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THE DILEMMA OF A MORE ADVANCED DEVELOPING COUNTRY: CONFLICTING VIEWS ON THE DEVELOPMENT STRATEGY OF SINGAPORE

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I. INTRODUCTION

On January 1, 1995 the Organisation for Economic Co-operation and Development (OECD) decided to stop classifying Singapore as a developing country and reclassified it along with Brunei, the Bahamas, Kuwait, Qatar, and the United Arab Emirates (UAE) as a "more advanced developing country." This was the follow-up to a decision made in 1992 to remove these high-income countries from the Development Assistance Committee (DAC) list of developing countries eligible to receive aid. It seems likely that in Singapore's case the expectation was that it would apply for full OECD membership, which automatically brings with it developed country status, but this was resisted by the Singapore authorities. The Republic of Korea, on the other hand, graduated to the "Super League" in October 1997. Singapore's omission was a curious development and naturally stimulated some discussion in Singapore and provoked an official justification.[1] The World Bank in its *World Development Report, 1997* continued to classify Singapore as a "high-income economy," along with developed countries such as the United States and Japan, but with a footnote qualification that it is one of the economies "classified by the United Nations or otherwise regarded by their authorities as developing."

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[1] The OECD position was that it considered all its members to be developed countries and the question as to whether Singapore would meet the necessary criteria would only arise if and when Singapore applied for membership (*Business Times,* January 17, 1996). The Asian Development Bank still regards Singapore as a developing country member as it is not listed as providing technical assistance.

This qualification also applied to some other high-income countries, namely, Hong Kong, UAE, Kuwait, and Israel, but no longer to Korea.[2]

From a comparative static perspective Singapore's present status looks decidedly odd. Comparing the rankings in the *1997 World Development Report* with the equivalent ones in 1980 there were no relegations from the "high-income" category. In other words those countries depicted as "high-income" in 1980 are still in the top league in 1997, but eight countries had been promoted: the footnote countries of Singapore, Hong Kong, UAE, Kuwait, and Israel, together with Spain, Portugal, and Korea.[3] Using conventional criteria few development economists would object to Spain, Portugal, and now Korea being regarded as developed countries. On the other hand, it would be difficult to make a strong case for UAE and Kuwait. This leaves Singapore, Hong Kong, and Israel as anomalies in the high-income category. One might exclude Hong Kong on the grounds that it became de jure reintegrated with China in 1997, and had de facto been reintegrating in an economic sense since the mid-1980s, so that it might be deemed to have withdrawn from the League! A similar legal problem arises with Taiwan, which does not appear in the World Bank classification. Israel's exclusion on grounds of ambiguous sovereignty would be less convincing, and a nonstarter in Singapore's case. Moreover, what makes Singapore stand out in the high-income category is the gap in per capita income between itself and other candidates for developed country status. Although the level of per capita income is not regarded as sufficient grounds for a country to qualify as developed, it is an important necessary condition. In 1997 Singapore's real GNP per capita of U.S.$32,940 was way above Spain (U.S.$14,510), Portugal (U.S.$10,450), Korea (U.S.$10,550), and even Hong Kong (U.S.$25,280) (World Bank 1999, Table 1).

It is perhaps not surprising, therefore, that the International Monetary Fund (IMF) in its *World Economic Outlook, May 1997*, has, much to the chagrin of the Singapore authorities, decided to "consider" Singapore, together with Israel, Hong Kong, Korea, and Taiwan with the "group of countries traditionally known as industrial countries." Notwithstanding legal ambiguities, this reclassification reflects "the advanced stage of economic development these economies have now reached" (IMF 1997, p. 4).

Yet the official position in Singapore is that Singapore is still a developing country, albeit a more advanced one. These sentiments are regularly expressed in the media and in parliamentary debates. Typical is the report in the *Straits Times* (March

[2] World Bank, *World Development Report, 1997*, Table A.1. In the *1998/99 World Development Report* all countries, including Singapore, are now presented in alphabetic order rather than by incpme category, but Singapore continues to be classified in the report (p. 251) as a high-income non-OECD country in the same category as French Polynesia, with the corollary that "classification by income does not necessarily reflect development status."

[3] One or two countries, such as Saudi Arabia, were promoted in the intervening period, but were subsequently relegated again.

4, 1995, p. 34) in which a member of Parliament, Koo Tsai Kee, is quoted as saying he "dismissed as 'absurd' the idea that Singapore was a developed country." Or more recently:

> We may be rich in terms of per capita GDP but Singapore cannot be considered a developed country as we lack depth in R&D and other capabilities that will ensure continued demand for our goods and services. (Wang Kai Yuen, member of Parliament for Bukit Timah, recorded in *Parliamentary Debates*, vol. 67, no. 2 [June 2, 1997], pp. 70–71)

These views are surely at odds with a layperson's perception of the city-state. Any visitor to the Republic who takes a taxi ride from Changi Airport to the city center, or who takes advantage of the free guided tour offered at the airport for transit passengers, will come to a different conclusion and would probably agree with the sentiments of McCrum et al. (1986, p. 336):

> After Japan, it is the most aggressively self-modernizing nation state in the Pacific, a model for Malaya, Korea, Taiwan and the Philippines. The huge international airport has turned a slum-ridden relic of British imperialism into a stop-over city with a high-rise business district, a pan-island expressway, and huge estates of regimented housing blocks.

Moreover, from the vantage point of the late 1990s these sentiments are even more pertinent with the proliferation of oil refineries and the Port of Singapore, high-tech wafer fabrication plants, the plush business district, and the upgraded housing estates and private luxury condominiums.

This is not a vision of a developing country,[4] but does it matter? Certainly it is a classification anomaly and there will be, I suspect, increasing pressure on the Singapore government from international organizations such as the OECD and the IMF to accept developed country status, particularly as Singapore is called upon to play an increasing role in the region. The irony here is that Singapore is currently trying very hard to establish itself as a regional financial center and business hub and to distance itself from the "bad" economic policies of some of its less developed neighbors which have surfaced in the wake of the 1997 Asian financial crisis.

Two questions are addressed in this paper:

- Why is it so hard to classify Singapore in the development spectrum?
- Does Singapore have any special problems which preclude it from joining the ranks of the developed world?

II. WHY DOES SINGAPORE NOT ACCEPT PROMOTION?

A. *Loss of Privileges?*

Why not accept promotion? After all, Malaysia, Singapore's closest neighbor,

[4] This is reminiscent of Benjamin Higgins provocative aerial exploration of the meaning of development (Higgins 1959, pp. 8–9).

has its sights firmly set on the achievement of fully developed status by the year 2020 ("vision 2020"). One possibility is the loss of developing country privileges. But since Singapore has not been a recipient of aid in the past,[5] and would be disqualified now anyway under its new OECD classification, this cannot be the issue. The limbo status of "more advanced developing country" would enable Singapore to continue to benefit from the European Union's (EU) General System of Preferences as far as trade is concerned, but even this would be subject to periodic review.

B. *More Responsibilities?*

It is also unlikely that the Singapore authorities would shrink from the responsibilities that developed country status would bring. It has been a participant in regional central bank initiatives and lending to countries such as Indonesia in the wake of the Asian financial crisis and is an enthusiastic participant in trade forums such as the ASEAN and the Asia-Pacific Economic Cooperation (APEC). It is no coincidence that, after hard lobbying, Singapore was rewarded with the honor of hosting the inaugural meeting of the World Trade Organization (WTO) in December 1996. Singapore, it seems, is destined to be dragged kicking and screaming into the ranks of the developed world.

