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**The Role of the State in an Increasingly Borderless
World**

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By

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Abstract

By focusing on the interaction between mobile factors and less mobile factors in the process of globalisation, this paper argues that the role of the state becomes more important as the pace of globalisation accelerates, contrary to the popular perception that it should be diminished. This is mainly because, as mobile factors obtain more freedom to choose locations across national borders, the quality of less mobile factors becomes more important as 'complementary assets' in attracting mobile factors to a national economy and the state is the least mobile factor ultimately responsible for managing the national system.

This paper also argues that the very success of Singapore's complementing strategy in the era of globalisation has necessitated the state to move to a two-pronged strategy, in which it needs to attempt seriously to acquire higher-end capabilities that are securely based on its territory, while trying to exploit ever-expanding complementary business areas as it has done previously. This is because, on the one hand, there is a limit to acquiring these capabilities through a complementing strategy, and on the other hand, MNCs' inward investment into this advanced country increasingly seeks higher-tier suppliers as complementary assets.

1. Introduction

In general, globalisation is a process whereby the market gains more power over the state by weakening the state's control over cross-border flows of products and services. A popular perception is that countries should allow a greater role to market forces and reduce the role of the state, to conform to this power shift. However, this paper argues on the contrary that the role of the state becomes more important in determining national competitiveness with the progress of globalisation.

This paper starts by drawing a distinction between mobile factors and less mobile factors in the process of globalisation and discusses changes brought about by the increased mobility in the world economy (section 2). It pays attention to the fact that mobile factors do not work by themselves, but interact closely with less mobile factors in a given territory. It then emphasises the heightened role of the state in determining competitiveness of nations as an agent least mobile, but ultimately responsible for providing mobile actors with 'complementary assets' (section 3). For Singapore, which has pioneered growth through utilising this interaction mechanism between mobile and less mobile factors, the challenges from the recent acceleration of globalisation may have been less daunting than other countries. However, as the economy has reached the status of an advanced country, globalisation poses a new set of challenges that its state is not really well-equipped to deal with (section 4). In conclusion, a summary of previous discussions and general policy implications are provided.

2. Challenges of Globalisation

The key word in globalisation is 'mobility'. I would define globalisation as "a trend increase in mobility of products, services, and factors of production across national borders". Mobility in the world economy has been increasing continually since the Industrial Revolution, but, until recently, it was confined mostly to that of products, which can be more rightly referred to as 'internationalisation'. "The basic division of labour within the productive process was primarily organised within national economies" for more than two centuries after the Industrial Revolution, as Hobsbawm (1979: 313) points out.

Globalisation has recently become a central subject in academic and policy-making discourse, mainly because the increase in mobility has been extended significantly to factors of production and services from the late 20th century. The central carriers of factors of production across national borders, i.e., multinational corporations (MNCs), took off in the 1960s and have become increasingly dominant forces in the world economy.¹ They have rapidly expanded the global production networks and their cross-border activities are now extended even to research and development (R&D). It was also from the late 1970s that financial markets began integrating globally, witnessing the

¹ MNCs have been of course present from the latter half of the 19th century. The stock of FDI in the world economy was also very high in the early 20th century, reaching "over 9 per cent of world output in 1913, a figure which had not been surpassed in the early 1990s" (Bairoch & Kozul-Wright 1996: 10). However, a little over half of FDI went directly to the primary sector during this period. Moreover, MNCs were not a major driving force in the world economy and the growth of FDI in the manufacturing sector was mainly a substitute for trade in response to rising tariff barrier (Kenwood & Lougheed 1994). This was quite different from the trend in the late 20th century when trade liberalisation progressed hand in hand with the rapid spread of global production networks by MNCs.

growing role of global financial institutions as the main carriers of services across borders.

The ever-increasing competition among corporations and financial institutions in advanced countries was a basic underlying force in the spread of globalisation.² However, the decisive acceleration of globalisation in the 1980s and onwards was supported by two concurrent developments in technologies and regulations, which facilitated easier movement of products, services, and factors of production across borders.

First, there was a blossoming of information and communication technologies (ICTs). As a major breakthrough in 'space-shrinking' technologies, the ICT Revolution has enabled firms to co-ordinate their operations on the global scale more easily thanks to drastic falls of costs involved in information creation, processing, storage and delivery.

