The Malaysian Economy: Past Successes, Future Challenges•

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Hal Hill
Australian National University

I INTRODUCTION

How might a development economist view the Malaysian economy? What are its key 'stylized facts' and its salient features? To what extent does its development record conform to the received wisdom on growth and development? These questions inform the analytical framework which guides this paper.

Starting with the big picture, at least five, and perhaps several more, features stand out in any overview of its development record. The first, and by far the most important, is *success*. In its almost five decades of Independence, Malaysia's growth record comfortably places it in the top performance decile of developing countries. It is among the tiny handful of countries to have performed consistently well since the 1970s. It was rightly included among the World Bank's (1993) "miracle" economies. It may not have grown quite as fast as China and the four Asian NIEs, but very few countries elsewhere have been able to match its record.

A second feature is the *consistency* of its performance. Inevitably, as one of the most open economies in the world, external events quickly impact on it. But its growth record has been impressive virtually throughout the period of Independence. When the economy has experienced difficulty, for example, in the 1997-98 Asian economic crisis and the mid 1980s recession, it has

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invariably bounced back quickly, testifying to its fundamental strengths and resilience.

A third feature is what one may term '*economic policy orthodoxy*'. Perhaps the most important contemporary challenge for development economics is to understand and explain long term differences in economic performance: why have some countries (like Malaysia) consistently grown more quickly than others; why are there 'chronic economic dropouts', and why do some appear to be particularly vulnerable to 'boom and bust' cycles? In the search for explanations, empirical verification of contending theories is providing important clues to these questions, while also of course highlighting much that is unknown. It will be argued in Section III that much of Malaysia's economic success can be explained by the more or less continuous adherence to 'orthodoxy' – principally openness and prudent macroeconomic management – by all five post-Independence administrations. Malaysia's policy orthodoxy, predictability, and consistency are, I believe, absolutely central to any explanation of its success.

A fourth feature is what may be regarded as Malaysia's *'inclusive development'* style. Inheriting a highly unequal distribution of income and wealth from the colonial era, successive governments have generally ensured that the benefits of rapid growth have been distributed reasonably broadly. Of course, there are conspicuous exceptions to this generalization. As in all countries, those close to the centres of power, and skilled in the art of rent-seeking, have enriched themselves spectacularly. But by and large, practically every Malaysian has benefitted from growth in some measure. The NEP and its successors have of course been central to this achievement, but several other factors are also relevant.

Finally, and consistent with the current predilection of economists to 'rediscover' history, *initial conditions* have shaped Malaysia's development trajectory in important ways. One, already alluded to, was the high levels of inequality generally associated with the colonial-era plantation-based, enclave economy; further complicated in Malaysia's case by the fact that this inequality had an ethnic dimension. While this created great challenges for the newly independent economy, there were also significant positives at the time of Independence: relatively high per capita income, a well functioning bureaucracy and legal system, and reasonably good (though spatially maldistributed) physically infrastructure.

This paper offers a broad assessment of Malaysian economic development over the past quarter century, set against the broader Southeast Asian experience. Section II examines the comparative record according to some key indicators. Section III looks at development achievements in more detail. Section IV considers some key development issues and challenges, while Section V summarizes our principal arguments.

II COMPARATIVE OVERVIEW

Any comparative assessment of Malaysia's development record naturally invites the question, 'compared to who or what'? Since Malaysia is a founding member of ASEAN, the usual comparators are drawn from among its Southeast Asian neighbours, or East Asia more generally. But apart from geographical proximity and policy similarities, there is no obvious East Asian comparator. If Penang were a nation state, it would make sense to compare it to Singapore, but a broader Malaysia-Singapore comparison obviously encounters difficulties. Malaysia and Thailand share many common features, but their initial conditions, institutions and natural resource endowments are also rather different. Malaysia's natural resource abundance invites a comparison with Indonesia, but the countries are very different in so many respects.

In an earlier period, the then Malaya was frequently compared to the West African state of Ghana. The two had a common colonial master, were tropical, and were major cash crop (especially rubber) exporters. Professor Peter Bauer's seminal contributions to our understanding of markets and development over 50 years ago were based on his work in the two countries. Ghana's per capita income was somewhat higher than Malaysia's at the time of Independence, but thereafter Malaysia's record has been so superior that the comparison is now all but pointless, except as a contrasting case study in development economics, of what to do (Malaysia) and to avoid (Ghana).[1]

Another set of comparisons has involved Malaysia and Sri Lanka, countries with somewhat similar colonial histories, populations, ethnic divisions, and cash crop export specializations (see Bruton et al, 1992). Here, too, Sri Lanka had the edge over Malaysia at the time of Independence, with similar per capita incomes but superior human capital. There were of course historical differences between the two in initial conditions, with Malaysia possessing a richer natural resource endowment. But the main point of the comparison is that Malaysia has grown much faster than Sri Lanka for most of the period since the 1960s, owing to better policies (especially before Sri Lanka reformed) and the absence of conflict, to the point where the comparison is now hardly relevant.

Thus, in the absence of anything better, the comparisons might as well be with its East Asian neighbours, recognizing the caveats noted above. Table 1 provides a summary set of indicators for Malaysia and the major East Asian developing economies with a per capita income (in PPP terms) of at least $3,000. We briefly discuss here how Malaysia ranks according to growth, macroeconomic management, openness, human capital, and a range of other indicators.

(Table 1 about here)

First, Malaysia is a relatively rich and small economy. Its economy is about the same size as Singapore's, while its per capita income is about three times that of Indonesia and about double China. Since 1980, its per capita GDP has more than doubled, in line with all the major ASEAN economies except the Philippines, but significantly slower than China.

[1] In fairness to Ghana, its recent performance has improved considerably, and it is now considered to be among Africa's better governed economies.

Second, Malaysia's macroeconomic management has been among the best in the developing world. Inflation has never been a problem, in most years falling below 5%, generally between the Singapore and Thailand averages. The country is moderately indebted, as indicated by its debt/GDP ratio. But debt service has never been a problem, owing to its highly outward orientation. Remarkably among developing countries, it has never experienced a serious debt or balance of payments crisis, apart from the special case of the 1997-98 Asian crisis.

Third, its economy is exceptionally open, with one of the highest trade/GDP ratios in the world. It is one of the half dozen developing economies which Sachs and Warner (1995) classified as 'always open', according to a robust set of criteria. Even among the export-oriented economies of East Asia, it has always had by far the highest trade/GDP ratio, apart from the special case of the two city states. In recent years, this ratio has risen rapidly owing to the very large share of electronics in the country's exports (the second highest share in East Asia, after Singapore), owing to the 'slicing up' of the production process in that industry, and the consequent thin domestic value added in its exports. But other indicators support the contention that it is a very open economy. Its average tariff rate is low, and there are few non-tariff barriers outside the automotive industry and some heavy industries. It does not score more highly on various indices of economic freedom principally because, rightly or wrongly, the various NEP-type commercial restrictions count against it. Malaysia is also very open to foreign direct investment (FDI), with a high FDI stock/GDP ratio, and with FDI generally dominating its aggregate capital inflows.[2]

Malaysia has never deviated from its open economic policy posture, which was rooted in the colonial era, and has never been fundamentally questioned since (Ariff, 1991). It may not have been 'made by God for free trade', in the manner that Indonesian geography is some times characterized. It is beyond the scope of this paper to examine why it has always been so open. But for what it is worth, my speculation is that it reflects a combination of at least four factors:

- Entrenched and powerful export interests.
- A recognition that, inevitably, protection would predominantly benefit non-bumiputera business interests, and hence run counter to the spirit of the NEP.
- Owing to sound macroeconomic management, there has never been a balance of payments crisis, which in some countries (eg, the Philippines, arguably) has been an accidental trigger for the adoption of 'temporary' protectionist measures which quickly become embedded in the country's political economy.