C. *Campaign Psychology?*

A glib explanation (but with some substance) for Singapore's reluctance to graduate lies in its famous on-going campaign psychology, which itself is inextricably linked to the country's development strategy which has been heavily dirigiste in many ways. There is no secret or miracle in the nature of Singapore's development:[6]

> It has relied on foreign capital and direct investment and export-led growth. The crucial Singaporean contribution has been to mobilize what domestic resources there were in the 1960s to drain the land, provide an efficient infrastructure, provide an educational and housing system and compliant labour relations that would provide a workforce attractive to foreign investors. Tax incentives and an incorrupt government have ensured that the returns to foreign investors are sufficient to prevent them from relocating to neighboring countries and to continue reinvesting in Singapore. (Peebles and Wilson 1996, p. 35)

Singapore is not unique in turning a small, resource-deficient territory into a developed economy. Hong Kong is another example; and some have ascribed

[5] However, it has benefited indirectly from funds received by the Association of Southeast Asian Nations (ASEAN), such as during recent bouts of haze generated by forest fires in neighboring countries.

[6] For a modern history of Singapore, see Turnbull (1989). An excellent economic history of Singapore can be found in Huff (1994). Huff (1995) also presents a persuasive account of Singapore's development strategy.

Singapore's success to the "'first law of development': to those who have shall be given" (Huff 1994, p. 2), pointing to its initial advantages in terms of location, natural deep-water port, and its free trade history. It is not to belittle Singapore's development policies to say that it followed a simple formula, since such formulae are not easy to conceive nor implement, nor is it easy to mobilize the population. As the *Asian Wall Street Journal* remarked:

> Copying the formula it used to help build thriving shipping, tourism and banking industries here, the Singapore government detailed plans for a big new performing arts center. That simple formula—build the best possible infrastructure, provide trained workers and salt liberally with tax breaks—along with an unbeatable location astride Asia's main sea route made this tiny city-state rich. (*Asian Wall Street Journal*, July 22–23, 1994, p. 1)

From this perspective, Singapore's economic development has benefited from the uninterrupted rule of the People's Action Party (PAP) since 1959. With the prospect of a change in government remote, long-term policies announced by the authorities are backed by a high degree of credibility, which is highly conducive to attracting foreign investment in Singapore. Businessmen do not like the uncertainties about future economic policy that the possibility of a radical change in government brings with it (Kalecki 1971). The concomitant of this has been an explicit "sacrifice" of democracy for "discipline" epitomized by the following quote from Lee Kuan Yew, and a reputation for a sometimes overbearing campaigning psychology:

> I do not believe that democracy necessarily leads to development. I believe that what a country needs to develop is discipline more than democracy. (Lee Kuan Yew cited in the *Economist*, August 27, 1994, p. 15)

Singaporeans are constantly being urged not to litter, smoke, urinate in lifts, or overfill plates at buffets, but are, on the other hand, urged to speak Mandarin (not dialect), be more courteous, and more recently, to smile at tourists. In fact, part of the official justification for retaining the developing country acronym stems from the belief (real or illusory) that Singapore has not yet reached a sufficient state of social graciousness.[7] Singaporeans even have their own Chinese dialect word "Kiasu" to sum up many of the selfish qualities which Singaporeans find most distasteful about themselves. Literally translated "Kiasu" means "scared to lose" and is also the name of a cartoon character.

The need to retain the goal of development as a rallying cry and to maintain "discipline" may have its part to play in the official resistance to graduation to the Super League, but it conceals a number of more subtle issues which will be ex-

[7] This was apparently the reaction of the Trade and Industry Minister Yeo Cheow Tong to the 1996 OECD reclassification of Singapore, as reported in the *Business Times*, January 17, 1996. Similar sentiments expressed by Prime Minister Goh Chok Tong are cited in the *Economist*, January 11, 1997, p. 25.

TABLE I

GROWTH AND STRUCTURAL CHANGE IN SINGAPORE, 1960–97

	Real GDP Growth	
1965–73	13.0	
1980–93	6.9	
1965–93	8.5	
1990–97	8.1	
	Value-Added % GDP	
	1960	1997
Agriculture	4	0
Industry	18	36
Services	78	64

Sources: *Yearbook of Statistics Singapore*, various issues; and World Bank, *World Development Report, 1998/99,* Table 12.

plored later. From an objective point of view is Singapore really "developed," or does it have special problems which would, indeed, justify its exclusion from the developed world?

III. ECONOMIC AND NONECONOMIC FACTORS

A. *Economic Indicators*

Although the process of economic development covers a multitude of sins, according to the conventional wisdom of development economists it has something to do with sustained rapid economic growth, a process of structural change involving, amongst other things, a decline in the importance of agriculture in national income and employment, and a demonstrable improvement in welfare or well-being for a substantial proportion of the population. On these criteria Singapore does well. Real GDP grew at a remarkable 8.5 per cent per annum between 1965 and 1993 (Table I). Indeed, Singapore is one of the few countries historically to have achieved rapid growth in output over successive decades, broken only by a short-lived recession in 1985.[8] Growth has been fast even in the 1990s, at least prior to the outbreak of the Asian crises, at 8.1 per cent between 1990 and 1997, when expectations were that growth would fall to a more sustainable rate.

Apart from certain quirks arising from its history as an entrepot trading center and island city-state bereft of natural resources, Singapore's rapid structural change began predictably with labor-intensive industrialization in the mid-1960s after its traumatic exodus from the Malaysian Federation in 1965, and it has moved steadily

[8] See, for example, the regression analysis of Easterly (1995).

TABLE II

INDICATORS OF MACROECONOMIC MANAGEMENT IN SINGAPORE

(% per annum)

	Inflation[a]	Unemployment[b]	
1966–73	3.7	6.4	
1980–93	2.8	3.2	
1966–93	3.7	4.3	
1990–97	2.2	2.1	
Gross international reserves per capita in 1997[c] (U.S.$)			23,767
Months of imports in 1995[d]			6.5
Overall balance of payments average 1990–97[e] (U.S.$ billion)			6.5

[a] Based on the consumer price index from various issues of the *Yearbook of Statistics Singapore*.
[b] *Yearbook of Statistics Singapore*, various issues.
[c] World Bank, *World Development Report, 1998/99*, Tables 3 and 15.
[d] Gross reserves from the World Bank, *World Development Report, 1997* (Table 16), divided by one-twelfth of the annual value of imports converted into U.S. dollars from the *Economic Survey of Singapore, 1997*.
[e] Figures for 1990–96 are from the Asian Development Bank, *Key Indicators of Developing Asian and Pacific Countries, 1997*; the figure for 1997 is converted into U.S. dollars from the *Economic Survey of Singapore, 1997*.

up the value-added ladder ever since. By 1997 the percentage of GDP accounted for by industry had risen to 36 per cent (Table I), with 26 per cent in manufacturing (especially electronics, machinery, transport equipment, and chemicals). Equivalent figures for Japan are 38 and 25 per cent respectively. Notice two rather special features of Singapore's structural transformation: the negligible role of agriculture even in 1960, and the fall in the contribution of services to 64 per cent by 1997. The latter is the opposite of the usual pattern but is easily explained by Singapore's history as an entrepot trading economy. Over time traditional entrepot activities, based on low value-added re-exports and the provision of import-export services revolving around the Singapore River fell, but were replaced by higher income services in the modern business and finance sector, and in tourism and communications, including Changi Airport and the Port of Singapore.[9]

This rapid growth and structural change has not been at the expense of domestic macroeconomic stability or external balance. Singapore has an enviable record (Table II) of low inflation, averaging 3.7 per cent between 1966 and 1993 and 2.2 per cent 1990 to 1997, and low unemployment, averaging 3.2 per cent between 1980 and 1993, excluding the 1985/86 recession, and 2.1 per cent 1990 to 1997. The natural

[9] If the character in Paul Theroux's (1976) novel *Saint Jack* had jumped ship in Singapore in 1997 instead of in the 1950s, he might well be servicing visiting ships with oil bunkers rather than the more basic creature comforts he helped to supply in earlier years!

