1994: Table A3, 4). In contrast to Malaysia’s tax incentives, Thailand’s R&D tax deduction primarily went to locally owned and controlled firms, who garnered 75 per cent of the total incentive value.¹⁴ One reason is that the criteria for promotion were less strict, and the BOI did not seek to restrict incentives only to

Table 4.6 Malaysia and Philippines: R&D expenditure by field of research, 1992

<i>Field of research</i>	<i>Malaysia 1992</i>	<i>Philippines 1992</i>
Maths, physical, chemical, earth and biological sciences	14.6	20.0
Computer and communications technologies	6.5	na
Engineering and applied sciences	49.6	19.4
Agricultural sciences	25.9	31.8
Medical and health sciences	1.7	8.1
<i>Sub-total natural sciences and engineering</i>	<i>98.3</i>	<i>79.3</i>
Social sciences	1.6	14.8
Humanities	0.1	1.9
<i>Sub-total social sciences and humanities</i>	<i>1.7</i>	<i>16.7</i>
Other (not elsewhere classified)	0.0	4.0

Source: ASEAN-COST 1997.

high-technology sectors. Instead, it granted incentives in sectors where local companies are strong, including projects in mining, silk products, shrimp processing, rubber products, construction materials, and garments, along with electronics and telecommunications. The Science Ministry operated a minuscule soft-loan programme worth US\$1.2 million dollars a year, which supported only 30 projects during 1984–94. The NSTDA also operated matching grant and soft-loan schemes, and while these were somewhat larger, they still comprised only a small proportion of the Agency's overall budget. During 1988–97, the two schemes supported 10 and 31 companies respectively, with a combined value of approximately US\$10 million in public support. Ironically, public agencies' collaboration with Thailand's private financial institutions also frustrated the administration of subsidies for private-sector technology development. Thailand's Budget Bureau insisted that agencies implementing technology subsidies should subcontract loan administration to commercial banks. In turn, the banks imposed commercial standards in screening loan proposals, and rejected some applications by SMEs for lack of collateral, even after the implementing agencies (MOSTE and NSTDA) had already approved proposals for their technological merit. Like Malaysia, Thailand also sought to induce private-sector R&D by providing specialised infrastructure. NSTDA undertook construction of the country's first Science Park to house extension branches of its three research arms, along with a start-up incubator and a range of specialised technical services (testing, calibration, training, design and prototyping) for established companies' high-tech manufacturing and research operations. The economic crisis delayed construction, and the Park was only scheduled to open in the year 2001.

Philippines

Despite periodic reforms, the Philippines' research system suffered from bureaucratic management and funding constraints throughout the 1990s. Despite the creation of a Cabinet-level Science and Technology Coordinating Council under the Aquino government, the allocation of public-sector R&D funding remained under the control of the line bureaucracies, most notably, the Departments of Science and Agriculture, in contrast to the prominent role played by quasi-independent Science Councils or Boards, as in Malaysia and Thailand.¹⁵ The DOST's sectoral planning councils, which do include some inter-ministerial and private-sector representatives, allocated a limited amount of funding for education, research and facilities improvements in government and university research laboratories. Yet the councils remained thoroughly embedded within the DOST, wielding little influence on other agencies' research. Instead, the department focused primarily on university research and the Department's own system of seven sectoral R&D laboratories and seven service-related institutes. Beyond the limitations of bureaucratic operation, the Department's meagre financial and human resources were spread thinly across numerous disparate research fields. The chief Industrial Technology Development Institute (ITDI) managed seven research programmes ranging from microbiology to materials to food processing, while the Advanced Science and Technology Institute (ASTI) was to focus on emerging high-technology fields such as electronics systems and information technology, but lacked the expensive equipment required for research in those fields. These and other government RIs remained poorly funded and under-staffed, bereft of significant collaboration with industry.

The 1990s saw several efforts to increase the commercial application of public research projects, a theme stressed by the Ramos' administration's chief S&T planning document, the Science and Technology Agenda for National Development (STAND). A Comprehensive Technology Transfer and Commercialisation programme was launched in 1989 to foster the commercial exploitation of government research. A special Technology Application and Promotion Institute (TAPI) was established to act as DOST's commercialisation arm, managing programmes to 'package and promote' public-sector technology. The commercialisation initiative did not alter the legal status or incentive framework for public-sector research institutions, however, and no notable increase in public-private research collaboration was achieved. In 1999, the DOST launched a new commercialisation initiative under the Comprehensive Program to Enhance Technology Enterprises, which pledged to redouble efforts to build linkages to industry and to explore the corporatisation of some of the department's research and technology extension units.

Government financial support for private-sector technology investments was similarly limited in scope and effectiveness. DOST's planning councils

were authorised to allocate funding to the private sector on a matching-grant basis, with a priority for projects involving joint research with government or university laboratories. While the government did support projects in a few industry-run co-operative research organisations in the agricultural sector, DOST conserved most of its inadequate industrial research funds for its own research institutions.¹⁶ The Board of Investment began offering tax-holiday and tariff-exemption incentives for private-sector R&D projects in the late 1980s, but from 1991 to 1997, only 13 projects by a total of eleven companies received approval. DOST's commercialisation unit (TAPI) administered other subsidy programmes for private-sector technology development. These included subsidised loans and tax incentives for private-sector research and commercialisation projects, many of them promulgated under an Inventors and Inventions Act in 1994.¹⁷ Two technology finance vehicles were established in the early 1990s, the Philippine Technology Development Venture Corporation and the Philippine Science Technology Corporation, but both remained under-funded and became largely inactive after taking stakes in a small number of project ventures. Apart from technology finance, DOST also initiated a science park programme, beginning with its own main compound in Bicutan, Metro Manila, where it operates a Business Incubation programme. Several universities, including the flagship University of the Philippines, were likewise supported in establishing science and technology parks, though their facilities were typically limited.

Indonesia

Indonesia's research infrastructure was the largest among the ASEAN 4 prior to the crisis of the late 1990s. Unlike Malaysia and Thailand, however, the Indonesian government did not substantially increase its budget for R&D and general S&T activities during the 1990s. In the mid-1990s, Indonesia's national R&D institutions employed some 240,000 scientists and engineers, half of whom held diplomas rather than degrees, and 70 per cent of whom were engaged in agricultural R&D (Lall 1998: 153–154). The public research establishment was effectively bifurcated between institutes under the line ministries, particularly the Ministry of Industry and Trade (MOIT), and six non-departmental institutions (LPNDs) under the Ministry of State for Research and Technology (Menristek), which accounted for the largest share of the national research budget. The MOIT's RIs were poorly funded and conducted little actual research, focusing primarily on routine testing activities. By contrast, the institutes under Menristek (until 1998, Habibie's domain), were better funded, equipped and staffed, but according to Lall (1998), their research activities were overwhelmingly geared towards supporting the ten strategic industries, managed by another Menristek agency, the BPIS.

The centrepiece of the government's industrial research establishment was the Science City at Serpong, developed by the National Centre for Science and Technology Development (Puspipstek), yet another Menristek agency. The Serpong complex included Puspipstek's 11 research institutes, several MOI institutes, a campus of the Indonesian Institute of Technology and a recently developed industrial park for technology-based enterprises. Puspipstek was unlike similar technology parks elsewhere in the region, which aimed to attract technology-intensive FDI and incubate new start-up enterprises. Instead, the 'Puspipstek facilities [were] internalised by the self-contained technology development fostered by Menristek . . . their central role remains with the strategic industries; Puspipstek remains largely delinked from the mainstream of Indonesian industry' (Lall 1998: 160).

In 1993–94, the government initiated a new 'One Gate' system of centralised screening and allocation of R&D across the entire government R&D system. Unlike Malaysia's similar IRPA programme, however, this programme failed to substantially alter existing budgetary allocations and thereby achieve sufficient leverage to pressure RIs to reform their bureaucratic management systems. In 1995–96, Menristek launched a Priority Partnership Research Program that provided special funding to research projects conducted jointly between state-owned and private enterprises and government RIs. According to Thee (1998), however, the programme was 'supply-driven – in the sense that the public R&D institutes have been the main initiators – rather than demand driven, that is, initiated by national industry itself'. Other measures to stimulate the private sector's own R&D activity were few and ineffectual. In 1990, Indonesia introduced tax deductions for R&D expenditures and technology royalty payments, but the uptake was low and concentrated among a few large-scale enterprises.

Technology diffusion

While Southeast Asia's technology policies focused heavily on strategic R&D programmes and troubled commercialisation efforts, policies to encourage technology diffusion often suffered from relative neglect. For many latecomer industries, the major barriers to technological development are not the risks or costs of R&D, especially when few local firms have reached a stage at which major new-product innovations are key to their competitiveness. Rather, the more urgent challenges are to enhance the quality and productivity of *existing* activities through technology acquisition and incremental technical improvements. Government technology policies often assume that firms can internalise the costs and benefits of incremental innovation relatively easily compared to those associated with R&D, yet these functions – testing, measuring, training, trouble-shooting, etc. – often require costly equipment and specialised expertise that are beyond the internal capabilities of many firms, particularly small and

medium enterprises (SMEs). In newly industrialising economies, commercial providers of services – such as product testing, equipment calibration, technical information, and training – are often either non-existent or very expensive. Creating an infrastructure of public or non-profit institutions to provide metrology, standards, testing, quality-certification (MSTQ) and training is thus a crucial part of an innovation system. Public diffusion programmes demand both specialised technical expertise and management abilities for effective industrial extension. SMEs are typically the primary constituency for diffusion services. Serving smaller firms requires public agencies to make a concerted outreach and marketing effort, and to package technical assistance with other types of business assistance.

Though preoccupied with research-based innovation, Southeast Asia's official technology policies did acknowledge the importance of systemically improving the quality and productivity of established industries. Several governments mounted official quality and productivity campaigns to focus industry attention on incremental technical improvement. Technology diffusion nevertheless did not receive the same strategic emphasis reflected in R&D and high-technology industrial projects. While state–business clientelism in Southeast Asia conferred major rent opportunities on large-scale conglomerates, SME-promotion policies had a chequered history of mismanagement, and the region's bureaucracies were generally ill-equipped to undertake aggressive technology extension. On the other hand, technology diffusion programmes had a far greater potential impact and private-sector constituency than strategic R&D projects, at least in the short and medium term. A key factor in the success of Southeast Asia's technology policies, therefore, was whether new technology strategies were accompanied by systematic efforts to reform the management of public-sector technical institutes to foster greater linkages with local industry.

Malaysia

Malaysia made significant progress in strengthening its technology diffusion infrastructure during the 1990s. Ironically, growing linkages between public RIs and universities and private industry emerged as a by-product of ineffective efforts to commercialise public-sector R&D. Malaysia's SME promotion schemes had long been focused on the promotion of Bumiputera or Malay entrepreneurship, and effective technology extension was hampered by a legacy of mistrust between the Malay-dominated government technology agencies and the predominantly ethnic Chinese small and medium sized manufacturers. Beginning in the late 1980s, however, the Science Council used the centralised R&D allocation system, IRPA, to reform the system of 33 government research institutions (RIs). RIs were required to draw up corporate plans to reform their management systems, and were given targets for the self-financing of operational budgets from

industry contract revenues. Likewise, each of the government-funded universities was encouraged to set up consultancy units to market their research services and findings to industry. Several major institutes, most notably the Standards and Industrial Research Institute of Malaysia (SIRIM) and the chief electronics research institute (MIMOS), were corporatised, thereby freeing them from civil service pay-scales and restrictions on commercial activities. Similar reforms facilitated the expansion of university consultancy work.

As described above, concerted efforts to commercialise public R&D produced negligible results. Under pressure to increase their self-financing through contract revenues, however, several public RIs discovered niches in providing less advanced (but no less essential) technical extension services. SIRIM was particularly notable in expanding its technology diffusion activities. When the International Standards Organisation's ISO9000 quality-system certification scheme spread across the globe in the early 1990s, SIRIM quickly recognised the trend as crucial to local companies' efforts to break into MNCs' supply chains as subcontractors. The Institute began performing quality-system audits as early as 1989, and by 1996, had issued ISO9000 certification to almost 700 firms. Acting as the national product standards authority, SIRIM had recognised a cumulative total of 2,116 product standards in 1995, up from 1,242 ten years earlier. In addition to standards, the Institute increased its capacity to measure and calibrate industrial machinery, a crucial service to export manufacturers using highly precise machines and measurement tools. SIRIM calibrated 8,200 machines in 1990, a total which skyrocketed to 37,000 in 1993, generating over US\$650,000 in revenue. Japanese aid agencies helped establish a national CAD/CAM training centre in SIRIM's Advanced Manufacturing Technology lab, as well as a Foundry Technology Centre to assist the local die-casting industry. Several of Malaysia's RIs also provide technology information services to industry. SIRIM developed an on-line patent information and documentation system in the early 1990s, while MIMOS provided information on electronics and information-systems technologies to more than 600 firms in 1994. SIRIM is also the primary institution supporting the diffusion of automation technologies to SMEs, providing consulting and training through its Advanced Manufacturing Technology Centre.

As private-sector awareness and demand for standards testing and certification grew, SIRIM began to separate its regulatory functions from its growing service-provision roles. After its corporatisation, the Institute formed a joint venture to create a calibration and measurement services centre, while another subsidiary partnered with MTDC to offer technology consulting services. The Institute proper strengthened its roles as a national metrology centre and as an accreditation body. By 1994, SIRIM had audited and certified a cumulative total of 41 testing and calibration

laboratories, four in government agencies and 37 in private industry. In 1994, the government established a tripartite National Accreditation Council, involving SIRIM and other government authorities, university experts, and the Federation of Malaysian Manufacturers to accredit private providers of ISO9000 certification.

Malaysia's universities also expanded their private-sector linkages through industrial liaison units or consultancy centres. As a positive incentive for reform, the National Science Council enacted variations to civil service guidelines to allow university academic staff to spend more time consulting and to retain a higher proportion of fees as personal remuneration. The Science University (USM), located adjacent to the electronics industry cluster in Penang, developed diverse service linkages with industry, while the National University (UKM) and Technology University (UTM) began industrial outreach near Kuala Lumpur and Johor Baru, respectively. A 1995 study found Malaysian universities' revenues from industry contracts tripled from US\$2 million during 1989–91 to more than US\$6 million in 1992–94 (World Bank 1995: Table 8.7). Significantly, the study found that R&D accounted for only 10 per cent of the value of external contracts during the period 1989–94. The largest amount of revenue (42 per cent) came from feasibility studies and environmental impact assessments (EIAs), while 11 per cent derived from routine technical services like testing.

Thailand

Thailand also sought to increase support for technology diffusion in the late 1980s and early 1990s. Thailand's fragmented and technically weak bureaucracy inhibited progress, although a handful of institutions achieved modest success in forging industry linkages. Thailand's well-developed structure of private business associations, which distinguished it from other Southeast Asian economies, offered a promising avenue for public–private collaboration in technology extension, though this potential was rarely tapped effectively. Efforts to reform government technology institutes gathered steam in the late 1980s. As in Malaysia, their chief aim was to enhance the commercialisation of public R&D, while the extension of non-research technology services lagged behind demand. The Science Ministry had a Department of Science Services that provided a limited number of testing and calibration services, focused primarily on public-sector laboratories. The Ministry's main Thailand Institute of Scientific and Technological Research (TISTR) was reorganised in the late 1980s along sector-specific lines and attempted to boost its commercialisation effort. Though nominally an independent government corporation, TISTR continued to be hampered by strict budgetary controls and civil service personnel regulations. Its limited research budget was thinly spread across

multiple activities; most of its fifteen departments had annual research budgets under US\$175,000. Several individual units, such as the materials testing centre, ecological research department, and engineering industry department, had ongoing contracts with industry for testing or feasibility studies, and TISTR derived an average of one-third of its operating budget from contracts in the late 1980s and early 1990s. Over ninety percent of this amount, however, derived from research projects sponsored by the government or international agencies.

The Ministry of Industry's (MOI) technical extension services also suffered from bureaucratic rigidities. The MOI had several sector-specific divisions and institutes charged with providing services such as testing, training, consulting and the translation of technical manuals. The Ministry also operated the Thailand Management Development and Productivity Centre (TMDPC), which organised seminars on quality control and management in conjunction with private marketing and management associations. In the 1980s, the MOI floated plans for a National Engineering Institute and a National Textile Institute, but the proposals languished, due both to bureaucratic conflicts and differences within the private sector (Doner and Siroros 1992). A more successful initiative led to the creation, in 1986, of a Metalworking and Machinery Industries Development Institute (MIDI) under the Industry Ministry's Department of Industrial Promotion. In contrast to most public technology institutes, MIDI was notable for *escaping* government mandates to conduct R&D and commercialise new innovations. Instead, the Institute concentrated on helping Thailand's existing mould and die producers to upgrade their technical proficiency through training, testing, quality control, product testing, prototyping and consulting. However, its biggest function was to provide short technical training courses in the use of improved equipment or computer-aided design and manufacturing (CAD/CAM) systems.¹⁸ MIDI fostered the formation of the Thai Tool & Die Association, which grew to include over 500 firms, allowing the Institute to reach a large cross-section of its target clientele (Doner 1993: 192–193). Despite this success, MIDI had to lobby each year to preserve its small budgetary allocation and was hard pressed to keep its own technical capacities up to date and to meet changing service needs.

The National Science and Technology Development Agency (NSTDA) was charged with providing direct technological support to private industry in addition to fostering applied R&D and commercialisation. One programme called STAMP (Support for Technology Acquisition and Mastery Program) provided small grants and consulting services to help firms select and master new production technology. Another programme, the diagnostic/research design service, helped industry clients to hire expert consultants from universities or government laboratories to troubleshoot technical problems or to assist with the mastery of new equipment.

Co-operative programmes with foreign aid agencies linked Thai companies to international expert service programmes, such as the International Executive Service Corps (US), Canadian Executive Service Organisation (Canada) and Senior Expert Service (Germany). While NSTDA thus offered a comprehensive menu of technology extension services, the overall scope of its industry outreach remained small, particularly in comparison with its research role. The agency's projected budget for 1993–96 allocated approximately US\$2 million a year for private-sector support, compared to \$75–140 million for public-sector and in-house programmes (Brimble and Sripaipan 1994: 37).

Thailand's infrastructure for metrological and industrial standards and testing services was divided among multiple agencies.¹⁹ The lack of clear lines of authority in metrology meant that the measures used in local testing and calibration services were often not compatible with official international standards (Sripaipan 1994: 76). Meanwhile, the government was also unable to meet the escalating need for standards, measurement and certification services from Thailand's growing population of export manufacturers. In the late 1980s, the STDB sought unsuccessfully to improve the standards and testing infrastructure through a programme that made grants to the relevant government agencies for equipment purchases, training, and outreach programmes to industry. The MOI's Thailand Institute of Standards and Industry (TISI) acted as the chief national standards authority for industry, testing products submitted by industry as well as accrediting agencies or companies providing testing and certification services in conformance with national standards. In the early 1990s, Japanese aid agencies provided funding for a national calibration and testing centre. Rivalry between the ministries of Science and Industry, however, led to the building of two separate testing laboratories in the Samutprakarn industrial zone south of Bangkok, each of which was constrained by staff and budget limitations. TISI was slow to promote the ISO9000 quality certification system in the early 1990s, and firms were forced to rely on expensive foreign certification authorities.²⁰

In the face of the state's weak provision of public-goods technology services, several co-operative private-sector institutions met the growing demand for technology diffusion support in the 1980s and early 1990s. The most important business-run institute was the Thai–Japan Technology Promotion Association (TPA), which was formed in 1973 with support from Japan's Ministry of International Trade and Industry (MITI) and the Keidanren, the leading Japanese business federation. The TPA's primary function was to offer short training courses in quality systems management and specialised technical subjects, but in the 1980s, the TPA branched out into testing and calibration. In 1997, these services were organised into a separately endowed Thai Technology Promotion Institute. Moreover, the Association helped to link industry to state technology agencies by

collaborating with the NSTDA's Metal and Materials Centre, TISI, and several universities in providing technical training.

Thailand moved to rationalise its technology extension infrastructure in the late 1990s. A unified National Metrology System was finally adopted in 1997, and a quasi-autonomous National Metrology Institute, unifying MOSTE's metrology operations, was implemented the following year under the direction of a former TPA executive. Beginning in 1998, TISI yielded much of its direct role in ISO9000 certification to a new Thailand Productivity Institute, and focused instead on its regulatory and promotion functions. TISI served as the secretariat for a tripartite National Accreditation Council, which promoted the diffusion of industrial, environmental, and quality-control standards and accredited private and public certification bodies. Meanwhile, the Ministry of Industry reorganised its technical arms and reconstituted its sectoral technology institutions as joint public-private corporations under an Industrial Development Foundation. New technical institutes were finally organised to serve the auto-parts, electrical and electronics, food, and textiles sectors, and these were given control over relevant parts of the MOI's testing and calibration operations. Seeking to emulate MIDI's collaboration with business associations, each of the new institutes was governed by joint government-industry boards, and in several cases the managing directors were hired from private corporations or business associations. Meanwhile, the NSTDA gradually expanded its technical extension services, opening a centre for electronics testing and product certification in 1998 near the Lat Krabang industrial area.

Philippines

Like similar strategy documents in other Southeast Asian countries, the Philippines' 1993 Science and Technology Agenda for National Development (STAND) recognised the need for public technology institutions to offer comprehensive extension services to help modernise established industries. Besides its R&D commercialisation programmes, the Technology Applications and Promotion Institute (TAPI) supervised DOST's non-research technology extension, organised under the auspices of technology-based enterprise development and consultancy services programmes. A separate S&T Information Institute disseminated technology information to government agencies and industry. Each of the Department's seven R&D institutes was also charged with forming technology extension units. In general, these programmes have suffered from inadequate funding and remained small in scale. In an effort to invigorate its technology service programme, DOST launched a more comprehensive Manufacturing Productivity Extension Program (MPEX) in 1994, which provided matching grants to industrial sector SMEs for the purchase of technical consultancies. The programme claimed to have served 680 firms through 1999. In a

second thrust, DOST expanded its Technology Business Incubator (TBI) programme by establishing satellite operations in several provincial locations, and also expanded its network of testing and calibration centres during the 1990s to a total of nine.

Despite these measures, most RIs remained under-funded and bound by highly bureaucratic management systems. As a result, few developed significant service linkages to industry. The government made new efforts to reform the industrial extension infrastructure in the late 1990s, issuing a National Action Agenda for Productivity (NAAP) in 1999 that aimed to co-ordinate DOST's testing and research facilities with the MOI's industry promotion programmes. A chief feature of the plan was a rapid expansion of DOST's training programmes. Other planned reforms included the eventual privatisation of DOST's industrial measurement and calibration centres, and a greater emphasis on prior commercialisation success as a criterion for R&D funding allocations to public RIs. The metrology system was rationalised in 1999 with the passage of a National Metrology Law, aimed at ensuring international traceability for the DOST's system of measurement laboratories. Despite these declared objectives and new measures, no comprehensive reform of the legal and fiscal systems surrounding public technology institutions, including changes to their bureaucratic status and funding mechanisms, was forthcoming during the 1990s.

Indonesia

Indonesia's elaborate system of technology institutions has also performed relatively poorly in supporting technology diffusion through non-R&D services to industry. The Agency for Industrial R&D (BPPI), under the Ministry of Industry and Trade (MOIT), operated nine sectoral research institutes, five industrial research and testing centres, and ten regional testing laboratories. According to Thee (1998: 125–126), the MOIT institutes were primarily engaged in routine product testing and certification, even those officially designated as research institutions (RIs). Yet, the quality and scope of their technical services were limited, as much of their testing was focused on certifying various products for conformance with outdated national safety, health or other standards. Hampered by bureaucratic restrictions and inadequate funding, they were unable to attract highly qualified staff or update obsolete equipment, and lacked sufficient incentives to market their services to industry. Prior to 1990, they were, in fact, forbidden from charging fees for their services, though subsequently their routine testing activities, together with poor government funding, generated modest increases in the ratio of self-financed operating budgets (World Bank 1996: 39). The non-departmental RIs under Minister Habibie's bureaucratic domain (Menristek) were better equipped and staffed, but operated

under a similarly bureaucratic regime of regulations and funding. Most of them, including the laboratories at the Puspiptek research complex, were preoccupied with serving the BPIS strategic industries (Lall 1998: 159).

The national metrology, calibration and standards infrastructure also suffered from weak organisation and management. Despite the nominal authority of a National Standards Council, effective authority over industrial standards was divided among numerous agencies, while few of the government's measuring and testing laboratories were internationally accredited. Lall (1998: 154–155) notes that the MOIT's Centre for Industrial Standards (PUSTAN) and network of regional calibration laboratories were not co-ordinated with the National Metrology Centre (KIM-LIPI) under Menristek's Indonesian Institute of Sciences (LIPI). He also observed the absence of national programmes to promote productivity improvements through automation technologies and the ISO9000 quality-control certification scheme.

Like other Southeast Asian countries, Indonesia initiated reforms of its system of technology support institutions throughout the 1990s. A World Bank-funded project in the early 1990s created extra-bureaucratic Technical Services Groups (TSGs) in textiles, engineering products and pulp/paper to manage technology extension programmes on behalf of the relevant MOI institutes and to offer consulting services at highly subsidised rates. According to Lall (1998: 154), the programme showed promise but had limited scope and relied heavily on foreign funding and expertise. In 1995, the National Standards Council received German and Japanese technical assistance to draw up a Master Plan to improve metrology and standards services. The Plan aimed to help KIM-LIPI and PUSTAN and five regional testing laboratories to reach internationally accredited standards, to enhance the extension capabilities of the MOIT's institutes and to jump-start the dissemination of the ISO9000 system. The plan was implemented with the creation of a National Standardisation Agency in 1997 under Menristek. The Agency's National Accreditation Body began to accredit both government and private calibration and testing laboratories, as well as ISO9000 certification bodies, in accordance with ISO guidelines.²¹ PUSTAN began a small ISO9000 certification programme, issuing 55 certificates by 2000, most to food and agro-processing companies. It was doubtful, though, whether such efforts to strengthen technical and managerial practices would have significant impact in the absence of systemic reforms of legal and funding systems that would alter the basic incentive environment surrounding Indonesia's technology extension institutions. In fact, in 1996, the government did issue an Action Plan proposing the corporatisation of public technology institutions, but no action was taken prior to the onset of the economic crisis.

Conclusions

Southeast Asia's efforts to govern industrial technology development highlight major weaknesses in economic policy capacities and institutions. As the region began industrial take-off, its governments were ill-equipped to pursue goals sophisticated microeconomic goals like nurturing industrial technology development. Despite a conscious focus on industry-relevance, government efforts to build institutional infrastructures and to catalyse national technology investments remained disconnected from mainstream industrial trends.

These findings are unsurprising in light of the recent tide of critical appraisals of Southeast Asia's economic and political institutions. At a less general level of analysis, however, the region's efforts to foster technology development suggest more subtle lessons about the scope for, and challenges to, state policy activism in late industrialising economies. Southeast Asia's technology policy failures stemmed far more from weaknesses in the state's technical and management capacities than from rent-seeking pressures and the distortion of government policy initiatives by clientelism. In part, this is because technology policies and subsidies rarely involve major rents, especially as compared to trade, financial and industrial policies. In this sense, lagging investments in long-term assets, such as industrial technology development and skills-formation, may be seen as a by-product of clientelist politics and the short-term orientations of the leaders of weakly institutionalised state systems. Yet, the policy histories sketched above are not uniform, nor do they suggest a static neglect of the key challenges confronting their industrial goals. Viewed in long-term perspective, it is not surprising that Southeast Asian bureaucracies possessed limited industrial expertise and industry linkages, given the predominant role played by agriculture and minerals for most of their economic histories.²² To varying degrees, Southeast Asian governments recognised and struggled to address the bureaucratic reforms required to play an infrastructural role in supporting the industrial sector. The fact that such efforts lagged behind the demands of their rapidly expanding manufacturing sectors did not mean that these efforts were entirely unsuccessful.

Bureaucratic reforms progressed furthest in Malaysia, where the long-serving Mahathir government moulded the government apparatus to serve his vision of private-sector-led industrialisation. Reforms to the public technology system were incremental, but sustained. By the late 1990s, they had made notable progress in changing the incentives surrounding government research institutions. A number of RIs and university extension units had strengthened their management systems and begun to locate industry clienteles for their technical capacities, mostly in diffusion services, testing and training. Ironically, progress in diffusion-oriented services grew out of formal technology strategies that heavily emphasised formal R&D and

new-product innovation in high-technology fields. This contrast points to the overriding importance of the incentive system governing public agencies. In the case of technology-related institutions, this entailed removing service agencies from ordinary bureaucratic constraints and altering their performance incentives through competitive, project-based government funding and self-financing targets.

Indonesia's technology policies were backed by a degree of political commitment and strategic focus similar to Malaysia's. Yet, Habibie's pursuit of a state-led, infant-industry industrial programme effectively internalised linkages between technology institutions and industry within a bureaucratic empire. This self-contained system detracted from efforts to reform the management of the technology bureaucracy and to promote broad-based technology extension programmes. Sporadic efforts to upgrade the Industry Ministry's diffusion services showed promise, but in the absence of serious administrative reforms, Indonesia dissipated the potential impact of its large S&T establishment with a lack of focus and poor managerial incentives. The Philippines and Thailand were less successful in creating centralised technology strategies. The Philippines did, in fact, suffer from bureaucratic incoherence easily attributable to a general pattern of rent-seeking politics. The lack of systemic reforms to the infrastructure of technology institutions was matched by the failure to substantially increase public investments in science and technology. At the same time, the Philippines' less ambitious approach meant that existing government technology resources were often directed towards resource-based and traditional industries with greater potential impact on local firms. Thailand's bureaucratic fragmentation also frustrated efforts to reform technology institutions to play a vigorous service role. NSTDA's semi-autonomous status, however, did enable the agency to promote the growth of applied R&D capacities within the public sector and to build limited industry linkages, while recent reforms to the Industry Ministry's extension services bode well for an improved service orientation.

Mixed progress in reforms of public technology institutions highlight the potentially important role of government leadership in jump-starting technology diffusion services in late-industrialising economies. The larger failure of Southeast Asian technology policies has been an inability to stimulate the growth of private-sector technological capabilities.²³ The inability or unwillingness of governments to channel technology support directly through the private sector reflects the historically distant and wary political relationship between state elites and local private sectors, often reinforced by ethnic distinctions. While the corporatist brand of state-business relations, typified by the Northeast Asian model, is now widely criticised for fostering collusion and rigidity, the growth of technological capacities in indigenous private sectors still distinguishes Japan, South Korea and Taiwan among the ranks of late-industrialising societies. Direct technology subsidies may easily

become redundant unless carefully administered, but mechanisms to support private industry's own innovation efforts are likely to have much more impact than investments in public-sector technology creation intended for later transfer to the private sector. In this respect, Southeast Asia's technology policy weaknesses remind us that the region's problems with economic governance had as much to do with the lack of well-institutionalised public-private relationships as with overly close and collusive ties.