Secondly, major regulatory changes in the world economy took place. The U.S. and the U.K. initiated liberalisation of their domestic economies and pushed for liberalisation of international trade and investment from the 1980s. The wave of liberalisation advanced to other developed countries and to developing countries. In this process, the World Trade Organization (WTO) was formed as a new regulatory framework to ensure freer flow of products and investments.³

² For instance, global production in the semiconductor industry started by cut-throat competition among Silicon Valley firms to reduce production costs that eventually resulted in shifting their assembly processes, which could be performed out by unskilled labours, to developing countries in the 1960s (Henderson 1989; Grunwald & Flamm 1985).

³ For explanations of the progress of globalisation, refer to Dicken (1998); Dunning (1997); Julius (1990); Ernst (2002); Crafts (2000).

The increased mobility has brought about major changes in the world economy as follows. First, it has increased the volume of financial, technical, managerial and other resources available for individual countries, providing them with greater potential for economic growth. For countries that are mainly receivers of foreign direct investment (FDI) or portfolio investment, the greater availability of foreign capital and technologies has opened a possibility to accelerate the pace of economic growth by reducing time and effort taken in mobilising their own resources. For countries that already have their own advanced corporations and financial institutions, the acceleration of globalisation is a big opportunity to expand their businesses. In a nutshell, the higher mobility is translated into a bigger market, facilitates further division of labour in the world economy, and provides individual countries with a greater opportunity for economic growth.

Secondly, however, the increased instability is a Siamese twin of the higher growth potential. As MNCs are organising their productions on the global scale, they are more ready to change production sites if new needs arise from competition or technological progress. From the viewpoint of individual countries, this means production activities become more 'footloose'. Global financial institutions also manage their investment portfolios on the global scale and become more footloose as they tend to liquidate their investments in regions or countries as soon as they sense the slightest signs of deteriorating prospects. They then reconstruct their portfolios according to the revised assessment of financial risk across the globe. The growing incidence of

financial crises in the era of globalisation can be understood as a consequence of the increasing mobility in financial resources across national borders.⁴

Thirdly, there has been a great 'power shift' between mobile actors and less mobile actors. In the 1960s and 1970s when East Asian countries and Latin American countries began their industrial development, MNCs were commonly regarded as entities to be accepted cautiously and therefore it was a norm that they operated under heavy government regulations. But now they are regarded as 'engines (at least catalysts) of growth' by a broad spectrum of policy-makers, academics and international institutions, and it is widely accepted that deregulation is a necessary step to attract MNCs' investments for the benefit of individual countries.⁵

Of course, this power shift is not entirely one-way traffic. As competition among MNCs or financial institutions intensifies, an opportunity also emerges for recipient countries to extract gains by exploiting their competition. However, the power shift towards mobile actors has been decisive on the whole. The global players have become stronger in enforcing their logic of accumulation upon the running of the world economy while national governments have been under pressure to change their earlier practices of economic management.

⁴ According to Eichengreen & Bordo (2002: 16 & table 6), the number of financial crisis increased from 21 during 1945-71 to 44 during 1971-97 for industrial countries, and from 17 during 1945-71 to 95 during 1971-97 for emerging markets, respectively. During 1971-97, a randomly-selected country had as high as 10-12% probability of experiencing a financial crisis.

⁵ For this swing in opinion, refer to World Bank (2000); Dunning & Hamdani (1997); Lipsey (1997).

3. The Role of the State in an Increasingly Borderless Economy

One ironic thing about globalisation is that, as more and more factors become mobile, national competitiveness is more critically dependent on less mobile factors, i.e., less globalised ones. Among other factors^[MC1], the national government is arguably the most immobile one (we cannot move the Singaporean government to Japan, for instance). In this respect, the role of the state becomes more important with the further progress of globalisation, contrary to the popular perception that it should be diminished as an economy becomes globalised.⁶

Underlying this observation is the fact that the state is *the ultimate system manager of the national economy*, which is responsible for providing mobile actors with 'complementary assets'. In determining the location of production or provision of financial resources, the mobile actors consider 'location-specific factors' which will complement their own assets.⁷ If location-specific factors of a country are not adequate, mobile actors do not come to, or leave, the country. The character and quality of location-specific factors, which are by definition less mobile, determine the 'stickiness' of mobile assets.