rate of unemployment in Singapore in the mid-1990s is estimated to be about 3 per cent.[10] The balance of payments has been in surplus overall since 1965, the currency relatively stable, and foreign exchange reserves have steadily accumulated such that, in 1997, Singapore had the highest reserves per capita in the world at U.S.$23,767 followed by Switzerland with U.S.$9,022.[11]

B. *Welfare Indicators*

Assessing changes in economic welfare is clearly more subjective, but Singapore's progress in this respect has probably been understated in international comparisons. Table III reproduces some country rankings based on comparative welfare statistics. The first column ranks Singapore first in terms of GNP per capita in 1997 in international dollars, based on purchasing power parity estimates from the World Bank (1999, Table 1). The remaining rankings are directly comparable for 1992 and are taken from Crafts (1997b, Table 6). Singapore's relative ranking in 1992 falls from 16 in terms of GDP per head in purchasing power parity international dollars to 21 when the figures are adjusted to take into account hours worked per member of the labor force. The reasoning here is based on the suggestion by Nordhaus and Tobin (1972) that some allowance is needed for time spent on market work to allow for the opportunity cost of leisure. Such adjustments are especially important in comparisons which include countries such as Singapore and the other East Asian "tigers," where participation rates and hours worked per member of the labor force have been rising substantially since the 1950s compared to more advanced countries (see Crafts 1997b, p. 78). Nonetheless, even when the adjustments are made, Singapore still ranks above Portugal, Korea, and Taiwan in 1992, and would probably score better in more recent years.

C. *The Human Development Index*

A broader measure of economic welfare is the United Nations Human Development Index (HDI) which combines life expectancy at birth, adult literacy, and educational enrolment, and a measure of income discounted above a certain threshold. In the *Human Development Report, 1997* (Table 2.11), Singapore was ranked 26 out of 175 countries, up from 34 the previous year but still below countries such as Hong Kong, Israel, Cyprus, and Barbados, and with a score of minus 15 for the difference between the HDI ranking and the ranking based on real GDP per capita in purchasing power parity U.S. dollars, implying that the country was more advanced in terms of income than in social development. Using an adjusted HDI (Table III), based on Gormely (1995), Singapore slips from 16 (column 2) to 18

[10] This figure is from Low (1994) and is based on the unpublished Monetary Authority of Singapore's quarterly macroeconometric model.

[11] The reserves and population figures are from the World Bank, *World Development Report, 1998/99*, Tables 1 and 15.

TABLE III

COMPARATIVE WELFARE RANKINGS FOR SINGAPORE

	GNP/Head[a] (1997)	GDP/Head[b] (1992)	GDP/Hour[c] (1992)	HDI[d] (1992)	DW[e] (1992)
United States	2	1	9	1	10
Switzerland	3	2	6	2	1
Hong Kong	4	5	19	13	13
Singapore	*1*	*16*	*21*	*18*	*24*
Japan	6	3	18	3	4
Norway	5	9	5	7	5
Belgium	8	10	1	10	10
Austria	9	11	8	12	10
Denmark	7	6	11	8	17
Canada	10	7	7	4	5
France	11	8	2	6	7
Germany	13	4	4	5	7
Netherlands	12	13	3	9	3
Italy	16	15	14	15	18
United Kingdom	14	17	15	17	15
Australia	15	14	12	14	9
Sweden	17	12	10	10	2
Finland	18	18	17	16	14
Israel	19	—	—	—	—
Ireland	20	20	16	20	20
New Zealand	21	—	—	—	—
Spain	22	19	13	19	19
Portugal	23	22	22	23	22
Korea	24	24	24	24	23
Taiwan	—	21	23	22	16

[a] In current international dollars using purchasing power parity estimates from the World Bank, *World Development Report*, *1998/99*, Table 1.

[b] In 1990 international dollars based on purchasing power parity estimates from Maddison (1995) and reproduced in Crafts (1997b, Table 6).

[c] A revised version of Maddison (1995) from Crafts (1997b, Table 6)

[d] An amended version of the United Nations Human Development Index using the income concept in Gormely (1995) from Crafts (1997b, Table 6).

[e] An amended version of Dasgupta and Weale (1992) including standardized unemployment by Crafts (1997b, Table 6).

(column 4) in the rankings for 1992; although using a longer-run comparison benchmarking the HDI back to 1870 by Crafts (1997a) for sixteen Maddison (1995) sample developed countries and twenty-three other countries, Singapore and Taiwan were the biggest gainers between 1950 and 1992 in terms of their HDI rankings.[12] There is also a suspicion that HDI indexes are a little unkind to Singapore, partly

[12] Two versions of the HDI index are used in this study: HDI that discounts income above a threshold and HDI* that drops the discounting procedure and uses instead income per capita measured in 1990 international dollars. This is seen to be more appropriate for long-run welfare comparisons if the focus is broader than just the escape from poverty. See Crafts (1997a).

because it is more difficult to achieve an increase in the HDI if the country starts from a relatively high base and undergoes rapid change, but also because of the use of inappropriate or incorrect indicators in the index itself. Smith (1993), for example, argues that Singapore's relatively low HDI ranking for 1992 is due largely to a low score on educational attainment which does not adequately capture improvements in the education system in Singapore. It is ironic that of the high HDI countries in that year, only Qatar and Kuwait score lower than Singapore, despite the fact that raising average educational levels has been at the heart of Singapore's success. On any disaggregated measure of welfare or "basic needs," such as nutrition level, access to health care, housing, social infrastructure, amenities, crime, absolute poverty, number of beggars, etc., Singapore is likely to score very highly. This is also true if a range of educational indicators are used, as in Smith (1993, Table 3).

D. *Income Distribution*

As far as the distribution of income is concerned, accurate and recent data is less easy to come by, but according to the United Nations (1996, Tables 17 and 36) estimates for the period 1981–93, the ratio of the income share of the highest 20 per cent of income earners to the lowest 20 per cent was 9.6. This is higher than for Hong Kong, Korea, and Thailand but is equivalent to developed countries such as the United Kingdom and Australia. Within Singapore debate largely centers on the accuracy or otherwise of the consumer price index in accounting for the differential effects of inflation on different income groups and the size of ministerial salaries.[13]

E. *Noneconomic Indicators*

Where Singapore undoubtedly performs badly is on comparisons which include noneconomic criteria. In fact the country has become something of a bête noir in this respect. The final column in Table III lists the Dasgupta and Weale (1992) extension of the HDI incorporating a civil rights index and an index of political rights, and augmented by Crafts (1997b) to include an index of unemployment. Similar low rankings for Singapore are to be found in other studies. In the United Nations Human Freedom Index included in its *Human Development Report, 1991* (p. 20), which includes forty "basic freedoms," Singapore was placed 11/40 and is at the bottom of the "medium freedom" category, below Colombia, Thailand, India,

[13] See, for example, Singapore (1994, p. 11) and the *Economist*, November 26, 1994, p. 33. Using 1992 figures the Prime Minister received an annual salary of S$1,148,000 which ranked him 32nd among top private sector earners, while a Staff Grade I Minister earned S$587,000 and was ranked 244th. Both figures are substantially higher than their counterparts in the United States. It is an article of faith in Singapore that ministers and civil servants should be paid in line with the private sector and sufficiently well to prevent corruption. These salaries, as with most workers in Singapore, also contain a substantial variable component which is reduced when the economy fails to achieve a pre-specified rate of growth.

and Sierra Leone and in the vicinity of Benin and Nigeria. In Barro's (1994) Index of Human Rights, Singapore scores 0.33 out of a possible 1.0, approximately the same as Peru and South Africa. These rankings are in stark contrast to its rating in terms of the narrower concept of "economic freedom" focusing on variables such as taxation, trade policy, and property rights. The Heritage Foundation, for example, usually places Singapore top or second behind Hong Kong in its annual Index of Economic Freedom (see, for example, Johnson and Sheehy 1996).