Notes

- 1 'Southeast Asia' herein refers to the 'second-tier' newly industrialising countries of Malaysia, Thailand, the Philippines and Indonesia, also known as the 'ASEAN 4'.
- 2 The literature on East Asian industrialisation increasingly focused on issues of technological change. Once evidence of government sectoral interventions in East Asia was deemed incontrovertible, scholarly debate turned on interventionist policies' contribution to industrial performance (see World Bank 1993: 312–336 and the critical reviews in Fishlow, Gwin *et al.* 1994; also Dahlman 1994 and Lall 1996). Economic analysis came to focus on the relative contributions to economic growth of factor accumulation vs. total factor productivity growth (Krugman 1994; Thomas and Wang 1997; Rodrik 1998; Felipe 1999).
- 3 In this regard, the NIS concept fits well with the regional efforts to erect corporatist forms of state-business organisation, namely 'Malaysia, Inc.', 'Thailand, Inc.', and other such emulation of the Japanese template.
- 4 Porter's famous work (Porter 1990), along with the broader literature on industrial clusters, discusses the often-serendipitous origins of geographic concentrations of expertise, and the complex co-evolution of economic governance institutions (laws, skill endowments, infrastructure) and private business structures and strategies.
- 5 For example, advanced industrial countries such as Japan and the UK have conducted 'technology foresight' programmes that distil a tripartite consensus on the likely directions of technological change to provide a guide for technology policy planning.
- 6 Energy was later replaced by Environment.
- 7 In 1994, these included telecommunications, agro-waste, green (environment-friendly) materials, recycling, energy and new materials.
- 8 The various agency heads under MOSTE had independent bureaucratic influence and were able to obtain finance directly from the Budget Bureau. Thus, the Minister of Science exercised limited authority over his portfolio (Doner and Siroros 1992: 5).
- 9 In 1995, the Department of Agriculture received 40 per cent of total government S&T appropriations, and the Department of Science and Technology only 15 per cent.
- 10 According to Lall (1998: 155), 'The Indonesian government does not have a *strategy* – a coherent set of policies to encourage or remedy market failures – for technology development', despite the fact that technology development was the chief rationale for several high-profile interventions.
- 11 It should be stressed that the R&D figures given in the tables must be interpreted with caution, given the varying quality of the sources and the likely considerable under-reporting.

- 12 MTDC's initial efforts to identify and commercialise public-sector research resulted in thirty-one proposals, of which seven had found licensers, including only two non-resource-based industrial applications (MOSTE 1993: 32–33). According to Malaysia's National Council for Scientific Research and Development, the three leading industry-sector R&D institutes (SIRIM, MIMOS and MINT) successfully commercialised a total of 12 R&D findings during 1988–94.
- 13 Proton's 1996 purchase of the British automaker Lotus was intended to bolster its engine-design project.
- 14 Wholly foreign-owned subsidiaries received only 2 per cent, and foreign-majority owned companies about 22 per cent of the R&D incentives granted (author's calculations based on BOI data).
- 15 Special Presidential committees and task forces have operated to support individual technology initiatives, including a National Information Technology Committee.
- 16 The government's planning authority expressed scepticism about the wisdom of direct subsidies to the private sector for technology investments . . . 'the funding for R&D activities shall be the responsibility of the firm in the long term. Provision of incentives by government to induce the business sector to do R&D may not be necessary as the best incentives for firms are market and profit'. The Philippines National Development Plan 1999, Ch. 3, accessed at <http://www.neda.gov.ph/PNDP21/html>.
- 17 By 1997 DOST had won tax exemptions from the Bureau of Internal Revenue for the commercialisation of 107 inventions by 41 individual inventors.
- 18 From 29 training courses with 563 participants in 1987, MIDI's activities expanded to 71 courses, with 1,799 students in 1993. MIDI tested 2,283 machine pieces for 251 firms in 1994, up from 1,287 and 329 in 1991; and consulted with 463 companies in 1994, compared to only 120 three years earlier.
- 19 Ironically, even the Ministry of Science's Department of Science Services relied on Thai Airways to calibrate its electrical frequency testing equipment (Sripaipan 1994: 75).
- 20 In the mid-1990s, TISI suddenly became more active in ISO9000 certification. By 2000, it had issued ISO9000 certificates to 192 companies, out of a total of 2,124 (the rest having obtained certification from private or foreign bodies).
- 21 The 44 testing labs and 25 calibration labs.
- 22 Shafer (1994) analyses how the structural characteristics of leading growth sectors influence governance capacities. Several authors have argued that Southeast Asia's rich natural resource endowments weakened imperatives to promote industrial growth (Jomo *et al.* 1997; Ross 1999).
- 23 Malaysia's high proportion of business-enterprise R&D is a partial exception, but one mainly driven by MNC strategies and a number of government-linked corporations.

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5 Education and economic development in Southeast Asia

Myths and realities

Anne Booth

The literature on the ‘Asian Miracle’ which proliferated in the early 1990s offered a range of explanations for the remarkable growth record of the Asian ‘high performers’, (or HPAEs as they have become known) but almost all the contributions agreed on the importance of education. In their analysis of ‘the key to the Asian miracle’, Campos and Root (1996: 56), stressed that:

All of the HPAEs have invested heavily in education and, unlike many other developing countries, have concentrated on primary and secondary schooling. The share of the educational budgets allocated by the HPAEs to basic (primary and secondary) education is significantly higher than the share allocated by other developing countries. Tertiary education has been left largely to the private sector.

The World Bank, in its well-known 1993 report was only slightly more circumspect in its claims. It was argued that ‘in nearly all the rapidly growing East Asian economies, the growth and transformation of systems of education and training during the past three decades has been dramatic. The quantity of education children received increased at the same time that the quality of schooling, and of training in the home, markedly improved’ (World Bank 1993: 43). The report stressed that most of the HPAEs had higher enrolment rates than would have been predicted for their level of income from a sample of over 90 developing economies. Only Thailand’s performance was singled out as ‘weak’ in comparison to the HPAE average. Other studies originating from, or published by, the World Bank have also stressed the improvements in both quantity and quality of education in the HPAEs, where quality is measured by, declines in repetition and dropout rates (Birdsall, Ross and Sabot 1995: 481). These authors pointed to the virtuous circle found in much of East Asia where education stimulates growth and growth stimulates education. In addition, they claimed that high rates of investment in education lowers inequality, which in turn further stimulates both economic growth and more investment in education. Furthermore, rapid growth in the HPAEs has speeded up the demographic

transition which has allowed governments to greatly increase the educational budget per student, thereby improving quality of instruction.

There can be little doubt that these views have now become orthodoxy, a canonical tradition which many writers on East Asia now follow uncritically. Indeed it is now frequently asserted in the literature on educational development that the Asian tigers have created a 'new model' a key component of which is 'forging newer, closer links between education, training, and economic growth' (Ashton and Sung 1997: 207). In contrast with the mature industrial economies, especially the UK and the US, where the educational system is claimed to have developed independently of the needs of the economy, it is argued that in the so-called Asian tigers, 'the relationship between education and economic growth has been much stronger, with the educational system and its output exhibiting a very strong and much closer linkage to the requirements of the economy' (Ashton and Sung 1997: 207). Cummings (1995: 67) goes so far as to argue that 'the Asian state in seeking to co-ordinate not only the development but also the utilisation of human resources involves itself in manpower planning and job placement and increasingly in the co-ordination of science and technology'.

It is not the intention of this chapter to argue that all these assertions are wrong for all the countries categorised by the World Bank as HPAEs, but rather to point out that much of the 'Asian miracle' literature suffers from gross over-generalisation. Findings from a very small number of countries (especially Japan, South Korea and Taiwan) have been assumed also to hold in most of Southeast Asia, and frequently China as well, often with only the most cursory examination of the statistical record in these countries. Nowhere is this more true than in the discussion of education and its role in the growth process. Because Taiwan and South Korea undeniably 'educated ahead of demand', even at the risk of substantial educated unemployment, it is widely assumed that the fast growing economies of Southeast Asia (Singapore, Malaysia, Thailand and Indonesia) did the same.¹ In fact it is very clear that the course of educational development in these four countries has been very different from that in Taiwan and South Korea. Partly this is due to very different colonial legacies, but it also reflects very different government policies towards the role of education in the growth process in the post-independence era, both within Southeast Asia and between Southeast and Northeast Asia.

The main purpose of this chapter is to review these policies for Malaysia, Singapore, Thailand and Indonesia. These countries were among the HPAEs whose record has been examined by the World Bank (1993), and by numerous other analysts as well. In particular, we will contrast Malaysian achievements with those of its ASEAN neighbours. But before we examine country case studies, it is useful to look at the data on secondary and tertiary enrolments, and on educational expenditures for a group of Asian economies (Table 5.1). It is clear that there is no strong relationship between per

Table 5.1 Educational indicators for fast-growing Asian economies, 1980–96

Country ^a	Gross secondary enrolment ratio		Tertiary students per 100,000 people		Government education expenditures as % GDP	
	1980	1996	1980	1996	1980	1995
Singapore	58	72	963	2,722	2.8	3.0
Taiwan	80	96 ^b	2,035	3,160	3.6	5.5
South Korea	78	102	1,698	5,609	3.7	3.7
Malaysia	48	62	419	971 ^c	6.0	5.2
Thailand	29	57	1,284	2,096 ^d	3.4	4.1
Indonesia	29	48 ^c	367	1,167 ^d	1.7	1.4
China	46	71	166	473	2.5	2.3
Vietnam	42	41 ^c	214	404 ^d	na	2.7 ^e

Sources: *UNESCO Statistical Yearbook 1998*; with additional data on Taiwan from the *Taiwan Statistical Yearbook, 1995*, Tables 47, 53; *Taiwan Statistical Data Book*, various issues.

Notes: a Ranked in order of per capita GDP, 1992. b Data refer to 1992. c Data refer to 1994. d Data refer to 1995. e Data refer to 1993.

capita GDP and enrolments; although Singapore had a higher per capita GDP in 1996 than either South Korea or Taiwan, both secondary and tertiary enrolments were lower.² Thailand stands out as having a rather low secondary enrolment ratio for its level of income; it was lower than China's in 1996. Thailand, Malaysia and Indonesia all had lower secondary enrolments in 1996 than Taiwan and South Korea had achieved in 1980, although both Malaysia's and Thailand's per capita GDP in the mid-1990s was higher than that of South Korea in 1980.³ Vietnam stands out as the only country to experience a fall in secondary enrolment rates over the 1980s.⁴ There is also a wide variation in government expenditures as a proportion of GDP with Indonesia, China and Vietnam all having markedly lower ratios than the other countries in 1995.

Singapore

Singapore is often considered, along with South Korea and Taiwan, to exemplify the model of the densely populated, resource-poor Asian economy that achieves rapid and sustained economic growth through heavy investment in education and training. The Singapore government over the years has done much to foster this image, and the official rhetoric about the Singapore model is replete with references to the importance of human resource development, and the pursuit of excellence in education. But at the same time, government ministers have always been aware of the formidable challenges which education policy in the island republic must confront. A government report published in 1979 stated the key problems as follows:

Most school children are taught in two languages – English and Mandarin. 85 per cent of them do not speak either of these languages at home. Our system is largely modelled on the British pattern but the social and demographic background could hardly be more dissimilar. If, as a result of a world calamity, children in England were taught Russian and Mandarin, while they continued to speak English at home, the British education system would run into some of the problems which have been plaguing the schools in Singapore and the Ministry of Education.

(Goh 1979: 1–1)

The report went on to emphasise that the decades of the 1960s and 1970s had seen a steady decline in numbers of children enrolled in the Chinese-stream schools in Singapore and an increase in numbers enrolled in schools where English was the medium of instruction. This reflected widespread parental conviction that fluency in English was crucial in gaining access to well-paid jobs. However many children from backgrounds where English was not spoken faced enormous difficulties in the English-stream schools, difficulties which were aggravated by teachers who were themselves often inadequately trained and faced large classes. Surveys carried out by the Ministry of Defence in the mid-1970s found that, of those recruits who had been to English medium schools but who had not passed O levels, only 11 per cent had retained reasonable fluency in English. The majority of students were not successful in passing O level examinations. Some 65 per cent of children entering first year primary school did not succeed in passing at least three O levels, and over one-third did not pass the primary school leaving examination. Out of each cohort of one thousand entering primary school in the early 1970s only 137 succeeded in completing senior high school; in Taiwan the comparable figure was 514 while in Japan it was 926 (Goh 1979: Annex 3).

Of course it could be argued that in ethnically homogeneous countries such as Taiwan and Japan children progressed through a school system where they were taught in the language they used at home, and where they did not have to grapple with instruction in a foreign language. But the consequences of the Singapore system, with its high failure rate and low continuation rates, for the skill level of the labour force were, by the 1970s, already serious. In 1974, less than 30 per cent of the labour force had completed secondary schooling; for males the percentage was slightly lower (Table 5.2). This could be compared with South Korea where in 1974 well over 40 per cent of the male labour force had completed secondary schooling (Table 5.3). In 1974 per capita GDP was over twice as high in Singapore as in South Korea. Part of the explanation for the poor educational level of the Singapore labour force in the 1970s was the extremely limited access to education provided by the colonial government. But since self-government was achieved in 1959, the pace of educational expansion,

Table 5.2 Singapore: labour force by educational attainment, 1974–97

	<i>Total</i>	<i>Male</i>	<i>Female</i>
<i>1974</i>			
Nil/below primary	40.3	41.8	36.9
Primary/post-primary	31.4	33.1	27.7
Secondary	19.7	16.4	26.8
Post-secondary	6.2	5.8	6.9
Tertiary	2.4	2.7	1.6
Others	0.1	0.2	0.1
Total	100.0	100.0	100.0
<i>1985</i>			
Nil/below primary	22.8	23.2	22.2
Primary/post-primary	31.3	34.7	25.3
Secondary	29.3	25.5	36.0
Post-secondary	11.0	10.5	11.8
Tertiary	5.2	5.6	4.3
Others	0.4	0.4	0.4
Total	100.0	100.0	100.0
<i>1997</i>			
Primary/below	24.8	25.9	23.1
Secondary	44.7	43.0	47.0
Post-secondary	11.6	10.6	13.1
Diploma	7.4	8.4	5.9
Degree	11.6	12.0	10.9
Total	100.0	100.0	100.0

Sources: *Yearbook of Labour Statistics 1976* (Singapore: Ministry of Labour); *Yearbook of Labour Statistics 1985* (Singapore: Ministry of Labour); *Yearbook of Manpower Statistics 1997* (Singapore: Ministry of Manpower).

especially at the post-primary levels, was slow. Partly this reflected the government's preoccupation with physical infrastructure development, including ambitious housing development schemes. But, in addition, education development was dominated by a narrow preoccupation with manpower planning projections, underlying which was a fear of the politically destabilising effects of unemployed high school and college graduates.⁵

The recommendations of the Goh report included a compulsory nine-year cycle for all children, and streaming of children so that the groups of differing ability could be taught at a pace which suited their abilities. High dropout rates among the less bright children were to be addressed by providing a vocational route through the system (Ashton, Green, James and Sung 1999: 38). But the government continued to be concerned about the links between education and the needs of the labour market, especially after the economy slowed sharply in the mid-1980s. Enrolment growth over the 1970s at both the lower secondary and the academic upper secondary levels

Table 5.3 Distribution of the labour force by educational attainment

	<i>Male</i>	<i>Female</i>
<i>South Korea 1974</i>		
No schooling	12.9	28.5
Primary	41.0	49.9
Secondary	38.5	20.0
College/university	7.6	1.6
Total	100.0	100.0
<i>Thailand 1981</i>		
No schooling	5.6	10.4
Primary	82.4	82.4
Secondary	8.3	4.2
College/university	3.8	2.9
Total	100.0	100.0
<i>Indonesia 1994</i>		
No schooling	7.5	16.4
Primary	59.6	59.9
Secondary	29.7	21.1
College/University	3.2	2.6
Total	100.0	100.0

Source: South Korea: *1974 Special Labour Force Survey Report* (Bureau of Statistics, Economic Planning Board); Thailand: *Report of the Labour Force Survey Round 2* (Bangkok: National Statistical Office); Indonesia: *Labour Force Situation in Indonesia 1994* (Jakarta: Central Bureau of Statistics).

was very slow in comparison with most other parts of the region (Table 5.4). Although part of this slow growth could be attributed to demographic change, low continuation rates were also to blame. A government report on future options for the economy published in 1986 stressed the continuing low level of education among the Singapore workforce. In 1979, only 60 per cent had completed primary school, and only 3 per cent had tertiary qualifications (Republic of Singapore 1986: 113). Attention was drawn to the sharp disparities between Singaporean educational achievement and that of Japan, the US and Taiwan. A 1988 academic analysis of policy options for the Singapore economy also drew attention to the failings of the education system; it argued that improving both the quality and quantity of educated people in the Singapore workforce was 'now an urgent task because there has been an under-investment in both formal and informal education' (Lim 1988: 167).

The Singapore government was not slow to grasp the lessons of these and other studies, and educational opportunities have certainly expanded in Singapore since the mid-1980s, especially at the upper secondary,

Table 5.4 East Asia: annual growth rates of lower and upper secondary enrolments, 1970–92

Country	Lower secondary		Academic upper secondary		Vocational upper secondary	
	1970–80	1980–92	1970–80	1980–92	1970–80	1980–92
Thailand	9.4	3.6	9.4	-0.3	na	0.4
Malaysia	6.9	1.4	9.9	3.2	13.7	7.8
Singapore	0.8	–	0.8	5.3	6.6	5.4
Indonesia	9.8	4 (4.5)	11.0	6.7 (6.9)	na	-5.4
Vietnam	na	-0.5	na	-2.9	na	-5.4
China	7.1	-0.4	10.7	-0.4	35.5	6.3
Taiwan	3.0	0.8	-0.5	1.8	6.6	2.4
South Korea	5.8	-1.2	12.2	3.5	9.5	-0.1

Sources: Thailand: data from Bureau of Educational Policy and Planning, Ministry of Education. Estimates refer to 1972–81 and 1981–93 respectively. For 1972–81 data refer to all secondary schools. Malaysia: data from *Mid-term Reviews* of the Second, Third, Fourth, Fifth and Sixth Malaysia Plans. There are gaps for some years which were filled by interpolation. After 1980 data were also taken from *Education Statistics of Malaysia* (annual; Educational Planning and Research Division, Ministry of Education) Singapore: data from *Economic and Social Statistics of Singapore, 1960–82*, *Statistical Yearbooks of Singapore*, various issues. Up to 1980 data refer to all academic high schools; from 1981 to 1991 academic high schools and pre-university high schools are combined. Data for 1992 not available. Indonesia: data from *Lampiran Pidato Kenegaraan*, various issues. They refer to government and government-assisted schools only; Islamic schools are omitted. Figures in brackets for 1980–92 refer to both government and private, including religious, schools. Vietnam: data are from World Bank (1997), Table 2.3 and refer to 1984/5 to 1994/5. China: data from *China Statistical Yearbook*, various issues. Taiwan: data from *Educational Statistics of the Republic of China, 1993*. South Korea: *Education in Korea*, various issues.

Note: In most cases growth rates are estimated by fitting a semi-log function to the data. Unless otherwise noted data refer to both government and private schools.

vocational and tertiary levels (Tables 5.1 and 5.4). In addition, the rapid demographic transition in the island republic has meant lower numbers of children coming into the school system, especially over the 1980s, so more resources can be spent per pupil. Yet secondary enrolment rates by the early 1990s were still well below those in South Korea and Taiwan (Table 5.1), and as late as 1997, almost 25 per cent of the labour force still had, at most, only completed primary education (Table 5.2). In the mid-1990s, academic studies were still drawing attention to the very low level of educational attainment in the population compared with Western countries with similar levels of per capita GDP (Chen 1996: 84–85). Cheah (1997: 131–132) has pointed out that the ‘bias against tertiary education was sustained for too long’ and that only in the 1990s was a second university formally established. In the mid-1990s Singapore still lagged well behind Japan, the US and much of West Europe in terms of numbers of research scientists and engineers per capita and per member of the labour force. Most workers with low educational attainment were in low-paying jobs with limited

opportunity for job progression. Many were in the older age groups, and there are now fears that if they are made redundant from manufacturing employment, they will find it difficult to get alternative employment, except at very low rates of pay. This implies that when they retire they will have inadequate savings and pensions entitlements to finance their old age.⁶ The consequences of this for social inequalities are examined further below.

It can of course be pointed out that Singapore's relatively weak educational achievement has not stopped the economy growing very rapidly over almost four decades. This is obviously true, but in the early phase of Singapore's economic development, much of the industrial development was labour-intensive and demanded relatively unskilled workers.⁷ Industrial technology – and often the skilled personnel to manage it – were provided by multinational companies locating in Singapore. Many dropouts from the education system were absorbed in unskilled service-sector jobs. Both the government and academic analysts are now acutely aware that this type of economic growth is not sustainable, and that heavy investment in human resource development will be crucial for Singapore's future. But this awareness has developed slowly, many would argue far too slowly, in response to changes in the labour market, and to a growing appreciation on the part of the authorities of the experience of other fast-growing Asian economies. It certainly cannot be argued that the Singapore government has led the market in investing in the development of human resources.⁸ In that sense it has clearly played a very different role from governments in South Korea and Taiwan; indeed, I will argue below that it has played a very different role from the government of its near neighbour, Malaysia.

Thailand

Although Thailand was never colonised by a Western power, the Thai government was slow to expand access to education and in the early years of the twentieth century the vast majority of the population were illiterate (Feeny 1998: Table 13.1). Universal primary education was adopted as an ideal in the 1920s and, after the 1932 revolution, pursued with some vigour by the government, although little progress was made in rural areas (Phongpaichit and Baker 1995: 368). But literacy rates did increase especially for males, who had access to some education in monasteries, and by 1947 it was estimated that about two-thirds of the male population and 40 per cent of women were literate. After 1950 primary enrolments in the secular education system increased rapidly, and by 1970, the great majority of children in the 7–12 cohort were in school (Wilson 1983: Table V-2; World Bank 1994: 217). But at the secondary level enrolments were extremely low; there were virtually no secondary schools outside Bangkok and a few large provincial towns until the 1960s. And even when provision

expanded in the 1970s and 1980s, 'cost and location still made it difficult for a villager to climb the educational pyramid any higher than the primary level' (Phongpaichit and Baker 1995: 369). The rapid growth in enrolments over the 1970s was almost entirely in urban areas. The effect on the educational attainment of the labour force was obvious. In 1981, while only 6 per cent of the male labour force and 10 per cent of the female labour force had had no formal education, only a meagre 12 per cent (7 per cent for female workers) had post-primary education (Table 5.3). The contrast with South Korea in 1974 was stark (in 1981 Thai per capita GDP was about the same as in South Korea in 1974).

Over the 1980s, secondary enrolment growth fell sharply compared with the 1970s, and by the latter part of the 1980s, access to education had become a highly controversial issue in discussions of public policy in Thailand. Academics and independent think-tanks such as the Thai Development Research Institute stressed the very low level of educational attainment of the labour force, not just in comparison with Taiwan and South Korea, but also with Thailand's poorer neighbours such as the Philippines and Indonesia (Myers and Sussangkarn 1992: 14; Khoman 1993: 329–330). Cross-country regressions showed that Thailand was well below the trend line relating per capita GDP to post-primary enrolments; in other words enrolments were much lower than for other countries at similar levels of per capita GDP. By the early 1990s there were growing signs that the poor level of education, especially among new entrants to the labour force, was creating serious economic problems (Bello, Cunningham and Poh 1998: 56–57). Employers in both manufacturing industry and the modern service sector complained that new recruits had to be given substantial remedial training, especially in numeracy and technical skills, before they could operate modern equipment. In the increasingly tight labour market of the early 1990s, workers who had acquired basic skills were often poached by rivals, making firms increasingly reluctant to invest in on-the-job training. As a result of skill shortages, industries which were being priced out of markets for labour-intensive manufactures such as garments and footwear found it difficult to move into medium technology sectors, especially for export. In 1996 after a decade of rapid growth, exports hardly expanded at all (Warr 1998: 50–58).

However, the debates of the late 1980s and early 1990s did lead to a number of reforms. By 1994 the Thai government was committed to a compulsory nine-year cycle which meant accelerated expenditures on teaching training and upgrading of school facilities. Certainly there can be little doubt that transition rates from primary to secondary level have increased over the 1990s; the official data indicate that they jumped from 54 per cent in 1990 to 90 per cent by 1996 (Kingdom of Thailand 1997: 118). Numbers in lower secondary schools (almost entirely government schools) increased from 1.4 million in 1990 to 2.4 million in 1996, and by 1996 gross enrolment rates

Table 5.5 Secondary enrolments in Thailand, 1983–96 (1,000s)

<i>Year</i>	<i>Lower secondary</i>		<i>Upper secondary</i>	
1983	1,224		968	
1984	1,305		944	
1985	1,309		935	
1986	1,278		907	
1987	1,217	(32.6)	893	(24.2)
1988	1,221	(32.8)	862	(23.4)
1989	1,282	(34.4)	837	(22.7)
1990	1,394	(37.2)	834	(22.5)
1991	1,570	(41.4)	879	(23.6)
1992	1,772	(46.8)	945	(25.3)
1993	1,991	(53.4)	1,056	(28.2)
1994	2,200	(59.7)	1,185	(31.5)
1995	2,362	(64.4)	1,321	(35.3)
1996	2,445	(66.0)	1,482	(40.2)

Source: Bureau of Educational Policy and Planning, Ministry of Education.

Note: Figures in brackets refer to enrolments as a percentage of the numbers of children in the relevant age cohorts.

increased to 66 per cent (Table 5.5). There has also been a rapid growth in upper secondary enrolments, so that by 1996 gross enrolment rates were 40 per cent (Table 5.5). Of the total growth in upper secondary enrolments between 1990 and 1996, 55 per cent was in the academic stream and 45 per cent in the vocational stream. Although private schools account for a greater proportion of enrolments at the upper secondary level (about 23 per cent in 1996), much of the enrolment growth over the 1990s took place in government schools.

The Thai experience in the 1990s certainly shows that determined public action can make a difference to post-primary participation rates, even over a relatively short space of time. When the financial crisis hit Thailand in the latter part of 1997, there was widespread fear that the repercussions on the education system would be severe; parents would be forced to remove children from school and at least some of the gains of the earlier part of the decade would be lost. It is still too early to judge whether these fears are justified, but some observers argue that in fact the crisis may have the opposite effect and persuade many millions of parents that better education is essential if their children are to compete successfully in a much tougher labour market. During the latter part of the 1980s and early 1990s, jobs for young school leavers were plentiful and there was little incentive for parents to keep children on to complete the secondary cycle when they could be working and earning. But as jobs for unskilled youth in sectors such as construction and manufacturing become far scarcer, and the qualifications for entry into

such jobs escalate, parents will have little option but to keep children in school for longer.

Indonesia

Indonesia emerged into the post-independence era with probably the poorest educational legacy of any country in Southeast Asia. The Dutch had expanded vernacular schooling for the indigenous population in the inter-war years, but for many children their only educational experience was in an Islamic school where almost all the teaching was religious. Access to secondary and tertiary education was extremely limited for indigenous Indonesians (Booth 1998: 268ff). In spite of the efforts made in the early post-independence years to increase enrolments at all levels, by the late 1960s it was estimated that only about 50 per cent of children between seven and twelve were in primary schools and enrolment rates at the post-primary level were much lower. It was only in the early 1970s when the oil boom led to greatly expanded government revenues that the government increased the allocation of resources to the educational sector. From the early 1970s to the latter part of the 1980s, enrolments at both the primary and the secondary levels increased rapidly; indeed over the 1970s enrolments growth in Indonesia at both the lower and the upper secondary levels were among the fastest in Asia (Table 5.4). By the latter part of the 1980s, the government was able to claim universal primary education, and gross enrolment rates at the lower secondary level of around 55 per cent (in 1987/88). Gross enrolment rates at the upper secondary level in 1987/88 were around 35 per cent (Government of Indonesia 1993: chapter XVI).

In quantitative terms the achievements of the 1970s and 1980s were certainly impressive and, as in the case of Malaysia, do not confirm the argument that resource-rich countries neglect education. In fact it was the increasing revenues from petroleum exports which permitted the rapid growth in government expenditures on education during the fifteen years from 1974 to 1989. But by the early 1990s there was much evidence of serious problems in the Indonesian education sector. Over the fifth five-year plan (1989–94), numbers enrolled in both lower secondary and academic upper secondary schools actually contracted, so that enrolment ratios were lower by 1993 than they had been in the late 1980s (Booth 1994: Table 14). In addition, it was clear by 1990, that universal primary education had not, in reality, been attained; in 1990 it was estimated officially that only about 90 per cent of children between seven and twelve were attending school. In more remote parts of the archipelago the percentage was much lower (Booth 1994: 26–36).

The government reacted to the disappointing figures of the early 1990s with a pledge to achieve universal education over a nine-year cycle by the end of the second decade of the twenty-first century. Crude participation

rates in the lower secondary system were to increase by steps until they reached 87 per cent by 2004. This would involve an expansion in numbers at the lower secondary level of close to two million students. To accommodate an increase of this magnitude it was estimated that some 45,000 new classrooms would be needed, and tens of thousands of new teachers would have to be recruited and trained. Unfortunately, the Suharto government in its final phase proved unwilling to increase budgetary expenditures on education. In fact, they had fallen somewhat as a percentage of GDP since the early 1980s, and by 1992, were just over 2 per cent of GDP, a very low proportion in comparison with many other Asian countries (Table 5.1). Although, as in Thailand, enrolment rates did increase between 1993 and 1997 at both the lower and upper secondary levels, by 1997/98 it was estimated that only about 45 per cent of youths aged between 13 and 15 were in lower secondary education (Government of Indonesia 1998: Table XVIII-3).

As in Thailand, there was much evidence that in Indonesia in the early 1990s, many parents could not afford the paid-out costs of keeping a child in secondary education. And if they could, they seemed unwilling to incur the expenditure because they did not see the benefits in terms of entry into better remunerated or more prestigious occupations.⁹ Many young people with completed primary education were able to find employment in jobs such as construction and manufacturing, and staying on to complete the lower, or even upper, secondary cycle did not necessarily mean that they would be able to get more highly prized jobs as white-collar workers. But at the same time, social rates of return estimates for Indonesia indicated that investment in lower secondary education yielded high returns (14 per cent in 1989). Indeed, some experts were arguing that the government was under-investing in education and devoting a disproportionate share of the government investment budget to physical infrastructure (MacMahon and Boediono 1992, Table 7; Boediono 1994).