Among the location-specific factors, there are certainly non-man-made factors like natural resources and geographic position, upon which national governments can hardly exert an influence unless they attempt to change

⁶ The following is an example of this view: "... a major feature of concentration and centralisation in late capitalism is its international scale, which makes most nation states relatively insignificant elements within the operation of a world economy dominated by a small number of companies which are larger and more wealthy than many individual states (Johnston 1982: 61).

⁷ Refer to Dunning (1988; 1997)

territorial boundaries. Earlier FDI by MNCs in the late 19th and early 20th century were in fact heavily related with the extraction of natural resources.⁸ In the current state of the world economy, however, man-made location-specific factors like policy, institutions, infrastructures and so on, are far more important in locational decisions made by mobile players.⁹ Within a given territory, the state is the principal agent responsible for providing these man-made complementary assets to attract mobile assets.

A basic assumption in the popular perception that the role of the state should be reduced in the era of globalisation is that market forces would replace or make unnecessary much of the role previously undertaken by the state as an economy is more broadly exposed to forces of globalisation. There are certainly some roles of the state that can be substituted for by the market. For instance, if domestic companies and financial institutions grow sufficiently to raise foreign money with their own credit and manage financial risks by themselves, many of the state's supports and regulations over international financial transactions become redundant.

However, there are also other important functions that only the state can undertake. For instance, policy formulation and implementation is one of the state's unique responsibilities, although the market situation may indicate or affect its direction. The state is also a basic provider of human capital required for economic development. The market cannot provide a legal system, which is

⁸ In a similar vein, imperial aggressions during this period had to do with competition among nations to secure non-man-made location-specific advantages around the globe.

⁹ Even in the case of natural resource-seeking FDIs, it requires a stable business environment and infrastructure for extraction and delivery of natural resources, which are part of man-made location-specific factors.

essential in the working of the market. Political and social conflicts are resolved mainly through the state apparatus. And these functions of the state, to which the market can never provide alternatives, are still critically important in determining the quality of location-specific factors.

What should be noted is that the role required for the state in the era of globalisation is more than a Smithian minimal one. When a country attempts to attract FDIs, it is often the case that its state needs to tempt them with an array of 'incentives'. Especially when host countries compete to attract FDIs, the role of incentives becomes more important. The provision of incentives inevitably contains elements of industrial policy because the state needs to decide what kind of incentives will be given, who will receive them, which sector will be given priority and so on. This is an unavoidable consequence when the state acts as a pro-active creator of complementary assets for inward FDIs, not simply a passive recipient of FDIs dictated by static 'factor endowments'.

Along with the role of promoting inward FDIs, the state needs to perform the role as a regulator of cross-border flows of products and services. In the previous section, I have stressed the connectedness of the positive and negative aspects of globalisation: The increased mobility has opened a great opportunity for a country to grow faster by utilising a greater availability of resources and markets whilst it has increased instability in the world economy. On the whole, the economic performance of the world economy during the period of accelerated globalisation is far from encouraging. As table 1 shows, per capita income growth rate in the world economy actually decelerated as the

pace of globalisation accelerated and this trend is more marked in developing countries than in developed countries.¹⁰

There is no doubt that the role of the state should be changed with the acceleration of globalisation since previous policy tools like tariff protection, subsidies for local industries and so on become less available and effective. However, this does not lead automatically to a wholesale reduction in the role of the state. On the contrary, its role as the ultimate provider of location-specific advantages becomes more important. Its role to minimise possible downside effects from the increasing instability of the world economy is also equally important. The role of the state requires revitalisation, rather than diminution, with the progress of globalisation.

4. The Role of the State in Singapore

Singapore has developed through, what I have named, a 'complementing strategy'.¹¹ Unlike other East Asian Newly Industrialising Economies (NIEs) like Korea and Taiwan, which put heavy regulations on FDI and nurtured local industries at the beginning of their industrialisation,¹² Singapore aggressively attracted MNCs' investments by providing them with complementary assets like

¹⁰ The per capita income growth rate of the world has dropped from 2.7% during 1961-80 to 1.2% during 1980-99. For the same periods of comparison, the figure for developing countries has fallen from 3.2% to 1.5% whilst that for developed countries has decreased from 3.6% to 2.0% (World Bank 2001).