F. *City-State Characteristics*

From the development point of view it would seem to be very harsh to exclude Singapore from the Super League by virtue of its poor performance according to noneconomic criteria, but there is some substance to the view that growth and welfare comparisons between Singapore and other countries should take into account its city-state characteristics. In many ways it seems more appropriate to compare Singapore's development to that of other cities such as New York, Tokyo, or Shanghai, or to a state or similar administrative region of another country, such as India.[14] After all, Singapore attracted capital and expertise from outside and has been able to draw on nearby countries for labor in forms ranging from foreign domestic maids, who release trained women to undertake higher productivity work, to the "reserve army" of immigrant workers on short-term contracts in the construction industry, to managers of multinational corporations (MNCs) and academics. It even has thousands of daily commuters from neighboring Malaysia and Indonesia just as any thriving city does. It is also easier to provide welfare and other social infrastructure (and measures of social control) in a small city of 3 million which has no poor agricultural sector to contend with. We shall return to the issue of dependence on foreigners in Section IV below, but the fact remains that notwithstanding its city characteristics, Singapore has been an independent sovereign entity since 1965, with none of the political ambiguities which have clouded the issue for Hong Kong and Taiwan, and on any reasonable application of standard economic criteria is a developed country.

IV. SINGAPORE HAS SPECIAL PROBLEMS

Is there any substance to the argument that Singapore has special problems which preclude it from joining the ranks of the Super League, apart from a predilection toward a campaigning psychology and the potential loss of some trading benefits? The official view revolves around the perception that Singapore somehow lacks the

[14] Before its departure from the Malaysian Federation, the vision of Singapore as just a city was not unreasonable. Lee Kuan Yew has been quoted as saying in 1963 that he looked forward to turning Singapore into the "New York of Malaysia, the industrial base of an affluent and just society" (Turnbull 1989, p. 278).

TABLE IV

SINGAPORE AS A VERY OPEN RE-EXPORT ECONOMY

	Trade to GDP Ratio[a]	Domestic Exports[b] (% of GDP)	Value-Added Exports[c] (% of GDP)
1965	210	—	10
1970	212	32	11
1975	364	86	16
1980	370	103	27
1985	277	84	23
1990	302	92	32
1992	274	82	31
1995	284	81	—
1996	276	79	—
1997	267	75	—

[a] Total merchandise exports and imports from the *Yearbook of Statistics Singapore.*
[b] Merchandise exports less officially defined re-exports from the *Yearbook of Statistics Singapore.*
[c] Total exports less traditional entrepot re-exports and imported intermediate inputs based on Lloyd and Sandilands (1986).

"depth and breadth of fully developed economies,"[15] due partly to its peculiar dependence on the world economy and therefore vulnerability to international shocks, but also to a belief that it is presently unable to compete in the Super League. We shall consider each of these arguments in turn.

A. *Dependence and Vulnerability to External Shocks*

1. *An open economy with scarce natural resources*

Any inquiry about the basic problem facing the Singapore economy will invariably invoke the standard mantra: "Singapore is a small open economy with no natural resources and is extremely vulnerable to shocks emanating from the outside world." Historical examples might include the oil price hikes of the 1970s, international recession in the early 1980s, the sharp fall in external demand as a major cause of the 1985/86 recession in Singapore, and more recently, the contagion effects from the 1997 Asian financial crisis.

There is no doubt that Singapore is extremely exposed to international trade and capital flows. With a simple trade to GDP ratio of 267 per cent in 1997 (Table IV), the total volume of trade is very large compared to the country's annual production making Singapore one of the most open economies in the world. Although (with the exception of the 1985/86 recession) Singapore does not yet seem to have begun to experience the business cycle of mature economies, its growth cycle can be sig-

[15] This was the view given to the media by the trade and industry minister after the OECD reclassification in 1995, as reported in the *Business Times,* January 17, 1996.

nificantly affected by external swings in demand. A recent example of this was the slowdown in the economy in the second and third quarters of 1996 due to a downswing in the global electronics cycle. Electronics accounts for about 15 per cent of Singapore's GDP and almost two-thirds of its non-oil exports.[16]

Singapore also exhibits a high level of import penetration as a direct consequence of both its extreme openness and very low level of protection. Almost all foodstuffs and raw materials are imported, including water from Malaysia. The import content of exports is also very high, especially petroleum-based products (mainly fuel for ships and aircraft), since all petroleum is imported.[17] Import penetration has also increased as a result of growth in its intra-industry trade in the last two decades. By 1990 almost half of Singapore's trade with the United States and EU in manufactured goods consisted of intra-industry trade, and a fifth of the trade with Japan (Chow et al. 1994).

Traditional measures of openness are, however, misleading as far as Singapore is concerned. Because much of its trade historically has taken the form of "entrepot" trade, the published trade statistics distinguish between total exports and domestic exports, with re-exports or pure entrepot exports as the difference between the two series. To measure the true "value-added" contribution of exports to GDP, however, even this distinction is too narrow because re-exports are officially defined as goods which are subject only to repacking, splitting into lots, sorting, or grading. To take the high import content of exports into account, Lloyd and Sandilands (1986) calculated an alternative export series by using the input-output tables to net out all imported inputs. Table IV presents both the official domestic export series and the new "value-added" series. Not only does the ratio shrink to a more sensible reflection of the role of exports in GDP, but the magnitude of the value-added series suggests that Singapore is structurally still very much a re-export economy in the broad sense. Although the ratio of the official domestic exports series to GDP was 82 per cent in 1992, "value-added" exports account for only 31 per cent of GDP. This emphasizes Singapore's continued heavy reliance on imported intermediate inputs as well as a small amount of entrepot exports. It is because of this that Lloyd and Sandilands described Singapore as a "Very Open Re-export Economy" or VORE. For most countries the import content of exports is relatively small so this distinction is not important, but for Singapore almost all the output of goods and services by the private sector and almost all intermediate capital inputs are tradable goods.

Certainly Singapore is potentially very vulnerable to a fall in export earnings, short-term and long-term capital outflows, gyrations in international interest rates, and imported inflation, given its heavy dependence on imports and MNCs and its

16 For an analysis of electronics and growth cycles in Singapore, see Abeysinghe (1996).

17 The average total weighted import requirements per unit of domestic exports (excluding re-exports) for 1988, calculated from the 1988 input-output table, is 0.692 (Peebles and Wilson 1996, p. 160).

financial openness. Yet historically it has been very difficult to knock Singapore off its sustained growth path, and the impact of short-term fluctuations in export earnings on aggregate income and the balance of payments are cushioned by inbuilt stabilizers through high marginal propensities to save and import, a structural surplus in services due in part to investment income from abroad, and a strong overall balance of payments and foreign exchange reserves position.[18] Hence, the effect of the 1997/98 Asian crisis on Singapore's overall trade performance has been to some extent mitigated by the fact that a substantial amount of its trade in the region consists of intra-firm transactions of intermediate inputs through MNCs to meet demand outside the region. Therefore while exports destined for local consumption in the region were badly hit as domestic demand collapsed, those used as intermediate inputs and eventually re-exported to developed countries outside the region remained healthy (see the *Economic Survey of Singapore, 1997*, pp. 100–101).