[2] See Menon (2000) for further discussion and empirical estimates of Malaysia's openness. Another dimension is of course its labour market, with foreigner workers, legal and illegal, reportedly accounting for as much as 20% of the workforce (at least until the recent crackdown), one of the highest figures in the developing world.

- Its proximity to always-open Singapore which, whatever the political realities, has been highly influential in the conduct of Malaysian commercial policy.

Fourth, Malaysia's human capital indicators are generally good but not outstanding. Here, too, history has shaped these outcomes. The country's public expenditure on education is one of the highest in East Asia, but it is still catching up from the colonial inheritance of under-investment. Thus, it is ahead of its lower-income ASEAN neighbours but behind the NIEs on years of schooling and gross tertiary enrolment ratios.[3] Its R&D efforts also follow such a ranking, resulting in some observers characterizing its technology strategy as 'passive, FDI reliant' (eg, Lall, 2003), in contrast to the NIE economies which have made a more vigorous attempt to develop domestic supply-side capabilities. In fairness, though, Malaysia has recently increased its R&D effort substantially (the figure cited in Table 1 from comparative data is about half the current reported R&D/GDP percentage). Moreover, Malaysia hit the 'turning point' of rapidly rising real wages, hence necessitating a greater technological effort, about a decade after the Asian NIEs. From that perspective, its R&D effort has not lagged as much.

Finally, Malaysia scores at least moderately well on a range of indicators which are presumed to be conducive to rapid economic development. Its physical infrastructure is (and always has been) one of the best in East Asia. Its financial system is sophisticated,[4] and its tax rates competitive. Its bureaucratic quality, country risk assessments, and its corruption rating all generally fall within the range of the NIEs. These measures are all crude, subjective and debatable. But they do mostly confirm generally perceptions of Malaysia, that it is a competently governed state, with a predictable commercial policy environment, and reasonably good institutions.

III THE DEVELOPMENT RECORD

Malaysia has grown very fast, in most years by at least 5% per annum, and generally a good deal more. The structure of its economy has also changed profoundly, from one dependent on agriculture and natural resources, to a broad-based economy with manufacturing and services of increasing importance. These two inter-related themes, combined with consistent global orientation and distributional considerations, dominate the development record since the 1970s.

Figure 1 shows economic growth over the period 1965-2000. Growth has been in the range 5-8% per annum in most years, with significant dips occurring on average once per decade. There were only two major departures

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[3] The latter figure probably understates Malaysia's ratio, owing to the fact that its large overseas student body is likely to be under-reported in the comparative statistics.

[4] Indeed, its financial sector may be a bit too 'sophisticated'. The country has one of the highest stock market capitalization/GDP ratios in the world, a phenomenon which complicated the government's post-1997 recovery strategies, owing to its highly leveraged corporate sector (Athukorala, 2001).

from this record of rapid growth. One was the mid 1980s, when Malaysia experienced a brief and mild recession, while the other was the more serious crisis of 1997-98. In both cases, a mixture of external and domestic factors caused the problem, and in both the response by the authorities was reasonably sure-footed and swift. In the mid 1980s, the sharp decline in commodity prices combined with expansionist fiscal policies (partly related to the heavy industry and NEP objectives) explained much of the downturn, which for varying reasons affected all of Southeast Asia. Yet by the end of the decade, the economy was growing strongly again. The causes of and responses to the 1997-98 events are more controversial, but the key point to note is that economic recovery was surprisingly strong and quick. It is important to emphasize that the global orientation, on both the current and capital account, was a factor in both the initial downturn and the swift recovery.

(Figure 1 about here)

Over the long run, growth has been remarkably consistent, in the sense that, with the possible exception of the period of exceptionally strong growth 1988-97, no one decade or episode stands out. That is, there has been rapid growth in all three decades since 1970. Thus, Malaysia has been more like the NIEs (and Thailand), as compared to some of its neighbours, especially Indonesia. Nor has there been a ‘turning point’ in its economic fortunes, coinciding with a major policy change, such as for example in China after 1978, India after 1991, Indonesia after 1966 (and again 1998), and Vietnam after the mid 1980s *Doi Moi*. As a corollary, no one administration stands out in Malaysian economic development, in the sense that all four past prime ministers have generally presided over rapid growth.

As would be expected in a rapidly growing, internationally oriented economy, structural change has been rapid. Over the period 1970-2000, the share of agriculture fell quickly, from 29% to 9% (Table 2). Most of the increase occurred in manufacturing, which more than doubled its share to 33%. Marking a turning point in the long sweep of economic development, manufacturing output surpassed that of agriculture in the late 1980s, and is now almost four times larger. The share of services rose significantly in the early 1970s and late 1990s, both periods coinciding with a pronounced increase in direct and indirect government expenditure in the economy. Employment shares have also changed significantly, albeit not as fast and with a lag (Table 3). From 1975-2000, agriculture’s share of employment fell by more than half, while that of manufacturing rose by about 50%. Manufacturing employment overtook agriculture in the mid 1990s. It is important to note that the differences in sectoral labour productivities in Malaysia are relatively small, under-scoring the undistorted nature of its economy. In particular, manufacturing productivity is only about 50% higher than the economy-wide average, quite low by developing country standards, and reflecting its predominantly labour-intensive character.

(Tables 2 & 3 about here)

The transformation in the composition of merchandise exports over this period was even faster than that of output and employment, with the share of primary products falling from 78% to 12%, while manufactures rose from 9% to 86%. Within the latter, electronics are absolutely dominant, generating about 70% of manufacturing exports and over 60% of the total. Two observations on these trends should be noted. The first is the irony that, in a country which in an earlier period worried about high commodity dependence (principally rubber and tin), export concentration is now as high as it was in the early post-Independence period. The nature of the dominant export is of course vastly different, of course, as electronics offers a very wide array of market niches, product specialization, and factor intensities. The fact remains, however, that Malaysia's fortunes are still closely tied to those of one industry, the global electronics cycle. The second comment is that these shares do overstate the magnitude of the export transformation. This is because much of the electronics exports comprise thin local value added in which output is sliced up across many products and countries as part of MNE owned and dominated international production networks.

Turning to the distribution story, as noted Malaysia inherited 'Latin American' (and Philippine) style inequality, with a plantation economy and commercial enclaves connected to the global economy, alongside a poor, predominantly Malay rural economy. The principal difference between Malaysia and these high inequality comparators is that it has grown much faster, and political power has been in the hands of the poorest ethnic group rather than the landed/commercial elite, thus ensuring a more concerted approach to addressing social grievances.

Inequality has remained fairly high since Independence, with the gini ratios (based on household income) generally moving in the range 0.45-0.5.[5] There seems to have been a dip in the 1970s and 1980s, followed by an increase in the 1990s, before tapering off again in the wake of the Asian economic crisis. Trends in the series for urban and rural areas have broadly followed the aggregate picture, with the rural figure lower than the urban, but the difference continues to be surprisingly small. Among ethnic groups, Malay incomes have gained relative to both the Chinese and Indian communities, but the former still remain significantly lower than the latter two. Inequality within the Chinese and Indian communities has remained broadly stable, while it appears to have risen within the Malay community. There does not appear to be any evidence of increased immiserization by ethnicity, region, or socio-economic class, with the possible exception of some very poor and uneducated plantation workers (reportedly mainly among the Indian community), where large-scale in-migration has also probably depressed earnings of the unskilled.[6]

With rapid growth, and little major change in inequality, poverty has fallen rapidly, from about 52% of households in 1970 to some 8% in 1999. The

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[5] This paragraph draws on Ragayah (2004) who, together with references cited therein, provides a comprehensive review of trends in inequality.

[6] More generally, perhaps these pockets of under-privilege, associated with low skills and individuals falling through the cracks of various NEP schemes, are more widespread than is commonly appreciated. See for example Ismail (2005), who highlights the continuing modest living standards of Malay smallholders. I am grateful to Colin Barlow, whose recent review drew this volume to my attention.

incidence (percentage) of poverty in rural areas is about three times that in urban areas, a relativity which has remained broadly constant since the 1970s. Absolute poverty, in the sense of World Bank benchmarks of daily expenditures below $1 and $2 (PPP), has virtually disappeared. Indeed, the Malaysian poverty figures do not appear to be comparable either across countries or over time, since the national poverty line is relatively high and it is adjusted over time.