Numbers in higher education in Indonesia have been growing rapidly since the 1980s, with much of the expansion coming from enrolments in private institutions. There has been much criticism that this expansion has been at the expense of quality, and that many of the private universities are simply low-quality diploma mills, catering to the demand for paper qualifications so that graduates can get, at least, a place in the queue for white-collar employment. The evidence from labour force surveys shows that, even before the financial crisis of 1997–98, in urban areas, unemployment rates for men and women between the ages of 20 and 30 with tertiary qualifications was very high (Manning and Junankar 1998: 60–61). This was in part attributed to rather rigid and inflexible markets for white-collar workers; once people find such jobs they tend to stick in them. But in addition there was much criticism from the employer side that the quality of university graduates in Indonesia was extremely poor and that most of them

required months or even years of on-the-job training before they could contribute much to output. In addition, as the labour market for particular categories of skilled worker tightened, there was evidence of increased poaching which made employers reluctant to invest in long periods of OJT.

Given the severity of the economic down-turn in Indonesia in 1998–99, the problem of unemployment among young upper secondary and tertiary graduates is likely to worsen. Preliminary data from the Department of Education available in the latter part of 1999 indicated a slight fall in enrolment ratios in government-funded lower and upper secondary schools in 1998–99 compared with the previous year, but not in Islamic schools (Booth 1999b: Table 9). Continuation rates from the primary to the lower secondary level, and from the lower to upper secondary level, also fell in 1997–98 and 1998–99. In the longer run, quality at the higher levels can only be improved if quality at the lower levels is improved. And this can only come about if the government is prepared to invest more in both expanding participation and in improving quality of instruction at the primary and lower secondary levels. There is abundant evidence to suggest that while the quantitative expansion of education in Indonesia between the late 1960s and the late 1980s was impressive, quality remains poor at all levels.¹⁰ A sustained improvement in quality can only be achieved with a much greater commitment of government funding. This would allow higher salaries to be paid to teachers, school buildings to be repaired and extended and more teaching aids to be provided.

Malaysia

It is clear that the educational policies of Singapore, Thailand and Indonesia differ both from those of South Korea and Taiwan and indeed from each other. In what ways does the Malaysian experience contrast with that of its ASEAN neighbours? In answering this question, it is useful to look at the colonial legacy. Rudner (1994: 285) has characterised British colonial educational policy in the Federated Malay States (FMS) as seeking ‘to strike a balance between the provision of sufficient English schooling to satisfy urban manpower and colonial administrative needs, while avoiding unwanted social changes among the local population’. Both the British colonial authorities and the Malay aristocratic elites were concerned that exposing the mass of the Malay peasantry to English education would make them discontented with their traditional rural lifestyles, and encourage them to drift to the cities where they would inevitably form an economic underclass. While urban schools catering largely for Chinese, Indian and Eurasian children expanded with both government and private finance, rural education for the Malays was restricted to vernacular instruction designed to make them better farmers and fishermen, more aware of the world around them but still content with their rural way of life. Although enrolments in Malay

vernacular schools increased rapidly, by the late 1930s only about 20 per cent of eligible children were attending school; many parents could not see the point of education which did not lead to social mobility (Snodgrass 1980: 237–243; Rudner 1994: 289–290).

When the Federation of Malaysia was formed and granted full independence from Britain in 1963, the educational legacy was thus highly inequitable in terms of race, class and place of residence. Although in the post-war years, primary schooling for Malays in the vernacular had greatly expanded it remained very much second-class education, and it was often very difficult for a Malay primary graduate to continue to secondary and tertiary education. The influential Razak Report of 1956 advocated universal primary education and unification of the education system, with Malay/English bilingualism as the ultimate goal (Snodgrass 1980: 245). Universal primary education was seen as the easier of these two objectives, and considerable progress was made in the 1960s; bilingualism required more resources and was opposed by both Chinese and Indian minorities. The result was that English remained the medium of instruction in many secondary schools and in the universities, and in 1970 when the New Economic Policy was adopted, Malays were still only a minority in higher education.¹¹ A crucial aim of the NEP was to sever the link between ethnicity and post-primary education and make access to secondary schools and universities available to all on the basis of ability.

Affirmative action was needed to accelerate Malay enrolments at upper secondary and tertiary levels and after the 1969 riots, the government made it clear that a number of measures would be adopted to facilitate increased Malay progression through the education system. The most controversial was the adoption of Malay language instruction at all levels as this inevitably discriminated against non-Malays. The more affluent sent their children to Western Europe, the US, Canada and Australia for secondary and tertiary education, but many non-Malays from less wealthy families found their progress blocked both by the language requirements and by stringent ethnic quotas. They had little choice but to drop out or seek tertiary qualifications in low-cost countries such as India or Taiwan, although degrees from these countries were often not recognised in Malaysia (Snodgrass 1998: 176).

Enrolments of Malays at the secondary and tertiary levels did increase rapidly and by 1985, 68 per cent of upper secondary and 63 per cent of degree enrolments were Malay, slightly higher figures than the population share (Government of Malaysia 1989: Table 13.2). Although rates of growth of enrolments at the lower and upper secondary levels slowed in the 1980s, compared with the rapid growth of the 1970s, gross secondary enrolments had reached 62 per cent in 1996, which was a higher percentage than that attained by Singapore in 1980, although real per capita GDP in Malaysia in the mid-1990s was well below that reached in Singapore in 1980 (Tables 5.1 and 5.4). But gross secondary enrolment ratios in 1996 were still below

those in Taiwan and South Korea in 1980, although by the mid-1990s Malaysia's per capita national income was well above that of both South Korea and Taiwan in 1980. Government expenditures on education were over 5 per cent of GDP in Malaysia from the early 1970s right through until the late 1990s, a higher percentage than in most other parts of Asia (Table 5.1; see also Khoman 1993: 344).

By the latter part of the 1980s, the impact of the expansion in education on the labour force data was very obvious. In 1988 when per capita GDP was still rather lower than the level Singapore had attained in 1974, the proportion of the labour force with at most, primary schooling was substantially lower (Table 5.6). For male workers the proportion with, at most, primary schooling was lower than in South Korea in 1974 (Table 5.3). The proportion of women in the labour force with, at most, primary education was considerably higher than for men, but still much lower than in Singapore in 1974 (Table 5.6). A comparison of Malaysian educational progress from 1970 to 1990 with that of Singapore does not, in my view, support the rather simplistic argument that resource-rich countries such as Malaysia neglect human resource development, and do not invest in education to the same extent as the resource-poor countries.¹² After 1970 the

Table 5.6 Distribution of the labour force by educational attainment

	<i>Male</i>	<i>Female</i>
<i>Singapore 1974</i>		
Below primary	41.8	36.9
Primary	33.1	27.7
Secondary	16.4	26.8
College/university	8.5	8.5
Total	100.0	100.0
<i>Malaysia 1988</i>		
No formal education	7.0	18.7
Primary	38.9	31.2
Secondary	49.1	45.3
College/university	5.0	4.7
Total	100.0	100.0
<i>Thailand 1993</i>		
Below primary	5.6	8.7
Primary	72.2	74.8
Secondary	15.8	9.7
College/university	6.4	6.7
Total	100.0	100.0

Sources: *Yearbook of Labour Statistics 1976* (Singapore: Ministry of Labour); Malaysia: *The Labour Force Survey Report: Malaysia, 1987-1988* (Kuala Lumpur: Department of Statistics); Thailand: *Report of the Labour Force Survey 1993, Round 3: August* (Bangkok: National Statistical Office).

Malaysian government was determined to increase Malay enrolments in secondary and tertiary education, even if the economic rationale for increased investment in education, especially at the tertiary level, did not at the time appear compelling.¹³ Over the years from 1970 to 1995, government expenditures on education seldom fell below 5 per cent of GNP, and in the mid-1980s were over 6 per cent¹⁴.

But doubts have been expressed about the cost-effectiveness of such high levels of government expenditure on education. Foreign observers such as Snodgrass (1998: 178) have pointed out that although the Malaysian government has consistently spent a high percentage of GDP on education since the early 1970s, this 'has not necessarily led to superior educational outcomes' compared to countries such as South Korea and Taiwan. Very large amounts of money have been spent on institutions that are targeted entirely to the Malay population and are intended to allow them to overcome perceived disadvantages in the educational system. Yet secondary and tertiary enrolments are not exceptionally high, even by ASEAN standards, and there is little evidence that student learning outcomes are high in international terms. While the Malaysian experiment in affirmative action can be defended on the grounds that without it, social tensions would have become dangerously high and could even have led to violence and civil war, there can be little doubt that, from an educational point of view, it has been an expensive experiment, and the results have been achieved at high cost.

There was also concern that the rapid expansion of educational opportunities for the Malay population would not be matched by a commensurate growth in job opportunities outside agriculture, leading to the creation of an unemployed underclass. In fact over the boom years from the mid-1980s to 1996, the Malaysian economy was able to absorb almost all the educated people that the expanded secondary and tertiary system turned out. Government expenditure on education was consistently higher than in many other Asian countries until the mid-1990s. The reasons for this emphasis on education could be found in the determination of the Malay-dominated ruling coalition to erase the sharp distinctions in educational attainment and employment by ethnic group, which were a legacy of colonial policies and which remained a potent source of discontent for the Malay majority in the post-independence era. By the early 1990s, 'the identification of race or ethnicity with economic function or occupation and sectoral activity had been generally reduced', although not completely eliminated (Gomez and Jomo 1997: 166). Indigenous Malays were still under-represented, and Chinese over-represented, in administrative and managerial occupations in 1995, which demonstrates the lags that exist between changes in educational achievement and changes in labour force structure.

In spite of the expansion in numbers in the secondary system, which continued right up until the latter part of the 1990s, gross secondary enrolment

ratios in 1996 were still below those attained by South Korea and Taiwan in 1980. In addition, tertiary enrolments were low in comparison with many other Asian countries. In 1996 there were fewer than 1,000 tertiary students per 100,000 people in Malaysia compared with over 2,000 in Thailand (Table 5.1). It can be argued that these comparative figures are distorted in that a much larger proportion of young Malaysians study abroad. That is certainly true; if we allow for the 50,000 or so Malaysian students studying abroad in 1995 and the smaller number (about 6,100) in private tertiary institutions in Malaysia, there were 1,143 students enrolled in tertiary institutions per 100,000 people in 1995 (Government of Malaysia 1999: Table 4–5). But even this figure is still well below that reached in Thailand, Taiwan and South Korea in 1980, although the Thai figures are inflated by the high enrolments in the two open universities.

The Malaysian government is now aware of the need to expand domestic provision of tertiary education, especially as the sharp depreciation of the ringgit in 1997/98 has greatly increased the cost of studying abroad. Government projections indicate that numbers studying for diploma courses in domestic tertiary institutions will almost double between 1995 and 2000, while those studying for degree courses will increase by 127 per cent (Government of Malaysia 1999: Table 4–5). In the past, the government could justify its cautious approach to expansion of tertiary numbers, especially in the private sector, by the need to maintain quality. Certainly it can be argued that the Malaysian tertiary sector has not experienced the rapid expansion of low-quality diploma mills of the type which are found in Thailand, the Philippines and Indonesia, and indeed in Japan and South Korea as well. But the expansion planned for the next decade can probably only be achieved at the cost of some decline in quality, as qualified teachers are in short supply, as are other facilities including libraries and laboratories.

Future challenges for education policies in ASEAN

The main purpose of this chapter has been to argue that the four HPAEs in Southeast Asia have all followed different education policies over the decades of rapid growth since the 1960s, reflecting in part their different colonial legacies, and in part the different attitudes of their governments to the role of education in the growth process. Although both the Taiwanese and South Korean experiences have been influential in Southeast Asia, as in other parts of the world, there is little evidence that educational development in Indonesia, Thailand, Malaysia and Singapore has followed either the Taiwanese or the South Korean path. Certainly the experience of these two countries has been much cited, especially by educational reformers, but usually in order to point out the lower level of educational attainment prevailing in, for example Singapore or Thailand compared with either

South Korea or Taiwan when these countries had similar levels of per capita GDP. Several countries in Southeast Asia have experienced periods of stagnant or falling enrolments at the secondary level and often these periods have coincided with rapid economic growth and rapid growth in the demand for labour. There is plenty of evidence that, at the secondary level, parents weigh up the costs and benefits of continuing education very carefully and often decide against keeping children in school beyond the primary level.

Some critics of education policy in Southeast Asia have argued that the real reason for poor performance has been the heavy reliance on foreign companies, especially in the export-oriented manufacturing sectors. Anderson (1998: 306) points out that most foreign investors were looking for low-wage export platforms, with 'submissive and non-unionised workers' and 'such investors rarely had the interest or the resources to engage in vocational training outside the immediate needs of their businesses'. There is probably some truth in this accusation, but it does not explain the very different policies pursued in, for example Malaysia and Thailand between 1970 and 1990. Both were successful in attracting foreign investors into the export sector, but educational policies and outcomes were very different. In my view the key problem in a country such as Thailand, where performance has been poor, lies with the government, and its reluctance to use budgetary resources to increase access to education, especially at the secondary level. The case of Thailand in the 1990s demonstrates what can be achieved when governments decide to commit more resources to the expansion of secondary facilities especially in rural areas. But Thailand was forced into a policy change only after it became very clear that severe skill shortages were emerging which were adversely affecting the economy's ability to upgrade industrial technology and move into the export of higher value-added products. Certainly neither Thailand nor Singapore educated 'ahead of demand' in the way that South Korea and Taiwan did.

A further point concerns the impact of Southeast Asian educational strategies on equity. Many writers have argued that the equity outcomes of rapid growth in the HPAEs have been unusually favourable, and that this is in large part due to their human resource development strategy. There is again often a tendency to generalise the experience of Taiwan and South Korea to other parts of the East Asian region with scant regard for the facts. Elsewhere (Booth 1999a: 315–316) I have pointed out that the available evidence shows that the distribution of income in several fast-growing Southeast Asian countries is not especially egalitarian and, indeed, government policies which in effect restricted access to secondary and tertiary education have aggravated inequalities. The case of Singapore is especially instructive. Rao (1996: Table 18.2) has demonstrated that the Gini coefficient of personal income accruing to resident taxpayers in Singapore has increased somewhat between 1970 and the early 1990s, by which time it was

0.47 indicating a fairly skewed distribution. Rao attributed at least part of the increase in earnings inequality to the growth in demand for skilled workers with tertiary qualifications over the 1980s and 1990s, especially in sectors such as finance. Given the small number of citizens with appropriate qualifications and the government's reluctance to grant large numbers of work permits to foreigners, the inevitable result was an increase in incomes for these workers. Meanwhile, at the bottom end of the labour market, demand fell and wages stagnated, as many labour-intensive industries moved offshore.

Rao cautioned against any simplistic expectation that an increase in educational attainment will necessarily modify earnings inequality in Singapore; he argued that many of the best educated workers are absorbed into the service sector where the distribution of earnings tends to be more skewed. The sharp slowdown in economic growth in the wake of the financial crisis has certainly led to reduced salaries in the financial sector, both in Singapore and in other affected countries. But this effect on the distribution of earnings might only be temporary, and indeed could be offset by reduced earnings (through job losses) for less affluent households. In other parts of Southeast Asia, such as Thailand and Indonesia, attempts by government to increase educational enrolments at the secondary level could, in the short run at least, aggravate existing income inequalities. Those households most likely to benefit from increased expenditure will probably not come from the bottom deciles of the income distribution.¹⁵ The very poor will be increasingly marginalised in the race for better jobs and higher incomes.

Given that in most parts of Southeast Asia, enrolments in the higher levels of education increase sharply in the upper income groups, and given the evidence of a tight link between level of education and lifetime earnings, there can be little doubt that restricted access to higher education is a powerful reason for the transmission of relative deprivation across generations. Khoman (1993: 330) has argued for Thailand that 'this inter-generational perpetuation of inequality is likely to accelerate in future as production technology becomes increasingly more complex and employment shifts increasingly out of agriculture and into industry'. Certainly the successful implementation of the nine-year cycle in both Thailand and Indonesia could potentially be a vehicle for greater equality, especially if at the same time a generous scholarship programme is available to permit bright children from less affluent homes to progress to upper secondary and tertiary levels. But that will involve a sharp increase in government educational expenditures relative to GDP, especially in Indonesia.

To return to the quotations with which I started, the argument that heavy investments in education have led to equitable economic growth in several of the fast-growing economies of Southeast Asia since the 1960s seems to me to be, for the most part, unconvincing and unsupported by the evidence. Neither do I think that their governments have been especially astute at

planning educational development in order to meet the demands of a fast-changing labour market. Indeed in several cases it is very clear that educational and skills bottlenecks have forced governments into relying on expatriate labour, and in some cases retarded economic growth. This has probably been less true in Malaysia and Singapore than in Thailand and Indonesia, but even in these economies there was clear evidence of skill shortages by the mid-1990s which were in turn due to the limited expansion in tertiary provision. The advantage conferred on the Thai, Indonesian and Malaysian export sectors by the substantial real devaluations of 1997–98 can only give a short-term breathing space. In the medium term, if these countries do not educate more of their young people to a higher standard, then the goal of catching up with the developed economies is unlikely to be achieved.

Notes

- 1 Ahuja, Bidani, Ferreira and Walton (1997: 53) argue that ‘in most East Asian economies educational expansion took place ahead of demand, delivering new cohorts of appropriately skilled workers for each phase of industrialisation’. I would argue that in several Southeast Asian economies the process has been far from smooth; the Philippines has had to export its large surplus of skilled workers while Thailand and Indonesia suffered from skills shortages in the early 1990s.
- 2 The data in Table 5.2 exclude students enrolled abroad; the implications of this for Malaysia are discussed further below.
- 3 Behrmann and Schneider (1994: 21) stress that per capita income does not appear to be closely correlated with enrolment rates and years of schooling for a cross-section of Asian countries in 1965 and 1987. They also point out that the seven Asian economies with high growth rates ‘as a group do not appear to have had unusually great schooling investments, although some individual countries within this group did have relatively high enrolment rates at some school levels’.
- 4 This chapter does not address the Vietnam experience in detail; see World Bank (1997), Glewwe and Jacoby (1998) and Mook (1999) for detailed discussions of the reasons for declining school enrolments since the mid-1980s.
- 5 Goh (1977: chapter 11) discusses the problems of implementing manpower planning in Singapore with characteristic candour; however he stresses the importance of this type of planning for Singapore’s economic future. Cheah (1997) and Ashton, Green, James and Sung (1999: chapter 3) give more recent analyses of how the system of education and skills training has changed in Singapore over the 1980s and 1990s in response to changes in trade patterns and economic structure.
- 6 See Ben Dolven (2000) ‘Old dogs, new tricks’, *Far Eastern Economic Review*, 27 January: 68–69.
- 7 Huff (1995: 740) quotes Dr Goh Keng Swee’s comment made in 1970 that ‘the electronic components we make in Singapore probably require less skill than that required by barbers or cooks, consisting mostly of repetitive manual operations’. Ashton, Green, James and Sung (1999: 32–33) claim that from 1965 to 1979 ‘the main demand from employers was for semi-skilled labour’. It was only in the 1980s that the demand for more skilled labour in both manufacturing and the modern service sector began to grow rapidly; this was in large part due to the government policy of increasing wages and encouraging the traditional labour-intensive sectors of manufacturing to relocate elsewhere.

- 8 The Singapore economy remains very dependent on expatriate labour in both manufacturing and the service sector; it is estimated that around 450,000 expatriates work in Singapore.
- 9 Survey data indicated that in Indonesia in 1992, paid-out costs of lower secondary education amounted to almost 22 per cent of average annual per capita household expenditures. The comparative data assembled by Tan and Mingat (1992: 190) show that 27 per cent of operating costs in public secondary education in Indonesia in the mid-1980s were covered by fees, a higher ratio than elsewhere in East Asia except for South Korea.
- 10 International comparative tests suggest that achievement of 9–10 year olds in Indonesian schools is below the international mean (World Bank 1997: 120).
- 11 Snodgrass (1998: 175) points out that in the 1960s 60 per cent of the student body at the University of Malaya was Chinese and only around 20–25 per cent Malay.
- 12 See, for example, Ashton and Green (1998) for a statement of this view.
- 13 A study carried out in the early 1970s argued that social returns to tertiary education expenditures were quite low, and that the Malaysian government was probably over-investing in education across the board (Hoerr 1973: 302). There is no evidence that the Malaysian government took such warnings seriously, which was just as well as the analysis on which they were based was certainly flawed. Had investment in post-primary education slowed in the 1970s and 1980s, skill bottlenecks would have emerged by the early 1990s, which would certainly have retarded growth.
- 14 These data are taken from the annual publication, *Educational Statistics of Malaysia*, published by the Educational Planning and Research Division, Ministry of Education, Kuala Lumpur.
- 15 See Ahuja, Bidani, Ferreira and Walton (1997), Table 2.5 for data on the distribution of enrolment rates across income groups. In Indonesia and Vietnam, the differences at the primary level are not great but they become far more pronounced at the higher secondary and post-secondary levels. See King (1997) and Glewwe and Jacoby (1998) for further discussions of Indonesia and Vietnam respectively.

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6 Growth with equity in East Asia?*

Jomo K. S.

The ‘growth with equity’ said to characterise East Asia has been explained by various factors. These include regime initiatives to secure greater political support and legitimacy (such as land reforms and rural development efforts), human resource development (HRD) efforts (especially meritocratic publicly funded education to the tertiary level) as well as significant household savings (‘forced’ or otherwise). Rapid economic growth in much of the region has undoubtedly raised living standards through various means. For example, ‘trickle-down’ inducements to increase labour productivity as well as tight labour markets have pushed up real incomes despite repressive labour policies, especially in Korea and Southeast Asia, and the declining terms of trade of manufactured exports from the South generally. Hence, any considerations of the distributive implications of growth as well as liberalisation must consider both inherent consequences as well as redistributive policy mechanisms.

While government interventions have been crucial to rapid growth and structural change in the region, there has been considerable liberalisation in the last decade, largely due to international pressures, especially from the West. The consequences of this liberalisation of trade regimes and foreign direct investment rules as well as financial regulation – especially in South Korea, Taiwan, Malaysia, Thailand and Indonesia (i.e. in both first- and second-generation NIEs) – will be considered here. While acknowledging the inevitability of liberalisation and globalisation, there appears to be considerable potential for continued or increased subsidisation of efforts in human resource development (especially education and training), redistribution and poverty targeting, more effective social safety nets, social corporatist and communitarian initiatives, quality-of-life improvement efforts, technology promotion, more gradual agricultural trade liberalisation, as well as more effective and efficient, but indirect, governance of foreign direct investment and international finance.

Many East Asian economies have achieved remarkable economic growth over the last three decades, which has helped improve living standards generally. Besides the eight high-performing Asian economies (HPAEs)

identified by the World Bank (1993), China too has grown very rapidly in the last two decades. According to the Bank, rapid growth of manufacturing and exports in these economies has been accompanied by falling poverty levels and better income distribution. While extensive interventions in the market have been important for late industrialisation, most governments have implemented substantial liberalisation from the mid-1980s. Much of such liberalisation can be attributed to pressure from the major powers and, often, recognition of the desirability of deregulation following excessive government interventions, including interventions for purposes other than industrial policy. The WTO has made further liberalisation virtually compulsory. It is thus important to examine the distributive implications of such increasing liberalisation or globalisation.

This brief review of the human development effects of liberalisation in the region will focus on five East Asian economies, namely the Republic of Korea (South Korea) and Taiwan from Northeast Asia, and Malaysia, Thailand and Indonesia in Southeast Asia. All of these economies have experienced unprecedented growth and structural transformation in the last few decades (see Table 6.1). Average annual gross domestic product (GDP) growth rates exceeded 7 per cent and 6 per cent in the periods 1970–80 and 1980–96, respectively, with the manufacturing sectors growing fastest to become the most important contributor to growth in these economies. Exports grew at double-digit levels annually over the period 1980–92, and average per capita incomes increased greatly as a consequence. As a proportion of total growth, primary exports have fallen sharply, while machinery and transport equipment production grew especially strongly in the manufacturing sectors.

The success of these five East Asian economies in reducing poverty has been spectacular. Income inequality has been low in South Korea and

Table 6.1 Five HPAEs: economic indicators, 1970–95

Economy	Per capita income (US\$)	Average annual GDP growth (%)		Manufacturing/GDP share (%)			Agriculture/GDP share (%)			Services/GDP share (%)	
		1970–80	1985–95	1970	1980	1995	1980	1995	1980	1995	
South Korea	9,700	10.1	7.71	21	29	27	15	7	45	50	
Taiwan	8,788 ^a	10.0 ^b	7.5 ^c	35 ^d	na	42 ^a	na	na	na	na	
Malaysia	3,890	7.9	5.7	12	21	33	22	13	40	44	
Thailand	2,740	7.1	8.4	16	22	29	23	11	48	49	
Indonesia	980	7.2	6.0	10	13	24	24	17	34	41	

Sources: World Bank (1997: Tables 12, 13, 15); Taiwan figures from Yu (1994) and Lee (1994).

Notes: a – for 1991; b – for period 1963–80; c – for period 1981–93; d – for industry. na: not available.

Taiwan in Northeast Asia, while the record in Thailand, Malaysia and Indonesia in Southeast Asia is less clear. The evidence suggests that the World Bank's claim of egalitarian growth in Southeast Asia might be exaggerated, if not erroneous. Initial conditions seem to be primarily responsible for the more egalitarian experience of Northeast Asia compared to Southeast Asia. Growth has been critical in raising overall real incomes and thus alleviating poverty, but there is less clear evidence of the growth process directly contributing to more equitable income distribution, except perhaps in Northeast Asia, where low unemployment and skill enhancement strengthened the bargaining power and remuneration of labour generally.

Poverty alleviation and redistribution

The incidence of poverty has declined sharply in all five economies, as shown in Table 6.2. With the exception of Thailand, which has not had a significant commitment to, or mechanisms for more egalitarian redistribution, income inequality declined or did not worsen in South Korea, Taiwan, Malaysia and Indonesia over the 1976–85 period. All five economies have had explicit poverty alleviation and redistribution policies, though their actual significance has varied within individual countries. With strong commitments to achieving growth and redistribution, the regimes in these economies have been able to direct developmental efforts relatively independently of clientelist interests and pressures.

The first important initiative for poverty alleviation and more equitable distribution came from land reforms in South Korea and Taiwan in the late 1940s (see Hamilton 1983; Hsiao 1996). In 1947, during the Korean War, the US military forces distributed land confiscated from the Japanese colonial government to the tillers, charging low rents. Later, after the

Table 6.2 Five HPAEs: poverty incidence, 1970–93

<i>Economy</i>	<i>Poverty incidence (%)</i>					
	<i>1970</i>	<i>1976</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1993</i>
South Korea	23.4	14.8	9.8	na	4.5	na
Taiwan	na	5.0	na	na	na	na
Malaysia	52.4	42.4	29.0	20.7 ^a	17.1 ^b	13.4
Thailand	39.0	30.0	23.0	29.5	17.9	na
Indonesia	57.1	50.1	39.8	21.6 ^a	15.8	na

Sources: Medhi (1995: 58–73); Malaysia (1996); Habibullah (1988); Yu (1994: 6); Chowdhury and Islam (1993).

Notes: na – not available; a – 1984; b – 1989. While inter-country comparison of changes is possible, cross-comparisons of rates in particular years is not possible due to classification differences.

Korean War, the South Korean government acquired land from landlords, reselling it at subsidised prices to 90,000 tenants (Amsden 1989). In Taiwan, the Kuomintang government seized land from landlords in return for shares in public companies, and sold them at favourable prices to the tillers of the land. Reforms in Taiwan led to a reduction of land rents to 37.5 per cent of the yield for major crops, sale of public land to cultivators and tenants, and limited ownership by land owners (Yu 1994: footnote 1). Meanwhile, competition among food producers and US food aid under Public Law 480 ensured low food prices for the population. The terms of trade between agriculture and manufacturing thus favoured manufacturing as small-scale farmers enjoyed little market power (Hamilton 1983; Yu 1994, fn. 2). Indeed, the Gini coefficient – as a measure of income inequality – for Taiwan declined from 0.358 in 1966 to 0.318 in 1972. However, the decline for South Korea was negligible, from 0.334 in 1965 to 0.332 in 1970 (Rao 1993; Medhi 1995: Table 1). When food aid ceased following the 1973 oil shock, the South Korean government launched the *Saemaul Undong* programme, which, *inter alia*, increased domestic food supply. With the help of price controls, the state succeeded in providing industrial workers with cheap food, thus lowering the wage bill for manufacturing firms. Price controls helped keep consumer prices low so that both savings and investment rates rose in these economies. Taiwan also emphasised rural industrialisation, encouraging manufacturing alongside farming. In the 1970s, both South Korea and Taiwan introduced hybrid grain varieties and modernised farming, which helped expand food supply and free more farm workers to join industry. With liberalisation – including globalisation – since the 1980s, income inequality has risen, with the Gini coefficient rising to 0.400 in South Korea in 1988, and to 0.312 in 1993, compared to 0.277 in 1980 in Taiwan (see Table 6.3).

The Southeast Asian experiences have been somewhat different. Unlike natural resource-poor South Korea and Taiwan, land reforms have been less significant in the resource-rich Southeast Asian economies. Political circumstances have also been less favourable to inducing proactive redistribution measures as in Northeast Asia. Resource wealth may also have weakened the imperative to industrialise, especially to promote export-oriented manufacturing. Political considerations as well as ethnic diversity may have also prevented the regimes from promoting domestic industrialists through more activist industrial policy initiatives. As a consequence, the region, especially Malaysia, has relied far more on foreign direct investment to industrialise, and especially for export-oriented manufacturing capacity. Labour, especially wage repression has been an important incentive to such FDI to relocate in the region. From the mid-1980s until the mid-1990s, currency under-valuation was an important incentive to FDI. Compared to Northeast Asia, Southeast Asia has done less well in terms of educational and training efforts, which in turn has limited development of industrial and

Table 6.3 Five HPAEs: household income distribution Gini coefficients, 1970–93

<i>Economy</i>	<i>Gini coefficients for household incomes</i>					
	<i>1970</i>	<i>1976</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1993</i>
South Korea	0.332	0.391	0.389	0.357 ^d	0.400 ^f	na
Taiwan	0.294	0.280	0.277	0.290	0.312	0.312
Malaysia	0.506	0.529	0.493 ^c	0.474 ^a	0.445	0.459
Thailand	na	0.451	0.473 ^c	0.500 ^f	0.504	na
Indonesia	0.35	0.34	0.34 ^d	0.33	0.32	0.34

Sources: Medhi (1995: 58–73); Jomo (1999); Habibullah (1988); Taiwan Gini coefficients are from Yu (1994: 6); Chowdhury and Islam (1993).

Notes: a – 1984; b – 1989; c – 1981; d – 1982; e – 1979; f – 1989; na – not available.

technological capabilities, and hence, prospects for greater productivity growth as well as labour remuneration. However, the Southeast Asian experiences have also been diverse in other respects.

