

political economy Studies in the Surplus Approach

volume 3, number 2, 1987

Contributions on East-Asian Capitalism edited by Amiya K. Bagchi

- 115 **Amiya Kumar Bagchi**, East Asian Capitalism: An Introduction.
- 133 **Alice H. Amsden**, The Paradigm of Late Industrialization.
- 161 **Tzong-biau Lin**, International Competition:
A Challenge from the Asian Pacific Rim.
- 181 **Susumu Watanabe**, On Socio-Institutional Conditions of Japan's Modernisation.
- 201 **Linda Y. C. Lim**, The State and Private Capital in Singapore's Economic
Development.
- 223 **K. S. Jomo and H. Ling Khong**, Whither Industrialization in Malaysia?

International Competition: a Challenge from the Asian Pacific Rim

Tzong-biau Lin

I. INTRODUCTION

The excellent performance of the economies in the Far East region during the past two decades has received much attention in the last few years. The region of the Far East contains a large number of nations, which are in various stages of economic development, ranging from a highly industrialised country such as Japan in the North to relatively less developed nations in the South and Southeast Asia such as Indonesia and the Philippines. Between these two extremes lies a group of nations whose economies experienced a sustained period of high growth and were newly industrialised. This group of nations is composed of the four economies in East Asia, namely South Korea, Taiwan, Hong Kong and Singapore, and is commonly referred to as the Newly Industrialised Countries (NICs).

The outstanding performance of these small, resources-poor, market-oriented countries has aroused a great deal of research interest lately. A large body of literature has been published for each nation. But for some reasons, comprehensive studies which cover all four nations, compare their relative performances and examine their particular features in terms of economic structure, development strategies, and other aspects, are surprisingly few. In my view, comparative studies are important because the Asian NICs are quite diverse. Despite the fact that all four nations are relatively market-oriented, resources-poor, small in size, sharing some common cultural roots (Confucianism, use of chopsticks etc.), differences between them — say, South Korea and Hong Kong — could be as great as between Switzerland and Japan. For this reason, in addition to the attempt to identify the favourable factors common to all of them, it is necessary to go one step further to examine each country's special features and its development prospect. Therefore, in this paper, we shall first examine their past experience and performance and then attempt to analyse their outlook in the medium and longer terms with special emphasis on their manufacturing sectors.

II. PAST PERFORMANCE

Since the 1960s, besides Japan, the Asian NICs have emerged as major exporters of manufactured goods of light industries and thereby changed greatly the world trade pattern. Their sustained growth in their export-oriented manufacturing sectors has resulted in a significant increase in their market shares in such light industrial products as textiles, clothing, toys and plastic products, watches, consumer electric and electronic products over the last two decades. Their economic strength was fully tested during the two oil crises and the two worldwide economic recessions.¹ The average growth rate of GNP in the 1960's was 8.6% for South Korea, 9.6% for Taiwan, 9.8% for Hong Kong and 7.9% for Singapore respectively. In the 70's their respective figures were 7%, 9.2%, 9.6% and 9.8%. In terms of per capita income, there was a total of eight countries in the Pacific Asia which by 1983 reached the level of the so-called "middle income" countries as defined by the World Bank. These consist of the four NICs and four near-NIC nations, namely Malaysia, Thailand, Indonesia and the Philippines. With the exception of the Philippines, which has experienced a negative real growth since 1982, all the remaining seven countries have an impressive better-than-average performance. And among the NICs, Hong Kong and Singapore have both attained a per capita income exceeding US \$ 7000 in 1986 and thus belong to the top end of the group, while South Korea and Taiwan had only about 30% to 40% of Hong Kong-Singapore's level and formed the lower group. In terms of per capita income Hong Kong and Singapore led South Korea and Taiwan by about two decades in the development process.²

The sustained growth in the Asian NICs was primarily powered by the tremendous increase in their exports of industrial products. In the 1960s and 1970s, the annual growth rate in exports was 38.9% for South Korea, 12% for Hong Kong, 24% for Taiwan and 12% for Singapore; in 1986, the export/GDP ratio was 36.5% for South Korea, 51.6% for Taiwan, 94.7% for Hong Kong and 123.6% for Singapore (export figures include re-exports). These figures fully imply that the economies in these nations were market-oriented and export-oriented. In other words, their economies are very open, which is the result of the early adoption of export-promotion strategies.