Three broad sets of factors are relevant in assessing these poverty and inequality outcomes. The first is growth which, in the absence of any major swings in inequality, accounts for virtually all of the decline in poverty, and has been slightly pro-poor (or more particularly 'pro-Bumiputera) in its orientation. The second, related to the first, has been employment outcomes. Unemployment had all but disappeared by the late 1980s, by which time Malaysia (like Singapore a decade earlier) became a chronic labour-scarce economy. These employment outcomes were the joint result of the scale and type of growth – mostly rapid, and much of it labour-intensive, especially in export-oriented manufacturing.

A third factor has been public policy interventions, which in various forms have been either pro-poor or at least distributionally neutral. Malaysia has consistently had the world's best tropical agriculture research and extension efforts, with its rubber and palm oil institutes a model for other countries (Barlow, 2000). These institutes underpinned Malaysia's status as the world's most efficient producer of a range of tropical cash crops. They also contributed to the dramatic improvement in rural Malay incomes, and they are part of the reason why the country pulled ahead of the early comparators like Ghana. A second productive area of intervention has been education, with a particular focus on improving educational outcomes among the Bumiputera community through a system of generous scholarships. Some have argued, persuasively in my view, that this was probably the most effective component (in terms of both efficiency and equity) of the various NEP programs (Gomez and Jomo, 1997). A third inter-related factor has been some of the other NEP programs, an issue to which we return shortly.

Why has Malaysia performed so well? Explaining the development record of countries is never easy, and often the tentative hypotheses beg as many questions as they answer. One has to combine history, institutions and policies; to try to understand not just what happened (ie, what policies were pursued) but why; to distinguish between 'good luck' and 'good management'; and allow for the interplay between domestic and external factors. Modern growth theory and empirics are expanding rapidly (see Temple (1999) for an informative general survey), in the process assisting our understanding of country dynamics. I am not, however, aware of any detailed research applying this framework specifically to the Malaysian case.[7]

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[7] Hill and Hill (forthcoming) recently applied the standard growth econometrics methodology to the five original ASEAN member countries. In the case of Malaysia, they found that a robustly constructed empirical growth equation, incorporating the explanatory variables usually considered to be important determinants of inter-country growth differences, significantly under-estimates the country's growth rate over the period 1970-2000. One possible

One can at least begin to address this question by discarding a few likely dead ends. Two in particular come to mind. One is that Malaysia is blessed with natural resources, and that it simply had to ‘dig them out of the ground’ to grow. While it is true that the country is amply endowed, this view overlooks the ‘natural resource curse’, that for a variety of reasons, resource-rich countries tend to perform less well than resource poor ones (see Sachs and Warner (2001) for extensive discussion of this issue). In any case, Malaysia has continued to perform well as it has moved well beyond its earlier natural resourced based development phase.

A second argument might posit good luck – a painless and relatively well-prepared transition to Independence, favourable commodity prices for extended periods, reasonably generous aid flows in the 1960s and 1970s, and so on. These, too, may be correct, but there are plenty of counter-factuals, of countries with similar experiences performing poorly. Moreover, it would surely be stretching the argument to assert that the succession of competent UMNO-based administrations since 1957 was somehow not endogenous, or that Malaysia enjoying an ‘early mover’ advantage in export-oriented industrialization was in some senses accidental.

The more persuasive arguments rest on the proposition that Malaysian governments have successfully implemented ‘orthodox’ economic policies, of the kind which have been demonstrated to be highly growth-conducive. These factors were alluded to above. At least four seem to stand out consistently. One is the country’s openness. Very few developing countries have been more open, and the link between openness and growth (provided the other ingredients are present) is firmly established. Second has been the consistently good macroeconomic management, and the absence of any macroeconomic and balance of payments crises, apart from the special case of 1997-98. Third, growth has been reasonably ‘inclusive’, in the sense that practically the entire population has benefitted to some degree. This has provided the social cohesion which has underpinned stability in a multi-ethnic community highly exposed to the international economy, including the inevitable shocks associated with openness. Fourth, institutions have been above average by developing country standards, and these have ensured reasonably effective policy implementation, and policy predictability. Of particular relevance is the judicial system. Whether or not it has been weakened or politicized, Malaysian property rights and commercial/legal protection are arguably one of the best, and most consistent, in the developing world.

Initial conditions obviously mattered. As the late Benjamin Higgins once observed:
'The relative success of Malaysia among Asian countries <u>since</u> Independence is to be explained partly by differences in the impact of colonialism <u>before</u> Independence. Colonial economic penetration came late in Malaya, with

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explanation is that, in the widely used international Penn world tables of national accounts (which were also used in this study), and for reasons which are not obvious, Malaysia’s recorded investment rate is significantly lower than that of its own local-currency national accounts data.

rubber, in the last decade of the nineteenth century. Consequently, the population explosion also came late, population pressure on the land never became severe, and development strategy could take the form of frontier resource development for three decades after Independence.' (Higgins, nd, chapter XV, p. 15)
Indeed, and related to this argument, perhaps Malaysia fits the now increasingly popular 'inherited institutions' explanation for high growth. According to this view, congenial living conditions for expatriate settlers in the colonial era induced these communities to establish deep roots in the new environment, and hence to 'transplant' their home-country institutions. In turn, and unless the decolonization process was accompanied by violent struggle and rejection of the values associated with the metropolitan power, the newly independent state more or less incorporated these institutions into the formation of its own nation state (see Acemoglu et al, forthcoming).

A number of other factors could obviously be added to this list. Historically, Malaysia was among the first group of developing countries to shift in to export-oriented manufacturing, and thus it was able to establish a 'country reputation' for export success and a congenial base for MNEs well ahead of most countries. Physical infrastructure and financial development are two additional variables. Another is that, although the country's political structures have probably become more centralized over time, the country's federal structure (the only one in East Asia) has enabled well governed states to be able to reform more quickly, and attract investment.[8]

With these pillars of efficiency and openness, the export sector was able to support (and contain) the political excesses and scandals which have inevitably occurred from time to time. That is, 'UMNO money politics', rent-seeking, some costly industrial white elephants and mega projects become a lot easier to manage, and finance, when much of the economy is internationally oriented and efficient. Moreover, patronage and corruption has always been much more contained than in most of its neighbours.

I leave it to political scientists to answer the 'why' questions, that is of why economic policy has never been seriously derailed. Partly it is a story of success bequeathing further success. As far as I'm aware, UMNO leadership always saw the policy challenge as 'redistribution with growth', and never just the former. Perhaps it was based on a pragmatic realization that radical redistribution would bring everybody down, and that the non-Bumiputera community always had migration options.

Moreover, as I read the political science literature on Malaysia, it doesn't seem to fit comfortably into any simple mould. That is, it has never been the insulated state that for example has been used to characterize Korea and Taiwan in an earlier period. Nor is it really Ammar Siamwalla's (1999) 'bi-

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[8] The state of Penang, the fastest growing state outside the capital, is a case in point. Here, a succession of able state administrations, combined with high educational achievement, excellent, globally-connected infrastructure, and an early mover advantage in MNE, export-led industrialization, have underpinned a growth rate well above the national average. See Toh (2002) for an examination of Penang's development.

furcated state', his characterization of Thailand's competent macroeconomic management alongside micro interventions which are much more vulnerable to capture. Nor is it a Singapore story of one absolutely dominant figure on the political landscape for the first quarter century of Independence. Politics has been competitive, albeit within well defined parameters of Malay dominance. Hence the characterizations of its political system being 'repressive-responsive' (Crouch, 1996), and Malaysian businesses whose operations are found right across Peter Searle's spectrum from 'rent-seekers to real capitalists' (Searle, 1999).