¹¹ Refer to Shin (2002)

¹² Taiwan, however, shifted its policy from the 1970s to attracting MNCs' investment and forming joint ventures between local companies (or research institutes) and MNCs in high-tech industries whereas Korea continued promoting local entrepreneurs in high-tech industries and maintained its 'substituting strategy' for economic development (Shin 2002).

infrastructure, human capital, fiscal incentives and so on. From the beginning, its strategic focus was to exploit a complementary relationship with advanced countries for its own benefit, rather than to establish local industries in competition with them.¹³

This strategy originated largely from the country's special economic and political conditions. It had developed as an entrepôt open to foreign trade, investment and labour, and, as a former British colony, it had a large English speaking population, which formed an environment conducive for MNCs to operate in. On the other hand, its relation with its neighbours was not easy from the start of its nationhood and it could expect a greater possibility of success by connecting its economy directly to the 'First World', rather than relying on these unstable and often hostile neighbours for markets and resources.

In the 1960s when Singapore started its industrialisation, this kind of complementing strategy was an exception among developing countries. However, thanks to the rapid progress in globalisation thereafter, the strategy has been increasingly adopted as a norm for economic growth for developing countries. Even Britain, its former colonial ruler, adopted this strategy of attracting FDIs when it attempted to revitalise its economy in the 1980s. In this respect, the complementing strategy was a Singaporean innovation that has later spread broadly to other parts of the world.

Although Singapore's complementing strategy was geared to utilising market forces in the world economy on a greater scale, it was not in the least letting market forces dictate the running of the economy. The role of the state

¹³ Lee (2000); Mirza (1988); Huff (1994); Low (1998); Wong (2001)

was crucial as the prime agent to formulate and implement this development strategy. It directed its efforts at two major areas. First, it provided foreign investors with competitive and continuously-upgraded complementary assets, as the least mobile actor in its territory. Its role was elevated to that of an active promoter. Officials of the Economic Development Board (EDB) were no less than missionaries of 'Singapore Inc.' for attracting investments from all over the world.¹⁴ Secondly, the state itself assumed the role of investors through government-linked companies (GLCs), filling areas where MNCs were not interested but which the Singaporean government regarded as strategic to the country's development.¹⁵

As compared with other developing countries, the acceleration of globalisation has posed relatively less difficult challenges to the Singaporean state during its development period. Globalisation is basically a process of diminishing distinctions between domestic and foreign markets, and those between domestic and foreign capital. For countries that had established a system to promote local industries through mobilisation of local resources with tight controls over cross-border flows of products and services, globalisation was a serious challenge to overhaul their systems.¹⁶ However, Singapore's

¹⁴ Refer to Chan (2002); Schein (1996).

¹⁵ Reflecting this, the public share of gross fixed capital formation in Singapore was 35.6% in the 1960s, 26.7% in the 1970s, and 30.3% in the 1980s (Singapore Department of Statistics, *Singapore National Accounts*, various years).

¹⁶ From these different challenges of globalisation to individual countries, we may find one reason why Korea fell into a financial crisis in 1997 while Singapore and Taiwan weathered it relatively unscathed. Korea had relatively more formidable challenges to adjust its system following the acceleration of globalisation and the financial crisis can be understood as a consequence of failing in surmounting those challenges (refer to Shin & Chang 2003).

economic management system had been already established on the basis of little distinction between domestic and foreign capital (or markets), and therefore the state faced relatively less problems in system transition following the acceleration of globalisation.

Related with this, Singapore also faced relatively less problems from the increasing instability of the international financial market. Since it relied on MNCs for capital and technologies, it had little need to draw foreign debt.¹⁷ Similarly, the corporate debt level was also relatively low because local companies, being normally engaged in complementary areas of MNCs as subordinate partners, were less required to raise a large amount of investment funds.¹⁸ The lower levels of foreign debt and corporate debt, combined with its strong position in foreign reserve, were factors that helped Singapore to be less vulnerable to external financial shocks, although its financial market was wide open to international financial flows.