¹ For example, Hong Kong has taken the number one place in the world in the exports of clothing, furs, toys, plastic flowers, lanterns and candles and in terms of quantity, Hong Kong has also become the No. 1 exporter of clocks, watches and radio receivers (see *Financial Times*, June 2, 1986). Similarly, exports of cars, steel from South Korea, and textiles, footwear and consumer electronics from Taiwan have also had considerable impact on the international markets.

² See also J. REIDEL, "Economic Development in East Asia: Doing What Arises Naturally", National Centre for Development Studies, The Australian National University, *Industrialization Workshop*, September 10-12, 1985, p. 6.

The successful penetration of the developed markets by the manufactured products from these countries has forced many firms in the Western countries to close down and aggravated their unemployment problems. And it has also intensified their industrial adjustment problems.

As a result, protectionist sentiment has been growing higher with every new release of trade statistics and more protectionist measures, mostly in the form of non-tariff barriers (NTB) such as voluntary export restraints (VER) and quotas etc., were adopted in the US and the European countries, which were initially introduced as temporary measures, but gradually turned into permanent ones.

Another dimension of growth is increase in imports. Being a small and open economy, each NIC has to import a large quantity of raw materials as well as capital and consumption goods; otherwise their export growth would turn unsustainable. In absolute terms, total imports have increased about 200 times for South Korea, 40 times for Taiwan, 25 times for Hong Kong, and 17 times for Singapore, since the mid 1960s. Measured by import/GDP ratio, currently it ranges from 32% for South Korea, and Taiwan to 140% for Singapore. It is thus apparent that in all these nations, a rapid export expansion was accompanied by an equally rapid growth in imports. As a matter of fact, but for a few exceptional years, Hong Kong and South Korea have to live with a chronic deficit in their visible trade. Thus from the standpoint of the OECD economies, the Asian NICs also constitute a sizable market for their industrial products.

Besides the GNP (or GDP) and trade, there are other dimensions of growth. Investment/saving, consumption, technical progress and productivity, quality of life, infrastructure and various aspects of social life are only a few of such indicators relevant to the measurement of economic growth. However, due to limitations of space, no attempt will be made here to elaborate them. But it should be noted that the benefits of economic development in the Asian NICs have trickled down fairly well to the working masses. This is particularly true in the case of Taiwan, where the Gini coefficient is as low as 0.3 as against 0.39 for South Korea, 0.41 for Hong Kong and Singapore. Real wages in these countries have enjoyed a steady increase and this together with a declining birthrate has resulted in a general improvement in the standard of living of the working class.

III. FACTORS FAVOURING SUCCESS

One distinctive feature of economic growth in the Asian NICs has been the export-oriented industrialisation. In sequence, Hong Kong was the first to industrialise, followed by Singapore, Taiwan and lastly South Korea.

With the exception of Hong Kong, which right from the beginning developed light industries with products aimed at foreign markets, all the other countries adopted at the initial stage the strategies of import substitution and thereby established their own heavy industries, going against the theories of comparative advantages. One of the reason was the nationalist and defence consideration as in the case of South Korea and Taiwan. However, the economic policy-makers soon realised the limits of the import substitution strategy and swiftly switched to export promotion strategy with and initial emphasis on the fostering of the light industries specialising in standardised consumer goods such as textiles, garments, plastic products, toys, electric and electronic products, etc. The fabrication of these products is labour-intensive and in conformity with their comparative advantages prevailing there. The subsequent success in their industrialization endeavor has been remarkable.

Industrialization is not the ultimate end by itself but is a process which each country has to go through in order to achieve a sustained growth. History shows that no country can rely on agriculture alone to attain a sustained per capita income of more than \$500 per year.³

It is important to identify and analyse those factors which were conducive to capital accumulation and economic growth in these high-performing Asian NICs, so that useful lessons can be learned from them. The conclusions arrived at may have important implications for other late-comers, especially the near-NICs. There is a rich body of literature analysing the performance of each country. Some of the researchers have dug into the cultural roots, anthropological characteristics and socio-politico explanations. The answers advanced were very diverse. However the following factors appear to me at work in all four Asian NICs.⁴

1. *Political Stability*

Despite the fact that these countries lack a free democratic government and each of them has its own political problems, there exists a relatively stable and efficient government in each country. For the past three decades a fairly stable political climate has prevailed in all four NICs. In spite of the coups, South Korea's sovereign risk is considered relatively low and its bureaucratic machinery is generally clean and efficient. The political situation in the other three NICs has been even more stable. Political stability has been conducive to domestic investments and at the same time

³ See H. KAHN, *World Economic Development*, Boulder (USA), Westview Press, 1979.