IV DEVELOPMENT ISSUES AND CHALLENGES

There are many interesting and distinctive aspects of Malaysia's development record. To give a flavour of some of the development challenges and policy debates, we briefly look at three which have had significant international resonance: the heavy industry experiment, the affirmative action/NEP programs, and the capital controls imposed in September 1998. Each is a major and complex topic, and we cannot pretend to offer anything other than some broad-brush impressions.

Industry policy

Malaysian industry policy constitutes a clear departure from its otherwise generally orthodox economic strategy. In the late 1970s the government embarked on a number of ambitious heavy industry programs, the most important of which was an attempt to build a 'Malaysian car'. Steel, petrochemicals and other heavy industries were also targeted for promotion. This was very much a creature of the times. State-led industrialization strategies were then in vogue. Japan, and the alleged MITI industrial planning model, were in the ascendancy, and Dr Mahathir had announced a 'look East' strategy. Malaysia was flush with windfall oil revenues, and the government felt it could be adventurous.

Almost from the beginning, these projects experienced difficulties.[9] Commodity prices began to fall from the early 1980s and, as the government began to run very large fiscal deficits, the envisaged funding base evaporated. The Japanese joint venture partners apparently did not provide the scale of technological assistance which was originally expected. But, perhaps more fundamentally, the analytical foundations of the ventures were shaky. This was a case of 'back-to-front' industrialization, attempting to build strengths on the basis of limited technological capabilities. That is, rather than developing supply-side technical and R&D expertise, together with a strong SME supplier base, industrial planners started at the other end. An additional complicating factor was that NEP objectives were also wrapped up into the projects, further burdening an already highly ambitious agenda. A quarter of a century later, none of the projects has reported achieved international levels of efficiency, and there has been a low rate of return on these huge investments, which in the automotive industry alone are estimated to total about $2 billion. The

[9] See the contributors to Jomo and Felker (eds, 1999) and Jomo, Felker and Rasiah (eds, 1999) for detailed discussion of these projects.

technology alliance with Mitsubishi was terminated in early 2004. Foreign sales have been disappointing, and thus the firm has been restricted to the small local market. Even here, owing to Proton's indifferent quality control standards, local consumers have been willing to pay up to double the price for similar sized imported vehicles. The heavy industry program has also complicated Malaysia's trade policy negotiations, especially in the ASEAN Free Trade Agreement, where it is supposed to phase out its 300% import duties for autos by 2008. Meanwhile Thailand, which liberalized its protection more quickly than Malaysia, (and also Indonesia and the Philippines) has now become the dominant auto producing nation in Southeast Asia.[10]

Viewing these projects in broader context, a number of observations are warranted. First, undoubtedly there has been some technological learning from these projects, and domestic skills have been augmented. These objectives could of course have been achieved more efficiently through direct training and R&D support schemes. In particular, it is not clear how much these schemes have assisted the country in preparing for the current challenge of shifting gears into a more R&D intensive industrial trajectory.

Second, there remains a political economy puzzle as to why a country which was so successful with its approach to agricultural extension (arguably the best in the tropical world) did not employ the same broad approach to industry. Perhaps the answer has to do with what was intellectually fashionable at the time, as well as preferences of particular administrations.

Third, as in all policy discussions in Malaysia, it is important to keep in mind the overall environment. One of the benefits of Malaysia's highly open economy is that mistakes are quickly detected, and there is political pressure from the efficient, export-oriented sector to take remedial action. Moreover, there is greater accountability and administrative capacity in the system. Thus really serious policy mistakes are less likely to occur, and the government is able to (and did) pull back. It is notable, for example, that two of Malaysia's neighbours, Indonesia and the Philippines, also embarked on heavy industry initiatives at about the same time. In both cases, these ended up achieving less and probably cost more.

A final consequence is that, perhaps more than most countries, Malaysia continues to exhibit a 'dual industrial policy regime', with a protected heavy industry sector (in fact the only part of the economy to receive significant protection) alongside a highly efficient, export-oriented electronics sector. Moreover, the latter grew out of, and is still overwhelmingly concentrated in, the country's export zones. The development of efficient backward linkages is proceeding, perhaps more slowly than might be the case owing to regulatory barriers between the zones and the rest of the economy, and the need to upgrade the SME suppliers. The consequence is a somewhat unusual industrial structure, with a very large electronics sector, which dominates the

[10] Further complicating reform of the highly protected auto industry is the Approved Importer System, under which the government awards licences for the approximately 50,000 annual vehicle imports. These have traditionally been an instrument of political patronage, which became an issue of public debate in 2005 when the identities of the beneficiaries was revealed.

country's exports but which is still somewhat enclave in nature, alongside a protected heavy industry sector. This stereotype is perhaps somewhat exaggerated, but it does underline the importance of reform. That is, of forging an integrated and efficient industrial sector, which is less regulated but more promoted (in the sense of skills and R&D).[11]

Affirmative action programs

Malaysia's NEP[12] programs, introduced in the wake of the deeply disturbing events of May 1969, have constituted the most durable, and arguably the most successful, set of affirmative action programs in the developing world. It is difficult to think of any other initiative of its kind which has 'worked' in the sense that a deliberately redistributive program has been implemented while achieving high growth and maintaining ethnic harmony. It is a model to which other countries aspire, most notably post-Apartheid South Africa.

The details of the various NEP programs, and their implementation, are well known, and need not be repeated here (see Gomez and Jomo (1997) for a detailed study). Under the general goal of removing the association between economic differentiation and ethnicity, while maintaining high growth, a wide range of initiatives was introduced, including education programs, Bumiputera employment quotas in both the public and private sectors, and a redistribution of corporate ownership structures.

In broad terms, the NEP would have to be regarded as a success. Rapid growth was maintained, thanks in part to a pragmatic implementation strategy, under which goals were flexibly pursued depending on economic circumstances. The socio-economic circumstances of the Bumiputera community has been improved significantly, both absolutely and relative to the other ethnic groups. There has been no significant backlash from the other groups, communal relations have by and large been harmonious, and political stability maintained.[13]

Notwithstanding this success, inevitably there are also some question marks. First, on the corporate restructuring, most of the increase in the Bumiputera share (from around 2% to 20% since 1970) occurred at the expense of foreign ownership, rather than non-Bumiputera shares. In fact, the latter has also increased since 1970. Thus, the very high initial foreign share actually had the

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[11] Several prominent Malaysian economists have written about these challenges recently. See for example Rasiah (2003), Ragayah and Tham (2006) and Tham (2004).

[12] We use 'NEP' as a short-hand for these affirmative action programs, even though the NEP was terminated in 1990 and replaced with the New Development Policy.

[13] A number of Malaysian commentators note with satisfaction that the country did not experience the traumatic ethnic disputes which occurred in Indonesia in 1997-98, and they are inclined to attribute this success to the NEP programs. The counter-factual is of course unknowable, although there certainly are grounds for this assertion.

benefit of providing the government with some room to move in its redistribution objectives.

Second, one might debate which of the instruments have been more effective. The general impression is that those which are productivity-enhancing – such as education scholarships and agricultural extension – have contributed more directly to broad-based improvements in Bumiputera living standards, as compared to the redistributionist measures. The latter, inevitably, have tended to benefit the politically well-connected, especially as UMNO has ruled throughout the period. This factor probably also accounts for the observed increase in intra-Bumiputera inequality. More generally, were it not for the political constraints, one would argue that a first-best strategy would be to focus on the poor, regardless of ethnicity, so that an NEP-type program would also be aimed at, for example, the poor among the Indian and indigenous East Malaysian (Sarawak and Sabah) communities.