2. *Vulnerability to external shocks*

The 1985/86 recession in Singapore is often cited as an example of Singapore's vulnerability to external shocks but that recession, in fact, required a rather special combination of unfavorable circumstances. If you use the "value-added" exports series referred to above, of the three occasions between 1964 and 1992 in which value-added commodity exports experienced negative growth, in two cases (1975 and 1982) value-added service exports cushioned the impact on GDP growth to give positive growth in exports as a whole, and the growth in domestic demand was also positive. Only in 1985 did both commodity and service value-added exports exhibit negative growth (reflecting a downturn in electronics, ship repair, and regional tourism and entrepot trade), generating a negative value for external demand as a whole, and at the same time domestic demand growth was also negative due to a sharp fall in construction. Recovery from the recession was also rapid, helped by an improvement in external factors, but important too was swift government action to reduce producer costs by cutting compulsory savings contribution rates and restraining wage increases. In fact Singapore has shown remarkable adaptability and resilience in the face of changes in the world environment.

3. *Hollowing out of the manufacturing sector*

A second aspect of the vulnerability argument is the fear in Singapore of "hollowing out" or losing its manufacturing base as a result of the relocation of Singaporean firms to lower-cost neighboring countries, thus "exporting jobs" and reducing the manufacturing core of the economy. This is exactly what happened to Hong Kong during the 1980s when its entrepreneurs decided to relocate their manu-

[18] The impact of export fluctuations on Singapore is discussed in the context of the export instability debate in Wilson (1995).

facturing activities to the Pearl River Delta in mainland China. Businessmen literally closed down their factories on a Saturday, sent their machinery and equipment across the border, and started work again the following week employing Chinese workers. The danger, as Singaporeans see it, is that it may have lost its comparative advantage in low-skill labor-intensive goods and some capital-intensive goods to other newly industrializing economies (NIEs) or emerging NIEs before it has reached the stage at which it can compete in the Super League in technology and skill-intensive goods.[19]

A shift to service provision, and an increase in value-added in the manufacturing that remains in Singapore would obviate this problem as long as the service sector expands to absorb the growing and retrenched labor force, but the fear in Singapore is that the workforce might not be able to adapt to the loss of manufacturing jobs and switch to those activities that service the overseas manufacturing base, such as design and marketing services and the provision of banking, insurance, and transport services. Many of Singapore's exports come from foreign firms which brought with them their own marketing skills, markets, and connections, so there is not very much indigenous talent in these areas. Hong Kong has been able to achieve this restructuring because of its better-educated and flexible workforce with skills in the areas of design and marketing, and because it continues to act as China's main port and thus entrepot for the goods that are manufactured in mainland China. Singapore's longstanding role as an entrepot for goods produced in Malaysia is not so guaranteed as, in recent years, Malaysia has made it clear that it would prefer to "encourage" local firms to use Malaysia's own underutilized port facilities, such as Port Klang in the state of Selangor.

The specter of deindustrialization is not peculiar to Singapore. As the share of manufacturing in total employment in rich countries fell from 28 per cent in 1970 to 18 per cent in 1994 (Rowthorn and Ramaswamy 1997) similar fears were expressed in rich industrial countries such as the United Kingdom, and arguably the problem is likely to be more intractable for countries such as Korea, where a substantial amount of manufacturing and employment has become structurally locked into inefficient production through the *chaebol* system and protectionist policies. If Rowthorn and Ramaswamy (1997) are correct, the problem is not due primarily to richer consumers wanting more services relative to manufactured goods, or to the export of jobs to lower-wage countries, such as China and Vietnam, but is largely a result of faster productivity growth in manufacturing relative to services. The solution is to increase productivity growth in the latter to absorb the labor released from the former. In Singapore's case, it seems unlikely that the country will be able to maintain the share of manufacturing at the targeted minimum of 28 per cent of GDP, but its positive and flexible policy response to the problem is encouraging.

[19] This so-called sandwich problem is discussed in Sandilands (1986).

One solution has been to "grow a second wing" by using government agencies to encourage Singaporean firms to invest in developing countries in the region. The idea is to provide an extra source of income from abroad. Prominent initiatives include town planning and development in Suchou in China, an information technology park in Bangalore, and the establishment of hotels and port facilities in Vietnam. Also there has been some success from the establishment of an industrial park on the nearby Indonesian island of Batam which forms part of a "growth triangle" linking Singapore, the state of Johor in Malaysia, and the Riau Islands in Indonesia. Cheap Indonesian land and labor are combined with Singaporean infrastructure and management services to produce labor-intensive manufactured goods, but the scale of activity is still relatively small.

Another approach has been to "grow its own MNCs." The Economic Development Board "nurtures" a number of promising local enterprises over a ten-year period according to targeted industry clusters, such as electronics, precision engineering, heavy engineering, and chemicals. Policy is also directed toward developing higher value-added manufacturing in areas such as marine biology, electronics, design, and marketing. It is too early to say whether these policies have significantly altered the structure of the economy. The deepening of Singapore as a business and financial services center is also central to its diversification strategy and is discussed below.

4. *Dependence on foreigners and foreign capital*

A third aspect of the dependence/vulnerability argument, and probably the most important one, stems from Singapore's dependence on foreigners and on foreign capital. By 1994 about 300,000 foreign workers were employed in Singapore, representing roughly 10 per cent of the total population.[20] In 1997, of the S$8.5 billion committed to new investment, 70 per cent was foreign, coming mainly from the United States, Japan, and the United Kingdom and going largely into electronics, chemicals, transport equipment, and machinery (*Economic Survey of Singapore, 1997*, Table A7.6). Figures on ownership are less readily available, but in 1989 foreign-controlled companies (accounting for 50 per cent or more of the equity) accounted for 73 per cent of all corporate assets and tended on average to be bigger than their Singaporean counterparts. The importance of foreigners in the Singapore economy has even prompted the Department of Statistics to calculate an "indigenous" concept of national income which deducts the share of resident foreigners and resident foreign companies in Singapore from GDP. In 1996 about 34 per cent of Singapore's GDP was produced by, and due to, foreign workers or the owners of foreign capital located in Singapore (*Yearbook of Statistics Singapore, 1997*, p. 59). No wonder the government has campaigned for Singaporeans to be polite to foreigners!

[20] The figures in this section are from Peebles and Wilson (1996).

The notion that dependence on foreigners represents an Achilles heel for Singapore is a recurring theme in the literature (for example, Richardson 1994, pp. 96–97). Huff (1995) in his perceptive longer-term assessment of the Singapore model of development also observed that Singapore's income per capita at the end of the 1950s was already over a third of that of the United Kingdom and higher than anywhere else in Asia, yet in 1986 Singapore was still predominantly a manufacturing base, attractive to foreigners because of its pool of reliable and adaptable unskilled labor. The problem of vulnerability and dependence thus becomes inextricably linked to the imperative to diversify the structure of the economy away from exclusive reliance on a predominantly foreign manufacturing base and to increase domestic value-added. This is also the government's view.[21]

But since Singapore, in this sense, is likely to lack the "depth and breadth of fully developed countries" for some time to come (maybe in perpetuity!), especially if you subscribe to the view (discussed below) that its policy-driven initiatives to raise total factor productivity growth may not be very successful in the short run, then even if it continues to make itself useful to the world and an attractive location for foreign capital, labor, and technology, Singapore would be disqualified from the Super League on the grounds that the foreigners might decide to go home. This is as absurd as denying Chelsea Football Club promotion to the English Premier League on the grounds that its unusually high number of foreign players might decide to leave.

B. *Failure to Compete*

There are two senses in which Singapore worries about its present capacity to compete in the Super League: firstly, in its ability to deal with pressures on costs and prices with the macroeconomic tools which it has at its disposal; and secondly whether it can improve the quality of growth sufficiently—the total factor productivity growth debate.

Singapore is very unusual in breaking the famous Tinbergen (1952) assignment rule insofar as it has, since 1981, assigned one instrument—the nominal exchange rate—to the twin targets of low and stable inflation and external competitiveness.[22] In effect, the Monetary Authority of Singapore (MAS) targets the nominal exchange

[21] "MNCs and borrowed technology have helped us rapidly leapfrog from a poor trading village to an NIE, and in time to come to a developed economy. Foreign MNCs will continue to play a dominant part in our development. But to break through to the next level of development, we have to increasingly develop our homegrown talent and our own MNCs" (Prime Minister Goh Chok Tong quoted in the *Business Times*, March 25–26, 1995, p. 1).