Although there has not been any major land reform in Malaysia, new agricultural land has been distributed to the land-hungry through land development schemes managed by government agencies such as the Federal Land Development Authority (FELDA), Federal Land Consolidation and Rehabilitation Authority (FELCRA) and Rubber Industry Smallholders Development Authority (RISDA). Although the land schemes have had some effect on poverty alleviation, the impact has been limited (see Jomo 1986; Halim 1991). Malaysia deepened its rural development efforts following the 1971 introduction of the New Economic Policy (NEP), which was committed to poverty reduction and redistribution to achieve greater inter-ethnic parity. Besides extensive investments to develop rural infrastructure, where Bumiputera¹ are heavily concentrated, special ministries and government agencies – such as Bank Bumiputera, Majlis Amanah Rakyat (MARA) and Pernas – have been set up to enhance the socio-economic standing of the Bumiputera. With rapid economic growth, led by export-oriented manufacturing in the 1970s and since the late 1980s, poverty rapidly declined. In addition, the Green Revolution in paddy cultivation – involving double cropping, green revolution strains, fertilisers, pesticides, ploughing and harvesting machinery – helped raise yields and incomes. Income inequality trends are unclear, but seem to suggest growing inequality in the 1960s, declining inequality in the 1970s and 1980s, and increased inequality since then (Jomo and Ishak 1986; Hashim 1997).

Not unlike Malaysia, the Thai authorities emphasised agricultural diversification and the opening up of new land in the 1960s (Onchan 1995: 7–8), with little emphasis on land or income redistribution to help disadvantaged groups. Land reforms were formally introduced in Thailand in 1975 with the Agricultural Land Reform Act; however, little real progress was made

as much land was transferred to wealthy, politically influential businessmen instead (Onchan 1995). Hence, despite important initiatives, land reforms have generally been unsuccessful. However, growth helped lower the overall incidence of poverty (except in the mid-1980s) although income inequality worsened (see Tables 6.2 and 6.3). The government has also fairly successfully raised rural household incomes by promoting off-farm rural work, as in Japan, Taiwan and South Korea. As a consequence, the proportion of rural household incomes from off-farm activities rose from 46 per cent in 1971–72 to 63 per cent in 1986–87 (Onchan 1995: 32). Off-farm activities helped further reduce rural poverty in the period 1985–90, when urban poverty rose as well (see Rasiah, Ishak and Jomo 1996: Table 4).

Investments in human resources have also helped reduce poverty and inequality. Through government efforts, South Korea and Taiwan have developed highly educated labour forces. While primary education has been universal in these economies, at least since the 1960s, there have also been high rates of transition to the secondary and tertiary levels, and strong emphasis on technical and engineering disciplines. Clearly, these economies' investments in human capital went well beyond the primary schooling limit, recommended by the World Bank, with labour market interventions based on long-term considerations beyond current prices (Rodrik 1994). The expansion of education not only helped generate technical and professional human resources for industrial upgrading, but also enhanced opportunities for upward socio-economic mobility, including skills enhancement and higher remuneration (Deyo 1989).

Achievements in secondary and especially in tertiary education in Malaysia, Thailand and Indonesia have not been comparable to South Korea and Taiwan, as shown in Table 6.4. Hence, although basic education has offered access to low-skilled jobs in these economies, schooling has

Table 6.4 Educational enrolment in selected economies, 1970–93

<i>Economy</i>	<i>Percentage of age group enrolled in educational institutions</i>					
	<i>Primary</i>		<i>Secondary</i>		<i>Tertiary</i>	
	<i>1970</i>	<i>1995</i>	<i>1970</i>	<i>1995</i>	<i>1970</i>	<i>1993</i>
South Korea	103	99	42	96	16	48
Malaysia	87	91	34	58*	4	7
Thailand	83	98*	17	38*	13	19
Indonesia	80	97	16	42	4	10
United Kingdom	104	100	73	92	20	37
France	117	99	74	88	26	50
Japan	99	100	86	96	31	30

Source: World Bank (1995: 217; 1997: 226–227; 1998: 200–201).

Note: *1993.

Table 6.5 Five HPAEs: wage employment growth and unemployment rate, 1970–92

<i>Economy</i>	<i>Average annual growth rate of wage employment (1970–90) (%)</i>	<i>Unemployment rate (%)</i>		
		<i>1970</i>	<i>1983</i>	<i>1992</i>
South Korea	6.6	na	4.1	2.4
Taiwan	na	1.7	2.7	1.5
Malaysia	8.2	8.0	6.0	4.1
Thailand	6.6	na	2.9	2.2 ^a
Indonesia	na	na	2.0	1.4 ^b

Source: World Bank (1995); Taiwan figures from Yu (1994: 6).

Note: a – 1990; b – 1991; na – not available.

not offered as much upward social mobility. In addition, while Taiwan and South Korea generated ample supplies of technical labour, Malaysia, Thailand and Indonesia continue to face serious shortages of such labour. In 1990, Malaysia, Thailand and Indonesia had around 400 technologists and scientists per million people, compared to 2,200 for South Korea; 2,100 for Taiwan; and 6,700 for Japan (UNDP 1994: 17). While Malaysia and Indonesia managed to reduce inequality over long periods, unlike in Thailand, these limited successes were not due to market forces, as both governments spent a lot on redistribution and did much to generate employment.

Rapid growth, rising educational levels and declining unemployment have pushed up real wages in these economies (see Table 6.5), despite the weakness of organised labour. Real wages grew at average annual rates of 10 per cent and 8.2 per cent over the periods 1970–80 and 1980–92, respectively, in South Korea (World Bank 1995: 175). In Taiwan, real wages grew by 6 per cent (computed from Deyo 1989: 93) and 7.5 per cent (Lee 1994: 16) over the periods 1970–80 and 1976–86 respectively. Hence, although labour was brutally repressed in South Korea and Taiwan until democratisation in the late 1980s, efforts to enhance labour productivity, product quality, and firms' competitiveness helped raise wages. Some of these efforts helped reduce occupational hierarchies and income differentials within enterprises. Hence, by the time unions grew in strength, real wages had already risen substantially.

The growth of wage labour in Malaysia, Thailand and Indonesia intensified following rapid export-oriented manufacturing expansion from the 1970s or 1980s, which also reduced disguised unemployment and raised household incomes. Wage labour grew by annual average rates of 8.2 per cent and 6.6 per cent in Malaysia and Indonesia, respectively, in the 1970–90 period (see Table 6.5), with female participation growing especially strongly (see Kamal and Young 1985; McGee 1986; World Bank 1993;

Onchan 1995). The out-migration of rural labour to urban industrial areas was pronounced enough to put upward pressure on wages.

In Malaysia, the growing presence of foreign labour from the early 1980s (Jomo 1990) and union weaknesses undermined real wage increases in Malaysian plantation agriculture (Jomo and Todd 1994). However, inter-ethnic and other redistribution efforts as well as the expansion of more remunerative employment – especially the absorption of Bumiputera in the public sector, manufacturing and modern service wage employment – caused the Gini coefficient for income inequality to decline to 0.474 in 1984 and 0.445 in 1990 (see Table 6.3). However, overall growth in wage employment and consequent increases in household income reduced poverty and inequality.

There has also been less corporatism at the firm level in Malaysia, Thailand and Indonesia compared to South Korea and Taiwan. In export-oriented high-technology firms (semiconductors, in particular), enterprise-level corporatism has involved mutually beneficial co-operation between management and labour, but such enterprises tend to be much more exceptional in Southeast Asia. Meanwhile, rising demand for skilled labour in Malaysia and Thailand pushed up wages of skilled workers substantially (World Bank 1995; Rasiah and Osman-Rani 1995), increasing wage differentials between skilled and unskilled labour, with the latter's position also exacerbated by labour imports.

While unions and labour militancy have been treated unsympathetically, if not brutally, in all five economies, the second-tier newly industrialising countries (NICs) of Malaysia, Thailand and Indonesia have experienced much poorer wage and working conditions than in South Korea and Taiwan, with labour protests routinely suppressed. In Thailand and Indonesia, militant leaders have been beaten and murdered (Narayanasamy 1996), unions weakened and sometimes even destroyed. Collective bargaining rights for labour continue to be minimal in practice. Wages have risen, but mainly due to the exhaustion of labour reserves and technological deepening in a few export-oriented industries rather than union strength.

Unlike in South Korea and Taiwan, industrial policy in Malaysia, Thailand and Indonesia has sought to attract investments by emphasising low labour costs, thus militating against rapid wage growth in these countries. Real wages in Malaysia and Indonesia grew by 2 per cent and 5.2 per cent, respectively, on average over the 1970–80 period, and by 2.3 per cent and 4.3 per cent, respectively, over the 1980–92 period (World Bank 1995: 1974–1975). Real wages in Thailand grew by 2 per cent and 2.8 per cent, respectively, over the 1973–81 and 1981–89 periods (Rasiah 1994: 210).

Besides poverty alleviation and redistribution mechanisms, the five governments have, to varying extents, also introduced some social safety nets to reduce the dislocation caused by rapid structural changes and

cyclical influences. The effects of such instruments have, however, been mixed. In Malaysia, the cost of living allowance (COLA) for workers is one such provision, but the unemployed do not qualify for it. However, there has been a pronounced tendency to minimise such provisions on the presumption that full employment could be indefinitely assured, and would ensure 'work-fare' and thus eliminate the need for 'welfare' provisions. It was often also claimed that the unemployed could always count on 'traditional' social safety nets provided by families, communities and informal sector participation. The social disasters due to the recessions following the 1997 East Asia financial crisis have underscored the inadequacy of such provisions when they are most needed.

It is generally agreed that South Korea and Taiwan were far more interventionist in the 1950s and 1960s than Malaysia and Thailand have been in recent decades. Yet, income distribution was better and remained better in Northeast Asia during high growth while it has fared less well in Southeast Asia. Contrary to the Kuznets hypothesis, the cases of South Korea and Taiwan suggest that lower inequality can be complementary to rapid growth in its early stages. The Northeast Asian experiences in fact offer a strong case for intervention to improve asset distribution and to enhance human resources in order to generate rapid growth. However, the South Korean and Taiwanese experiences have been rejected by the World Bank (1993) as special cases unsuitable for emulation.

The experiences of Malaysia and Thailand offer different lessons. The Malaysian economy remained largely *laissez-faire* until around 1970 (World Bank 1995), with income distribution worsening in the 1960s. After interventionist redistribution policies were adopted, growth, industrialisation and income distribution improved in the next two decades before deteriorating again in the 1990s with economic liberalisation. While Thailand did not pursue redistribution policies, and also did not have much of an explicit industrial policy, its income Gini coefficient continued to rise. With increasing liberalisation since the 1980s, income inequality in Taiwan and South Korea began to worsen.

These experiences seem to suggest that poverty alleviation and reduction of income inequality can not only accompany, but may even be conducive to, rapid growth and industrialisation, while income inequalities tend to worsen with economic liberalisation, especially in the absence of effective provisions for redistribution. Also, the fact that income inequality in Taiwan and South Korea declined in the initial stages of growth, and worsened as the two economies liberalised, turns the Kuznets hypothesis on its head. However, the unique circumstances of post-war asset redistribution (including land reforms) suggest that their initial conditions – rather than subsequent growth itself – may better explain these Northeast Asian exceptions.

Income distribution

The World Bank's *East Asian Miracle* volume has created a myth of egalitarian export-oriented growth in the region by claiming that

The positive association between growth and low inequality in the HPAEs, and the contrast with other economies, is illustrated. . . . Forty economies are ranked by the ratio of the income share of the richest fifth of the population to the income share of the poorest fifth and per capita real GDP growth during 1965–89. . . . There are seven high growth, low inequality economies. All of them are in East Asia; only Malaysia, which has an index of inequality above 15, is excluded.

(World Bank 1993: 29–30)

However, as Rao (1998) notes, 'All that the data . . . can convey is that there are 22 (out of 40) economies with low relative inequality and varying economic growth rates. Thus, the evidence is not strong enough to establish a firm relationship between growth and relative inequality, notwithstanding the fact that seven high growth and low relative inequality economies are located in East Asia'.

Only South Korea and Taiwan had relatively low Gini coefficients from the 1960s, while there were significant reductions (almost 20 per cent or more) in the Gini coefficients of the five economies by the 1980s, compared to the 1960s (Tables 6.6 and 6.7). Thus, the World Bank's generalisation about income inequality reduction is erroneous. Gini coefficients in South Korea and Taiwan have been low, but relatively unchanging, while declines have only been observed for Indonesia, Malaysia and perhaps Thailand.

The rather low Gini coefficients for South Korea – 0.34 in 1965 and 0.33 in 1970 – have been attributed to a number of factors (Table 6.8). The most important of these include the land reforms of 1947 and 1949 (which reduced income inequality among farm households), asset destruction during the Korean War, and confiscation of illegally accumulated

Table 6.6 All HPAEs: Gini coefficients, 1965–90

<i>Economy</i>	<i>1965–70</i>	<i>1971–80</i>	<i>1981–90</i>
Japan	0.31	0.28	na
Hong Kong	0.49	0.42	0.39
South Korea	0.34	0.38	0.33
Singapore	0.50	0.45	0.41
Taiwan	0.32	0.36	0.30
Indonesia	0.40	0.41	0.30
Malaysia	0.50	0.48	0.42
Thailand	0.44	0.37	0.37

Source: Rao (1998); based on graphs in World Bank (1993: 72–74).

Table 6.7 Five HPAs: rural–urban poverty incidence and Gini coefficient trends, 1970–93

<i>Economy</i>	<i>Rural–urban poverty incidence</i>						<i>Rural–urban Gini coefficient trends</i>					
	1970	1976	1980	1985	1990	1993	1970	1976	1980	1985	1990	1993
<i>S Korea</i>												
Rural	27.9	11.7	9.0	4.4 ^a	na	na	0.332	0.91	0.389	0.357 ^c	na	na
Urban	16.2	18.1	10.4	4.6 ^a	na	na	0.346	0.412	0.405	0.371 ^c	na	na
<i>Taiwan</i>												
Rural	na	na	na	na	na	na	0.32	0.32 ^b	na	na	na	na
Urban	na	na	na	na	na	na	0.31	0.30 ^b	na	na	na	na
<i>Malaysia</i>												
Rural	58.5	50.9	37.4	27.3 ^a	22.4	18.6	0.469	0.500	0.482	0.440	0.409	na
Urban	21.3	18.7	12.6	8.5 ^a	8.3	5.3	0.503	0.529	0.501	0.466	0.445	na
<i>Thailand</i>												
Rural	43.0	36.2	25.8	35.8	33.9	na	na	na	na	na	na	na
Urban	16.0	12.5	7.5	5.9	6.7	na	na	na	na	na	na	na
<i>Indonesia</i>												
Rural	58.5	na	44.6	na	18.5	na	0.34	0.31	0.31	0.28	0.26	0.26
Urban	50.7	na	19.7	na	8.3	na	0.33	0.36	0.38	0.32	0.32	0.33

Sources: Ishak and Ragayah (1995); Chowdhury and Islam (1993).

Notes: a – 1984; b – 1972; c – 1982; na – not available.

Table 6.8 South Korea: Gini coefficients, 1965–88

	1965	1970	1976	1982	1985	1988
<i>Set 1</i>						
All households	0.34	0.33	0.38	0.36		
Farm households	0.29	0.30	0.33	0.31		
Employee households	0.40	0.30	0.36	0.31		
Proprietor and self-employed households	0.38	0.35	0.45	0.45		
<i>Set 2</i>	0.34	0.33	0.39	0.36	0.34	0.34
<i>Set 3</i>						0.40

Sources: Rao (1998: Table 4) from Choo (1991) for Set 1; the 1996 World Bank Data Base for Set 2; and the Korean Development Institute for Set 3, as cited in Leipziger *et al.* (1992).

wealth (Choo 1975). After critically examining the available evidence, Rao (1998) concludes that there is no evidence of continuing decline in income inequality, as suggested by the World Bank (1993).

The available evidence suggests that the Gini coefficient for Taiwan declined from the 1950s until the early 1970s, then stayed in the range of 0.28–0.30 during most of the 1970s and the early 1980s, and has risen slightly since the mid-1980s. Land reform, labour-intensive industrialisation, full employment, off-farm work, educational expansion and industrial organisation (with large state-owned enterprises coexisting with small and medium-sized private firms) are believed to have contributed to the relatively egalitarian income distribution of Taiwan (Table 6.9).

Table 6.9 Taiwan: Gini coefficients, 1964–93

<i>Set 1: 1953–60: 0.44–0.50</i>									
<i>Year</i>	1964	1966	1968	1970	1972	1973	1974	1975	1976
Set 2	0.36	0.36	0.36	0.32	0.32		0.32		0.31
Set 3				0.29			0.29		0.28
Set 4	0.32	0.32	0.29	0.29	0.29	0.34	0.28	0.31	0.28
<i>Year</i>	1977	1978	1979	1980	1981	1982	1983	1984	1985
Set 2		0.31		0.30		0.31		0.31	0.32
Set 3	0.28	0.29	0.28	0.28	0.28	0.28	0.29	0.29	0.29
Set 4	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.29	0.29
<i>Year</i>	1986	1987	1988	1989	1990	1991	1992	1993	
Set 3	0.30	0.30	0.30	0.30	0.31				
Set 4	0.29	0.30	0.30	0.30	0.30	0.30	0.31	0.31	

Sources: Kuo (1975) for Set 1; Rasiah, Ishak and Jomo (1996) for Sets 2 and 3; and the 1996 World Bank Data Base for Set 4 (note that Sets 3 and 4 are almost identical).

Given the absence of reliable income distribution data for Indonesia, Rao (1998) suspects that the World Bank's claims about Indonesia were based on expenditure trends (Table 6.10). While acknowledging significant reduction in absolute poverty in the country since the early 1970s, Rao notes that such a reduction in absolute poverty would be manifested in narrowing consumption gaps and declining expenditure inequality, especially since the ostentatious consumption of the rich is barely reflected in most household expenditure surveys. Most importantly, Rao argues that a reduction in expenditure inequality does not necessarily imply reduced income inequality. Hence, he argues, it is not entirely clear that economic inequality went down as much as claimed by the Bank – i.e. from 0.4 in the 1970s to 0.3 in the 1980s. He notes, for instance, the lack of any significant reduction in the relevant Gini coefficients between 1976 and 1993 (Rao 1998: Table 7).

Although the Bank's 'Miracle' volume suggests that Malaysia was the only exception to the regional trend of declining income inequality, government efforts to reduce inter-ethnic inequality during the 1970s and 1980s may have reduced overall inequality in Malaysia as well, especially from the mid-1970s until the late 1980s (Table 6.11). Using Theil index decompositions, Ikemoto (1985: 358) argues that much of the (modest) decline in overall inequality between 1970 and 1979 was due to reductions in inter-ethnic rather than intra-ethnic inequality. The apparently slightly greater decline of overall inequality in the 1980s (also see Hashim 1997) may have been due to the changed nature of the data (household income surveys only started in 1984; much of the earlier data are for household budgets or expenditure). It is also likely that the mid-1980s recession reduced inequality by reducing the incomes of the higher income groups. Partial economic

Table 6.10 Indonesia: expenditure Gini coefficients, 1976–93

1976	1980	1981	1984	1987	1993
0.34	0.34	0.33	0.33	0.32	0.34

Sources: Tjondronegoro *et al.* (1992) and Medhi (1994).

Table 6.11 Malaysia*: Gini coefficients, 1957–97

1957	1967	1970	1973	1975	1976	1980	1984	1987	1989	1993	1995	1997
0.412	0.444	0.513	0.530	0.557	0.567	0.508	0.480	0.459	0.447	0.459	0.462	0.470

Sources: Hashim (1997: 60, Table 3.1) before the 1990s; Malaysia Plan documents for the 1990s. Also see Jomo and Ishak (1986: Table 1, p. 4) for 1957 and 1973; Ishak and Ragayah (1990) for 1979, 1984 and 1987; Ishak (2000).

Notes: * Peninsular Malaysia only before 1990s. The 1996 World Bank Data Base has a few more Gini coefficients – 0.52 for 1973, 0.53 in 1976, and 0.48 in 1989. The data for these years, however, are even less comparable to those for the other years.

Table 6.12 Thailand: Gini coefficients, 1962–92

	<i>Set 1</i>	<i>Set 2</i>	<i>Set 3</i>
1962	0.41		0.41
1968	0.43		0.43
1975	0.42	0.43	0.42
1981	0.44	0.45	0.43
1986	0.47	0.50	0.47
1988		0.48	0.47
1990		0.50	0.49
1992		0.54	0.51

Sources: Ikemoto (1992: 14) for Set 1, Medhi (1996) for Set 2 and the 1996 World Bank Data Base for Set 3.

liberalisation and reduced government interventions for redistribution since the late 1980s appear to have contributed to increased inter-ethnic as well as overall inequality since the early 1990s.

There has been a continuous rise in the Gini coefficient for Thailand since 1962, when income data first became available (Rao 1998: Table 9), to a high 0.54 in 1992 (Table 6.12). There seems to be no Thai evidence supporting the World Bank's claim of a dramatic decline in income inequality.

Hence, the available evidence suggests that Taiwan is almost unique in East Asia in having established and sustained an egalitarian income distribution – as indicated by the Gini coefficient remaining close to the 0.30–0.31 level, although there was no significant decline in the Gini coefficient after the late 1960s. In the case of South Korea, too, there was no continuous decline of the Gini coefficient after 1965. In Indonesia, there was some decline in the Gini coefficient for household expenditure, but no evidence to show that income inequality had declined. Reduction of inter-ethnic income differences has been the main factor behind the reduction of the Gini coefficient for Malaysia from 0.5 to around 0.45 in the 1970s and 1980s, before rising again in the 1990s. Meanwhile, the Thai Gini coefficient for income distribution rose from 0.41 in 1962 to a little over 0.5 in 1992.

Regardless of trends, income inequality in Southeast Asia seems to be significantly higher than in Taiwan and South Korea, where significant asset redistribution took place with land reforms in the late 1940s and early 1950s. Malaysia, Thailand and possibly Indonesia have income Gini coefficients of 0.45 or more. None of them had low Gini coefficients at the beginning of their rapid growth phases or have had sustained reductions in income inequality since then. Only in South Korea and Taiwan did land reforms contribute to low initial levels of income inequality. The subsequent evidence suggests maintenance of these relatively low levels of inequality at

best. The evidence on income inequality in these five HPAEs does not support *The East Asian Miracle's* claim of declining income inequality during the rapid growth phase after 1965.

Corroborating Rao, You (1998) has also found that, among the World Bank's eight HPAEs, only Japan, South Korea and Taiwan have had unusually low inequality. He argues that they were able to combine low inequality with rapid growth because

- 1 they started rapid growth with an exceptionally egalitarian distribution of real and financial assets as a result of post-war, mainly agrarian, reforms;
- 2 rapid income growth was based on capital accumulation as well as employment expansion;
- 3 high profit shares were crucial for accumulation, by generating high savings rates and inducing high investment rates (though high profits are not sufficient for rapid growth, the three achieved rapid accumulation because effective institutions and policies translated large profits into high savings and investment rates);
- 4 wealth distribution was relatively even due to the highly egalitarian post-war redistribution and the unusual savings behaviour of low-income households, especially in Japan and Taiwan; and
- 5 although wage distribution has not been particularly egalitarian, rapid employment expansion and near full employment has probably meant wider and more even distribution of wage-earning opportunities among households.

For You, the future prospects for income distribution in the relatively egalitarian Northeast Asian three are not good. The favourable influence of the initially egalitarian wealth distribution will only continue to diminish over time, and little more can be achieved from further employment expansion. In fact, there is evidence of growing wealth concentration in all three relatively egalitarian HPAEs, especially with the recent asset-price bubbles from the late 1980s. It appears that income inequality rose in Japan, Taiwan and South Korea during the 1980s.

The World Bank and others have argued that, owing to the exceptional nature of Japan and the first-generation newly industrialised economies (NIEs) of East Asia, the rest of the developing world should emulate the second-tier Southeast Asian newly industrialising countries (NICs) instead. While the more recent experiences of the second-tier Southeast Asian NICs may be more relevant to the rest of the South in some respects (e.g. resource wealth), the superior industrial policy as well as the more egalitarian initial conditions and development outcomes of Japan, South Korea and Taiwan should not be lost to others.

Implications of economic liberalisation for equity

The fiscal and foreign debt crises of the early and mid-1980s took a heavy toll on many governments in the region. Most governments emerged leaner by the late 1980s, though not necessarily meaner, i.e. more effective, partly due to economic liberalisation which served to undermine state capacities and, often, capabilities. Government expenditure as a percentage of total economic activity has been reduced, public sectors checked, state-owned enterprises constrained and privatisation policies pursued. Government regulations have been reduced, mainly to induce greater private, especially foreign, investments. While economic welfare has often been adversely affected, some waste and undesirable regulation has also been eliminated in the process. However, available information does not allow meaningful welfare balance sheets to be drawn up in this regard.

The consequences of globalisation and liberalisation for growth, poverty and income inequality in East Asia are quite complicated and also quite contingent. Available information does not allow a carefully considered assessment of the welfare consequences of recent liberalisation and globalisation for different socio-economic groups, including those in poverty. South Korea and Taiwan have lacked natural resources, but have transformed their economies through interventionist industrial policies. Malaysia, Thailand and Indonesia have relied more on resource rents to alleviate poverty, though growth has also been important. Export-oriented industrialisation, driven primarily by foreign capital in Southeast Asia, has helped reduce unemployment and thus raised household incomes in these economies.

Poverty alleviation in these economies has been facilitated by rapid growth. The East Asian economies reviewed here seem to be examples of economies that have managed to grow rapidly without seriously worsening income distribution. Poverty, both urban and rural, has generally continued to decline in these economies. All these economies introduced policy instruments to alleviate poverty and, to a lesser extent, to improve income distribution.

Income distribution in South Korea, Taiwan, Malaysia and Indonesia has intermittently experienced some improvements. Only Thailand, the least committed to redistribution, has experienced worsening income distribution over the long term. Thailand, which has historically been the most liberal of the five economies under consideration, has experienced the most sustained long-term tendency toward greater income inequality. In fact, it was the only economy among the five that recorded increased poverty in the mid-1980s, and greater urban poverty in 1990.

Before the currency and financial crises of 1997 induced a regional recession in 1998, liberalisation had not significantly increased poverty in the region (except perhaps in Thailand). However, liberalisation seems to have

been accompanied by worsening inequality in Malaysia, South Korea and Taiwan – a trend more consistently pronounced in Thailand from earlier on. In other words, although poverty in these economies continued to fall with rapid growth, productivity gains and declining unemployment, income inequality has been worsening in South Korea, Taiwan and Malaysia from the 1980s.

Liberalisation since the 1980s seems to have adversely affected income distribution in the region. Rising income inequality under essentially *laissez-faire* conditions in the past have re-emerged as the economies of the region have liberalised once again. Deregulation, reduced government intervention, declining commitment to earlier redistributive mechanisms, and greater government efforts to meet investor expectations have probably all contributed to increased inequality in the region. Recent and current trends suggest the likelihood of worsening inequality in the future (see Onchan 1995; Ishak 1996). Redistributive policies have been discouraged by liberalisation as well as renewed commitments to protecting property rights, aggravating social inequality in these countries. More liberalisation is likely to further exacerbate such regressive trends.

Hence, contrary to the claims of the World Bank, the East Asian economies do not demonstrate any clear relationship between export-oriented industrialisation and better income distribution (also see Alarcon-Gonzales 1996). While export orientation may have been necessary to sustain long-term growth, equity may not improve without effective mechanisms for redistribution, usually implemented through government intervention. The World Bank recommends that other developing countries try to emulate the second-tier Southeast Asian NICs, especially since the mid-1980s, when they liberalised. However, the evidence suggests that South Korea and Taiwan have had much more egalitarian growth compared to Malaysia, Indonesia and Thailand, and that inequality has increased all round since liberalisation from the mid-1980s, especially in Southeast Asia.

The simplistic picture of East Asian ‘growth with redistribution’ or ‘egalitarian growth’ does not stand up very well to careful empirical scrutiny. Northeast Asia has been distinctly more egalitarian than Southeast Asia, and recent economic liberalisation has exacerbated inequality in the region. Interestingly, those economies with more elaborate, effective and successful industrial policies have also been more egalitarian, although available data does not allow meaningful testing for causality.

In light of these developments, it is important to consider possible measures to try to sustain poverty decline and reduce inequality in the face of continued pressures for trade, financial and investment liberalisation, and especially with the unprecedented regional recession in the aftermath of the 1997–8 currency and financial crises. Poverty alleviation and redistribution policies are still needed, particularly in Thailand, where such policies have been absent, and income distribution has been worsening over a few

decades. Evidence from the region suggests that efforts targeting poor groups – e.g. land reform, subsidised housing and subsidised access to education – have been successful and should be emulated elsewhere.

Liberalisation of agricultural, especially food, trade should be gradual to facilitate adjustments, since real wage increases in South Korea and Taiwan from the late 1980s will most likely lead to cheap food imports from abroad. Such liberalisation will inevitably destroy the livelihoods of many farmers in South Korea, though the problem will be less severe in Taiwan due to the importance of off-farm work. Similarly, Malaysia and Indonesia and, to a lesser extent, Thailand too will face similar challenges as cheap rice imports from Vietnam and China enter their economies. The livelihoods of farmers would have been negatively affected, especially in Indonesia and Thailand, though the collapse of many East Asian currencies since mid-1997 has changed the terms of trade for agriculture once again, at least for the near future. Alternative employment sources also need to be identified and developed by the governments concerned, e.g. the promotion of industrial dispersal to raise off-farm incomes, as in Japan and Taiwan. The regional recession from 1998 has revived interest in questions such as food security, which had been largely forgotten with the enthusiasm for liberalisation and globalisation in the preceding decade.

While direct subsidisation may be difficult to sustain in the emerging trade environment, new forms of indirect subsidisation may well compensate. For example, increased government education and training efforts can become an even more important means of advancing industrial and technological capabilities. Taiwan and South Korea have successfully pursued such a strategy for some time. While the demand for skilled labour has risen substantially in Malaysia and Thailand, earlier government efforts have been inadequate to meet such requirements. The improvement of the labour force in this way will also help raise the competitiveness of firms and economies, and should narrow wage differentials and income inequality more generally.

The East Asian experience with labour market liberalisation is quite complicated. Labour market liberalisation has undoubtedly undermined labour market segmentation in significant ways, but such labour market rigidities still prevail. Some rigidities are becoming even more pronounced with more educational and skill specialisation as well as greater use of foreign labour – with reduced ‘citizenship rights’ – at both ends of the labour force. In most East Asian economies, except for the ‘new democracies’ of South Korea and Taiwan, labour regulations have not improved significantly in the last decade, resulting in greater casualisation of labour relations, thus enhancing labour flexibility without a concomitant improvement in labour security. The significance of corporate savings in explaining the high savings rate associated with the East Asian region suggests that this may have been at the expense of labour incomes.

While changing production relations at the international level have brought about some of this greater flexibility, much of this has been promoted by governments believing this to be desirable for attracting investments and thus enhancing growth. However, there has been relatively little resistance to such casualisation, as its negative consequences were partly offset by the post-1985 boom (after the appreciation of the yen and the currencies of the first-tier East Asian NIEs), which has been accompanied by declining unemployment as well as improved labour remuneration to retain employees. However, such casualisation negates the likelihood of corporatism, and hence of greater commitment by workers as 'stakeholders', as in Japan and Singapore. Weak institutional development governing labour relations has exacerbated the situation of workers in the region. Liberalisation is also likely to have weakened the bargaining power of workers in Malaysia, Thailand and Indonesia, and may thus have worsened income distribution.