However, this does not imply that what lies ahead of the Singaporean state is an easy task, or it will be all right if it simply sticks to the previous way of managing the economy. It is still a formidable task to anticipate the next growth area and attract investments there while providing and upgrading necessary complementary assets. As the pace of globalisation accelerates, the state

¹⁷ For instance, the ratio of Singapore's external debt to its Gross Domestic Product (GDP) was 22% in 1982 much lower than Korea's 52%. The figure was higher than that of Taiwan (12.8%), but Singapore's foreign debt was mostly burdened by MNCs with their own credit and the Singaporean government did not regard it as its own debt (Shin 2002).

¹⁸ The corporate debt-equity ratio of Singaporean firms, including that of MNCs, was therefore around 123% during the 1980-91, much lower than that of Korea (383%) during the same period (Shin 2002).

needs to accelerate its efforts at upgrading complementary assets in the economy.

In particular, as the income level of the country reaches that of an advanced country, the state seems to face a challenge that is qualitatively different from previous ones. One weakness of the complementing strategy lies in the relative underdevelopment of domestic technological capability. This is because countries adopting complementing strategies do not have strong incentives to invest in R&D as MNCs are sources of major technologies. Reflecting this, Singapore's expenditure on R&D investment had been very low even until the early 1990s when it reached the advanced country status.¹⁹ And the weakness in the private sector R&D capability is more pronounced in comparison with other East Asian countries, as figure 1 shows.

While Singapore remains a catching-up country, it might have been sufficient to try to find business areas that MNCs were willing to part with and attract them by providing complementary assets. Fortunately for Singapore, the acceleration of globalisation has continuously expanded the complementary business areas even to higher-end manufacturing and service sectors, and lengthened the life span of the complementing strategy. However, it seems to me that there is a certain limit to the attainable growth through the complementing strategy because of the difficulty in acquiring core technologies.

¹⁹ The gross expenditure on R&D (GERD) of Singapore was 0.21% in 1981 and increased only to 0.84% in 1990. During the same period, Korea's figure jumped from 0.65% to 1.95% whilst Taiwan's rose from 0.84% to 1.66%. Singapore's GERD began increasing sharply only after it reached the advanced country status and its state invested heavily in R&D in the 1990s. In 1999, Singapore's GERD nearly levelled that of Taiwan (1.84%), though still lower than that of Korea (2.46%) (Wong 2001; Hou & Gee 1993; Shin & Chang 2003, figure 2.7).

From the viewpoint of MNCs, the core R&D capability, which is related with the development of new products and processes, is the last thing that they will transfer to local subsidiaries. In fact, one principal reason why MNCs globalise their operations is that economies of scale and scope involved in their core R&D activities are ever-increasing and they have to recoup the costs in new technology development.²⁰ It does not make economic sense for MNCs to separate their core R&D activities geographically. It is still an overall trend that MNCs concentrate their higher value-added production processes, including R&D, in their home countries. Although MNCs set up regional R&D centres, technologies transferred or developed there are mostly limited to those related with adapting their products to rapidly-changing local market conditions.²¹ No matter how far globalisation progresses and no matter how hard recipient countries try to attract them, there is no complementary asset for core R&D capabilities.²²

Moreover, as competition among MNCs intensifies and 'time-to-market' becomes more important, MNCs look for investment sites where 'higher-tier' suppliers provide them with some technologies and production capabilities that

²⁰ Refer to Freeman & Hagedoorn (1995); Pavitt & Patel (1999).

²¹ Amsden *et al.* (2001: 3) point out this aspect with their case study of the hard disk drive industry as follows. "In 1995, Southeast Asia (mostly Singapore) had virtually no nationally controlled HDD companies, but it accounted for as much as 64% of final global assembly and 44% of total global employment ... Southeast Asia's wage bill, however, was only 13% of industry wages worldwide. Developed economies (Europe, Japan and the US), by contrast, controlled the ownership of the HDD industry's leading enterprises and were responsible for virtually all of its R&D. These economies accounted for less than one-third of both final assembly and total employment but captured more than three-fourths of the HDD industry's wage bill".