A third observation is that there have been some losses of highly skilled people from among the non-Bumiputera communities. I am not aware of any quantification, and the outflows were probably larger in the first decade or two of the NEP when uncertainty surrounding its implementation was greater. But one does continue to note a significant number of very successful non-Bumiputera Malaysians who have chosen to work and reside abroad. At the margin, also, the NEP programs may have deterred foreign investors somewhat, to the extent that their freedom to hire workers (especially managers) in an already very tight labour market has been complicated. Nevertheless, Malaysia's FDI policies have been implemented in a pragmatic fashion, and it is arguably the case that these concerns (and the country's surprisingly low ranking in the 'commercial freedom' indices reported in Table 1) are exaggerated.

A fourth challenge concerns an exit, or at least phasing-out, strategy. The political economy calculus in all public policy interventions is that it is much easier for governments to introduce special programs of assistance than to withdraw them. Inevitably, vested interests build up, and some individuals benefit spectacularly. Ideally, affirmative action programs should be regarded as temporary, perhaps stretching over a couple of generations in order to redress past ills and grievances. Will a Bumiputera-dominated government be able at some point to withdraw the privileges that its dominant support base has grown accustomed to? One senses already the complications which such a challenge poses. Conversely, Malaysia's strong economic performance and pragmatic leadership provide grounds for optimism.

Finally, whenever international lessons are being drawn from its experience, it is important not to lose sight of Malaysia's fundamental strengths and distinctive characteristics, both of which make replication difficult. Its leadership has always been committed to growth. Decades of policy consistency and predictability have conferred 'policy credibility' on successive governments, giving them room to move. Its economy is highly open, thus quickly exposing any inefficiencies. Its macroeconomic management has always been excellent, and its institutions reasonably effective. Few if any regimes – including, arguably, post-Apartheid South Africa – can match this record in all these respects.

Capital controls

Malaysia's delayed response to the Asian financial crisis is also worthy of comment.[14] Malaysia was one of the four economies severely affected by the crisis, with its economy contracting by almost 8% in 1998. It was the only one of the four not to formally enter an IMF program, though its policy response was broadly 'IMF-like' for the first year of the crisis. By mid-1998, unhappy with the sluggish economic recovery, a policy rethink apparently commenced. This culminated in the decision in early September 1998 to reject the IMF orthodoxy, peg the exchange rate, and impose controls on short-term capital flows. These measures coincided with the dramatic dismissal and incarceration of the then Deputy Prime Minister and Finance Minister.

Although regarded as a radical and bold experiment, and implemented against a backdrop of occasionally fierce anti-Western rhetoric, the measures were not especially unconventional, and it is clear in retrospect that they were carefully thought out and executed. The rationale was that, particularly in times of crisis, financial markets tend to over-shoot, and that there is a case for Keynesian-style reflationary measures to stimulate the economy. But such a strategy of loose monetary policy entails lower interest rates, which in turn is likely to lead to further capital outflow, and hence pressure on the exchange rate and financial system.[15] Thus, so the argument goes, the domestic capital market needs to be temporarily disconnected from the global economy while the government pursues its stimulatory measures.

This, broadly, is what the Malaysian government did for the 12-18 months after September 1998. Interest rates were lowered, and fiscal policy was more expansionist than arguably would have been the case without the controls. In retrospect, the policy experiment worked not only because there was a sound case for these measures in certain circumstances, but also because they were applied sensibly. Among the important elements of the stimulation package, the following were important:

- The exchange rate chosen (R3.8 = $1) was on the 'low' side, thus conferring a major competitive boost to the tradables sector.
- It was very clear that the target of the controls was purely short-term flows. The government went out of its way to reassure foreign equity investors; in fact FDI flows actually increased in the wake of the controls.
- The reflation process was carefully managed, and the government was at pains to generally eschew playing political favourites with its bail-outs and expenditure projects. Moreover, the two key macroeconomic policy

[14] This section draws heavily on what for me have been the two most insightful analyses of this episode, an insider's account by a prominent Malaysian academic (Mahani, 2002) and the analytically coherent assessment by Athukorala (2001).

[15] A particular complication in the Malaysian case was that the ratios of stock market capitalization and outstanding credit to GDP were the highest among the four crisis economies, and thus its policy makers arguably had limited maneuverability in adjusting interest rates as a means of protecting the exchange rate.

institutions, Bank Negara Malaysia and the Ministry of Finance, both had long-established policy credibility.

Three other points are worth observing. The first was the special problem Malaysia had pre-crisis in the large offshore RM circulation, principally in Singapore. The Malaysian authorities could reasonably argue that these transactions were of such magnitude that they had lost control of monetary aggregates – or at least were in danger of doing so. Thus the controls had a twin purpose, to reflate effectively, and to regain control of monetary policy.

Second, in evaluating the program, the counter-factuals are inherently unknowable and untestable. One could of course argue that Korea and Thailand, which adhered to IMF programs, recovered just as quickly. The former two did of course lose some policy autonomy (a particular concern in Malaysia was that its NEP programs would come under pressure from 'Washington'). How significant this IMF intervention would have been by late 1998 is not clear, as the Fund itself shifted ground significantly during that year, owing to its alleged mis-handling of Indonesia (and four years later Argentina) and much global criticism. Malaysia probably also denied itself some external funding windows, which for a period looked as though it might have been a problem, but eventually was not, owing to large current account surpluses and alternative funding channels. Although comparisons are difficult given the significant country differences, it has to be recognized that Malaysia's economic and exchange rate recoveries were not substantially superior to those of Korea and Thailand over the period 1998-2002. Perhaps the strongest conclusion is that the controls worked much better than their detractors predicted, but it seems difficult to support their proponents' view that they were the key to Malaysia's impressive recovery.

Third, as with everything Malaysian, its special circumstances need to be emphasized. That is, its policy credibility, absence of prior crises, relatively good institutions. It is not clear that its experience is at all generalizable. Indeed, none of its lower income neighbours embarked on such a course. For example, a Philippine Cabinet member remarked at the time that they considered the Malaysian option, for about 10 seconds! That country was not long out of a debilitating era of capital controls, which had witnessed extensive corruption and attempts to hold the rate at inappropriate levels. After the onset of the crisis, the peso float cushioned the country from more serious macroeconomic adjustment, and facilitated recovery. In the case of Indonesia, the option was not available owing to its participation in the IMF program. But, in any case, given its unhappy history with controls prior to 1970, and the fact that the business community learned to live with the floating regime surprisingly quickly, it is unlikely that it was ever to be a serious option.

As a footnote, one lesson from the Malaysian experience is that controls should be imposed ex ante rather than ex post. That is, they should be part of the pre-crisis policy environment, rather than imposed suddenly, during a crisis. The risk of an imposition in the manner of the Malaysian controls is that business will fear a re-occurrence, and therefore re-rate the country risk. (That this appears not to have happened reflects positively on Malaysia's long-established policy credibility.) It is arguably also the case that most of the capital flight had already occurred by September 1998.

V SUMMING UP

Malaysian economic development has been a remarkable success story, and one that few developing countries can match, certainly outside East Asia. At the time of Independence, it was a classic colonial, resource-rich, 'enclave economy', with a pronounced divide between the urban and rural economies, and among ethnic groups, and high levels of inequality. It also inherited several features, subsequently maintained and developed, which are central to understanding its development success story. These include its openness to the global economy, prudent macroeconomic management, its excellent physical infrastructure, and its above average institutional quality. It is broadly a case of 'orthodoxy confirmed', but with several distinctive features, particularly its handling of major ethnic differences.

Looking ahead, the key question is whether the past bases of success can sustain the future momentum. The answer would seem to be partly yes and partly no. Its openness, prudent macroeconomic management and good infrastructure and institutions will always be important. The principal challenge is to manage the upgrading process to OECD levels of income and productivity. The huge inflows of unskilled workers since around 1990 have to some extent delayed this upgrading process, but the transition is both inevitable and desirable. The implication, as the current Malaysia Plan recognizes, is that the past bases of growth will have to be modified.