⁴ For details see T. B. LIN, *The Asian Newly Industrialized Countries at Crossroad*, presented at an International Conference held in Innsbruck in August 1985; E. K. Y. CHEN, *The Newly Industrializing Countries in Asia: Growth Experience and Prospects*, Dept. of Economics Discussion Paper No. 55, Hong Kong University.

has attracted foreign capital from the advanced countries and the troubled South East Asian region.

2. *Pursuit of the Outward-Looking, Export Promotion Development Policy*

As mentioned above, the sustained growth eras in these Asian NICs coincided with the adoption of an export promotion policy.⁵ Compared with those countries which stuck to import substitution strategies during the same period, such as South Asian countries and most of the Latin American countries, the Asian NICs experienced a much higher and steadier economic expansion. The fact that the Asian NICs were able to switch to the export promotion development strategy during the period of a worldwide trade expansion in the 1960s was an important factor favouring their success.

3. *Pragmatic Mentality - "Conthics"*

It was a common belief that the industrial revolution in Europe was precipitated by the ethics of protestantism. In East Asia, the success stories of Japan, South Korea, Taiwan, Hong Kong and Singapore after World War II have prompted scholars to search for their spiritual and cultural roots. One such root is identified as Confucianism, which is, still very pervasive in all these five countries. Confucianism stresses, among other things, the virtues of family life, obedience, frugality, education and industriousness. As the family is the basic unit in these societies, a harmonious family life lays an important foundation for a stable society. The stress on education was traditionally associated with the prospect of becoming a member of officialdom, which used to enjoy the highest status among all the professions. But today this virtue has unintentionally resulted in an overall lifting of educational attainment, eradicated illiteracy and upgraded the skill level of the work force. The virtue of frugality leads to high saving rates, which in turn has made possible a high domestic capital formation. Finally, obedience has contributed to labour discipline and smooth management-labour relations.

⁵ With the wisdom of a hindsight, it has been claimed that the export-promotion policy is superior to the import-substitution one in the following respects:

- a) Export promotion policy depends more on incentive schemes than on direct control.
- b) Because export promotion policy emphasizes export expansion, the firms must be cost-effective, so that their products can be competitive on the international markets. By way of contrast, import substitution policy is bound to lead to market distortion, because it raises prices of imported inputs and often discriminates against exports.
- c) The incentives introduced under the export promotion policies are general in nature, while control measures adopted under import substitution regime are more selective and often devoid of sound economic argument.
- d) The effectiveness of export promotion policies is normally easier to assess than that of import substitution measures. Therefore mistakes can be rectified at an earlier stage.
- e) The export promotion policies force domestic firms to compete on the international market and eventually enlarge the size of firms and achieve greater economies of scale.

Confucianism is not against material pursuit, but is rather pragmatic and flexible. Confucian ethics (or simply call it 'Conthics') has been found to be compatible with the spirit of capitalism.

4. *Successful Land Reform*

A common characteristic in the LDCs is the monopolistic ownership and low productivity of land. The farmers who actually tilled the lands were, under the old feudal system, exploited by their landlords and the prevalent system of crop-sharing had resulted in low productivity in the agrarian sector. The incentive for the farmers to put extra effort to increase their yields was minimal and in the absence of technical assistance from public institutions technical progress was virtually nonexistent. For this reason, farmers generally subsisted in poverty. The successful land reform (notably in Taiwan) has fostered technical progress in the agrarian sector, which in turn enabled it to release the redundant peasant population to the booming manufacturing industries.

All three factors were at work in the Asian NICs (the land reform was not a problem for Hong Kong and Singapore. Nevertheless, both city states enjoy benefits of having a huge hinterland, China for Hong Kong, Malaysia and Indonesia for Singapore, without carrying the burden of supporting it). All the factors combined enabled them to commercialise and industrialise their economies in a relatively short span of time.