²² A similar argument can be made to the marketing capability, especially in relation with brand names. Singapore has depended its marketing channels predominantly on those of MNCs and has only a few internationally established brand names of its own. This is because brand name is also the last thing MNCs are going to transfer to others.

they urgently need to develop but do not have time to implement. If 'lower-tier' suppliers are in a subordinate position to MNCs and rely on them for major technologies, these higher-tier suppliers have their own technologies and work with MNCs as nearly equal partners.²³ Since Singapore's per capita income level has reached that of advanced countries and it is increasingly difficult to maintain price competitiveness of lower-tier suppliers, the creation of higher-tier suppliers or upgrading previous lower-tier suppliers to higher-tier ones becomes all the more important as a new injection of complementary assets.

These high-end capabilities, i.e., core technological capabilities possessed by MNCs and technologies owned by higher-tier suppliers, are crucially important in maintaining Singapore's advanced country status, because other advanced countries keep moving ahead by leveraging on them, while less advanced countries also continue to climb up the technology ladder. In this respect, it seems that Singapore has now arrived at a stage when these higher-end-but-less-transferable capabilities become more and more important for its future growth. And this presses Singapore to pursue a two-pronged growth strategy: It needs to attempt seriously to acquire higher-end capabilities that are securely based on its territory, while trying to exploit ever-expanding complementary business areas as it has done previously.

Here again, the state is the principal agent responsible for re-gearing the strategic focus and developing necessary capabilities and institutions. As the ultimate system manager of the national economy, the state should maintain its

²³ For conceptual distinction between 'higher-tier' and 'lower-tier' suppliers and their relative importance in the process of globalisation, see Ernst & Kim (2002).

leadership in transforming the economy for the next leap. In Singapore, the role currently required for the state is more than that of system manager because the local private sector is relatively underdeveloped as a result of the complementing strategy. It should be extended to compensate for the relative lack of capability in its private sector.

Singapore's current push towards nurturing 'technopreneurship' and building a 'regional knowledge centre (or hub)' can be understood in this context. These are no more than state-initiated efforts to develop higher-end capabilities that are rooted in the territory and interact with mobile factors. The existence of higher-tier suppliers becomes increasingly crucial in attracting MNCs' higher-end investments and it is desirable for the state to promote them with available incentives. The existence of strong research institutes and a dense network of cooperation between research institutes and companies residing in Singapore are also essential for a knowledge centre.

The current discussion on the restructuring of GLCs can be also put into a similar context. At stake is not simply whether the restructuring will make GLCs, which are already efficient in international standards, more efficient or not. The allegations of GLCs' 'encroachment' of SMEs' business areas and 'stifling' competition have also more to do with distributional questions than long-term growth questions. Both GLCs and local private companies are important constituents of less mobile actors responsible for higher-end capabilities within Singapore. This is not to deny that GLCs need to globalise or regionalise their operations in order to seize business opportunities arising from the acceleration of globalisation as well as their own growth. But this is what

they do naturally as corporations. It seems to me that a higher priority of the state policy should be given to the question of what kind of mix between GLCs and local private companies will be appropriate for Singapore to create core technological capabilities and a pool of higher-end suppliers, than that of how to help globalisation of GLCs.

Although the state may set a policy direction correctly, it is also a demanding job to implement it successfully since there are institutional backlogs and social attitudes accumulated from the previous development path. It may be easier to change formal institutions but it takes time and is often very difficult to change informal institutions. However, the state is again the agent that is mainly responsible for directing and managing this transition. The future success of the Singaporean economy also hinges on the state's capability to deal with this institutional transition.

5. Conclusions

By focusing on the interaction between mobile factors and less mobile factors in the process of globalisation, I have argued, contrary to the popular perception, the role of the state becomes more important as the pace of globalisation accelerates. This is mainly because, as mobile factors obtain more freedom to choose locations across national borders, the quality of less mobile factors becomes more important in attracting mobile factors to a national economy and the state is the least mobile factor ultimately responsible for managing the system.

I have also argued that the very success of Singapore's complementing strategy in the era of globalisation has necessitated the state to move to a two-pronged strategy, in which it should increasingly emphasise the creation and acquisition of higher-end capabilities rooted in its territory in conjunction with its traditional policy of attracting FDIs. This is because, on the one hand, there is a limit to acquiring these capabilities through a complementing strategy, and on the other hand, MNCs' inward investment into this advanced country increasingly seeks higher-tier suppliers as complementary assets.