Malaysia's current per capita income is similar to that of the Asian NIEs about 15 years ago. It was at about this period that all four economies invested substantially, though in different ways, in upgrading their physical, social and institutional infrastructure, with a view to attaining OECD levels within a generation. As Table 1 indicates, Malaysia lags somewhat in key areas of science and technology. Its universities, once among the best in East Asia, have not kept pace with the economy, and in some respect have reportedly slipped in quality, particularly in the sciences. R&D expenditure is rising, but arguably not quickly enough.

Evidently, the country's leadership does not yet appear to be convinced of the importance of committing strongly to a comprehensive technology strategy which develops and combines strengths based on the large MNE presence, its open labour market, its universities and public investments in R&D. The country continues to lose significant amounts of high-level, mainly non-Bumiputera, skilled labour. By all available indicators, much of the large state enterprise sector performs indifferently. For example, over the period 1999-2004, Government Linked Companies on the Kuala Lumpur Stock Exchange (which constitute over one-third of the KLSE's market capitalization) delivered annual shareholder returns of just 3.6%, less than half that of privately owned firms (Economist, August 20, 2005). Many of these firms enjoy privileged, often monopoly, rights in their businesses. But they are also over-staffed, serve as vehicles of patronage, as well as being obliged to perform uneconomic community services and to offer preferential treatment to

Bumiputera supplier firms. Huge public sector projects are generally not open to competitive tendering, and they are well known as a means of enrichment for the politically well connected. The media remains heavily government-influenced and lacks the capacity to act as an independent watchdog.

Inevitably, for these reforms to be successful the country's 'sacred cows' cannot avoid scrutiny. This will not be easy for a governing party which has been in power continuously since 1957, and for the Bumiputera community which has grown accustomed to preferential treatment. Indeed, in August 2005 former Deputy Prime Minister Anwar Ibrahim called for the abolition of the NEP, arguing that it is '… obsolete, corrupt, and that only a few well-connected Malays have benefitted from it.' There can be no doubting the importance of development strategies to tackle deep-seated poverty and inequality, especially when there is also an ethnic dimension. Yet, desirably, all affirmative action programs should be subject to a sunset clause, at which point the original objectives and instruments are re-evaluated. The NEP is no exception. As Mr Anwar and others have argued, the targeted welfare objectives should be maintained, albeit without an explicit ethnic component, while the overtly rent-seeking programs (eg, preferential access to government contracts, employment, licences, and share offerings) could be replaced with a new emphasis on technological modernization. Moreover, Malaysia's rapidly changing demographics, the result of Chinese outmigration and significantly higher Malay fertility, is in any case going to render the NEP largely irrelevant, as the Bumiputera proportion of the population approaches 75%, up from just over 50% at the time of the Program's inauguration.

These reforms will be politically and institutionally complex, and require a fundamental change in the mindset of the country's political and bureaucratic elite. But in the absence of major reform, the country is in danger of entering an era of slower growth, unable to graduate from its current status as a (reasonably prosperous) middle-income developing country. As epitomized by the adjustments currently occurring in the large electronics industry in Penang, Malaysian firms now struggle to compete with China and others in labour-intensive activities employing mature, standardized technology, while at the same time they lack the technological capacity to match the more advanced NIEs. Taking the longer term view, the maintenance of rapid growth has always been a fundamental element of the 'Malaysian compact', and its policy makers are mindful of the importance of keeping up with its high-growth neighbours. Therefore, in the absence of any better predictor, the historical record suggests grounds for optimism in facing these challenges.

REFERENCES

Acemoglu, D., S. Johnson, and J. Robinson (forthcoming), 'Institutions as the Fundamental Cause of Long-Run Growth', in P. Aghion and S. Durlauf (eds), Handbook of Economic Growth, North Holland, Amsterdam.

Ammar Siamwalla (1999), Thailand's Boom and Bust: Collected Papers, Thailand Development Research Institute, Bangkok.

Ariff, M. (1991), The Malaysian Economy: Pacific Connections, Oxford University Press, Singapore.

Athukorala, P.-C. (2001), Crisis and Recovery in Malaysia: The Role of Capital Controls, Edward Elgar, Cheltenham.

Athukorala, P.-C. (2003), 'Growth, Employment and Equity: The Malaysian Experience', in K. Sharma (ed), Trade Policy, Growth and Poverty in Developing Countries, Routledge, London.

Barlow, C. (ed) (2000), Institutions and Economic Change in Southeast Asia: The Context of Development from the 1960s to the 1990s, Edward Elgar, Cheltenham.

Barlow, C. and Francis Loh Kok Wah (eds) (2003), Malaysian Economics and Politics in the New Century, Edward Elgar, Cheltenham.

Bruton, H.J. and Associates (1992), The Political Economy of Poverty, Equity and Growth: Sri Lanka and Malaysia, Oxford University Press, New York.

Brooks, D.H. and H. Hill (eds, 2004), Managing FDI in a Globalizing Economy: Asian Experiences, Palgrave MacMillan, London.

Chu, Y.-P. and H. Hill (eds, 2006), East Asia's High-Tech Drive, Edward Elgar, Cheltenham, forthcoming.

Crouch, H. (1996), Government and Society in Malaysia, Allen & Unwin, Sydney.

Gomez, E.T. and Jomo K.S. (1997), Malaysia's Political Economy: Politics, Patronage and Profits, Cambridge University Press, Cambridge.

Higgins, B. (nd), Dualism and Dependency in Southeast Asian Development, unpublished manuscript.

Hill, H. and S. Hill (forthcoming), 'Growth Econometrics in the Tropics: What Insights for Southeast Asian Economic Development?', Singapore Economic Review.

Ismail, Tan Sri Dato' Seri Haji Basir (2005), Land and Agricultural Policy: A Mismatch, Malaysian Palm Oil Board, Kuala Lumpur.

Jomo K.S. (1986), A Question of Class: Capital, the State and Uneven Development in Malaya, Oxford University Press, Singapore.

Jomo K.S. and G. Felker (eds) (1999), Technology, Competitiveness, and the State: Malaysia's Industrial Technology Policies, Routledge, London.

Jomo K.S., G. Felker, and R. Rasiah (eds) (1999), Industrial Technology Development in Malaysia: Industry and Firm Studies, Routledge, London.

Lall, S. (2003), ‘Foreign Direct Investment, Technology Development and Competitiveness: Issues and Evidence’, in S. Lall and S. Urata (eds), Competitiveness, FDI and Technological Activity in East Asia, Edward Elgar, Cheltenham, pp. 12-56.

Mahani Zainal Abidin (2002), Rewriting the Rules: The Malaysian Crisis Management Model, Prentice Hall, Petaling Jaya.

Menon, J (2000), ‘How Open is Malaysia: An Analysis of Trade, Capital and Labour Flows’, The World Economy, 23 (2), pp. 235-255.

Ragayah Haji Mat Zin (2004), ‘Income Distribution and Poverty Eradication in Malaysia: Where do we go from here?’, in A.R. Embong (ed), Globalization, Culture and Inequalities: In Honour of the Late Ishak Shari, Penerbit Universiti Kebangsaan Malaysia, Bangi, pp. 175-203.

Ragayah Haji Mat Zin and Tham Siew-Yean (2006), ‘Malaysia’, in Chu and Hill (eds), forthcoming.

Rasiah, R. (2003), ‘Industrial Technology Transition in Malaysia’, in Lall and Urata (eds), pp. 305-333.

Sachs. J. and A. Warner (1995), ‘Economic Reform and the Process of Global Integration’, Brookings Papers on Economic Activity, 1 (1).

Sachs, J.D. and A.M. Warner (2001), ‘The Curse of Natural Resources’, European Economic Review, 45, pp. 827-838.

Searle, P. (1999), The Riddle of Malaysian Capitalism: Rent-seekers or Real Capitalists?, Allen & Unwin, Sydney.

Temple, J. (1999), ‘The New Growth Evidence’, Journal of Economic Literature, 37 (1).

Tham Siew-Yean (2004), ‘Malaysia’, in Brooks and Hill (eds), pp. 189-238.

Toh Kin Woon (2002), The Political Economy of Industrialization in Penang, Paper presented to a conference on Malaysian industrialization, Australian National University, Canberra.