Unions should instead be encouraged to collaborate with management and the government to enhance social corporatism so that enhanced trust, commitment and efficiency from such collaboration can help raise competitiveness and workers' remuneration. This would probably involve more multi-skilling, cross-skilling and institutionalisation of the work process, including union participation in worker training to strengthen effective tripartism. Such flexible work practices can also lower occupational hierarchies, status differentials and income inequalities.

Technological development is essential for the success of such efforts. Growth should become a shared responsibility, with all parties partaking of its fruits. Commitment to technology development – e.g. through subsidisation of catching-up activities – will become increasingly crucial to sustaining industrialisation, growth and improved living standards. However, technology development efforts should not merely focus on firms alone. The broader institutional set-up for the national system of innovation, including upgrading labour force skills, will be critical for such efforts.

Insofar as human development efforts are not proscribed and circumscribed by the new international economic governance, such efforts may become the main instruments of developmental intervention still open to governments. Already, this has been recognised in recent years by increased attention to what is called human resource development (HRD). While certainly better than the previous focus on human capital accumulation in its various forms, this is still a far cry from human development (HD) as understood by the United Nations Development Program (UNDP). Nevertheless, as traditional industrial policy measures are increasingly negated, there is likely to be greater interest in and attention to HRD efforts, offering a rare window of opportunity for HD proponents to advance their agenda. However, there is also a danger that only HD measures considered supportive of economic growth and industrialisation, especially in the short

Table 6.13 Four HPAs: health indicators, 1980–97

<i>Economy</i>	<i>Access to health care (%)</i>		<i>Access to safe water (%)</i>		<i>Access to sanitation (%)</i>		<i>Infant mortality rate (per 1,000 live births)</i>		<i>Maternal mortality rate (per 100,000 live births)</i>		<i>Malnutrition (% under 5)</i>
	1980	1993	1982	1995	1982	1995	1980	1997	1990–7	1994/5	
South Korea	–	100	83	83	100	100	26	9	30	–	
Malaysia	–	88	71	89	75	94	30	11	34	26	
Thailand	30	59	66	89	47	96	49	33	200	13	
Indonesia	–	–	39	65	30	55	90	47	390	40	

Sources: World Bank (1997: Table 6, pp. 224–245); World Bank (2000: Table 7, pp. 242–243).

Note: – indicates data not available.

Table 6.14 Five HPAEs: selected human development indicators, 1970–95

<i>Economy</i>	<i>Life expectancy at birth (years)</i>		<i>Adult (15+) literacy rate (%)</i>		<i>Average income of poorest 20% (1985 PPP)</i>	
	<i>1970</i>	<i>1997</i>	<i>1970</i>	<i>1997</i>	<i>1970*</i>	<i>1990**</i>
South Korea	60	73	88	98	303	2,071
Malaysia	62	73	60	85	431	1,070
Thailand	58	69	79	95	361	726
Indonesia	48	65	54	85	392	908
Philippines	57	69	83	94	218	435

Sources: World Bank (1997); Deininger and Squire (1996); World Bank (2000, Table 2, pp. 232–233).

Notes: *1976 for Indonesia, 1965 for South Korea and the Philippines, and 1969 for Thailand. **1988 for South Korea and the Philippines, 1989 for Malaysia, and 1992 for Thailand.

and medium term, will be adopted, as others are neglected and eventually quietly forgotten.

HD proponents assert that, in the long term, continued progress in HD – health, education and labour productivity – will be necessary to sustain economic growth and improve standards of living. Intuitively, of course, economic growth and human development should increase in tandem. This hypothesis is tested empirically, using a sample of developing countries, in Ramirez, Ranis and Stewart (1997). They postulate a cumulative cycle of economic growth and human development, based on two chains: one linking economic growth to human development, the other linking human development to economic growth. They find that higher social expenditure improves human development, and that high investment rates and more equitable income distribution bolster economic growth. Hence, it is concluded that most developing countries follow either a progressive ‘virtuous cycle’ of high economic growth and human development, or a regressive ‘vicious cycle’. As expected, East Asia’s HPAEs fit into the ‘virtuous cycle’ category, with relatively high literacy rates and life expectancies, among other positive social indicators. As suggested by Tables 6.13 and 6.14, these countries are well poised for further human development and economic growth in the future. However, the outcome will depend on governments’ commitment to human development measures, especially through social expenditures.

Notes

* This chapter is largely based on parts of Jomo (1999). Assistance from Mohd Aslam, Foo Ah Hiang and Lee Hwok Aun is gratefully acknowledged. The usual caveats apply.

- 1 Bumiputera translated literally means 'sons of the soil', but is generally used to refer to the Malays and other indigenous people of Malaysia.

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7 Financial capacity and governance in Southeast Asia

Natasha Hamilton-Hart and Jomo K. S.

The currency and financial crises that broke in Asia in mid-1997 have provoked widespread re-evaluation of several orthodoxies in national and international finance. The severity and spread of the crises brought into the mainstream previously obscure and marginal debates, effectively undermining the 'Washington consensus' that had prevailed over the preceding decade. Some indication of the change in sentiment can be found in the report carried by a leading banking industry periodical, which featured comments by prominent economists on the dangers of unfettered financial markets (*Euromoney*, September 1998: 71–80). While debates on the currency crisis reveal more areas of disagreement than agreement, there seems to be one issue on which most are agreed: the need for more (or better) financial governance. The concept, however, is remarkably elastic and, in many formulations, approaches the tautological. This study aims to critically consider financial capacity and governance in the financial systems of the major Southeast Asian countries.

The current debate on the region's currency and financial crises has raised a number of questions about the wisdom and nature of the financial reforms carried out in the 1980s and early and mid-1990s. The defining characteristics of the various national financial systems in the years leading up to the crisis are not easily assessed. In some analyses, countries in the region had substantively liberalised financial systems. In other accounts, these same financial systems were substantively controlled. Many commentators have sought refuge in the assessment that financial reform in the region was 'incomplete'. This formulation usually suggests the desirability of further financial liberalisation, rather than liberalisation without adequate prudential regulation. However, the latter may explain much of the vulnerability to crisis displayed by countries in the region, but also raises more fundamental issues. Was the failure of national financial governance mere oversight on the part of national policy-makers? Or were there significant obstacles to better governance? How can one explain particular decisions that, even without the benefit of hindsight, were clearly costly or perverse? Finally, to what extent do external factors, especially internationally mobile

Table 7.1 Asia-Pacific: indicators of the financial crash, 1997-99

	Stock market*		Currency (units per US dollar)**			GDP growth***	
	30.6.97	30.9.98	23.1.97	23.1.98	9.11.98	1998	1999
Australia	100	75	1.295	1.521	1.578	3.7	4.0
Indonesia	100	9	2,393	12,900	8,200	-15.0	-0.6
Korea	100	26	855	1,725	1,321	-7.0	-0.7
Malaysia	100	23	2,491	4,499	3,79	-5.8	-0.7
New Zealand	100	50	1,447	1,732	1,875	-0.9	1.2
Philippines	100	26	26.33	42.16	39.84	-0.2	2.0
Singapore	100	39	1,407	1,763	1,647	-2.0	0.7
Thailand	100	28	25.81	54.22	36.78	-8.0	-1.0

Sources: *Value of US\$100 invested in stock exchange - Ross Garnaut, in *The Australian*, 20 October 1998. ***FEER*, 5 February 1998; *FEER*, 19 November 1998. ***Forecast growth rates - *FEER*, 19 November 1998.

finance, limit the effectiveness of even the most competent of national regulatory authorities?

Given the severe consequences of the region's financial crash, these questions are of great importance. It is hard to underestimate the severity of the crisis, even when the partial recoveries of stock markets and currency values towards the end of 1998 are taken into account. As shown in Table 7.1, the decline in the prices of financial assets was extraordinarily sharp for countries with low inflation. Banking system fragility remains a serious problem, ranging from high levels of non-performing loans in countries such as Thailand and Malaysia to virtual collapse in Indonesia. There are differences as to the severity of the banking crisis. Malaysia, for example, was confronting a large problem loan situation in the banking system as of late 1998, but a full-scale financial crisis was avoided: there was no serious foreign currency debt problem, and intervention by the authorities had ensured that credit did not entirely dry up. Indonesia was the worst affected country in the region, suffering a disastrous currency collapse and a grid-locked credit system. Although the Indonesian rupiah strengthened towards the end of 1998, some analysts considered this to be out of line with the country's likely prospects (*Business Times*, 21 November 1998).

The effects of the crisis have not been confined to the financial sector. It has had ongoing effects on the real economies of most countries in the region. By the third quarter of 1998, all the East Asian region's major economies except Taiwan and China were in recession and most 1999 GDP forecasts were for negative or low economic growth. Corporate bankruptcy rates rose dramatically in Hong Kong, Malaysia, Korea, Thailand and Indonesia during 1998. In Indonesia, problems with the banking system and the external indebtedness of the corporate sector were imposing severe costs on the country (Johnson 1998). According to an official survey, more than a third of Indonesia's key industries had been forced to close by October 1998, and of those remaining open, about 30 per cent had laid off workers, reduced work days and reduced shifts (*Business Times*, 7 November 1998). Unemployment and poverty levels in Thailand and Indonesia in particular rose precipitously during 1998.

These debacles – in countries that had been seen as 'miracle economies' to emulate – left the world asking what had gone wrong. 'What happened to Asia?' as Krugman (1998) put it. A slowdown might have been expected after a decade of economic growth rates that were (with the exception of the Philippines) among the highest in the world. Krugman, in fact, was one of those to foreshadow a reversion to slower growth (1994). But slower growth is one thing; no one expected a crash of such severity and speed. A few cautions had been sounded. For example, the IMF had reportedly warned the Thai authorities about Thailand's current account deficit and banking system fragility. But 'the warnings were made only in secret and cannot be verified. Moreover these warnings, if they were given, were inconsistent with

Table 7.2 Capital flows to five East Asian crisis countries^a (US\$ billion)

	1994	1995	1996	1997 ^b	1998 ^c
Current account balance	-24.6	-41.3	-54.9	-26.0	17.6
External financing (net)	47.4	80.9	92.8	15.2	15.2
Private inflows (net)	40.5	77.4	93.0	-12.1	-9.4
Direct equity	4.7	4.9	7.0	7.2	9.8
Portfolio equity	7.6	10.6	12.1	-11.6	-1.9
Bank credit	24.0	49.5	55.5	-21.3	-14.1
Non-bank credit	4.2	12.4	18.4	13.7	-3.2
Official inflows (net)	7.0	3.6	-0.2	27.2	24.6
Residents and other (net) ^d	-17.5	-25.9	-19.6	-11.9	-5.7
Change in reserves ^e	-5.4	-13.7	-18.3	22.7	-27.1

Source: Institute of International Finance, 'Capital Flows to Emerging Market Economies', 29 January 1998 [<http://www.iif.com/PublicPDF/cf-0198.pdf>].

Notes: a Korea, Indonesia, Malaysia, Thailand and the Philippines; b estimate; c forecast; d includes resident net lending, monetary gold, errors and omissions; e a negative value indicates an increase.

published IMF commentary at the time, including that contained in the IMF's *Annual Report 1996* and its special 1996 report on the 'Thai economy' (Warr 1998: 59). Bad debt and regulatory problems in the Indonesian banking system had been public issues since the early 1990s. The high debt to equity ratios of Korean conglomerates were also well known. Overall, however, positive assessments of the region's prospects predominated; spreads (the risk premium attached to international lending rates) on external borrowing by the region's banks and corporations actually narrowed in the years before the crisis; and, as shown in Table 7.2, inward capital flows remained strongly positive until their sudden reversal.

So what went wrong? Alternative explanations are discussed in a later section. At this stage, it is sufficient to say that the major disagreements reflect fundamental differences in opinion as to how financial markets operate and, consequently, the implications of different financial policies. If financial markets are assumed to be naturally tending toward Pareto-optimal equilibria, the origins of financial crises will be presumed as factors that interfere with market mechanisms in either the financial or real sectors. Such factors include policy-induced moral hazard, perverse incentives due to interference with prices, oligopolistic banking structures and government-mandated financial repression. On the other hand, when financial markets are seen as inherently imperfect, the origins of financial crisis are more likely to be traced to the inadequacy of private or public mechanisms to overcome market failure. In this view, the crisis and the severity of the crisis may be attributed to factors such as inadequate prudential regulation, uneven development of financial markets and poor policy responses.

One major conclusion presented here is that financial markets tend to allocate resources imperfectly even in the best of circumstances. Such problems are more serious in developing countries, which are also more prone to serious instability, particularly following substantial liberalisation. Managing financial markets is thus a demanding task for government, regardless of whether the policy regime aims at more market-based allocation or greater intervention is attempted. Largely bank-based financial systems in which competition is limited may in fact be appropriate for developing countries given the risks associated with more dynamic but unstable liberalised systems.

Our second major finding is that developing and maintaining appropriate financial governance is a crucial factor determining policy outcomes, since the main cause of failure is often in the implementation rather than the design of financial policy. Significantly, the scope for abuse by politically influential interests may not decline but may actually increase with financial sector deregulation. Indeed, the consequences of inadequate governance capacity to regulate such interests are likely to become more costly as the financial sector develops under liberalised policy regimes. The international openness of financial markets also increases the risk of instability associated with financial liberalisation, creating additional demands on national – and international – governance systems.

The following section reviews some of the theoretical issues concerning financial markets and governance that have implications for policy in the financial sector. Second, the country cases are introduced with a presentation of pre-reform financial policies, structures and outcomes in Indonesia, the Philippines, Malaysia and Thailand. The next section discusses the financial reform experiences of these countries. The penultimate section draws on the information given in the country cases to assess contending explanations of the 1997–98 financial crisis in Southeast Asia. Some conclusions for financial policy and institution building in developing countries are offered in the final section.

Analytical issues

Governments intervene in national banking systems and capital markets for a variety of reasons and with different consequences. It is widely accepted that a minimum level of intervention is required for prudential reasons. Beyond this, intervention may be primarily protective or redistributive, structured to favour particular constituencies. In certain cases, more strategic or developmental policies may be attempted. Each type of intervention has a different rationale in economic theory and, it is argued here, each requires specific capacities on the part of national regulatory authorities. The major theoretical and policy issues are reviewed here, including those associated with internationally open financial systems.

Finance and development

The relationship between the financial system and economic development is contentious because different economic perspectives accord differing degrees of importance to three factors: information asymmetries, transaction costs and price incentives.¹ The degree to which intervention in financial markets is advocated partly depends on assumptions about the role of finance in generating economic growth as well as the relative weight accorded to each factor. Information asymmetries are a common feature of financial transactions. Simply put, borrowers will always have more information about their business than outside creditors will be able to gather. Creditors' imperfect information means that the price of a financial asset will only imperfectly reflect credit risk and credit can be inefficiently allocated. Of course, creditors can take steps to minimise gaps in their information, but some such efforts are costly.

As highlighted by the now substantial literature on transaction costs, organisations play a key role in reducing costs associated with information gathering, monitoring and analysis (Williamson 1975, 1985). Because they reduce transaction costs associated with transforming savings held by one economic agent into investment by another economic agent, specialised financial intermediaries such as banks ought to enhance efficiency. Hence, an early line of thought in the literature on finance and development held that increasing the degree of financial intermediation in a country would have positive effects on growth (Gurley and Shaw 1955).

The implications of these features of financial transactions and intermediation have developed into two increasingly divergent lines of analyses. On the one hand, followers of McKinnon (1973) and Shaw (1973) have emphasised the advantages of increasing the ratio of financial assets in the economy (financial deepening). Financial liberalisation, particularly the removal of interest rate controls and implicit taxes on financial intermediation, has been promoted as a means to financial development and the more efficient use of financial resources. In general, these models have moved away from Gurley and Shaw's original thesis regarding the advantages of financial intermediation, which has its rationale in the transaction costs associated with direct financial transactions between borrowers and lenders, to emphasise the conventional advantages of the price mechanism as an allocative device. In this view, encouraging the liberalisation of all financial markets, not just the development of intermediated finance, will yield efficiency gains as investment risks are most accurately priced in competitive, liquid and diversified markets for financial assets.

In contrast, various theories of finance and development have placed greater emphasis on factors that make entirely market-based financial systems sub-optimal. In this respect, early work by Gerschenkron (1962: 5–30) remains influential. In his account, countries that industrialised at a

later date than the leading economy of the day needed to create systems for industrial finance that differed greatly from those in the leading economy. Thus, Germany developed a system of industrial finance in which banks (rather than the stock market) provided most of the capital for industry and, rather than remaining in their role as external creditors, the banks maintained close management ties to industrial firms. Russia, a case of even later development, adopted a state-financed path to infrastructure development, which was then succeeded by a more bank-based system. Different forms of financing emerged, partly because the optimum scale of industry, and thus the amount of finance required, tended to be much greater for late developers, at least for heavy industries. In addition, the credit infrastructure in less developed countries would not normally support the financing needs of industrial development. To mobilise sufficient resources and monitor their use, intervention by government or other authoritative organisations is required.

Essentially, Gerschenkron's analysis of late industrialisation suggests that in certain circumstances, market mechanisms for the provision of external finance for investment will fail, to some degree, and thus, the creation of 'quasi-internal' capital markets can be more efficient. This insight has been developed and expressed more formally by later economists, who have developed models of financial intermediation that incorporate information asymmetries and transaction costs.² In general, these models provide the bases for introducing certain non-market mechanisms for the allocation of finance. Internal capital markets for the purpose of allocating financial resources can become efficient because financial transactions 'are especially subject to moral hazard and costly contract enforcement' (Lee and Haggard 1995: 6). For this reason, individual firms often develop an internal capital market for their savings and investment decisions. However, given the need for a critical minimum capital market size for efficiency reasons, German-style universal banks – or even governments – may also replicate elements of an internal capital market.

The close ties between banks and industry promoted by universal banks have the effect of mitigating the information asymmetries associated with external finance. Close bank–industry ties are also associated with the provision of longer-term finance (Zysman 1983), which may be particularly important for late developers aiming to 'catch-up' with technological advances. Government intervention in the financial system can provide alternative forms of hierarchical credit allocation. Regulatory controls on the prices of financial assets resulting in below-market or even negative interest rates for certain categories of borrowers have been used to influence investment and credit decisions. The rationale for this type of financial repression lies in the view that, in certain circumstances, a market-based financial system will not provide adequate incentives to invest in technological upgrading or industrial development. If the lead-time required for

technology acquisition is significant, uncertainty will be high and credit risks priced accordingly, even if the projected investment has long-term or external benefits that would make it viable or desirable. In these circumstances, 'getting prices wrong' – including the price of credit – may be an integral part of development policy (Amsden 1989).

The record of attempts at this type of financial repression is quite chequered. Some degree of financial repression in Taiwan, Korea and Japan was consistent with excellent economy-wide performance and significant developmental success (Patrick and Park 1994). However, in many developing countries, developmental goals have not been realised and financial repression has merely created disincentives for financial savings and, very plausibly, grossly inefficient investment decisions. In part, the record is poor because this type of policy is particularly subject to implementation problems. It is also the case that advocates of financial repression have done a better job of explaining why market-based financial systems may fail in theoretical terms, than they have in clearly identifying the conditions in which alternative financial systems will allocate credit well.

Aware of the theoretical and practical limitations of policies of financial repression involving explicit credit targeting, a theory of financial restraint has recently been advanced (Hellman, Murdock and Stiglitz 1997). Financial restraint involves the inhibition of price competition among financial intermediaries while maintaining market-based incentives. Financial restraint and targeted credit subsidies are both attempts to channel rents to economic agents for the purpose of creating positive externalities for the economy as a whole. But while targeted credit subsidies provide economic rents to borrowers, financial restraint allocates rents to financial intermediaries, otherwise leaving specific credit allocation decisions to be guided by market-based incentives. Interest rate controls limit price competition for bank deposits, but as long as real interest rates remain positive, financial savings may still be encouraged through non-price competition and the confidence-enhancing effects of reduced competition in the banking system. Regulatory controls on lending rates are consistent with non-price competition among creditors since they still have an incentive to maximise earning assets. But reducing price-based competition means that long-term banking relationships are likely to be encouraged, mitigating the problem of imperfect information in financial transactions.

Financial markets: stable or unstable?

Some degree of prudential regulation of financial markets is now accepted by most analysts, and virtually no national financial market operates without some prudential regulation. Two major rationales exist for some prudential regulation. In the first place, financial markets seem particularly susceptible to 'irrational' (that is, not justified by underlying economic realities)

behaviour on the part of investors as self-fulfilling spirals of first enthusiasm and then panic can dominate credit allocation on the basis of an assessment of underlying factors. When the expected price of a financial asset in the future depends significantly on the behaviour of other investors, each investor will, quite rationally, pay more attention to investor behaviour than a company's actual earnings prospects.³ Regulations that attempt to minimise the scope for 'irrational exuberance' (to borrow a phrase from the current chairman of the Federal Reserve Board) and intervention in the form of lender of last resort facilities during a panic can dampen, if not avoid, these cyclical swings in financial markets.

Prudential regulation and a lender of last resort facility are also features of most financial systems because of the degree of systemic risk that is generally perceived to exist. Systemic risk, in this sense, is the risk that the failure of one agent in the financial system that results in default on its financial obligations will generate a chain reaction of default by other institutions, even though they may be solvent. An element of systemic risk exists in all economic systems, but in fractionally backed banking systems or other financial markets where leverage is significant, systemic risk becomes particularly important. The degree to which systemic risk is an inherent problem in financial systems is debatable, and the remedies proposed to manage it may also exacerbate it. That is, the more regulatory authorities intervene to ensure the soundness of market participants, the less incentive financial actors have to carry out their own monitoring of those they transact with. Further, the more prudential regulations imply an engaged national authority with an interest in system stability, the more lender of last resort intervention will be expected. And as originally captured in Walter Bagehot's *Lombard Street*, this situation creates moral hazard – the problem that actors who expect to be rescued from the consequences of risky behaviour have no incentive to minimise or provide for risks.

Financial governance

The foregoing discussion demonstrates that some form of financial governance is a practical necessity. Even a deregulated, market-based financial system requires national authorities to play an active role in maintaining, if not also in establishing, such a system. Simply put, finance is a difficult sector that is demanding on government regardless of policy regime. In the event of a financial crisis, disengagement is not politically possible in any but the most extreme cases. Even if it were politically feasible for governments simply to stand back and allow widespread default to run through the financial sector and then the real economy, this would probably be an extremely costly course of action. Therefore, moral hazard problems, raised by many as being behind East Asia's recent crises, are unavoidable. As an increasing number of economists have argued, a market-based financial system

requires adequate human resource development together with a system of law, regulation, information dissemination and prudential enforcement (McKinnon 1986; Hugh Patrick, cited in Lee and Haggard 1995).

It seems likely that some forms of 'command' in the allocation of credit will be especially advantageous when the institutional structure to support a competitive, market-based system does not exist. However, deficiencies in governance capacity will also be consequential in such hierarchical systems as they are subject to implementation problems. As the literature on rent-seeking reminds us, regulatory interventions tend to create openings for politically influential actors to realise private gains at public cost. Any attempt to channel rents productively thus requires some capacity to discipline the economic actors that benefit from them. The more ambitious financial and industrial policy is, the more it appears that problems of discipline, design, information and policy rigidity will compromise actual outcomes, even if the original intervention is theoretically justifiable. However, as the cases of Indonesia and the Philippines discussed here show, when governance is severely defective, with administrative ineptitude common and corruption virtually systemic, it is likely that these features of government will be of overriding importance whatever the financial policy regime. It makes little sense, for example, to debate the marginal effects of minor adjustments to interest rates when specially-favoured individuals avoid paying the principal on their loans.

This study shows the potential for systematic abuse of policy by rent-seeking groups both before and after reform aimed at substantial deregulation and liberalisation. If the costs of post-deregulation crises are taken into account, it is not at all evident that interventionist financial policies are easier for governments, or that the costs of government failure are higher under interventionist policy regimes. Post-deregulation financial systems all over the world seem especially vulnerable to financial instability, which tends to be exacerbated by international capital flows (Diaz-Alejandro 1985; Park 1994; McKinnon and Pill 1996; Demirguc-Kunt and Detragiache 1998). Based on this evidence, liberalisation is not an easy or attractive option for governments with less than robust regulatory and surveillance systems.

This returns us to the question of what governance capacity in general and financial governance in particular consists of. It is not easy to make an *ex ante* specification of the factors producing 'good governance'. Books extolling the governance capacities of countries in Asia (Root 1996; Rowen 1997) were appearing as the crisis was brewing. One detailed study of Thailand singled out the financial sector as one where 'social capital' – a term used to describe the conditions conducive to effective governance – was particularly well developed (Unger 1998). Considering that poor governance in the Thai financial sector was the source of the region's meltdown, it should be quite clear that there are few areas of agreement on how

one recognises governance capacity. It is tempting to conclude that the concept is meaningless: when East Asia enjoyed spectacular rates of growth, it had good governance; when it crashed, it was discovered to have flawed governance.

The country studies below show that there are particular institutional features associated with more or less effective financial sector governance. Democracy as such does not emerge as a necessary factor in effective governance; while political stability and limits to political competition seem to be important. Administrative organisations that enjoy high levels of staff expertise and relatively high prestige are often associated with more effective governance. Complete insulation of the administrative sphere from politics is not possible and has rarely existed, certainly not in the countries under study. It seems important for key administrators to have roles and (to some extent) interests that differentiate them from political and business actors. Further, the basis for interaction between different types of actors should be regularised rather than subject to personalistic criteria. Overall, attention to state-building along Weberian rational-legal principles emerges as an important condition of effective governance.⁴

Open economy financial policy

An open financial system complicates the tasks of financial sector governance, considerably raising the demands on government. In an open system, government capacity becomes even more important at lower levels of policy ambition.⁵ Since international factors have been important for countries in this study – most dramatically with their recent currency crises – the constraints on government arising from financial openness are briefly reviewed here. One of the basic constraints of openness is described in a well-recognised (in theory at least) axiom known as the Mundell-Flemming thesis.⁶ Simply put, it holds that under conditions of capital mobility, governments must choose whether they wish to control the external price of their currency (the exchange rate) or internal real interest rates. Monetary autonomy, stable exchange rates and capital mobility are not all simultaneously realisable. In this situation, national authorities are forced to make difficult trade-offs. As we shall show in a later section, the attempt to avoid such trade-offs was, to some extent, responsible for the region's currency crisis.

Financial openness places particular demands on government by tending to undermine national efforts at prudential regulation and lender of last resort functions. Singapore's relatively internationalised but comparatively stable banking system shows that national prudential standards are not necessarily compromised by openness. But, as shown by the Indonesian case, the ability to circumvent national regulations by going offshore was a major factor behind the failure of both public- and private-sector

governance. While national regulators may be hampered in their prudential efforts, they are no less required to act as lenders of last resort when a financial crisis does occur. The same caveats about the risks of moral hazard apply, but sovereign guarantees are generally necessary to restore confidence in a real crisis. When a crisis of confidence revolves around the currency – rather than the domestic banking system – the national lender of last resort is only able to lend to the extent that its foreign exchange reserves allow it to do so. And to exacerbate the situation, the belief that the national authority may have to run down its foreign exchange reserves can itself further erode confidence in an economy and its currency. These are real problems raised by an international financial system that remains primarily regulated at the national level. The current debate about reforming international cross-border financial flows is beyond the scope of this study, but the issues raised by the debate are important in the cases presented here.

Pre-reform financial regimes

This section looks at banking and financial policy in four Southeast Asian countries – Indonesia, the Philippines, Malaysia and Thailand – in the years before they initiated major reforms in the financial sector. First, the major features of financial policy and financial system organisation are described. The degree of government activism in the financial system is assessed and, more specifically, the nature of government intervention. Second, monetary and foreign exchange policies are reviewed with the aim of summarising the major policy goals, mechanisms and outcomes. Third, we examine the underlying conditions that enabled – or compromised – national policy in these areas.

Indonesia

Of the countries covered in this study, Indonesia had the least developed financial system at independence (declared in 1945, ceded by the Dutch in 1949). Relatively sophisticated, internationalised foreign banks dominated the banking system until most were nationalised or brought under substantial Indonesian control in the late 1950s. These banks were, however, a small enclave in an economy that made very little use of banks or formal financial markets. By the end of the 1950s, the stock exchange was stagnant (Bank Indonesia, *Report for the Financial Year*, 1959–60: 99–101) and, despite being re-opened in the 1970s, did not become active until the late 1980s. The inter-bank market in the 1950s was extremely limited and the financial sector remained comparatively undeveloped until the 1980s.

Government-led financial development efforts in the early years of independence focused on the establishment of several state-owned commercial banks. In the late 1950s, the largest foreign banks, the Dutch banks, were

nationalised and, in the early 1960s, the remaining foreign banks were also taken under national control. During the periods of parliamentary democracy (until 1957) and 'guided democracy' (until 1966) under Indonesia's first President, Sukarno, the state banks largely functioned as a means of channelling government budget funds to political supporters and public sector projects.⁷ General policy disarray and adverse economic and political circumstances in the last decade of President Sukarno's rule meant the complete breakdown of earlier attempts at a coherent industrial or economic development strategy. Hyperinflation in the mid-1960s saw the banking system, indeed the country as a whole, effectively bankrupted by the time General (later President) Suharto's New Order took power in 1966.

In the late 1960s, the new government's economic policy efforts focused on bringing inflation down through quite drastic monetary levers, re-negotiating external debt and securing the financial resources needed for recovery (Arndt 1984: 135–159; Winters 1996). Foreign banks were admitted in 1968, but thereafter, entry into the banking sector was closed to foreigners and restricted for Indonesians until deregulation in the 1980s. The government was successful in its use of high interest rates to mobilise substantial savings from 1969 to 1972, but at the cost of negative interest spreads. For most of the time between 1973 and 1982, real deposit interest rates were negative (Cole and Slade 1996: 18) and bank savings growth limited (Atiyas *et al.* 1994: 97). In terms of banking offices per inhabitant, development was more or less stagnant from the early 1970s until 1989.⁸ Non-bank financial institutions (NBFIs) and private development finance companies were promoted in the 1970s and early 1980s (McLeod 1984), but they did not function as expected and the NBFIs (most in poor condition) were converted into commercial banks in 1992.