I have painted a broad picture on the role of the state in the era of accelerated globalisation and attempted to draw policy implications for Singapore. The actual ways individual states respond to globalisation would be diverse across countries, reflecting their differences in their previous paths of development, stages of development, structure of economy and so on. There will be no 'one-size-fits-all' solution for any country. However, the fact remains that the state should not refrain from carrying out its creative role as the system manager in its territory, without succumbing to the 'market-will-do' rhetoric currently prevalent in the academic and policy-making discourse.

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Table 1. Economic Performance by Country Groups during 1961-1999

Country group	1999 GDP per capita ¹ (\$US)	Average annual growth rates (%)					
		1961 -69	1970 - 79	1980 - 89	1990 -99	1961 - 79	1980 - 99
Developing countries ²	1,301	2.9	3.4	1.6	1.5	3.2	1.5
East Asia & Pacific	1,177	2.4	5.0	5.7	5.8	3.8	5.8
South Asia	446	1.8	0.5	3.5	3.4	1.1	3.4
Europe & Central Asia	2,135	n.a.	n.a.	n.a.	-2.6	n.a.	n.a.
Middle East & North Africa	1,979	n.a.	n.a.	-1.2	1.3	n.a.	0.0
Latin America and Caribbean	3,763	2.4	3.3	-0.1	1.2	2.9	0.5
Sub-Saharan Africa	561	2.4	1.0	-0.6	-0.9	1.7	-0.7
Developed countries ³	28,892	4.4	2.9	2.4	1.6	3.6	2.0
High-income OECD	29,578	4.4	2.9	2.4	1.5	3.6	1.9
World	5,439	3.4	2.1	1.4	0.9	2.7	1.2

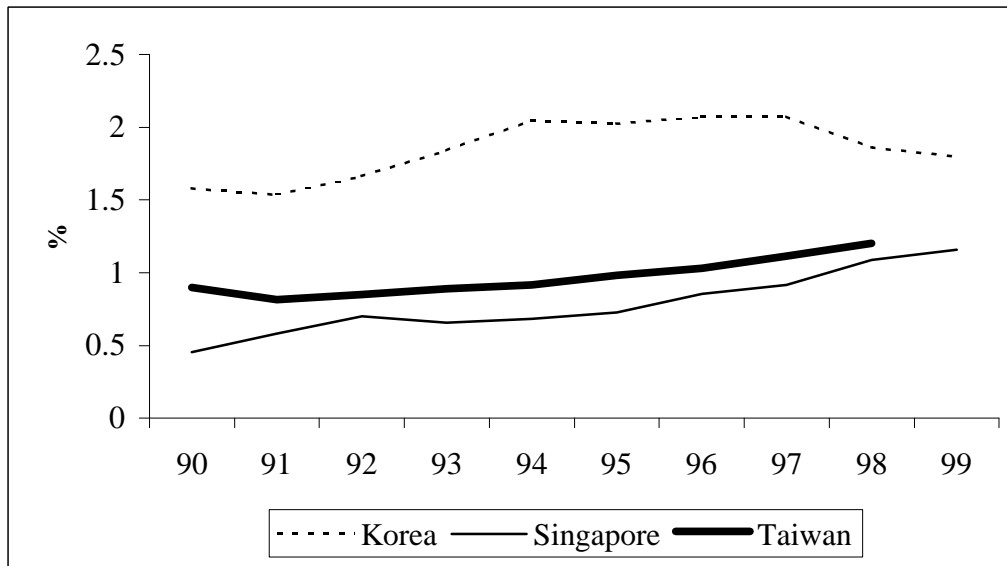
Source: Adapted from World Bank (2001)

Note: 1. Constant 1995 US\$

2. Equivalent to 'low- and middle-income economies' in the World Bank classification

3. Equivalent to 'high-income economies' in the World Bank classification

Figure 1. Trend of Private R&D Expenditure to GDP ratios in Korea, Taiwan and Singapore



Source: STEPI website, NSTB, Bureau of Statistics of Taiwan