World Bank (1993), The East Asian Miracle: Economic Growth and Public Policy, Washington DC.

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	PRC	Indonesia	Korea	Malaysia	Philippines	Singapore	Thailand	Ta
General economic indicators								
GDP, 2003 ($ billion)	1,410	208	605	103	79	91	143	
GDP per capita PPP, 2003 ($)	4,995	3,364	17,908	9,696	4,321	24,480	7,580	2
GDP per capita growth, 1990-2003 (%)	8.2	3.1	5.1	3.9	1.0	3.5	4.2	
Annual average inflation, 1990-2003(%)	5.6	12.8	5.0	3.0	8.0	1.6	4.0	
Total external debt/GDP, 2002 (%)	13	76	23	51	76	266	47	
GDP per capita 2003/1980	6.1	2.2	3.7	2.2	1.1	2.5	2.9	
Openness								
Trade								
(Exports + imports)/GDP, 1990 (%)	29.9	54.5	58.4	154.8	62.9	373.8	79.7	
(Exports + imports)/GDP, 2003 (%)[i]	65.7	64.0	74.3	213.9	113.9	352.0	128.7	
Export growth, 1990-2003 (%)[ii]	18.0	8.1	9.3	11.3	10.7	9.1	10.3	
Average tariff rate, 2001[iii]	14.3	5.4	9.2	5.8	4.0	0.0	9.7	
Index of economic freedom, 2004[iv]	3.6	3.8	2.7	3.2	3.1	1.6	2.9	
Investment								
FDI as % of total capital inflows, 1990-2003[v]	93.0	-48.2	16.6	129.0	52.2	33.4	-19.2	
Total FDI inward stock, $ billion, 2003[vi]	501.5	57.2	47.5	59.0	11.5	147.3	36.9	
Total FDI outward stock, $ billion, 2003[vii]	37.0	2.7	34.5	29.7	1.0	90.9	3.3	
Total FDI inward stock as % of GDP, 2003	35.6	27.5	7.8	57.2	14.5	161.3	25.8	
Total FDI outward stock as % of GDP, 2003	2.6	1.3	5.7	28.8	1.2	99.5	2.3	
Human capital and innovation								
Years of education, 2000[viii]	5.7	4.7	10.5	7.9	7.6	8.1	6.1	
Gross tertiary enrolment rate (%), 2001	12.6	14.6	77.6	28.2	31.2	46.0	35.3	
R&D expenditure as % of GDP, 2002[ix]	0.6	-	2.6	0.2	-	1.4	0.1	
Number of internet users as % of total inhabitants, 2003	6.3	3.8	61.3	34.5	4.4	54.8	9.7	
Public spending on education as % of GDP, 2001[x]	2.1	1.3	3.6	7.9	3.2	3.1	5.0	
International ranking in quality of math & science education[xi]	55	57	41	27	84	1	53	
Total R&D employment, thousand, 2001[xii]	956.5	-	165.7	10.1	-	19.5	14.0	
R&D employment per 1 million population, 2001[xiii]	752	-	3,500	432	-	4,709	236	
Utility patents data, 2003[xiv]	0.2	0.0	82.7	2.0	0.3	99.3	0.4	
% of manufactured exports which are 'high tech', 2002[xv]	23.3	16.4	31.5	58.3	65.3	60.3	31.4	
Physical infrastructure[XVI]	60	45	23	22	87	6	39	

Institutional quality and risk							
Corruption							
Corruption perceptions index, 2003[xvii] (country ranking)	3.4 (66)	1.9 (122)	4.3 (50)	5.2 (37)	2.5 (92)	9.4 (5)	3.3 (70)
Country risk							
Composite risk ranking, 2002	75.0	58.3	79.8	77.5	71.0	90.0	76.3
Property rights							
Index of economic freedom[xviii]	4	4	2	3	4	1	3
Bureaucratic quality							
Public institutions index, 2004[xix] (country ranking)	4.39 (55)	4.12 (68)	4.81 (41)	5.06 (38)	3.21 (99)	6.21 (10)	4.71 (45)
Fiscal/finance							
Stock market capitalization as % of GDP, 2003[xx]	48.3	26.2	54.5	163.2	29.3	115.4	84.4
Highest corporate tax rate, 2003 (%)	33	30	27	28	32	22	30

Note: All data covering a period of time, e.g., GDP per capita growth, 1990-2003, refer to the yearly average among all years during the period.

Table 2: Sectoral Growth Performance, Malaysia (1970-2002)

(a) Composition (%)*	1970	1975	1980	1985	1990	1997	2002
Agriculture	28.5	26.9	22.9	20.8	18.7	12.6	8.7
Industry	32.3	32.6	35.8	36.7	42.2	41.3	44.6
Manufacturing	15.8	17.3	19.6	19.5	26.9	34.2	29.9
Services**	33.5	40.5	41.3	42.6	39.1	38.9	46.8
GDP	100	100	100	100	100	100	100

(b) Average annual growth (%)*	1970-75	1975-80	1980-85	1985-90	1990-97	1997-02
Agriculture	9.5	5.1	3.1	4.6	2.4	1.1
Industry	6.7	10.7	5.7	9.8	12.8	3.3
Manufacturing	6.7	11.4	5.3	13.7	13.2	4.1
Services**	12.2	13.9	5.8	5.1	10.2	3.8
GDP	10.6	8.5	5.2	6.8	8.1	3.2

(c) Contribution to output increment (%)	1970-75	1975-80	1980-85	1985-90	1990-97	1997-02
Agriculture	10.1	21.1	31.2	13.4	-2	4.4
Industry	35.8	37.2	32.2	46.2	48.5	40.1
Manufacturing	33.1	20.6	20	35.7	38.4	30.4
Services**	114.1	41.7	36.2	30.2	48.5	55.5
GDP	100	100	100	100	100	100

Notes: * Output shares and growth rates are based on constant (1978) prices. Growth rates are annual averages between the reported years.
** Include import duties net of bank service charges.

Source: Athukorala (2003), from Ministry of Finance Malaysia, *Economic Report* (various issues)

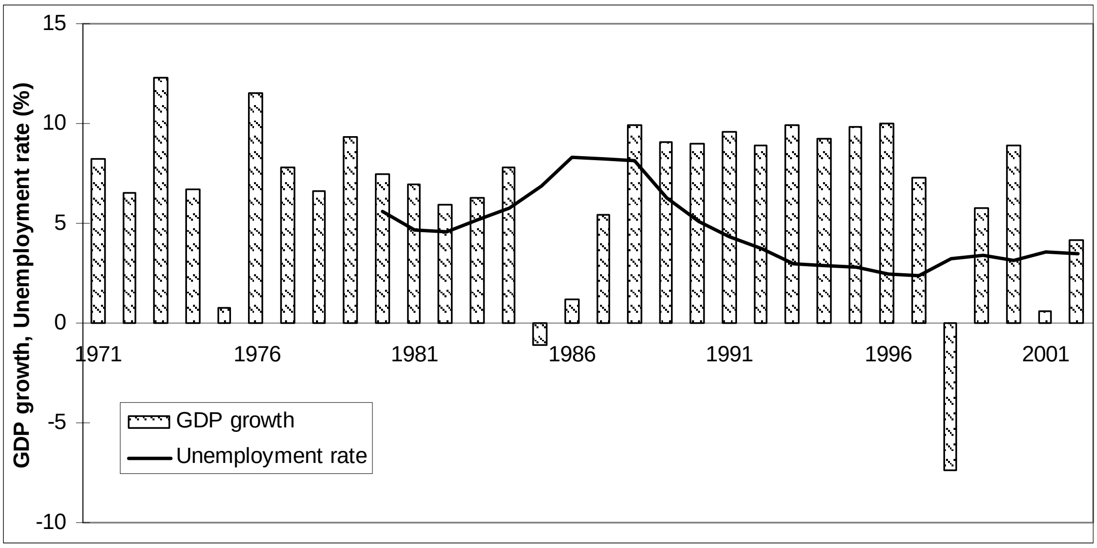
Table 3: Employment by Sector (% shares), Malaysia (1975-2003)