Together with a state-owned national development bank and a large number of regional development banks, the state sector accounted for most banking system assets from the late 1950s until reform in the 1980s. In the 1970s, state banks accounted for about 80 per cent of total bank assets (Chant and Pangestu 1994: 229). In addition, a number of subsidised lending programmes for small business and agriculture were developed from the late 1960s (Rahardjo 1995: 273–328). As part of these efforts, the central bank, Bank Indonesia, was used as an 'agent of development' to finance officially prioritised sectors and organisations.⁹ As well as providing re-discounting of commercial bank credits, direct credits from the central bank were used to fund high-profile government agencies such as the commodities board (Bulog), to bail out the state oil company after 1975 and to provide subsidised credit for favoured individuals. In this respect, the direction of subsidised credit changed noticeably over time. In the late 1960s, subsidised credits for rice stabilisation and farmers accounted for over 40 per cent of all bank credit, a proportion which declined fairly steadily to 13 per cent in

1975, 9 per cent in 1980 and 2 per cent in 1990. From 1975 to 1980, the single largest component of subsidised credit was accounted for by repayments on the state oil company's loans, run up as a result of fraud and mismanagement in the early 1970s (MacIntyre 1993: 150).

An unusual feature of the pre-reform Indonesian financial system was that a heavily government-controlled banking system co-existed with an exceptionally open capital account. A complex system of foreign exchange allocation and multi-tier exchange rates in the Sukarno period had been associated with frequent scandals involving the allocation of foreign exchange, widespread bribery and fraud, and a severe smuggling problem (Higgins 1957; Simkin 1970). With the new regime, a progressively simplified foreign exchange system was introduced from 1967, and in 1970, all capital account controls were eliminated. Since then, exchange controls have been practically non-existent, without even the reporting requirements imposed by other countries after liberalisation. Since 1974, overseas investment by Indonesian companies has been officially prohibited, but this has not prevented extensive investments being made through foreign-incorporated companies (Hamilton-Hart 1999: 77).

Despite this capital account openness before the 1980s, monetary policy showed some signs of independence. Since the late 1960s, containing inflation has been a priority for the monetary authorities, and in general, they have succeeded in this. Besides credit and interest rate controls until the early 1980s, reserve requirements were imposed on the banks, but the invariability of the reserve ratio meant that it was not a monetary policy lever. Negative real interest rates for most of the 1970s were maintained in conjunction with a relatively stable currency until 1978. Quantitative controls on credit and government spending were the main monetary policy levers in the 1970s.

In economic terms, financial policy outcomes in the pre-reform era can be categorised as a relative success for monetary control after the stabilisation efforts in the late 1960s, but a relative failure as regards the banking system. For most of the pre-reform era, the banking system had a limited ability to mobilise financial savings. However, it must be noted that in comparison with many other developing countries, bank stability due to government guarantee of the system did make bank-based savings secure. Combined with macroeconomic stability, this feature was probably behind Indonesia's relatively good national savings rate. By 1980, national savings were 33 per cent of GNP (Pangestu 1996: 101), which is not exceptional by regional standards but high compared with a wider sample of countries at similar levels of development.

The government-controlled banking system was, however, a constant drain on the national budget. This was mainly due to the extensive direct and indirect credit subsidies channelled to high-cost state enterprises and politically favoured private interests. In terms of realising economically

sustainable developmental goals, there has been little observable return on these subsidies. Indonesia did achieve undoubted success in some areas, particularly in terms of relatively high overall growth rates, poverty alleviation and food production. To a great extent, however, rather than economic success being due to the government's financial and credit policies, aid and oil revenues fed the system. When oil prices fell in the 1980s, Indonesia came under strong pressure for reform.

By looking at the administrative capacities and governance structures behind policy, we can offer a partial explanation of Indonesia's mixed record. In terms of the overall institutional environment of financial policy, Indonesia's governing system since 1966 was politically stable throughout the pre-reform period, with little effective, organised opposition to the Suharto regime. The state, however, 'has not been "strong" or "hard", but rather infused with patrimonial distribution networks linking officials and business people' (MacIntyre 1994: 244). However, while showing some similarities with Philippine-style 'booty capitalism' (Hutchcroft 1998), the governing structures of Indonesia have had a more solid institutional base in the state than those of the Philippines. The state apparatus has not been completely ineffective in its official tasks, and development policy from 1968 until 1997 led to improvements in a range of economic and social indicators.

The administrative structure of the governing system has often been weak in terms of the functional tasks it has had to perform, particularly when these tasks involved issues other than regime security. Indonesia 'began its post-revolutionary existence with what was undoubtedly the weakest civil service by far of any contemporary major state' (Kahin 1967: 581). Corruption was common, as it had been under the Dutch, and was exacerbated by the hyperinflation of the mid-1960s (Smith 1971). The erosion of bureaucratic salaries due to inflation meant that non-salary sources of income became necessary. The armed forces in particular began to be extensively involved in business enterprises and also struck up relationships with businesspeople, often ethnic Chinese, who gained a measure of protection in return for financing (Crouch 1988). Despite official rhetoric about the rule of law brought in by the new regime in 1966, over the next decade, it continued to be the case that 'an official's real status depends not on his formal title but on securing wealth, clients and favour' (McVey 1982: 88).

In the financial sector, the pre-eminent organisation responsible for policy and implementation in the pre-reform period was the central bank, Bank Indonesia. Bank Indonesia had been established as the *Javasche* (Java) Bank in 1827 and full control over the bank by the independent Indonesian government was not secured until 1951.¹⁰ From 1955, Bank Indonesia had 'all the powers and prerogatives of a central bank', but limited ability to use them (Higgins and Hollinger 1960: 60). This is often attributed to the lack of an effective money market, but other central banks, including Malaysia's

Bank Negara, have exercised monetary control despite this handicap. Continued commercial banking, which was supposed to end with the Central Bank Act of 1953, reduced the priority given to central banking functions and compromised standards for its own clients. It also contributed to the central bank's low standing among commercial banks (Nasution 1983: 60). Most obviously, the ineffectiveness of the central bank's monetary policy in the period to 1966 was due to the government's inability and unwillingness to restrain spending. The legal limits on central bank advances to government were repeatedly over-stepped.

Under the banking law of 1967 and the Central Bank Act of 1968, Bank Indonesia became more of a pure central bank with the transfer of its commercial banking department to other state banks. It did, however, hold shares in other financial institutions, either as a joint-venture partner or as part of rescue packages for private banks (Nasution 1983: 63). The central bank's record with these institutions is not good, although details on credit support and equity financing are generally not made public. Bank Indonesia stood at the centre of the greatly expanded state banking sector from the early 1950s but, under both the Old and New Orders, was unable to stop the bribery, bad credit decisions and channelling of loans on the basis of political connections that were among the deficiencies of these banks (MacIntyre 1993). Low salaries in the central bank may have made regulators particularly susceptible to outside pressure, but the overall Indonesian context of personalised political authority and the use of official credit for patronage purposes would have compromised regulatory functions however skilled, motivated and well paid the central bank staff were. From the early New Order onwards, the Indonesian government has in fact had a sizeable pool of technocratic expertise available to it, suggesting that political, not technical, factors compromised financial policy in the pre-reform period.

It is perhaps surprising that the Indonesian regulatory context was nonetheless able to provide for success in terms of macroeconomic stability from the late 1960s onwards. During the 1970s and early 1980s, although inflation levels exceeded 10 per cent at times, inflation was not a major problem. In part, this record of success is due to the fact that macroeconomic goals, unlike micro-level credit policy, can be relatively easily insulated from particularistic interests. Limiting political competition and excluding popular pressures from any influence over policy under an authoritarian regime that prioritised rural stability also reduced political incentives for overly expansive macroeconomic policy.

Responsibility for monetary policy under the 1968 Central Bank Act was accorded to the Economic Stabilisation Council, chaired by the President, with the central bank governor a member. The Monetary Board, still chaired by the Minister of Finance, is meant to assist the government in planning monetary policy. However, the formalised commitment to a balanced budget that was brought in by the new regime has institutionalised

a block on central bank provision of credit to government. Efforts by Indonesian technocrats to maintain this conservative fiscal stance would have been greatly helped by the influence of external aid donors, who saw the prohibition on domestic financing of the budget deficit as crucial. Most of all, however, it is likely that the government's access to adequate financial resources through oil revenues from the early 1970s to the early 1980s made it possible to operate a patronage-oriented credit system without excessive domestic deficit financing.

The Philippines

Like the other countries in this study, in the period until financial reforms in the early 1980s, the Philippines had a bank-based financial system, at least as far as the formal financial sector was concerned. Even by the late 1970s, trading on the country's two stock exchanges was at relatively low levels and did not increase much over the latter half of the decade.¹¹ Commercial banks accounted for 46 per cent of total financial assets in 1970, reflecting a relatively large role for savings banks and private development banks at this time, as well as a large and increasing share of financial assets held by the central bank. Government commercial banks had a significant role to play in the early period, but they were never in the dominant position of Indonesian government banks. Foreign banks lost their pre-eminent position early in the twentieth century. From the early 1950s, the foreign share has been under 15 per cent of commercial bank assets. At first, the erosion of the foreign bank position was due to the expansion of government banks, but private domestic banks held half, or more than half, of all commercial bank assets from 1960 onwards (Hutchcroft 1998: 257). Private domestic banks, as shown in Table 7.3, thus emerged as significant actors comparatively early in the Philippines.

In the 1960s, there was particularly rapid growth and proliferation of domestic private banks. During this time, nearly every major business family diversified into banking (Hutchcroft 1998: 81). The central bank encouraged the development of private commercial banks, providing 'subsidies on their initial capital and operational funds via the rediscount window' (Montes and Ravalo 1995: 143–144). Family-based, sectorally diversified conglomerates which included a group bank became the norm as Philippine industrialisation and financial development evolved from the 1950s onwards.

From 1972, there was a de facto prohibition on new entrants into the banking industry, and intra-industry co-operation through personal contacts and the Bankers Association of the Philippines was routinised. Interest rates were subject to official controls through the 1970s, with ceilings on loan and deposit rates. However, the ceilings on loan rates were effectively circumvented through the imposition of charges and the

Table 7.3 Philippines: commercial banking assets, 1970–80 (%)

	1970	1975	1980
Private	59	66	61
Government	33	35	25
Foreign	8	–	14
Total (billions of pesos)			
Commercial banks	14.1	53.2	138.4
Central bank	6.0	26.0	65.4
Financial assets	30.9	122.7	313.1

Source: Montes and Ravalo (1995: 155).

requirement to hold compensating deposit balances. Actual lending rates in the 1970s rose to twice the officially allowed rates (Hutchcroft 1998: 160–161). Deposit ceilings, in contrast, were effective and real deposit rates on bank savings were almost always negative. Non-bank financial assets, notably high denomination money-market instruments, were offered at much higher rates of interest, creating a two-tier system, in which large savers could benefit from market interest rates, but most households could not.

Selective credit allocation in the period to 1980 was mainly achieved through central bank rediscounting, allocation of foreign exchange and the government banks. The selective credit policy was operated on a system of priority lists, which described sectors eligible for subsidised funds. Allocation within the list was decided on a case-by-case basis, officially determined by the viability of the proposed project. In reality, the priority lists remained vague and virtually all-encompassing. Individual loan decisions were made on the basis of political connections or outright bribery, or both. As concluded by an extensive study of the Philippine banking system, there was no economic development rationale discernible in credit policy implementation (Hutchcroft 1998).

The allocation of foreign exchange emerged as an important source of official discretion in credit policy, although Philippine realities meant that the discretion more often lay with private-sector borrowers than the officials administering the schemes. The establishment of the central bank in 1949 in the context of a balance of payments crisis was part of the reason why it emerged as the institution responsible for allocating foreign exchange via a system of foreign exchange swaps. These swaps effectively transferred the risk of currency movements from private borrowers to the public sector, and were an important source of subsidised development finance from the central bank. Limited controls on the remittance of export proceeds (20 per cent of which were to be surrendered to the central bank) were introduced during a period of balance of payments difficulties between 1959 and 1962.

After that, virtually all exchange controls were removed until further balance of payments difficulties in the late 1960s (Emery 1970: 362).

Both public- and private-sector actors were able to borrow extensively from abroad during the 1970s. Recourse to external credit has been a long-standing feature of the Philippine financial system (Lamberte *et al.* 1992), reflecting the comparative ease of gaining finance through external borrowing rather than domestic mobilisation efforts. Many subsidised public-sector loans were channelled through the central bank for lending on to Philippine businesses. The Philippine finance sector bureaucracy – the central bank and the finance ministry – had a particularly intimate and long-term relationship with the major multilateral lending institutions. Both the World Bank and the IMF were heavily involved in, among other areas, financial sector policy from the early 1970s.¹² In addition, foreign borrowing and international capital flows were facilitated by the close ties between the local financial system and the international banking community (Santiago and Tagle, cited in Montes and Ravalo 1995: 145).

The exchange rate ceased to be officially pegged after devaluation in 1970, but remained relatively stable for the rest of the 1970s. In 1970, the peso was devalued to a rate of 6.02 pesos per dollar from the previous rate of 3.92. In the rest of the decade, it gradually depreciated to 7.38 pesos per dollar (Lamberte *et al.* 1992: 118). In real terms, the effective exchange rate appreciated by about 10 per cent over the decade, before dropping in 1979. The external value of the currency over the decade was consistent with the country's macroeconomic performance. Inflation peaked in the 1970s at 34.2 per cent in 1974, but was otherwise at moderate levels during the 1970s, averaging 14.5 per cent per annum over the decade as a whole (Lamberte *et al.* 1992: 11). External debt rose from US\$2.3 billion in 1970 to US\$13.5 billion in 1979, equal to 34 per cent of GNP in 1970 and 45 per cent of GNP in 1979 (Lamberte *et al.* 1992: 86). Economic growth was not spectacular, but was reasonably good during the decade, with real GNP growth averaging 6.2 per cent for 1970–79 (Lamberte *et al.* 1992: 10–12).

Despite these positive indicators, the Philippine economy was, in a sense, accumulating problems which would be more manifest in later years. Oligopolistic and monopolistic industry structures, high rates of protection and relatively low levels of public infrastructure and social spending contributed to a high-cost economy, with growth in the external trade sector largely accounted for by resource exports. Exports as a percentage of GNP barely rose over the decade, moving from 13 per cent of GNP in 1970 to 14 per cent of GNP in 1979 (Lamberte *et al.* 1992: 111).

Even during this decade of relatively good growth, banking sector instability remained a problem, notwithstanding reform in 1972 aimed at reducing abuses associated with the plundering of bank resources by directors and owners (Hutchcroft 1998: 115–132). A lack of long-term finance for industry was cited as a problem in periodic external reviews of the finance

sector, along with high costs to domestic bank users, particularly small and medium operators. Financial deepening, as measured by the ratio of M2 (currency in circulation, demand, savings and time deposits of the banks) and M3 (M2 plus banking-sector deposit substitutes) to GDP barely rose over the 1970s. As one study concluded, 'it can be said that the financial system was not able to make a sustained increase in the flow of loanable funds' (Lamberte *et al.* 1992: 191–193). Severely negative deposit interest rates in the period are generally blamed for this lack of financial development, although banking instability is also likely to have played a part. Overall national savings have always lagged behind those of either Malaysia or Thailand. Gross national savings averaged 24 per cent of GNP for 1970–79 (Lamberte *et al.* 1992: 120).

The underlying governance structures in the Philippines in this period have been consonant with these observed outcomes. Consistently, state organisations have been used as instruments of private actors, subject to nepotism, manipulation and the political struggles of outsiders to gain the 'booty' accessible through public office (Hutchcroft 1998).¹³ The lack of an independent state tradition and an entrenched system of society-based government and politicisation of public office were legacies of the American colonial period that proved enduring (Anderson 1988). Whether government policy has tended towards openness and the promotion of exports or import-substitution, the result has been to channel large gains to favoured interests, with little consideration given to potential costs inflicted on either the public purse or less-privileged members of society (Hawes 1987; Doner 1991: 158–189; Dauvergne 1997: 133–163; Hutchcroft 1998). The Philippine case is also noteworthy because it demonstrates that governance is not a proxy for democratic institutions, formal checks and balances, levels of education or simply levels of wealth. In the 1950s and 1960s, the Philippines stood out from its Southeast Asian neighbours for being more developed on these measures than any other country of the region.

Politicised and weak public institutions subject to capture by external actors correspond with the oligarchic nature of the Philippine political economy. Unlike the other countries of Southeast Asia, the Philippines has long had a significant concentration of political power in the hands of a land-owning elite (Crouch 1985). As the Philippines industrialised, oligarchic land-owning families developed more diversified commercial interests but maintained their overlapping political and business roles. When President Marcos consolidated his power during the 1970s, he did so in the context of a system of elite politics and business in which the major families were long used to using public positions for personal gain. While authoritarian government under Marcos (the country was under martial law from 1972) apparently moderated the influence of the oligarchy, it became increasingly clear that Marcos basically centralised existing patterns of plunder (Anderson 1988). As long as he enjoyed a honeymoon period with

multilateral lenders and most domestic business interests, favourable economic conditions and political stability, Marcos's own use of state resources remained at moderate levels compared to those that would be tapped in the later stages of his regime.

The systematised manipulation of key regulatory agencies that continued under Marcos lay the foundations for long-term financial instability, which would become acute whenever external economic conditions became less favourable or when political instability threatened to erupt. Financial instability in the Philippines has been in part due to the vulnerability of the system to external shocks (Lamberte *et al.* 1992: 187), but it has also been a consequence of politically connected private banks being able to avoid effective government regulation. Rather, they have often been able to extract large public subsidies and bailouts (Hutchcroft 1998; IBON Databank 1983). In the pre-reform period, financial subsidies were largely channelled through government banks, central bank rediscounts and foreign exchange allocations, as well as via protection of the inefficient private domestic banks. The ostensible bank regulator, the central bank, was never able to assert its authority over the private banks or to end private extraction from the government banks. Problems in its operations during the 1950s were ascribed to the central bank's comparative inexperience as it had been established in 1950 (Castro 1960). But regulatory weakness remained an ongoing feature of the bank's operations. As well as outright political pressure on the bank, poor salaries and a legal framework that hamstrung the bank's investigative powers have also been important. Another major reason for the bank's ineffectiveness has been the continual exposure of bank staff to lawsuits launched by the interests against which they may have attempted to take action (Hutchcroft 1998). Regardless of the law, in no other country of the region would public norms allow private bankers to sue central bank officials.

Malaysia

Until the 1990s, Malaysia's financial system remained bank dominated, with most industrial and development financing sourced from the commercial banks. At independence in 1957, foreign banks were the most significant actors in the financial system. Over time, their role has steadily decreased, with government-controlled banks playing an increasingly important role from the late 1960s, when the two banks that were to emerge as the country's largest, Bank Bumiputra and Malayan Banking (known as Maybank), were established or taken under effective government control. Domestic private-sector banking interests up to the 1970s were primarily ethnic Chinese entrepreneurs who had ventured into banking. Government influence in the financial sector through financial policy in the pre-reform period (which, on most counts, extended to the end of the 1970s) was at

moderate levels. Significant constraints on the banks included the requirement to hold government debt and the requirement to direct loans to certain categories of borrowers. Interest rates were set by the central bank, but were generally positive, set in relation to market rates in London. Controls on entry and restricted competition provided Malaysian banks with a relatively high degree of protection.

With the establishment of the central bank in 1959, the government moved to influence market structure and development. The change in the position of foreign and local banks was brought about through restrictions on the establishment and operations of foreign banks from the late 1960s. Regulations have limited the branching of foreign banks, their freedom to set interest rates that would undercut local banks, and their use of expatriate bank personnel. Foreign banks have also been under more stringent capital requirements than local banks, and since the introduction of the Banking and Financial Institutions Act (BAFIA), 1989, they were required to incorporate locally by 1994, leading one foreign bank to relinquish its licence. Foreign investors have also been required to use local banks for a specified portion of locally raised funds.

The central bank placed an early priority on the development of the banking system and the mobilisation of savings. This included initiatives to upgrade the national payments system and encourage the spread of banking facilities nation-wide (Lee 1981, 1987; Singh 1984). The government was influential in generating confidence in the banking system since with the establishment of a central bank in 1959, the banking sector was, for the first time, subject to some prudential regulation and disclosure requirements. The central bank was also able to act as lender of last resort and has taken on this role during episodes of banking or finance company instability, e.g. in the second half of the 1980s.

The government also attempted to influence the spread of commercial bank branches. Until the late 1960s, this was done by exhortation and some use of incentives (Singh 1984; BNM 1989: 18). The early 1960s was a period of rapid bank branching, with the number of banking offices more than doubling between 1959 and 1963 (BNM 1994: 518). Much of the later spread of banking facilities into the smaller towns was due to government banks. The result was to alter the distribution of bank branches in the 1960s and 1970s, reducing the previous concentration in the major urban centres (Lee 1981: 38–41).

The mobilisation of savings through the financial system was encouraged through the state-run National Savings Bank, originally the Post Office Savings Bank. This bank has declined in importance now, but provided deposit services across the country at a time when much of the population did not have access to commercial bank offices. The government has also operated a compulsory savings fund, the EPF (Employees Provident Fund), to which all employees and employers contribute.

Rather than extensive use of 'policy loans' through the banks, the government has financed its industrial policy by appropriations from the budget, borrowing by state enterprises and direct loans to the private sector. In addition, the two largest commercial banks are government owned. Until the 1990s, the commercial banks have generally accounted for around 75 per cent of credit to industry. While only making limited and generally indirect interventions in the credit decisions of the commercial banks, the central bank has at times urged banks to limit lending for property development and shares, and to increase lending to the indigenous ethnic groups, known as Bumiputeras, low-cost housing, small-scale enterprises, manufacturing (until 1984) and agriculture. In 1975, lending directives were formally introduced, stipulating minimum lending levels to different categories of borrower. The most significant directive mandated a minimum proportion of bank credit to Bumiputeras. Although the sectoral distribution of bank credit shifted over time, this was probably not a result of government banking policy or central bank 'moral suasion', which were said to be ineffective to justify directives being brought in for loans to Bumiputeras. Manufacturing's share of bank credit increased through the 1970s, but agriculture's share did not (Table 7.4).

Interest rate controls were not a major policy instrument. All interest rates were set by the central bank until 1972, when the rates on three-year fixed deposits were freed. In 1978, all interest rates were freed except for interest rates on loans to priority sectors. The rates on deposits were maximum rates intended to prevent 'excess competition' among banks – mainly to prevent foreign banks outbidding local banks (Lee 1981: 67). Lending rates set by the central bank until 1978 were mostly minimum rates, also aimed at limiting competition from foreign banks (Emery 1970: 279; Abang 1986: 306). The central bank also set a marginally cheaper rate for government borrowing (0.5 per cent less than the prime rate).

Part of the reason for maintaining near-market interest rates was the relatively open capital account in Malaysia. After independence, capital was free to move within the Sterling Area, with this discrimination in favour of the Sterling Area lifted in 1973. Malaysia, Singapore and Brunei had a single currency until 1967, after which their currencies were exchangeable

Table 7.4 Malaysia: distribution of bank credit, 1966–80 (%)

	<i>Manufacturing</i>	<i>Property</i>	<i>Shares</i>	<i>Agriculture</i>
1966–70	2.6	8.8	–	9.2
1971–75	8.5	17.0	–	8.6
1976–80	18.8	22.5	1.8*	7.1

Sources: BNM (1994: 506), BNM *Quarterly Economic Bulletin*, BNM *Annual Report*, various issues.

Note: *1979–80. Property includes loans for building, construction, real estate and housing.

at face value until 1973. For foreign investors, profits and capital have always been freely repatriated. The necessity of maintaining rough parity with rates in London is frequently referred to in early reports of the central bank. The desire for greater monetary autonomy was part of the reason why Malaysia ended the currency board system shared with Singapore and Brunei in 1967, and moved towards more flexible exchange rates in 1973 (Lee 1981; Lee 1990). But the openness of the economy meant that Malaysia consistently imported world inflation and interest rate trends. Foreigners seeking relatively liquid investment opportunities could, and did, invest on the stock exchange, which was active from the 1960s and amalgamated with the Singapore exchange until 1973. However, the foreign exchange market was quite small until the 1980s. The greater part of foreign exchange transactions were trade-related throughout the 1960s and 1970s.¹⁴

Financial policy outcomes in Malaysia in the pre-reform period were generally positive. In terms of savings mobilisation, Malaysia has always performed well despite elements of financial repression, including required reserve ratios and moderate interest rate controls. Although Malaysia at independence had a more developed financial system than Indonesia, the formal financial sector was restricted to the major towns and larger businesses. The general population used the post office savings system and the central pension fund more than the banking system. Two decades later, with total financial assets at 139 per cent of GDP in 1980, Malaysia's financial system could no longer be called undeveloped. Meanwhile, the M2 to GDP ratio had increased from 0.28 in 1965 to 0.48 in 1978 (Skully and Viksnins 1987: 141).

Economic growth in Malaysia was high throughout the pre-reform period, averaging nearly 6 per cent per annum in the 1960s and 8 per cent in the 1970s (BNM 1994: Table 1.1). Inflation was low – less than 1 per cent in the 1960s and 5.5 per cent in the 1970s. Government debt increased significantly as a result of increased policy activism from the early 1970s – from RM2.7 billion in 1965 to RM23.4 billion in 1980. However, around 80 per cent of government debt in this period was financed domestically, primarily through the issuance of securities to captive institutions, mainly banks and the compulsory central pension fund (BNM 1994: Table A.37). Export growth was strong with exports, which had always been significant, increasing in value from 47 per cent of GNP over 1965–67 to 55 per cent of GNP in 1975–79 (BNM 1994: Table A.38).

Apart from the impressive record of macroeconomic stability, it is not likely that these outcomes were due for the most part to the government's financial policy. In the first place, the government's industrial finance policy and targeted credit initiatives were very limited. Even the specialised industrial finance organisations accounted for a very small share of lending to industry. Most industrial development in the 1970s was due to foreign investment, often in export processing zones, with little linkage to the

domestic economy. Second, although the increase in economic growth rates in the 1970s coincided with an increased fiscal and policy role for government, it also coincided with an increase in natural resource revenues. In the early 1980s, the primary sector, although growing more slowly than the manufacturing sector, remained the single largest part of the economy (Jomo 1990: 42).

Malaysia's underlying governance capacities are in accordance with these outcomes. Macroeconomic stability cannot be taken for granted or simply attributed to fiscal conservatism. The government maintained stability in circumstances of greatly increased government spending and new initiatives in a variety of sectors, including the finance sector, in the 1970s. These initiatives were taken as a result of increased political demands for the state to play a greater redistributive and growth-enhancing role. They were introduced as a result of heightened ethnic tension, including rioting in the capital, and began to be implemented during a period when normal parliamentary government was suspended. Taken together, this would have been a recipe for severe monetary instability in most developing countries. That Malaysia avoided this outcome is something that can be directly related to the capacities of its government.

Malaysia's governing system in the 1970s remained highly bureaucratic, a legacy of the role that leading civil servants had played in the country's transition to independence. Partly as a result of traditions inherited from the colonial period, the civil service was relatively less corrupt and more efficient, maintaining fairly strong internal norms that constrained behaviour, including private moneymaking ventures or personal indebtedness (Federation of Malaya 1956; Tilman 1964). An orderly system of advancement by seniority was maintained through the 1970s and, although loyalty to the ruling party was taken for granted, in the context of a high degree of elite consensus, this did not translate into competing factional loyalties being played out in the bureaucracy.¹⁵ The civil service was, in contrast to the Philippines, a career service with few overt political appointees and very limited lateral entry. Tilman's (1964: 132) study concluded that bureaucrats were thoroughly imbued with the norms of rational decision making and empirical observation. Through the 1970s, the civil service was able to recruit many of the country's 'best and brightest', although a shortfall in technical specialists was also observed, and rapid expansion meant that many who were not the best and brightest also entered the service. Nonetheless, the calibre of the country's officials meant that an outside observer could describe them as 'the indispensable steel frame which has held this precarious state together even when the political processes failed' (Esman 1972: v).

In the financial sector, the primary government regulator and policy maker was the central bank, Bank Negara Malaysia (BNM). Bank Negara was established as a new institution in 1959. Unlike Bank Indonesia, it did

not therefore have the legacy of growing out of a colonial-era commercial bank. It had a planned and carefully structured birth, and assumed responsibilities gradually.¹⁶ Currency issue was left to the currency board until 1967; fixed exchange rates and the maintenance of exchangeability at par with the Singapore currency until 1973 meant that an active monetary policy was not attempted until the 1970s. This meant that after its establishment, the bank had more than a decade to concentrate on internal organisation as well as the regulation and development of the banking system. Bank Negara has developed as a strong institution. Internally, it has been meritocratic, and externally, it has been authoritative and insulated in many respects.

The external authority and internal discipline maintained by the central bank in the pre-reform era had much to do with the efforts of its first Malaysian governor, Ismail Ali (1962–80). His competence, attention to detail, staff discipline and demands for high standards were legendary. He was also held in high respect, if not fear, by most of the banks. His friendship with the finance minister in the 1960s and family connections with other members of Malaysia's political elite added to the central bank's influence, as did the fact that its officers were among the best-trained economists the country could field. The position of private bankers *vis-à-vis* the central bank – that emerges from reading the bank's history (Singh 1984) – was the polar opposite of the relationship between regulators and bankers in the Philippines.

Malaysia's governing system was well suited to financial policies followed until the 1980s, providing for good regulation and stability, but failing on more developmental goals.¹⁷ The conservative, disciplined and bureaucratic element in government was oriented to maintaining macroeconomic stability. It was able to do this even when early fiscal conservatism gave way to significant government borrowing in the 1970s, largely because captive institutions – the banks and the central pension fund – could be pressed into holding large amounts of government debt. To make this system work, increases in spending had to remain controlled, financial stability maintained, and the manipulation of government-controlled central savings funds avoided. To maintain this discipline, however, more ambitious industrial finance schemes and targeted credit were to be avoided. Malaysia's most interventionist industrialisation and redistributive policies deliberately went outside the core civil service structures and the central bank, which were perceived as too cautious and insufficiently entrepreneurial.

A final feature of the Malaysian governing system that has greatly influenced economic policy is the ethnic dimension of almost all initiatives. After ethnic riots in 1969, the period of greater government activism that was ushered in always had an explicitly redistributive agenda. The New Economic Policy (NEP), officially embarked upon from 1971, aimed at poverty alleviation in general, but also at changing the extant ethnically

based division of labour and ownership in the economy. Many government policies were aimed at raising the business strength of Bumiputeras relative to the local Chinese business community that, along with the significant foreign-owned sector, was economically dominant. Thus, from the start of its developmental phase, the government's economic goals were infused with a strong political logic, coloured in ethnic terms. From the point of view of this political agenda, industrial policy worked well (Jesudason 1989). In economic terms, it did not have an industrial finance system that even approached activist systems such as Korea's, in either design or execution. The goals and mechanisms employed in Korea were simply not in line with Malaysia's political economy or governing system.

Thailand

Although some Thai commercial banks had been established in the pre-war period, the banking system in Thailand did not play a large role in the economy as a whole until the late 1960s. From 1957 to 1967, private-sector borrowing amounted to, on average, only 12 per cent of private-sector investment (Rozenal 1970: 45). Government savings banks played an important role in this period, accounting for nearly a third of all time and savings deposits in 1967 (Rozenal 1970: 44). In the formal financial sector, however, commercial banks were the most important institutions for the provision of external finance for business, and remained so until recently. Non-financial businesses became increasingly reliant on bank loans and commercial bills over the 1970s, with the role played by internal funds (share capital) undergoing a corresponding decline from 55 per cent of funds in 1971 to 17 per cent in 1983 (Thailand Development Research Institute, cited in Muscat 1995: 131).