[22] During the floating era of the 1970s the National Wages Council was also used to keep exports competitive, thus freeing the exchange rate for inflation targeting (Huff 1995, p. 736). Since 1981 the NWC has continued to bring together the government, employers, and employees and set guidelines for wage settlements, but it has not been used as a flexible macroeconomic instrument and its recommendations are not binding in sectors where there is a labor shortage.

rate on the basis of an undisclosed basket of currencies, with a close eye on inflationary pressures, on the grounds that both conventional fiscal and monetary policy tools are relatively ineffective for demand management purposes in Singapore, whilst external monetary policy (the exchange rate) is seen to be very effective:

> We have only one monetary policy, which is the exchange rate. Because we have completely open financial markets without foreign-exchange controls or capital controls, we don't even control interest rates. Our only control is managing the exchange rate and that is basically to prevent the Singapore dollar from rising too fast. (Chairman of the MAS Richard Hu Tsu Tau in *Euromoney*, February 1995, p. 85)

1. *Fiscal policy*

It is well known that fiscal policy is relatively ineffective as a stabilization tool in open economies with relatively flexible exchange rates and high short-term capital mobility, but other factors come into play in Singapore. In particular, the wealth effect of tax policy is significantly reduced by the high compulsory contributions by employers and employees to the Central Provident Fund (CPF), the forced savings mechanism in Singapore. In 1997 the combined contribution rate was 40 per cent. Contributions peaked in July 1985 at 50 per cent. CPF contributions are not strictly taxes, since they are returned to employees in the future, but they operate like taxes in the short run. The capacity to "crowd out" domestic investment through fiscal-induced changes in interest rates is also limited since interest rates are set by the world market; and the very high marginal propensity to import substantially reduces the multiplier effects on domestic income of any fiscal expansion or contraction. Singapore, like the other East Asian tigers, has tended to use fiscal policy more as a longer-term device to mobilize resources for exports, such as tax breaks to attract foreign MNCs, or for case-by-case social programs, such as encouraging families to have more children. Nevertheless sometimes tax cuts do indirectly stimulate investment and output by increasing business optimism as did the cut in the corporate tax rate and in personal income taxes in the 1993 budget.

2. *Monetary policy*

The impotence of monetary policy in Singapore follows largely from the prominent position of foreign financial institutions, so a large proportion of changes in the domestic quantity of money are attributable to flows of external sector net foreign assets. As a consequence, controlling the "domestic" money supply is limited to narrow money aggregates such as M1, but this has little impact on ultimate targets such as inflation. M2 and M3, on the other hand, are neither stable nor controllable since they are dominated by international money markets. Interest rates in Singapore cannot be used as effective instruments either since they are tied to international rates; and even if the MAS decided to use monetary policy for domestic goals, the effectiveness of open market operations is severely limited by the small domestic secondary market for government securities.

3. *Exchange rate management*

External monetary policy, on the other hand, has proved itself to be a very effective means of ensuring low and stable inflation in Singapore because of the strong link between import prices and domestic inflation. According to Low (1994) a 1 per cent increase in the import price index leads to a proportionate increase in wholesale prices and an approximately 0.7 per cent increase in the consumer price index within two years. The link between the money supply and the aggregate price level is therefore much less important than the link through import prices. The MAS thus targets the nominal effective exchange rate to achieve low and stable inflation by allowing an appreciation of the currency, if necessary, to neutralize imported or domestic inflationary pressures. The MAS hopes that this will also keep exporters competitive, not least by keeping the cost of imported inputs low, even if at the same time an appreciating currency raises the foreign currency price of exports. If, on the other hand, inflationary pressures are not expected to be significant, the authorities may intervene to soften the appreciation to help export competitiveness.

Despite the rationale behind MAS policy, businessmen and economists increasingly expressed concern in the 1990s about the strength of the Singapore dollar and its potentially negative impact on exports, especially in competition with the other tigers (Taiwan, Hong Kong, Korea) and newly industrializing neighbors such as Malaysia and Thailand in products such as electronics.[23] The MAS, on the other hand, has been adamant that the real effective exchange rate has been relatively stable compared to the nominal effective rate and that there is no real evidence of a net negative impact on exports.

4. *Stabilization policy*

For the time being the Asian crisis has taken the heat out of the debate as the Singapore dollar softened and imported inflation has been low. Certainly Singapore's reliance on the exchange rate weapon to achieve multiple goals underlines the relatively underdeveloped character of its macroeconomic system, but stabilization policy has proved to be remarkably successful over the last two decades (see Table II). The country's strong regulatory system has helped minimize the financial fallout of the banking crisis, as did preemptive action to cool the property market in 1996. The Singapore authorities also avoided the mistake of trying to keep too tight a peg against the U.S. dollar in the face of large capital inflows into the region in the 1990s. The tools for macro-stabilization may be limited in Singapore but they have been used skillfully and backed up by less orthodox measures including the use of

[23] Yip (1994), for example, has argued that the Singapore dollar was fundamentally overvalued relative to purchasing power parity between 1981 and 1985, and again from 1990 onwards.

public construction projects as a countercyclical measure when external demand slackens, cutting back on imported labor as an automatic stabilizer when domestic unemployment rises,[24] and occasionally (as in 1998) reducing the variable component built-in to public sector remuneration and cutting employer CPF contributions to lower business costs.

C. *Growth on Steroids? The Total Factor Productivity Debate*

1. *Input-driven growth*

Paul Krugman set the cat among the methodological pigeons in his article for *Foreign Affairs* in 1994, "The Myth of Asia's Miracle" (Krugman 1994). Krugman set out to debunk the myth of Asia's miracle growth performance, including that of Singapore, over the preceding three decades, describing it as essentially input-driven and drawing an analogy with the rapid growth achieved by the Soviet Union and its Eastern European satellites in the 1950s. In short, their growth was input-driven, involved a heavy sacrifice in terms of current consumption, their efficiency levels were well below the United States and their growth will eventually encounter diminishing returns.

2. *Total factor productivity growth*

If Krugman's pessimistic appraisal of the quality of Asian growth experience is correct, and Singapore was singled out by Krugman for rather special debunking, then it would cast doubt on the capacity of Singapore to compete in a Super League where quality growth is paramount. Much depends on the interpretation of the evidence on the sources of growth and, in particular, on the contribution of total factor productivity growth (TFPG).[25] Krugman himself relied heavily on empirical work on Singapore by [Lee] Tsao Yuan (1985, 1986) and Alwyn Young (1992), as well as on more general studies such as Kim and Lau (1994). [Lee] Tsao Yuan (1985) found virtually no productivity growth for the average of twenty-eight manufacturing industries in Singapore between 1970 and 1979, and it was negative for seventeen of them. In a subsequent study ([Lee] Tsao Yuan 1986) she concluded that all of Singapore's output growth over the period 1966 to 1980 could be explained in

[24] In the 1985 recession there was a net reduction of 96,000 jobs, but over three-fifths were foreign (Huff 1995, p. 753).

[25] The essential purpose of growth accounting is to try to estimate the relative importance of three key economic factors thought to contribute to growth over time: growth in capital input, growth in labor input (or human capital), and growth in TFP (TFPG). If we assume profit maximization, constant returns to scale, and perfect competition in both goods and factor markets, output growth can be attributed to the sum of TFPG plus the growth rate of the capital input weighted by its share in output plus labor input growth weighted by its share of income. Estimates of output growth and growth in capital and labor input can be obtained from statistical sources leaving the estimate for TFPG as a residual. Some studies further decompose the inputs into different types of capital, perhaps add land as an input or use different types of labor input. For a recent discussion of the methodology of growth accounting, see Oulton (1997).