Sectoral composition (%)	1975	1980	1985	1990	1997	2003
Agriculture	43.6	40.6	31.3	29.9	16.6	13.8
Industry	20.9	22.7	23.6	24.6	37.3	36.3
Manufacturing	14.2	15.8	15.2	17.6	26.9	28.1
Services	35.5	36.7	45.1	45.5	46.0	50.0
Total	100	100	100	100	100	100
Total	4376	4817	5622	6682	8817	10181

Contribution to employment growth (%)	1976-80	1980-85	1985-90	1990-97	1997-03
Agriculture	10.8	-24.3	22.5	-24.8	-4.8
Industry	40.6	29.0	29.9	77.2	29.3
Manufacturing	31.7	11.6	30.3	56.2	35.4
Services	48.6	95.4	47.6	47.6	75.5
Total	100	100	100	100	100

Source*: Athukorala (2003), from Ministry of Finance,* Economic Report *(various issues)*

Figure 1: Malaysia: Growth (1971-00)* and Unemployment (1980-00), (%)



Notes:
* Growth rates are computed based on GDP at market prices from 1975 onwards. Prior to that, GDP at factor costs were used.

Period-average growth rates:

1971-1984	7.5
1986-1997	8.3
1971-2000	6.7

Source: Based on data compiled from Ministry of Finance, *Economic Report*, Kuala Lumpur (various issues)

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[i] Data for Singapore are for the year 2002.
[ii] Data for Singapore are for the period 1990-2002.
[iii] Data for Indonesia, Korea, Malaysia, and Thailand are for 2000, 2002, 1997, and 2000 respectively.
[iv] Index of economic freedom ranges from 0 (mostly free) to 5 (highly restricted).
[v] FDI: Foreign Direct Investment.
Total capital inflows = Direct investment + (Net Increases in) portfolio investment liabilities + (Net Increases in) other investment liabilities.
FDI as % of total capital inflows = FDI inflows / total capital inflows.
[vi] FDI inward stock:
Data for Korea are accumulated since 1962.
PRC, Korea, Philippines, and Thailand: Stock data after 2002 are estimated by adding flows.
Indonesia: Stock data after 1999 are estimated by adding flows.
Malaysia: Stock data after 1994 are estimated by adding flows.
Taiwan: Stock data after 1988 are estimated by adding flows.
[vii] FDI outward stock:
Data for Korea are accumulated since 1968.
PRC: Stock data after 1989 are estimated by adding flows.
Indonesia: Stock data after 1999 are estimated by adding flows.
Korea, Malaysia: Stock data after 2002 are estimated by adding flows.
Taiwan: Stock data after 1988 are estimated by adding flows.
[viii] Years of education are average years of school over age 25.

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ix Data for Malaysia are for the year 2001. Data for Indonesia and Philippines are unavailable.

x Data for the PRC, Singapore, and Taiwan are for 1999, 1995, and 2003 respectively.

xi Based on the 1-104 country ranking in the Global Competitiveness Report (1=best).

xii Data for Malaysia and Thailand are for 2000 and 1997, respectively. Data for Indonesia and Philippines are unavailable.

xiii Data for Malaysia and Thailand are for 2000 and 1997, respectively. Data for Indonesia and Philippines are unavailable.

xiv US utility patents granted per million of population.

xv Data for Thailand and Taiwan are both for the year 2001.

xvi Based on the 1-104 country ranking in the Global Competitiveness Report (1=best).

xvii The index ranges from 0 (highly corrupt) to 10 (highly clean). The world average for the 133 countries covered is 4.2, with a maximum of 9.7 and a minimum of 1.3.

xviii The property rights index is a composite from the index of economic freedom developed by the Heritage Foundation. The range is from 0 (very good) to 5 (very poor).

xix The public institutions index is based on survey data and ranges from 2.47 to 6.59 across 104 countries. The Higher the index, the higher the quality.

xx Data for Singapore are for the year 2002.

Sources:

General economic indicators	
GDP, 2003 ($ billion)	*The Global Competitiveness Report 2004-2005.*
GDP per capita PPP, 2003 ($)	*The Global Competitiveness Report 2004-2005.*
GDP per capita growth, 1990-2003 (%)	World Bank, *World Development Indicators* (Online).
Annual average inflation, 1990-2003(%)	World Bank, *World Development Indicators* (Online).
Total external debt/GDP, 2002 (%)	Total External Deb: World Bank, *World Development Indicators* (Online). Inter-Agency Task Force on Finance Statistics,「Joint BIS-IMF-OECD-World Statistics on External Debt」, http://www.oecd.org/dac/debt/
GDP per capita 2003/1980	World Bank, *World Development Indicators* (Online).
Openness	
Trade	
(Exports + imports)/GDP, 1990 (%)	World Bank, *World Development Indicators* (Online). National Statistics, Roc. http://www.dgbas.gov.tw/
(Exports + imports)/GDP, 2003 (%)	
Export growth, 1990-2003 (%)	
Average tariff rate, 2001	Heritage Foundation, http://www.heritage.org/research/features/index/
Index of economic freedom, 2004	Heritage Foundation, http://www.heritage.org/research/features/index/
Investment	
FDI as % of total capital inflows, 1990-2003	FDI: UNCTAD, *World Investment Report*, http://stats.unctad.org/fdi/ Total capital inflows: IMF, *International Financial Statistics*. http://www.imfstatistics.org/ Central Bank of China, ROC (Taiwan). http://www.cbc.gov.tw/
Total FDI stock, $ billion, 2003	
Total FDI stock as % of GDP, 2003	
Human capital and innovation	
Years of education, 2000	Barro-Lee Education Data, http://www.nber.org/pub/barro.lee/
Gross tertiary enrolment rate (%), 2001	*The Global Competitiveness Report 2004-2005.*
R&D expenditure as % of GDP, 2002	World Bank, *World Development Indicators* (Online). National Statistics, ROC (Taiwan). http://www.dgbas.gov.tw/

Number of internet users as % of total inhabitants, 2003	*The Global Competitiveness Report 2004-2005.*
Public spending on education as % of GDP, 2001	World Bank, *World Development Indicators* (Online). UNESCO Institute for Statistics. http://www.uis.unesco.org "*Indicators of Educational Statistics of the Republic of China*," by the Minis Education, ROC
International ranking in quality of math & science education	*The Global Competitiveness Report 2004-2005.*
Total R&D employment, thousand, 2001	UNESCO Institute for Statistics. http://www.uis.unesco.org National Statistics, Roc. http://www.dgbas.gov.tw/
R&D employment per 1 million population, 2001	
Utility patents data, 2003	*The Global Competitiveness Report 2004-2005.*
% of manufactured exports which are 'high tech', 2002	World Bank, *World Development Indicators* (Online). "*Monthly Statistics of Exports and Imports Taiwan Area, ROC*" by the Minis Finance, ROC
Physical infrastructure	*The Global Competitiveness Report 2004-2005.*
Institutional quality and risk	
Corruption	
Corruption perceptions index, 2003[xx] (country ranking)	Transparency International, http://www.transparency.org/
Country risk	
Composite risk ranking, 2002	UNCTAD, *World Investment Report*, http://stats.unctad.org/fdi/
Property rights	
Index of economic freedom[xx]	Heritage Foundation, http://www.heritage.org/research/features/index/
Bureaucratic quality	
Public institutions index, 2004[xx] (country ranking)	*The Global Competitiveness Report 2004-2005.*
Fiscal/finance	
Stock market capitalization as % of GDP, 2003[xx]	World Bank, *World Development Indicators* (Online). Taiwan Stock Exchange Corporation.
Highest corporate tax rate, 2003 (%)	Heritage Foundation, http://www.heritage.org/research/features/index/