Foreign banks established before the war were significant in the early post-war period, but domestically owned commercial banks grew rapidly and emerged early on as relatively sophisticated and internationalised financial intermediaries. As early as 1962, the share of total banking assets accounted for by foreign banks was only 19 per cent, falling to less than 15 per cent by 1966 (Rozenal 1970: 128–132), much less than in Malaysia at this time. Many of the local Thai banks were always relatively outward looking, particularly the largest, the Bangkok Bank. Banks and non-financial businesses in Thailand have for a long time been able to access foreign sources of finance, making use of informal ties among the region's ethnic Chinese as well as formal financial markets (Muscat 1995: 122).

Thai financial policies in the pre-reform period were the least interventionist of the countries covered here, but substantial liberalisation only occurred from the end of the 1980s onwards. As noted by Doner and Unger (1993), financial policy was unusually hands-off for a developing country. There were few compulsory credit requirements, loose capital controls,

positive interest rates and only a modest role for state-owned financial institutions. To the 'small degree that state officials have pursued an interventionist industrialisation strategy, they have tended to rely on fiscal rather than financial policy tools' (Doner and Unger 1993: 93). Financial subsidies through the rediscounting of credit were concentrated in the export sector (Doner and Unger 1993: 102). Export rediscounting started at the end of 1958 (Rozenal 1970: 200) and other interventions were later introduced. Despite relatively early central bank interest in directing a greater amount of credit to manufacturing, it did not begin to provide liquidity to commercial banks until 1959, and by 1967, claims against commercial banks accounted for less than 2 per cent of central bank assets, an amount that was even smaller relative to commercial bank assets (Rozenal 1970: 193–198). Later financial policy efforts 'have not, in practice, represented substantial departures from the conservative, non-interventionist traditions of the past' (Muscat 1995: 121).

Thailand did not, however, have a competitive, market-based financial system. In the first place, entry was controlled and interest rate regulations reduced price-based competition. Foreign banks were restricted in their ability to set up branches. The lack of competition among the banks was reflected in the fact that actual interest rates on deposits were at times lower than the official ceiling for deposit rates (Bhanupong 1993: 189). On the other hand, unlike the Philippines, real deposit rates were significantly negative only during 1973–74 and 1979–80, i.e. after the oil price shocks (Bhanupong 1993: 189). The second factor that reduced competition among banks was the oligopolistic structure of the industry (Unger 1998: 84). After a period of ownership concentration in the 1960s, the banking sector came to be controlled by 16 corporate and family groups (Hewison 1989: 179).

By 1969, the two largest banks – the Bangkok Bank and Krung Thai Bank – accounted for 41 per cent of all bank assets (Emery 1970: 567). Finally, there was also no real competition from the capital market or non-bank financial institutions in the pre-reform period. The stock exchange was not a significant financial market, the long-term capital market only emerged in the 1990s, and secondary capital markets were all but non-existent. Non-bank financial institutions did exist in plentiful supply, particularly finance companies, from the 1970s onwards. The most significant of these, however, were all subsidiaries of the commercial banks or related to them by common ownership.

Although government credit directives were minimal, other forms of control did exist in the financial sector. With three major banks controlled by the government, the royal family and the military, the overall state presence in the banking sector was not insignificant. More importantly, the commercial banks, mostly owned by ethnic Chinese families, were not universal banks, but were in many ways similar to such banks, able to

provide 'elements of private sector governance' (Unger 1998: 84). The banks were not owned by non-bank conglomerates; rather, the reverse pattern prevailed since most banks were established when the industrial sector in Thailand was still only nascent (Muscat 1995: 117). Overall, limits on entry, constraints on the foreign banks, and the interlocking structure of Thai financial interests constituted a system in which informal collaboration was easy. As described in detail by Hewison (1989), the market operated in the context of a cosy alliance of domestic bankers, industrialists and a political-government elite.

Monetary and foreign exchange policy remained oriented to ensuring macroeconomic stability. The system was relatively open, with few controls on capital inflows. Banks often had significant recourse to borrowings from abroad, which were in fact higher in the 1970s than in the 1980s, due to increases in borrowings from the central bank in the 1980s (Naris 1993: 245–249). Monetary levers used by the central bank included interest rate controls and use of its own bank rate in its lending. Generally, the central bank set rates close to foreign rates, but 'from time to time the bank rate has been adjusted either to induce capital inflow or prevent capital outflow' (Bhanupong 1993: 185). A stable exchange rate was long considered a normal feature of the Thai environment. From 1961 to 1980, Thailand's exchange rate remained at roughly 20 baht per US dollar. In the early 1980s, the belief that an overvalued exchange rate was contributing to balance of payments difficulties resulted in devaluations in 1981, 1984 and 1985, bringing the rate to about 27 baht to the dollar. With these adjustments to the nominal rates, the real effective exchange rate followed a moderate depreciation path from 1984 to 1990, supporting the country's export drive (Warr and Bhanupong 1996: 204–207).

Economic outcomes in Thailand were excellent throughout the three decades before financial reform began in 1990. Real GNP growth averaged 7.7 per cent per annum in 1960–68 (Emery 1970: 560), 7 per cent in the 1970s and 7.3 per cent in the 1980s (Warr and Bhanupong 1996: 43). Since inflation during the war and in the early post-war period, Thailand has enjoyed a low inflation rate – 1.9 per cent on average during the 1960s (Emery 1970: 560). Inflation rose briefly as a result of the oil shocks and external factors in the mid-1970s and early 1980s, but was otherwise relatively low and stable (Warr and Bhanupong 1996: 54). External debt was always moderate in the pre-reform period – 25.9 per cent of GNP in 1980 and 32.6 per cent of GNP in 1990 (Warr and Bhanupong 1996: 55).

Despite the anti-competitive banking structure, financial development was rapid, with quasi-money liabilities of the banking system rising from 9.4 per cent of GNP in 1960–64 to 50.3 per cent of GNP in 1985–86 (Jansen 1990: 71). The banking sector experienced periodic problems but relative stability in the early period. Emery (1970: 582) noted that there were 'no reports of bank failures' but a few 'problem banks'. Relatively contained

problems of bank instability in the 1970s, involving financial mismanagement of the banks, resulted in tightened regulations in 1979. In the 1980s, the situation was more unstable, with a major banking crisis in the middle of the decade. As with the later crisis in Thailand, this one had its origins in reckless lending by loosely controlled finance companies, generally bank subsidiaries (Lauridsen 1998: 141). As well as these finance company problems, insolvency crises – involving three commercial banks in the 1980s – required large-scale Bank of Thailand support, with other institutions also receiving aid (Muscat 1995: 120).

Thailand's underlying governing capacity has been ambiguous for most of the post-war period. It had elements of a heavily bureaucratic system – Thailand was, after all, the original 'bureaucratic polity' (Riggs 1966). There was certainly a tradition of the civil service being an elite occupation, and the fiscal conservatism of this bureaucratic elite is often noted as a key explanatory variable in accounts of Thai economic policy. The elite's aversion to inflationary policies was supposedly based on its historical experience of inflation and the detrimental impact it had on the material interests of civil servants (Warr and Bhanupong 1996: 19–27). Since the late 1950s, commitment to macroeconomic stability has been a pillar of government policy and this bureaucratic orientation may be a factor accounting for this.

One of the guardians of macroeconomic stability has been the Thai central bank, the Bank of Thailand. Established in 1942 as a means of deflecting Japanese moves to take over the management of the currency, the bank focused on economic stabilisation from 1959 onwards, prioritising the maintenance of the external value of the currency and internal price stability (Rozental 1970: 191). The conservative macroeconomic outlook, relatively high level of cohesion and acknowledged expertise of central bank staff have undoubtedly helped policy implementation on this score. However, macroeconomic stability in the 1960s at least was considered to be largely due to the government's fiscal conservatism. Despite the Bank of Thailand having 'the necessary monetary and credit instruments to maintain stability, it has made very little use of them' (Emery 1970: 582). On the other hand, central bank influence may still have been important, via the informal influence it has exercised over government spending, drawing on its assets of prestige and respect within the government (Maxfield 1997: 71–90).

One of the reasons why the government has, for most of the time since 1960, been able to stick to its cautious fiscal stance is that it has faced few political demands for greater activism. Thus, the same political economy factors identified as behind the absence of major preferential credit programmes also largely account for fiscal restraint. That is, the dominant private actors had interests concentrated in externally oriented commercial and financial activities, with relatively good access to credit without the need for subsidies from the state. There were also relatively few politically

significant interests to be dealt with and competition among them was restrained (Doner and Unger 1993).

The influence of this business elite has been important despite Thailand's image as a bureaucratic polity. The government elite has always had ties with business, which, contrary to Riggs's expectations, has developed healthily in post-war Thailand (McVey 1992). Private-sector business has enhanced its influence by organising, both through formal sectoral associations and informal collusion. Business–government relations evolved into a collaborative partnership, not top-down government dominance (Doner 1991; Anek, in MacIntyre 1994). In the banking sector, the close links between officials, bankers and politicians were even greater than in other sectors. There was regular interaction and a high degree of co-operation between officials and bankers (Unger 1998: 83–108). Bankers also often moved on to 'leading positions in political parties' (Unger 1998: 85). This amalgamation of interest is consonant with Hewison's (1989: 174–213) study of banking in Thailand.

Establishing the direction of predominant influence in the relationship between officials and the banking community is, in this context, almost impossible. The policy preferences of the Bank of Thailand (BoT) have been 'largely consistent with those of Thailand's most powerful business interests, which have been linked to the country's commercial banks' (Unger 1998: 95). In contrast with the autonomy and influence of the Bank of Thailand in relation to the Thai state (Maxfield 1997: 71–90), autonomy from Thai business is 'relatively weak and less important for the pursuit of open financial policies. Indeed, part of the BoT's strength derives from the congruence of its views with those of the commercial banks and other major business interests' (Unger 1998: 122). While Unger viewed this as a productive partnership, the ambivalence of the central bank as regards its regulatory role may have been a factor behind banking instability in the 1980s. At the time, management of the crisis was considered successful, but it was noted that while 'government authorities will prevent a bank going bankrupt, they lack the authority to (take the) necessary actions against problem banks' (Naris 1993: 264) – a comment that would have particular resonance less than a decade later.

Financial reform

This section briefly discusses the financial reform experience of each country. In most cases, reforms were initiated in the 1980s and continued in the 1990s. The major domestic policy changes and outcomes are summarised. The effects, both intended and unintended, of these changes on pre-reform governance systems are analysed, along with other changes to financial governance that may have occurred in each country. Finally, an attempt is made to weigh the relative importance of structural economic

motives (or systemic imperatives) for reform in each country against the political forces influencing the reform agenda with redistributive or rent-seeking motives.

Indonesia

Indonesia's financial reforms in the 1980s drew much attention and commentary, almost all of it overwhelmingly positive. Substantial deregulation of the financial sector began in 1983 and was stepped up in 1988 and 1989.¹⁸ Restrictions on branching by local private banks were eliminated, reserve ratios cut to minimal levels, restrictions on the establishment of new banks were considerably eased, and credit subsidies via state banks cut back. As can be seen from Table 7.5, previously wide-ranging credit subsidies were practically eliminated.

The role of state-owned banks declined markedly in the 1990s with the rise of many new private banks and the rapid expansion of older private banks. The state share dropped from 76 per cent of all lending in 1984 to 56 per cent in 1990 and 37 per cent in 1996 (MacIntyre 1993: 138; Bank Indonesia, *Indonesian Financial Statistics*, January 1997). From 1988, government officials concurrently carried out deregulation and promotion of the stock market. Regulation of the stock exchange was light, to the point of prompting concern by brokers (*FEER*, 14 September 1989). The initial idea was for a self-regulating market and the government regulatory agency did not get legislation enabling it to investigate improprieties until 1995 (*FEER*, 18 May 1995).

Table 7.5 Subsidised credit through Bank Indonesia, 1953–96

	<i>Liquidity credits</i> (% bank lending)	<i>Direct credits</i>	
		<i>Rp. billion</i>	(% bank lending)
1953	–	0.511	22
1959	–	1.955	18
1965	–	1.992	77*
1970	39	97	34
1975	30	894	48
1980	32	2,454	45
1985	36	964	5
1990	14	718	1
1996	7	37	0

Source: Hamilton-Hart (1999: 94).

Note: *1965 refers to new credit (increase in advances outstanding) and includes lending to government and banks. If lending to government and bank are excluded, BI direct credits are Rp. 217 million, or 27 per cent of all lending to the public (Arndt 1984: 142). Currency revaluation in 1965 saw each 1,000 old rupiah become 1 new rupiah.

The result of these policy changes was a huge rise in the rate of financial sector growth and financial development. The revival of the stock exchange in the late 1980s was, on its own terms, very successful.¹⁹ The rapid growth of the market provided a strong incentive for firms to list, and borrowing privileges were also accorded to listed firms by the central bank (*Jakarta Post*, 23 September 1995). The banking sector grew rapidly in terms of total assets and number of banks. After 1988, the number of local and foreign (including joint venture) banks grew rapidly to reach 164 and 41 respectively by the end of 1996. This growth occurred despite frequent calls for rationalisation made by Bank Indonesia and outside commentators. A few mergers did take place, and some small problem banks were placed under the management of larger banks, but the general situation of a very large number of mostly very small banks did not change. Two banks were allowed to fail, one of which, Bank Summa, was a medium-size bank that closed in 1992 with much publicity. For the most part, problem banks continued operating, often with the help of the central bank, until closures were forced during the currency crisis.

Amidst much publicity about bank instability and speculation over the quality of loans made by the state banks, reforms aimed at prudential re-regulation were introduced from late 1990. These included limits on lending to related parties and on the concentration of loans to a single business group, an increase in bank soundness requirements, prudential limits on foreign exchange exposure, and more comprehensive reporting requirements. Of course, the extent to which changes in regulation are meaningful depends on implementation. Most accounts of financial reform in Indonesia conclude that deregulation in the 1980s was genuine. The effectiveness of moves to exert more control over the financial sector in the 1990s, on the other hand, was much more limited.

Besides prudential regulation, some elements of redistributive policy and politically motivated lending continued. Regulations were introduced in the late 1980s requiring local banks to direct 20 per cent of all credit to small businesses, and foreign banks to direct 50 per cent of all credit to the export sector. In 1997, the requirement that 20 per cent of all credits go to the small business sector was explicitly extended to foreign banks. Whether, and how, these regulations would be enforced was not clear. An increase in central bank liquidity credits in the 1990s was also observed (McLeod 1996) but, as can be seen from Table 7.5, this increase represents a declining share of bank credit. Two well-known cases of central bank financing during the 1990s were central bank loans to the president's son for his clove monopoly and for his highly protected 'national car' project (Schwarz 1994: 153–157; *Bisnis Indonesia*, 28 April 1997). Bank Indonesia also subsidised interest rates to support the country's export drive in the 1980s.

Financial reform, along with more cautious reforms in other sectors, was initially driven by fairly clear systemic imperatives. The collapse in oil prices

in the 1980s, combined with pressure from aid donors, meant that the government had very few options for mobilising finance and stimulating growth (Soesastro 1989; Haggard and Maxfield 1996; Hill 1996; Pangestu 1996; Winters 1996). Because of Indonesia's underlying governing system, however, political considerations influenced the course of reform and the way it was implemented. Far from leading to a shake-out in the banking sector, only one of the ten largest private banks in 1982 had lost market share by 1994, and none of the regime's favourites have suffered. Instead, they have been major beneficiaries of reform as banking activity grew enormously after deregulation. Until 1997, the only loss in the banking sector to cause significant change in the ownership of economic assets was the 1992 collapse of Bank Summa, owned by the Soeryadjaya family who also owned Astra, Indonesia's second largest conglomerate.

Lax enforcement of prudential regulations also compromised the reform process. Poor-quality loans at both state and small private banks grew over the 1990s, despite being a high priority for the central bank.²⁰ The situation persisted despite changes aimed at improving the soundness of the banks and a common perception that these changes were the right ones. Despite central bank efforts, disregard of lending limits was routine, incestuous lending 'rampant', and accounting cheating to cover bad loans by lending more to these customers was very common at the private banks, according to the president of Thomson Bankwatch Asia, an affiliate of a New York bank rating agency (*Jakarta Post*, 10 January 1996). The limits to government-related overseas borrowing introduced in 1991 could be side-stepped with political support (Schwarz 1994: 151–153). Many banks exceeded the credit ceilings issued by Bank Indonesia and continued to expand at extraordinary rates. Bank Danamon, for example, posted loan growth of 41 per cent in 1995 and 56 per cent in 1996 (*Business Times*, 23–24 August 1997).

After the banking deregulation of 1988, there was a common perception that the central bank did not have the professional expertise to cope with the new growth in the sector, and that its auditing procedures were cursory and overly concentrated on liquidity ratios, rather than portfolio soundness and managerial competence (*FEER*, 12 October 1989; *FEER*, 20 December 1990). There was, however, quite widespread consensus that the major obstacles to better performance by the central bank were not technical. In a critical review of bank practices, the president of Thomson Bankwatch Asia said that blame for not doing more to address banking problems did not lie with Bank Indonesia (*Jakarta Post*, 10 January 1996). The basic problem was that Indonesia's patrimonial governing system had not fundamentally changed and administrative capacity remained weak in many areas (MacIntyre 1994: 260–262; Dauvergne 1997: 60–69).

In addition, monetary policy became increasingly difficult as a result of the increased capital flows that were encouraged by deregulation. An open capital account was not a new phenomenon, but growth and deregulation

in the late 1980s and early 1990s made the inter-bank market much more attractive. Another major financial market to open up for foreign investors was the stock market in the late 1980s. Foreign purchasers led the revival on the Jakarta Stock Exchange and were still significant through the 1990s. During 1996, trading transactions involving only domestic parties accounted for 24.5 per cent of the total, while transactions involving only foreign parties accounted for 45 per cent of the total (Jakarta Stock Exchange, *Yearbook 1996*). Capital inflows from 1989 were significant and much of the inflow was portfolio rather than long-term investment. In addition, direct lending to Indonesian non-financial companies, often through international financial centres, emerged as much higher than had been reported.

For a variety of reasons, monetary policy reacted to the increased liquidity in the system by sterilising a large part of capital inflows through the issue of central bank bonds, known as SBIs. One reason for this was the desire to maintain the slow devaluation of the currency in support of the export sector. The exchange rate had long reflected an apparent policy to redistribute income to producers of traded goods. This concern meant that even during periods of balance of payments surpluses, the currency was devalued.²¹ Large inflows of capital into the domestic financial system were thus not absorbed by an appreciating exchange rate, although from 1996, the rate of devaluation was allowed to slow. Rather than capital flows returning to equilibrium through a lowering of domestic interest rates, which would have been the result in the absence of sterilisation, domestic interest rates remained high. This only provided an additional incentive for capital inflows and a strong reason for Indonesian companies to raise funds offshore. In this rather perverse policy stance, Indonesia was no different from most of the other countries in the region. However, poorer control over the domestic banking system, weaker monitoring capacity and fewer regulations over private-sector borrowing meant that the consequences were particularly severe. Ultimately, Indonesia's personalised governing system meant that political instability followed economic collapse, further exacerbating the economic situation.

The Philippines

The Philippine financial reform programme began in 1980, but major instability in the decade meant that rapid financial-sector growth and more significant liberalisation did not occur until the 1990s. In addition, liberalising reforms remained more limited than in other countries. Interest rate liberalisation was introduced in 1980 and completed by 1985 (Montes and Ravallo 1995). Formal liberalisation, however, had little effect on lending or deposit rates. As noted in the previous section, lending rates had already exceeded official interest rate ceilings, and deposit rates remained low due

to overt collaboration among the commercial banks, with the effective support of the central bank. Again, interest rates in the money market, accessible only to large operators, were much higher, and a two-tier system remained in place (Hutchcroft 1998: 161).

Another reform introduced from 1980 was aimed at increasing the supply of long-term finance for industry. The new banking laws allowed commercial banks meeting minimum capitalisation requirements to become 'Expanded Commercial Banks' – with the right to own up to 35 per cent of the equity in non-financial businesses and to operate as investment houses. The move to create what were effectively German-style universal banks was instigated by Philippine technocrats and the multilateral lending institutions (Broad 1988). For most of the 1980s, however, the change in legal regime had little effect on the operations of the major banks.

The selective credit system was also reformed in the 1980s. The proportion of total commercial bank assets financed by central bank loans and rediscounts dropped from 20.3 per cent in 1984 to 6.5 per cent in 1985, and became progressively even less important over the decade (Hutchcroft 1998: 183). By 1992, outstanding central bank rediscounts amounted to 5.3 billion pesos, 60 per cent of which was directed to export financing and 27 per cent to rural banks (BSP *Annual Report 1993*, Table A-08). The total amount of rediscounted financing was less than 2 per cent of total loans and advances by the commercial banks that year. For most banks, foreign exchange swaps as a source of funds also became less important from 1984.

Further reform was initiated in the early 1990s. In an effort to boost competition, restrictions on entry by foreign and domestic banks were loosened. New entrants into the banking sector were not established until 1994, and there was little actual increase in the level of competition, especially in the retail market. Foreign banks were restricted in their branching, and most of them also had little interest in lending to small and medium size enterprises or collecting high street deposits. The domestic banks were thus able to continue their cartel-type practices (Hutchcroft 1998: 213–220). Real interest rates on deposits, however, did increase in the 1990s to become positive. Real interest rates on time deposits averaged 2.8 per cent during 1992–96 (BSP 1998).

Overall changes in banking structure can be seen in Table 7.6. Commercial banks accounted for 60 per cent of financial system assets (excluding the central bank) in 1988, compared to the pre-reform (1980) figure of 56 per cent. However, a notable feature of the post-reform period is the large amount of financial assets held by the central bank. If these central bank assets are taken into account, the proportion held by commercial banks falls to 35 per cent by 1988, compared to 45 per cent in 1980. When the central bank was closed and re-established as the *Bangko Sentral ng Pilipinas* (BSP) in 1993, it was made plain that these central bank 'assets' represented unrequited transfers to the banking system.²²

Table 7.6 Philippines: post-reform distribution of commercial banking assets, 1983–95

	1983	1985	1988	1995
Private	57%	58%	75%	91%
Government	26%	27%	13%	0%
Foreign	17%	15%	12%	9%
Total (billions of pesos)				
Commercial banks	247.9	285.7	299.3	1,282.2
Central bank	130.4	251.6	349.9	501.9
Financial assets	553.9	751.5	850.2	–

Sources: 1983–1988: Montes and Ravallo (1995: 155); 1995: Hutchcroft (1998: 257) and *Philippine Statistical Yearbook 1997* (Table 16.9).

Arguably, the financial-sector reforms of the 1980s never had a chance to prove themselves as they were almost immediately overtaken by a series of crises. However, what is apparent is the underlying continuity in the direction of state subsidies to the sector. The early and mid-1980s were a period of severe banking instability. First, in 1981, the financial sector was shaken by the default of businessman Dewey Dee on his money market debt that exposed a number of banks. Then in 1983, the banking system suffered from large-scale withdrawals of deposits, capital flight and a balance of payments crisis triggered by the assassination of Marcos's main political rival, Senator Benigno Aquino, and subsequent political instability.

A major clean-up was attempted by the new Central Bank Governor, Jose Fernandez, from 1984. In a situation of extreme financial-sector distress and macroeconomic instability, the primary mechanism he employed to deal with both the balance of payments and the banking crisis was the floating of high interest rate bank bills, popularly known as 'Jobo bills' starting in March 1984. These bills soaked up liquidity, stabilised the currency, curbed capital flight and provided the banking sector (and other large asset-holders) with high-interest, low-risk investments (Hutchcroft 1998: 172). The bills achieved these aims, but made credit even more difficult for most borrowers and many of the country's non-financial businesses experienced huge difficulties at this time. The major conglomerates, however, were protected by their diversification into banking. Unlike in the earlier period, there was no clear division between financiers and manufacturers (Hutchcroft 1998: 173). Not all banks came through unscathed – three were closed down between 1984 and 1986, and another in 1987. In each case, abusive in-house lending practices were cited (Hutchcroft 1998: 175). Equity infusions and emergency loans were also received by other banks (IBON Databank 1983).

Later in the 1980s, with rediscounting and credit subsidies curtailed, government largesse went directly to the banks through the issue of high-yielding treasury bills. The government's domestic debt expanded more

than threefold between 1986 and 1990, and 30 per cent of the government budget was spent on interest payments on this debt by 1990. The favoured banks received a further boon from 1987, when government deposits were transferred to the five largest banks, initially interest-free, then at a low 5 per cent interest. The banks could turn around these funds and invest them in government securities yielding 20 per cent or more (Hutchcroft 1998: 194–195), at a time when inflation averaged less than 6 per cent between 1986 and 1989 (Lim 1998: 201).

Some indication of the cost of rehabilitation measures came in 1993, when the Central Bank itself, labouring under an increasingly precarious balance sheet, was closed down. Its debts of P331 or US\$12 billion were transferred to the national government. Most of the central bank's debt was due to its largesse in the 1980s (Hutchcroft 1998: 206–207). In addition, in the early 1980s at least, the main state-owned banking institutions – the Philippine National Bank (PNB) and the Development Bank of the Philippines (DPB) – continued to be used as cash cows. When they were rehabilitated in the wake of Marcos's ouster in 1986, it was estimated that the two banks had bad loans of P119 billion, or US\$5.9 billion. When their non-performing assets were transferred to other government bodies, PNB's balance sheet was reduced by 67 per cent and DBP's by 86 per cent (Hutchcroft 1998: 188).

In other respects, the financial system and the economy performed dismally in the 1980s. Gross national savings averaged 19 per cent of GNP in 1980–89 (Lamberte *et al.* 1992: 120), which was low by regional standards and even lower than the Philippine record in the 1970s. Real GNP growth averaged 2 per cent in 1980–89, mainly due to poor growth performance in 1982–86, including sharp contractions in 1984 and 1985 (Lamberte *et al.* 1992: 10–12). GNP per capita remained stagnant in real terms between 1981 and 1997 (Lim 1998: 201). External debt rose from 49 per cent of GNP in 1980 to peak at 94 per cent of GNP in 1986, before dropping to 61 per cent in 1990 and 48 per cent in 1996 (Lamberte *et al.* 1992: 86; BSP 1998). For most of the 1980s, the Philippines was effectively experiencing a prolonged foreign debt crisis, with debt service levels as high as three times national exports and never less than twice the value of exports (Lamberte *et al.* 1992: 86). Extraordinarily rapid growth in exports during the 1990s (from US\$9.8 billion in 1992 to US\$20.5 billion in 1996), combined with a major exercise in debt rescheduling and reduction, including debt-for-equity swaps in the early 1990s, saw overall debt levels fall to 12 per cent of exports by 1996 (BSP *Annual Report* 1993; BSP 1998).

Significant growth in the financial sector did not occur until the 1990s. The rapid increase in commercial bank assets is clear from Table 7.6. Stock exchange activity also picked up from 1986, with turnover reaching 31.4 billion pesos in 1987 and 18.3 billion pesos in 1988 (Lamberte *et al.* 1992:

203). This moderate growth was completely outpaced in the 1990s, when stock exchange turnover rocketed from 77 billion pesos in 1992 to 669 billion pesos in 1996 (BSP 1998). Large capital inflows, however, did not occur until 1996. The Philippine offshore banking system's loans to residents were US\$462 million in 1993 (BSP *Annual Report* 1993: Table A-22) – significantly less than the 1989 figure of US\$981 million in loans to residents (Lamberte *et al.* 1992: 186).

The exchange rate reflected the macroeconomic instability and then stabilisation of the 1980s. From P7.9 to the dollar in 1981, the currency declined to P11.11 to the dollar in 1983 and reached P20.39 to the dollar in 1986. Low inflation stabilised the currency for the rest of the decade, until it declined again from P21.74 to the dollar in 1989 to P27.48 in 1991 (Lim 1998: 201). The value of the peso was maintained at about this level until a major devaluation was forced in the midst of the region-wide currency crisis from 1997.

Malaysia

Financial reform in Malaysia was incremental, starting with interest rate decontrol in 1978 followed by increased prudential standards from 1989.²³ Deregulation and active promotion of the financial sector produced significant growth (Lin 1993). Credit through the banking system increased rapidly, although not at unprecedented rates. There was a stock market boom in the early 1980s, and even more rapid growth in stock exchange turnover and inter-bank assets occurred in the late 1980s and early 1990s. The government also led the effort to establish and promote an offshore banking facility located in Labuan Island, off Sabah in East Malaysia from 1991. Malaysian companies began to source significant amounts of capital from the equity market in the 1990s. Specialised industrial finance and development banks became even less important from the 1980s, as the assets of development finance institutions declined from an already low 2.9 per cent of total financial assets in 1983 to 1.6 per cent in 1995.

Certain forms of intervention continued. Besides the compulsory pension savings fund, voluntary savings institutions were set up and encouraged, including rural co-operatives and the national unit trust schemes.²⁴ Special credit funds for particular borrowers or activities established in the 1970s were maintained in the post-reform period, with some new funds set up in this period.²⁵ The special credit directives brought in during the 1970s continued to operate but, while significant at the time, they were of little significance by the 1990s. The most significant directive mandated 20 per cent of bank credit to Bumiputeras. In 1975, lending to Bumiputeras was low, but by the 1990s, it was well over the stipulated 20 per cent. For the other designated sectors, the amounts required were negligible. Some

Table 7.7 Malaysia: distribution of bank credit, 1981–96 (%)

	<i>Manufacturing</i>	<i>Property</i>	<i>Shares</i>	<i>Agriculture</i>
1981–85	21.1	32.0	1.8	6.5
1986–90	20.1	33.5	2.4	5.6
1992–96	22.6	30.5	3.8	2.9

Sources: BNM (1994: 506), BNM *Quarterly Economic Bulletin*, BNM *Annual Report*, various issues.

Note: Property: loans for building, construction, real estate and housing.

control of interest rates was re-instituted during the 1980s when banks were required to publish their 'base lending rates', determined in relation to the cost of funds, and specified types of loans were not to deviate more than a set amount from the base rate. This system continued until 1991 (Zainal *et al.* 1994).

Government influence over the sectoral distribution of credit (Table 7.7) remained minimal. Property loans did not moderate in the 1980s despite being frequently cited as problematic. The central bank often stated that lending for property and share purchases was too high in the first half of the 1980s, but such lending increased in the second half of the decade both absolutely and relatively. Even directives on the direction of lending could be peripheral. For example, the 1989 banking law limits exposure to property and shares, but lending to these sectors in the 1990s was similar to what it was in the early 1980s, later judged to be too high. Considering the string of troubled banks in the mid-1980s, mainly due to overexposure to property and shares, more stringent limits might have been expected.