TABLE V

ACCOUNTING FOR GROWTH IN TWO GOLDEN AGES

(% per annum)

	Output	Contribution from: Capital	Contribution from: Labor	Total Factor Productivity
1950–73:				
France	5.0	1.6	0.3	3.1
Germany	6.0	2.2	0.5	3.3
Italy	5.0	1.6	0.2	3.2
Japan	9.2	3.1	2.5	3.6
United Kingdom	3.0	1.6	0.2	1.2
1966–90:				
Hong Kong	7.3	3.0	2.0	2.3
Korea	10.3	4.1	4.5	1.7
Singapore	8.7	5.6	2.9	0.2
Taiwan	9.4	3.2	3.6	2.6

Source: Adapted from Crafts (1997b, Table 2).

terms of increases in the quantities of factor inputs, especially capital and labor, with a negligible contribution from TFPG. Young (1992) also painted an unflattering picture of Singapore's TFPG compared to Hong Kong. Between 1970 and 1990, despite a similar average growth rate, the contribution of total factor productivity to growth in Singapore was minus 8 per cent, with a substantial contribution coming from capital accumulation, compared to 30–50 per cent on average for Hong Kong over the same period.

Singapore also fares relatively badly in other comparative studies of TFPG, such as Kim and Lau (1994). To illustrate this, Table V reproduces some growth accounting estimates from Crafts (1997b) for the tigers between 1966 and 1990 and contrasts them with Maddison's estimates for some western European countries during their "golden era" 1950–73. The growth figure in the final column represents the sum of the contributions from growth in capital and labor inputs and the residual TFP. The Asian "miracle" does not look quite so spectacular here, but more important in the present context, Singapore has substantially lower TFPG than the other tigers. Given the well-known methodological difficulties which surround the measurement of TFPG,[26] why was there so much fuss about it in Singapore? In December 1995 the prime minister even took the opportunity at a conference in Singapore on growth and development in ASEAN to give a public rebuttal of Krugman's views.[27]

[26] For a general discussion see Oulton (1997) and Sarel (1996). For Singapore specifically, see Peebles and Wilson (1996, chap. 7).

[27] The conference proceedings are published in Koh and Wilson (1995).

The official Singapore view seems to be that the numbers may be correct for the past (after all the work was done by respected Singapore economists such as [Lee] Tsao Yuan, or in the case of Alwyn Young, with the help of some unpublished official data) but are not a good guide to the future, with the implication that Singapore is not yet a developed country. They are encouraged in this respect by empirical studies which suggest that TFPG may have increased in recent years,[28] and are optimistic that TFPG can be increased through policy and will increase of its own accord as past investment in education and infrastructure bear fruit. Just in case this is not enough, Singapore is unique in having a target of 2 per cent TFPG per annum and government agencies dedicated explicitly to its achievement. Complementary measures include the reorganization of the core curriculum in schools to encourage more creativity, an expansion of computer-based learning, and developing research centers of excellence.

This is not entirely inconsistent with Young's (1992, 1995) view that Singapore's industrialization policies have, in the past, tended to push production from one sector to another (textiles to electronics and oil refining to clothing and electronics and banking services) too fast for there to be enough time for higher productivity rates to be achieved by "learning by doing." Since Singapore is already at the top of the learning curve, all it need do now is sit back and wait for the productivity gains to materialize. But Huff (1995, p. 742) offers a less optimistic view that in higher value-added activities the gains from the learning curve may be quickly exhausted. Singaporeans, he argues, have been employed as technicians and supervisors, but for electronics the bulk of the technological progress and learning gains have been attributable to the donor countries where R&D and product design have been concentrated. Previously successful policies will not be so effective in achieving industrial restructuring toward higher value-added industries and increased productivity. The dependence on foreigners is once again apparent and some observers of Singapore are skeptical that creativity of the type needed to raise TFPG can be introduced quickly within a social and political structure which does not place much emphasis on individuality. Eschweiler (1997) expresses similar sentiments in connection with business and financial services where he argues rigorous academic training is not enough to generate the innovation required to compete internationally.

3. *Asian values?*

If the Singapore authorities indeed believe in what Alwyn Young has called "the

[28] Rao and Lee (1995) confirmed the low estimates found in earlier studies for sub-periods 1966–73 and 1976–84, but found a significant increase in the contribution of TFPG to 30 per cent between 1987 and 1994. Toh and Low (1996) found a negligible contribution for TFPG over the whole period 1971–92 but a 1.87 percentage point contribution to the observed 7 per cent growth after 1981.

tyranny of numbers" implicit in the growth accounting approach, even if they are not immutable but can be changed through policy, why then was the reaction to Krugman so hostile? The answer is probably that the analogy with the Soviet Union over the sacrifice of current consumption struck a raw nerve in the Republic, since it raised the issue of the opportunity cost of Singapore's development strategy, compared to, say, Hong Kong, and because Krugman cast doubt on the belief that there is a distinctly Asian style of development. This supposed "Asian" model is based upon a mixture of government planning and reliance on the free market and underpinned by a set of "Asian" values, including Confucianist values of order, the family, respect for elders, and consensus. This contrasts with the "Western" stress on individual rights and the clash of ideas and U.S. style laissez-faire. Krugman does not see any evidence for nonquantifiable aspects of Asian efficiency independent of TFPG figures, just as gut feelings were wrong about the Soviet Union in the past. The Asian NIEs may continue to grow faster than the West for the next decade and beyond but they are nowhere near converging on United States efficiency and will inevitably run into diminishing returns to input-driven growth. The irony is that the Asian country probably most committed to the Confucianist model, Singapore, is also one of the most westernized.[29]

4. *High rates of saving and investment*

On the sacrifice issue Krugman is brutal.[30] There is no doubt that Singapore's savings and investment rates have been very high by international standards. In 1997 Singapore had the highest foreign exchange reserves per head in the world at U.S.$23,767 but the lowest ratio of consumption and government spending to GDP at 48 per cent (World Bank 1999, Table 13). This is what Young (1992) was getting at when he compared Singapore to Hong Kong since both have grown at about the same rate since the mid-1960s, but this was accompanied by a much higher rate of investment (lower value of consumption) in Singapore than in Hong Kong. Moreover, according to his calculations, the before-subsidy rate of return on capital in Singapore of 10.3 per cent between 1980 and 1989 was one of the lowest in the world compared to an average real prime lending rate of 5 per cent. It is also difficult to believe that channeling so much savings through government agencies such as the MAS and Government Investment Corporation (GIC) can be an efficient way

29 For the importance or otherwise of "Asian values" in the Asian economic "miracle" and recent Asian crisis, see the *Economist*, July 25, 1998, pp. 23–25.

30 "Between 1966 and 1990, the Singaporean economy grew a remarkable 8.5 percent per annum, three times as fast as the United States; per capita income grew at a 6.6 per cent rate, roughly doubling every decade. This achievement seems to be a kind of economic miracle. But the miracle turns out to have been based on perspiration rather than inspiration: Singapore grew through a mobilization of resources that would have done Stalin proud"; "If there is a secret to Asian growth, it is simply deferred gratification, the willingness to sacrifice current satisfaction for future gain" (Krugman 1994, pp. 70 and 78).

to generate a return on savings. Investment could have been financed domestically (by the late 1980s gross national savings exceeded gross domestic capital formation), but well before this had happened the government had been investing public savings abroad in equities, bonds, and real estate without apparent transparency or public accountability. Does this constitute over-saving and over-investment?