Government transfers and lending to the private and state enterprise sectors have been significant (Zainal *et al.* 1994: 287; Kanapathy and Ismail 1994: 107), but in line with the policy to reduce the state's role in the economy, these transfers became less significant from the mid-1980s. However, one of the largest state-owned banks, Bank Bumiputra, required bailouts twice during the 1980s. Other banks required extensive liquidity support in the late 1980s. An undisclosed amount of public money was spent overcoming the banking crisis of the late 1980s. In general, this episode was considered well managed and, with the exception of the Bank Bumiputra bailouts, not an excessive burden on public finances.

Foreign borrowing by Malaysian companies was not high. Permission was required for loans above a certain size, but this was readily given (Abang 1986). However, the availability of domestic credit meant that incentives to borrow offshore were not great. In the 1990s, the most significant Malaysian issuers of foreign debt were some large public enterprises. Recently, restrictions on foreign currency debt acquisition by Malaysian companies received more emphasis (BNM *Annual Report* 1997: 192–193). The current account

remained generally open, although reporting requirements were significant. The major control that continued until the period of strong capital inflows in the 1990s was that trade-related foreign currency earnings were to be repatriated within six months. Until the reversals in mid-1997, the 1990s saw an absolute and relative increase in the size of portfolio flows, largely due to mutual funds from developed countries turning their attention to emerging markets in Asia (Khan and Reinhart 1995). In 1993 in particular, capital inflows were very high. In early 1994, temporary controls aimed at limiting portfolio inflows were put in place, but were removed by the end of the year.

Efforts to maintain monetary autonomy with exchange rate stability continued in the 1990s. Over the period 1990–93, the currency hardly moved at all against the US dollar, despite the extremely large capital inflows.²⁶ The currency strengthened slightly over 1994–96, before dropping precipitously in the regional currency crisis of 1997–98. Given the large inflows of capital and rapid growth in the economy, keeping the currency undervalued contributed to excess domestic liquidity and inflationary pressures. The central bank attempted to deal with these pressures by targeting interest rates, a monetary policy lever that only began to be employed seriously from 1990 (BNM 1994). The massive sterilisation efforts required by the central bank's monetary policy saw official external reserves increase by 55 per cent in 1992 and 62 per cent in 1993. The cost of these efforts remains undisclosed, but was probably high (Kahn and Reinhart 1995). Further, the expectation of eventual appreciation further enhanced capital inflow, compounding the effect of continued high interest rates due to sterilisation. The ringgit did appreciate against the US dollar in 1994 and 1995, but remained below what many market analysts saw as realistic.²⁷

Reforms in Malaysia were driven by political considerations more than by systemic imperatives. The moderately high levels of state debt run up in the early 1980s were certainly not sustainable, and some measures, such as the more permissive foreign direct investment regime, were probably necessary to pull Malaysia out of recession in the mid-1980s. However, many of the measures to deregulate the financial system and withdraw the state from the economy either occurred before the slow-down in the early 1980s (e.g. interest rate decontrol) or in the context of high growth with little fiscal pressure on the government from the late 1980s (e.g. promotion of the offshore capital and equity markets, extensive privatisations).

Clear political favouritism can be seen in the implementation of many economic reforms of the 1980s and 1990s. Privatisation, which has been extensive, has been associated with significant favours to politically connected private interests (Jomo 1995). Many changes in the ownership structure of the banking sector correspond with the rise of Bumiputera interests in general and politically connected interests in particular (Gomez and Jomo 1997). Certainly, interests close to the ruling party have benefited

extensively from banking-sector development and from the robust growth of the equity market. Favoured individuals have made huge windfall profits from preferential allocation of new stock market issues (*Asian Wall Street Journal*, 19 June 1995) while political party fundraising efforts were probably behind stock market manipulation in 1993 (Gomez 1996). This may explain the strong official promotion of the stock market in a country that does not have a mature banking system (Chin and Jomo 1996).

An increasingly close identity of political and business interests emerged from the mid-1980s. Although not unknown earlier, the high proportion of politicians and ruling party officials with extensive business involvement is a development from the 1980s (Doh 1985: 109–115; Leigh 1992; Bowie 1994). There has also been the growth of money politics within UMNO and the divestment of party assets to trusted individuals (Gomez and Jomo 1997). Mahathir has also had an explicit policy of reducing the role of the state, especially the size of the bureaucracy, and implementing reforms to make the civil service more efficient and responsive to the private sector (Root 1996: 65–89). Downgrading the public sector, combined with extensive new opportunities in the private sector, resulted in some reduced administrative capacity in government, as talented and capable personnel moved to the private sector. Some regulatory agencies became less effective due to reduced powers, demoralisation, personnel changes and other factors. The Capital Issues Committee was removed from the relatively efficient and effective central bank in the mid-1980s to be reconstituted later within the Securities Commission set up in 1993.

It would be an exaggeration to conclude that politics and favouritism dominate financial policy to the exclusion of other considerations. Corruption and the manipulation of government policy for private purposes were a long way from reaching levels seen in Indonesia in the 1990s or in the Philippines under Marcos. In comparative surveys of corruption, Malaysia is consistently in the middle ranks, among countries such as Japan and South Korea (Root 1996: xv). Allegations of corruption and influence mostly involve politicians, not civil servants – which may be an indication of where the centre of decision-making is, but it also means that when political interest is not high, the interests motivating bureaucratic action can be reasonably independent, making for a moderately regularised and coherent administration.

The central bank is not untainted by scandal, but was considered to be one of the more competent, more meritocratic and independent government bodies. It has, at various times, been tasked with cleaning up private- and state-sector institutions not, at the time, under central bank supervision. This includes involvement in the aftermath of a corruption and mismanagement scandal of a state development bank in 1978, and failures of deposit-taking co-operatives and problem banks in the mid-1980s and the insurance industry in the late 1980s. Most accounts of the central bank's

resolution of these problems concur that the bank did reasonably well in these instances. Doubts about whether some private shareholders were sufficiently punished have been voiced, but it is significant that the financial problems of the institutions under Bank Negara's supervision were mostly resolved, which stands in contrast to Bank Indonesia's record of ongoing deterioration of the banks under its management. On the other hand, political constraints have probably deterred BNM from taking tough disciplinary action against favoured interests.²⁸

Thailand

Thailand's major financial reforms did not occur until the 1990s. Until the financial crash of 1997, it was considered a successful case of financial reform. Beginning in 1990, interest rate controls were removed, controls on the capital account were lifted and efforts were made to increase competition in the banking sector (Unger 1998: 95–99).²⁹ In addition, an offshore banking system was promoted and received de facto subsidies. Partly due to promotion efforts and partly due to external interest, the stock exchange also experienced unprecedented growth in the 1990s (*Euromoney* 1996).

According to a reasonably detailed study of the reforms, the government was able to engage in 'ambitious and coherent' efforts at financial-sector promotion and to implement the new policies 'with an unusual degree of coherence' (Unger 1998: 86). Unger's study offers two explanations of the financial mess that ensued. First, in retrospect, he acknowledges a 'design flaw' in the policies. Second, Unger points to signs of conflict and a breakdown of previous governance mechanisms in the relationship between the Bank of Thailand and the Ministry of Finance. This was exacerbated by political intrusion and heightened political competition, which increased pressure on extra-legal fundraising sources, which included the vibrant financial sector. There was an increase in political competition in the 1990s, with the political bases of support drawn most from 'those interests which stood to suffer the most damage from necessary political adjustments' (Unger 1998: 99).

In many ways, however, these were not new developments, and therefore it is hard to ascribe to them alone the poor state of the financial sector that became apparent in 1996. As discussed in the preceding section, political-business collusion and the support of political actors by financial and commercial interests were not new. Neither was banking instability. What was new was the relative size of the financial sector, which had grown in importance as a result of a policy of developing finance qua finance. The increased competition and internationalisation that this involved meant that the sector was no longer protected by the patterns of informal collusion that had previously operated. And failures became much more costly.

Currency and banking crises, 1997–98

The recent decade-long Southeast Asian economic boom has now come unstuck owing to the economic consequences of, and policy reactions to, the massive asset price deflation – due to panic (‘irrationally’ pessimistic herd behaviour) greatly exaggerating the impact of successful currency speculation against untenable virtual currency pegs against the US dollar. Such market behaviour sought to gain advantage or minimise losses from some unintended consequences of the region’s currency appreciations. The overvalued regional currencies had emerged from partial financial liberalisation, which had also created the conditions for the asset price inflationary bubbles that burst in mid-1997 with such devastating consequences for the region. Such problems were further exacerbated by injudicious official policy responses at both national and international levels. Failure to recognise the nature of the processes of accumulation and growth in the region had generally prevented the design and implementation of appropriate and adequate proactive strategies of well-designed and sequenced deregulation in the face of growing pressures for apparently inevitable financial liberalisation.

There is now little serious disagreement that the Southeast Asian economic turmoil since mid-1997 began as currency and liquidity crises. It is also increasingly agreed that the crises were principally due to the undermining of previous systems of financial governance due to deregulation and other developments associated with the growing influence of financial interests at both international and national levels as well as other pressures for financial liberalisation and globalisation. Such developments have included the subversion of effective financial governance at both international and national levels, which has created conditions increasingly vulnerable to financial crisis. It is now also increasingly acknowledged that the currency and liquidity crises became crises of the ‘real economy’, mainly due to inappropriate government – and IMF – policy responses as the problems emerged (e.g. Radelet and Sachs 1998a; Jomo 1998c).

High growth rates and high rates of return on capital (high interest rates as well as high returns to portfolio investments) plus predictable exchange rates (with currencies in the region pegged to the US dollar) as well as eased regulations on capital flows attracted enormous short-term capital flows of two types. On the one hand, international banks were especially keen to lend to both banks as well as corporations in the region. To minimise risks, they tended to lend short, but borrowers in the region were quite happy to deploy such borrowed funds for long-term purposes. On the other hand, foreign portfolio investments were attracted by national as well as international (official) promotion of newly emerging securities markets, buoyant conditions in the region and government guarantees of ease of exit.

Meanwhile, large current account deficits in some countries (notably Malaysia and Thailand) were being financed by short-term capital inflows

into the fast-growing domestic securities markets and by borrowings from abroad. The current account deficits were partly due to the growing proportion of 'non-tradables' being produced in the region, much of which was related to accelerated construction activity in response to real property booms. These flows were 'sterilised' to minimise consumer price inflation, as desired by the financial community, but instead fuelled asset price inflation, mainly involving real estate and share prices.

Despite official claims that the region's currencies were pegged to baskets of currencies of their main trading partners, for all intents and purposes, they had been virtually pegged – within narrow bands – to the US dollar for many years. Such quasi-pegging had offered certain advantages, including the semblance of exchange rate stability against the US dollar so much desired by financial interests. The 1994 devaluation of China's renminbi put greater competitive pressure on Southeast Asian economies, especially Thailand, which had been producing for similar export markets. As the US dollar strengthened against the Japanese yen from mid-1995, Southeast Asia's dollar-pegged currencies followed suit, adversely affecting the region's export competitiveness.

This was exacerbated by the region's failure to progress more rapidly to higher value-added production, mainly due to inadequate and inappropriate public investments in education and training as well as limited indigenous internationally competitive industrial capabilities. This state of affairs also reflected the political weakness – compared to the financial community in terms of influencing economic policy making – of exporting manufacturer interests in the region, where most internationally competitive industrial capability outside of resource-based manufacturing has been foreign-owned. The high investment rates apparently also led to production over-capacity as well as declining 'investment quality and productivity', though these notions are somewhat nebulous and may refer to the increasing share of 'non-productive' investments, e.g. in real estate, and sometimes to poor rates of return after the bubble burst (i.e. actual rates of return turn out to be well below expected rates of return to investments).

Meanwhile, the more rapid growth of equity (as opposed to debt) finance – probably involving some relative, if not absolute financial disintermediation – grew in significance in the 1990s, especially with the active official promotion of stock markets, encouraged by private financial interests and multilateral institutions such as the International Finance Corporation, a subsidiary of the World Bank. The establishment of various new international banking facilities in the region to ease access to foreign funds also undermined financial governance, especially prudential banking regulation, at the crucial national level. Such reforms, the growth of 'private banking' and 'relationship banking' in the region as well as intensified competition among 'debt-pushing' competitors had also weakened the scope and effectiveness of national financial governance. Other domestic as

Table 7.8 Pre-crisis financial development and internationalisation (billions of US dollars and as a percentage share of GDP³⁰)

	Credit ^a		Money ^b		Stocks ^c		Capital inflows ^d	
	\$bn	%	\$bn	%	\$bn	%	\$bn	%
Indonesia	123.9	55	94.9	42	43.5	19	10.8	4.8
Philippines	40.5	49.0	36.1	43	31.3	38	7.7	9.3
Malaysia	92.2	93.5	67.1	68	223.5	227	9.5	9.6
Thailand	185.0	100.0	130.3	70	142.0	77	19.5	10.5

Notes: a Claims on private sector held by deposit money banks, end 1996 (source: IMF *International Financial Statistics*, November 1998). b Quasi-money (source: IMF *International Financial Statistics*, November 1998). c Stock market capitalisation, December 1995 (source: Crosby Research figures cited in *Euromoney* (1996: 84)). d Net inflows of capital: financial and capital account of the balance of payments, 1996 (sources: IMF *International Financial Statistics*, November 1998; except Philippines: preliminary figures from *Philippine Statistical Yearbook* 1997).

well as international financial-sector reforms had also considerably reduced the powers and jurisdictions of the region's central banks.

The difference between the Philippines and other Southeast Asian countries with regard to financial development, disintermediation and internationalisation may help to explain why the Philippines was not as badly hit by the crisis as its neighbours. In terms of their level of financial development, Thailand and Malaysia showed much higher levels of intermediation as well as stock market capitalisation. Stock market capitalisation, in Malaysia in particular, had reached very high levels, with some relative disintermediation especially apparent in the 1990s, with active official promotion of the Kuala Lumpur Stock Exchange (KLSE). Table 7.8 summarises some relevant indicators.

In Thailand and Malaysia, unlike the Philippines, capital inflows had been high throughout the 1990s – inflows to Thailand averaged 10.2 per cent of GDP each year from 1990 to 1996 (Montes 1998: 19), while in the Philippines, they averaged 5.6 per cent of GDP during 1991–96. Recorded inflows to Indonesia in 1991–96 averaged 4.1 per cent of GDP (IMF, *International Financial Statistics*, November 1998), but recorded flows are now known to have greatly underestimated the foreign currency liabilities of the country. While the capitalisation of the Indonesian stock exchange compared to the size of the economy was lowest in Indonesia, its growth from 1990 to 1995 was 781 per cent – the highest by far of the four countries (*Euromoney* 1996: 84). Also not shown in Table 7.8 is the discrepancy in the Thai case between bank credit to the private sector and credit to the private sector by the financial industry as a whole, which increased from 72 per cent of GDP in 1990 to 142 per cent of GDP in 1995 (Montes 1998:

12–13). Another factor that distinguished the Thai financial sector was that just 1 per cent of total foreign exchange liabilities of commercial banks in Thailand was owed to residents – as compared to about 52 per cent in the Philippines, as of the first quarter of 1996 (Intal *et al.* 1998: 155).

Finally, the Philippines can be differentiated from the other countries for being at a much earlier stage in its export-led, high-growth spurt. While in the other countries, export-led growth had begun in the second half of the 1980s, in the Philippines, it did not commence until the mid-1990s. Thus, some of the problems experienced by the other countries in the region were effectively ‘nipped in the bud’. Thus, in the Philippines, by the advent of the crisis, it is suggested that ‘the Philippines has weathered this crisis relatively well partly because it was not experiencing economic “success” in comparison with the very high growth rates of the previously high-performing East Asian economies’ (Intal *et al.* 1998: 161). In addition, growth in the Philippines may have been more robust because the country’s exports have been more heavily oriented to markets outside the region, and hence, have not suffered as much from the ‘implosion of intra-regional trade’ (Garnaut 1998).

In the immediate aftermath of the outbreak of the crisis in mid-1997, many economic observers immediately assumed that the crises in the countries of the region were due to poor macroeconomic management, as suggested by the second generation of currency crisis theories. After the outbreak of the crisis, it soon became clear that all the Southeast Asian governments affected had been maintaining decent macroeconomic balances except for large balance of payments’ current account deficits for Malaysia and Thailand, which had been financed by massive, mainly short-term capital inflows. With the debt – including foreign borrowings – mainly involving the private sector, and with continued high savings and growth rates as well as low consumer price inflation, most monetary and financial authorities in the region were being enthusiastically encouraged by the international financial community.

The recent currency and financial crises clearly suggest that Southeast Asia’s economic boom had been built on some shaky and unsustainable foundations. Much of the retained wealth generated had been captured by those in power and their business cronies, who in turn contributed to growth by reinvesting much of their captured rents, mainly in the ‘protected’ domestic economy, e.g. in import-substituting industries, commerce, services and privatised utilities and infrastructure. Despite various weaknesses, this Southeast Asian brand of ersatz capitalism – involving changing forms of *rentier cronyism* – had sustained rapid growth for three to four decades.

Business organisations, relations, practices and norms that had previously been credited with the Southeast Asian miracle, have since been condemned as the sources of the debacle. It also became fashionable in some quarters to suggest that such practices and developments had their roots in Japanese-

type or more generically East Asian culture, norms and relationships that influence relations between the state and the private sector as well as among businesses, invariably involving welfare-reducing, if not downright debilitating rent-seeking behaviour. Insofar as such relations are believed to exclude outsiders, their elimination is believed to contribute to levelling the playing field and bringing about an inevitable convergence towards supposedly Anglo-American style arms-length market relations.

Such arrangements and institutions – previously celebrated as part of the basis for the phenomenally rapid growth in the region – are now derogatorily referred to as elements of crony capitalism and rent seeking. In themselves, however, it cannot be shown that they have actually precipitated the crisis nor do they satisfactorily explain its bases and origins. Cronyism (and nepotism) certainly influenced official policy responses to the crises in Malaysia and Indonesia before Suharto stepped down as president in May 1998 (Jomo 1998b; Pincus and Ramly 1998). More importantly, such influences – real as well as imagined – may well have exacerbated the crises and are likely to continue to undermine confidence in government efforts, and thus delay recovery.

Once it was clear that the region's macroeconomic indicators were not seriously awry, and in the wake of the recent debate on Asian values and other cultural, institutional and behavioural differences, many commentators increasingly invoked Southeast Asian cronyism and its alleged consequences as new explanations for the crises. Most such critics condemned some caricatured image of rent seeking in the region – as reflected in various alleged departures from some 'market fundamentalist' ideal – to explain the crises, usually ignoring all the subtlety and nuance of extant analyses of rent seeking in the region. Thus, Southeast Asia's financial turmoil came to be portrayed as having been induced by alleged crony capitalism and rent seeking in the region.

With the benefit of hindsight, it is now widely agreed that IMF policy responses exacerbated, rather than ameliorated the crises in the region as well as in South Korea (Radelet and Sachs 1998b). It appears that the Fund initially saw the currency crises as similar to earlier ones in Latin America and elsewhere (Kregel 1998). Even though most Southeast Asian governments had not run fiscal deficits for some time, the IMF insisted on fiscal spending cuts, which exacerbated the deflationary effects of the sudden massive currency devaluations related to panic and capital flight. In Thailand and especially in Indonesia, such cuts adversely affected public welfare, leading to economic distress, social unrest and regime change more conducive to policy reform. Given their generally sound fiscal positions, temporary counter-cyclical budget deficits could have helped to counter the deflationary impacts of the crises.

The Fund also insisted on raising domestic interest rates, ostensibly to try to immediately reverse capital outflows, even though there was little

immediate prospect of success while panic was still the order of the day. The high interest rate policies adopted throughout the region did little to stem the capital flight, but instead imposed crushing debt burdens on most enterprises, and consequently exacerbated the banks' bad debt problems. Since the vast majority of growing businesses were in debt (this being a common feature of corporate expansion in Southeast Asia), the increased interest rates rendered the region's private sectors – already beleaguered by the currency collapses and their consequences – even more vulnerable to collapse. To make matters worse, the credit ratings of both countries and their corporations were adversely affected, further raising the cost of badly needed external funds.

The IMF also exacerbated the situation by insisting on immediate drastic actions against problematic financial institutions in the region, which has been compared to 'shouting fire in a crowded darkened theatre'. While structural reforms would, in any case, have been necessary in the medium term to rebuild stronger financial systems, the timing of these actions generally undermined remaining confidence in domestic financial institutions, causing runs on many of them, thus inadvertently increasing the fragility of these financial systems. Almost inevitable government interventions – as lender of last resort to save these systems – have since been denounced as evidence of government policy contributing to moral hazard, although there is little real evidence of explicit government guarantees that can be construed as the bases for such claims. In other words, the fact of subsequent government intervention to save drowning financial institutions does not, in itself, prove that the governments had contributed to moral hazard by explicitly making such guarantees before the crises.

Other IMF demands for immediate structural adjustments and systemic reforms – previously prescribed elsewhere over the medium term (e.g. with the short-term stabilisation measures introduced in the wake of the 1980s' debt crises) – only worsened the situation by overloading the reform agenda at a time of chaos and uncertainty as well as depleted capacity and resources. In some cases, the conditionalities imposed were not even relevant to solving the immediate problems at hand, but instead reflected particular (usually 'market fundamentalist') views of how Southeast Asian economies should be reorganised. For example, the Malaysian authorities redefined 'non-performing loans' more stringently, reducing the grace period from six to three months, as the effects of the worsening financial crisis were reverberating through the economy.

In the third quarter of 1997, the Japanese Government offered US\$100 billion for the establishment of some kind of Asian monetary facility to address the region's rapidly unfolding crisis. This initiative was blocked by opposition from the Clinton administration as well as the IMF, which may have felt that its existing (monopolistic) authority would be undermined by the advent of alternative sources of emergency credit accessible on less

onerous terms. The lukewarm US response to the East Asian regional crisis contrasted with its earlier intervention to save Mexico from going under in 1995 as well as its virtually unconditional support for the Yeltsin regime in mid-1998. In the last quarter of 1998, however, the Clinton administration did not openly oppose the Miyazawa initiative to provide US\$30 billion towards East Asian credit needs, but instead tried to gain some credit at the Asia Pacific Economic Co-operation (APEC) Forum in Kuala Lumpur in early November by offering to top up the Japanese offer with a much more modest financial aid offer of its own.

Thus, during the crucial first year of the regional crisis, Southeast Asian economies only had limited access – on very tough conditions – to the badly needed credit required to check the fast-growing liquidity crisis and thus contribute to recovery. This has been variously attributed to, among other factors, the limited funds at the disposal of the IMF (in contrast to Keynes' original funding recommendations in 1944 as well as the enormity of the problem in East Asia), political divisions in the US over IMF funding, the declining strategic significance of Southeast Asia to the US after the end of the Cold War (compared, say, to the importance of 'saving' US neighbour Mexico in 1995, especially so soon after the advent of the controversial NAFTA, the North American Free Trade Area), and failure to recognise the serious systemic implications of the crisis, especially by those who felt it represented a long overdue come-uppance for the increasingly cocky East (including Southeast) Asians who had become smug with their apparent economic success.

While flawed in both design and implementation, the Malaysian currency controls since September 1998 have provided a critical window of opportunity by restoring greater government control over monetary policy, enabling the authorities to lower interest rates (previously subject to offshore currency trading) and stabilise the exchange rate (ironically, against the US dollar). By moving briskly to take over non-performing loans and to re-capitalise the banks, the Malaysian authorities seem to have succeeded in salvaging the banking system and restoring financial confidence fairly quickly. Unfortunately, the failure to draw meaningful policy lessons from the late 1980s' banking crisis for subsequent prudential regulation – or perhaps the failure to sustain the greater prudence which initially emerged after that episode – casts doubt as to whether the financial system is able to effectively internalise lessons from previous failures.

Conclusion

This study has argued that the institutional foundations of the financial policy regime matter, though this does not mean that financial policy design is unimportant (e.g. Chin and Jomo 1996). Particular strengths and weaknesses stem from particular organisational and political settings.

The institutional foundations of governance that work relatively well in sheltered, marginally inefficient systems, may fail when the policy regime favours greater financial development. Poor governance is likely to produce policy failure no matter what particular policies are attempted. In other words, financial governance is important, and good policy design, in itself, cannot guarantee good outcomes. Good policy can fail because of poor political implementation or enforcement.

This study has also highlighted the particular pitfalls of financial liberalisation, internationalisation and unregulated capital mobility in the absence of robust regulatory regimes. The consequences of regulatory failure appear to be much less serious in protected financial systems. Some degree of international openness may be a salutary source of discipline, but this discipline will tend to be ambiguous, post-hoc and counterproductive since international financial markets often respond to market sentiment rather than economic fundamentals.

The governance structures that prevailed in Thailand, for example, worked relatively well when the financial sector was protected, but failed in the face of exposure to international financial flows. Malaysia's governance capacities were well suited to relatively conservative bank-based financial development. The breakdown from the 1980s of its previously strong regulatory record and exceptional financial stability (by developing country standards) corresponded with the changed orientation of the country's financial policy (e.g. stock market promotion involving financial disintermediation), increased political subversion of regulation and a rise in private-sector influence over policy.

Indonesia's administratively weak and patrimonial governing capacities meant that both its phase of state-led financial policy and deregulated financial development proved unsustainable. The Philippines has also had failures in governing capacity. It escaped the crisis relatively lightly, largely because it had already rehabilitated its banking system after an earlier, very severe and prolonged crisis, and lagged behind other countries in the region in terms of growth and attracting massive capital inflows. In all these cases, the problem of over-exuberance followed by panic – that seems to be a common feature of financial market behaviour – was exacerbated by the internationalisation of financial market activity.

The cases also show that undue influence exerted by special interests often distort policy and its implementation in both state-led and ostensibly market-based financial systems. The inherent imperfections of financial markets mean that there is a strong case for some government role, both for prudential regulation and to take a more proactive role in better allocating financial resources to ensure desirable, sustained and equitable development. In both cases, more attention needs to be directed to building the necessary governance capacity. In some cases, this may be achieved by private-sector mechanisms for controlling financial transactions, but the

broader policy framework, together with a country's political and administrative conditions, must be conducive to private-sector governance. It is unlikely that relatively efficient financial markets can be sustained in the absence of uncompromised and regularised government authority. It is not simply a matter of making the right prudential policies, but also of ensuring that they are effectively implemented or enforced.

Notes

- 1 Fry (1995) provides a comprehensive review of the theory and evidence regarding finance and development and argues the case for liberalised financial systems. On market imperfections, see Stiglitz and Weiss (1981), Hellman, Murdock and Stiglitz (1997) and reviews by Park (1994), Lee and Haggard (1995) and Chin and Jomo (1996).
- 2 Chin and Jomo (1996) review the major arguments in this area.
- 3 This is the 'beauty contest' described by Keynes. Kindleberger (1996) discusses the cycle of 'manias, panics and crashes' endemic to financial markets over the past centuries.
- 4 See Hutchcroft (1998) for an argument along these lines illustrated by the Philippine case. Hamilton-Hart (1999) discusses the factors accounting for (or compromising) institutionalised governing systems in other Southeast Asian countries.
- 5 This argument is elaborated and assessed in Hamilton-Hart (1999).
- 6 See Goodman and Pauly (1993) for a political economy account of this axiom.
- 7 On banking in the first decades of independence, see Emery (1970: 153–225), Nasution (1983) and Wardhana, in Glassburner (1971).
- 8 Population per bank office remained around 18,000 between 1974 and 1988 (Pangestu 1996: 113).
- 9 On these functions, see Prawiro (1972) and Rahardjo (1995: 273–328).
- 10 Bank Indonesia's history is given in Rahardjo (1995).
- 11 Total trading on the Manila and Makati stock exchanges rose in nominal terms from 3.1 billion pesos in 1975 to 4.7 billion pesos in 1980 (Lamberte *et al.* 1992: 203).
- 12 The relationships between the Philippine authorities, the World Bank and the IMF are covered in detail by Robin Broad (1988). Bello *et al.* (1982) provide a critical discussion of World Bank policies and the results of World Bank lending in the Marcos era.
- 13 The absence of a rational-legal Weberian bureaucracy or state system is most explicit in Hutchcroft's work, but almost any study of Philippine political economy will confirm these features. See Hawes (1987, 1992) and Hutchison (1993).
- 14 Figures on foreign exchange transactions are not available until the 1980s. Comments in the annual reports of the central bank suggest that before then, transactions were mainly trade-related.
- 15 The major studies of the bureaucracy, on which this account is based, are Tilman (1964), Esman (1972), Puthucheary (1978) and Khasnor (1984).
- 16 A World Bank mission in 1954 recommended establishing a central bank, more-detailed plans for which were put forward in the Watson-Caine report of 1956 (Sherwood 1966). The primary study of central banking in Malaysia is Lee (1987).
- 17 This argument is elaborated further in Hamilton-Hart (1999, Ch. 4).
- 18 The financial sector reforms have been discussed by many authors. Cole and Slade (1996) are the most comprehensive. See also MacIntyre (1993), McLeod (1994), Chant and Pangestu (1994) and Binhadi (1995).

- 19 On the development of the stock exchange, see Cole and Slade (1996: 153–185).
- 20 Among the numerous accounts of the post-deregulation financial system, Nasution (1992) provided the earliest academic note of caution. See also MacIntyre (1993), Suwandi (1995) and Cole and Slade (1996: 81–146).
- 21 Cole and Slade (1996: 44, 78) cite studies by Woo and Nasution, Warr and Woo, Glassburner and Nasution on this point.
- 22 The balance sheet of the old central bank is included in the 1993 *Annual Report* of the new BSP.
- 23 A concise overview of financial policies over time was provided by Zainal *et al.* (1994).
- 24 Savings through the ASN and ASB schemes amounted to over RM12 billion between 1981 and 1992 (Khalid, in Al' Alim 1994: 171).
- 25 These funds are described in BNM (1994: 164–183).
- 26 The end-year rates are slightly deceptive. From December 1992 to September 1993, the currency did appreciate 2 per cent but dropped nearly 6 per cent in the last quarter of 1993, due to heavy selling by the central bank to reduce the Malaysian-currency value of its foreign exchange losses.
- 27 The assessment that the currency was undervalued was made by the IMF Managing Director in July 1996. A Morgan Stanley report predicted in 1994 that the ringgit should trade at RM2.00 to the dollar by 1996. See Ong (1996: 10) and Zeti (1998).
- 28 Details are given in Hamilton-Hart (1999, Ch. 4).
- 29 Although in some respects open before then, a number of direct and indirect controls meant that the capital account was not really open (Warr and Bhanupong 1996: 1769–1771).
- 30 Calculated according to the following exchange rates and GDP values:

	<i>1996 GDP</i> <i>(billions, local currency)</i>	<i>Exchange rate per US\$,</i> <i>end 1996</i>
Indonesia	532,631	2383
Philippines	2171.9	26.288
Malaysia	249.503	2.529
Thailand	4689.6	25.343

Source: IMF, International Financial Statistics (November 1998).

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