One way to justify such resource mobilization would be to see it as part of a successful noninflationary development strategy geared toward specific normative goals, including the spread of home ownership and sufficient reserves to ensure external security.[31] In effect, forced savings through the CPF mechanism were used to finance development infrastructure and public goods (port, airport, telecommunications, roads) whilst at the same time some of these savings were converted into a portfolio of foreign assets at the MAS and GIC to generate a diversified source of income from abroad. Singapore was thus able to finance development without recourse to deficit financing, foreign commercial debt, or foreign aid, whilst simultaneously achieving export-led growth based upon an inflow of FDI. As Huff (1995, p. 754) emphasizes, foreign business, in particular, benefited from the implicit subsidization from ready-made factory sites, technical education and training, and education in English, and because government injections were strongly complementary to the private sector there was a degree of "crowding-in" of private investment. The negative counterpart to this, however, was that the private sector investment crowded in was largely foreign and reinforced Singapore's longer-run dependence on foreigners.

It is also difficult to see why this centralization of control over resources is still so necessary as the magnitude of the surplus savings required for basic development falls and the reserves reach a high plateau. Although there has been a significant widening of the uses to which CPF funds can be used and measures taken to encourage government bodies to use professional fund management services, the primary aims are still investment not consumption, and maximization of the reserves.[32] Certainly one would expect Singapore to hold higher than average reserves given its import dependence and need for a shock absorber against an unexpected outflow of capital, and to implement its policy of managed floating. A case could also be made for higher reserves to instill confidence in Singapore as a fledgling international monetary center, and to deter or fight speculative attacks as the Singapore dollar gradually becomes more internationalized. None of these arguments, however, justifies maximizing the reserves. A more important motive may be the government's view that the reserves must grow in line with increased popu-

[31] The relationships between savings, housing, and Singapore's development strategy are discussed in Sandilands (1992).

[32] In February 1995 Finance Minister Richard Hu reiterated the government's continued policy of "encouraging people not to spend too much on consumption" and on "putting aside every dollar we can lay our hands on" (*Euromoney*, February 1995, p. 87).

lation and living standards to provide a nest egg to cover future liabilities to CPF holders within the context of an ageing population. In other words, it is an argument about the desired magnitude of savings and investment and who controls the resources rather than a standard argument about the demand for reserves. The reserves issue has always been heavily politicized in Singapore and was one of the reasons for the introduction of an elected president in 1989, ostensibly to prevent an incoming government squandering the nation's savings.[33]

5. *Development style*

But does poor performance on TFPG disqualify Singapore from the Super League? If the growth accounting numbers are correct and Singapore does have a "structural" problem in moving from input-driven growth to quality growth, then there is a case for saying that the leap to the Super League might prove to be a difficult one, especially if the causes are related to the country's inability to generate an indigenous response to replace its dependence on foreign resources, such as industrial and service sector entrepreneurs and R&D. There is, however, considerable room for agnosticism about the TFPG estimates for Singapore and for optimism about its capacity to continue the catch-up over the longer run, perhaps at a slower pace than in the past, and to make the necessary adjustments to ensure its survival in an international environment where "thinking smart" becomes more important than increasing the quantity of capital and labor input—in which case delaying its reclassification seems unnecessary and the dispute with Krugman more to do with the style of development and control over resources. The comparison with the Eastern bloc was always a little unkind to the tigers who have, with the exception of Singapore so far, generated some productivity growth (Table V), even if less than developed countries in the past, and critically, have been capable of delivering a range of quite sophisticated consumer goods and services.[34]

V. CONCLUSION

On any reasonable application of conventional development criteria, Singapore is a developed country. It undoubtedly exhibits some special characteristics which make it difficult to classify the country in the development spectrum, such as a lack of natural resources, a heavy reliance on foreigners for the creation of its domestic product and the economic and socio-political features of a small densely-populated island city-state. But none of these considerations justifies a transitory categorization of "more advanced developing country." Income per capita is high by current developed country standards, the structure of the economy is orientated toward

[33] On this issue, see Low and Toh (1989).

[34] This more optimistic view of the Asian crisis and the prospects for continuing "catch-up" has recently been articulated by Radelet and Sachs (1997).

high-income services and the production of sophisticated manufactured goods, and the level of welfare of the indigenous population is higher than in many fully developed countries, especially if disaggregated socioeconomic indicators are used rather than aggregate indexes such as the Human Development Index. Singapore performs badly in international rankings only on noneconomic measures of media freedom and civil and political rights when judged from a western perspective.

The reluctance on the part of the Singapore government to accept reclassification as a developed country by the OECD and IMF is puzzling but explicable when seen in the context of Singapore's development strategy, which has been strongly dirigiste in many ways. In this sense the perception by its leaders that it is not yet a "gracious society" is part and parcel of a longer-term campaigning psychology of "striving to be the best." Such rallying calls are viewed as essential to create a society free of past racial tensions and to solidify a sense of national identity. To some observers, especially those whose experience of Singapore extends beyond the guided tour for transit passengers, this may be out of proportion to the problem, especially compared with neighboring countries such as Malaysia, Indonesia, and the Philippines where geographical distances and ethnic diversities are more clearly apparent, but such goals remain fundamental to the PAP and are rationalized in terms of material prosperity and social and political stability. Moreover, it is not at all clear when the circumstances will be "right" for Singapore to apply for reclassification. According to the view given to the media by the trade and industry minister after the OECD reclassification in 1995 and also in response to the IMF's reclassification of Singapore as an industrial country in 1997, the timescale the minister had in mind before developed country status appears to be five to ten years.[35]

It is also hard to sustain the view that Singapore "lacks the depth and breadth of fully developed economies" sufficient to disqualify it from the Super League. It is true that Singapore's dependence on trade and factor flows makes it vulnerable to external shocks, and its free-trading philosophy obliges it to respond to competitive pressures, including those associated with the process of deindustrialization, in a positive rather than a negative (protectionist) fashion. But apart from the short-lived 1985/86 recession and the widely experienced contagion effects of the 1997/98 Asian economic crisis, its record on growth and macroeconomic stability has been outstanding. The impotence of traditional macroeconomic policy tools has not prevented Singapore from implementing a successful exchange rate policy and improvising where necessary with unconventional tools of domestic demand management through public building programs, the releasing of foreign workers, or flexible wage arrangements. The Singapore economy does not operate in a vacuum. There are automatic stabilizers to help cushion swings in external demand and a triple "A" rating in international financial markets. Maximizing the reserves through

[35] See the *Business Times*, January 17, 1996, p. 1; and the Economist Intelligence Unit (1997, p. 15).

high domestic savings rates to cope with a potential “doomsday scenario” is far less convincing for Singapore than for countries such as Taiwan (or pre-unification Hong Kong) where the political future has been less certain. Apart from occasional political spats with Malaysia over water supplies, immigration procedures, and insensitive comments by prominent people on both sides of the causeway, there is little threat from its neighbors.

The view that Singapore is not yet ready to compete in the Super League is also unconvincing. It may be a harder league to play in but Singapore’s progression up the value-added table so far would give grounds for optimism. The more pertinent issue is the extent to which this success will continue to depend on foreign players. Singapore’s post-independence development strategy was never hampered by any pervasive ideological aversion to foreign labor, capital, and technology or a “dependency” psychology popular in Latin America in the 1960s and 1970s. Indeed, the fear in Singapore is just the opposite, that the foreigners will decide to leave. But even if one takes the total factor productivity figures with a dose of salt, there is genuine concern about the speed with which Singapore can develop its own indigenous talent and innovation sufficient to compete successfully with advanced developed countries within the constraints of the existing political and educational system. The reaction to Krugman in Singapore had far less to do with the problems of moving beyond input-driven growth, since these problems had already been recognized by Singapore’s policymakers and priority given to their solution, than with the analogy between Singapore and the heavy “sacrifice” in terms of consumption and centralized control over resources in the former Soviet Union, and the denial that there is a distinctly Asian style of development to rival the laissez-faire individual-centered western model.

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