IV. OUTLOOK

A. *Basic Scenario*

It has never been easy to predict the future course of development for these NICs. As pointed out earlier, the combined strength of the four nations is not great enough to affect the world economic order seriously, despite the fact that their successful penetration of the development markets with their labour intensive products has given rise to the protectionist movement in the Western industrialised countries. On the other hand, their export-driven growth is highly subject to the influences of the outside world. Therefore it is imperative to make some assumptions (or scenarios) about those external factors whose course of development is deemed to have a direct bearing on the economic performance of these nations. In forming our views on the outlook for these countries at this moment, we may very easily be biased toward the pessimistic side. This is mainly due to the following considerations:

1. The US dollar has been falling steeply after the meeting in September 1985 of the five most powerful governors of the central banks (the so-called

G-5). The weakening dollar renders the products from these countries less competitive because the USA has been the most important market for their exports.

2. The real wage levels in these countries have increased so much that their traditional labour-intensive industries have found it increasingly difficult to compete abroad. In order to protect the workers' wellbeing, weed out low-efficiency labour-intensive industries and promote high-tech industries, and also in response to a tight labour market, many laws were passed in the NICs to regulate their labour-markets. In the extreme case of Singapore, the government mandatorily required an annual increase of 20% in nominal wage rates for four successive years from 1979 to 1983 in a bid to weed out low-productivity labour-intensive industries and to force the industrialists to switch to high-tech, capital and knowledge intensive industries. Furthermore, employers there were required to pay 25% of a worker's wage to the Central Provident Fund. In a similar fashion, prices for factory and office space were also lifted to a prohibitive level. Recognising the detrimental impact of its earlier policies, the Singaporean government has since 1986 taken remedial measures to lower the costs of production. A wage freeze is one of these measures. The wage rates in the other NICs have also risen significantly.

3. The Asian NICs have been faced with strong competition from the near-NIC countries in Asia such as Thailand, Malaysia and the Philippines. Although these countries are late-comers and the technologies employed there are less sophisticated, their wage rates are considerably lower than those in the NICs. As far as labour-intensive, standardised consumer goods are concerned, the battle has perhaps been lost by the NICs. Furthermore in the past seven years, China's modernization programme has attracted a large number of joint ventures involving billions of dollars of direct foreign investments, especially to the Special Economic Zones. China has established a solid foundation for some labour-intensive light industries and started to compete on the international markets for exports of their products. Since labour is still very cheap in China, she has become a formidable competitor (in addition to being a trade partner) to the Asian NICs.

4. Each of the four Asian NICs is now facing a thorny industrial restructuring problem. Each country tries very hard to upgrade its technology and diversify its product mix. This is a daunting task in view of the fact that R and D programmes are generally weak in these countries, due partly to the absence of government assistance (as in the case of Hong Kong) and partly to the relatively small size of the firm: in Hong Kong, for example, the average number of workers per manufacturing firm has decreased from 40 in 1970 to 25 in 1985, and an average firm does not

have enough resources to undertake any serious research programme. A possible exception is South Korea, where the economy is dominated by a small number of big enterprises which have the capability to pursue some genuine research, especially in the field of micro-electronics. The difficult task of industrial restructuring is therefore now bothering each of the four Asian countries.

The above factors will cast a shadow on the future of the Asian NICs. But there is at least one favourable development to balance the picture. The price of oil has been falling sharply and the probability that it will again rise sharply is slight. As the Asian NICs are importers of oil (Singapore refines and stores oil, but does not produce it) a falling oil price will greatly benefit them.

B. Assumptions about the Economic outlook of the NICS' Major Trade Partners

Given the fact that the NIC's economic growth is export driven, what ever happens to the world economic order in general and their major trading partners is particular will have a profound impact on their economic development. We believe that the spirit of freer trade as enshrined in GATT will continue into the future, despite the fact that owing to a high unemployment rate the protectionist sentiment has been very intense in the advanced OECD countries. This is because freer trade has made a more rational international division of labour possible, promising greater economic wellbeing to all parties concerned. The protectionist measures which were introduced in the US and EEC countries were regarded as temporary ones and as such will be removed once their unemployment and balance of payments situations are sufficiently improved. We therefore assume that the world trade will continue to be largely conducted under the spirit of GATT during the coming decade.

As to the economic outlook of the major economic powers, the following scenarios were made:

U.S.A.

The economic situation of the United States is perhaps the single most important factor in the whole trade equation, simply because the US market accounted for more than one third of the exports from the NICs. The recent fall in the dollar will be more conducive to US exports, but the government's fiscal and trade deficits will remain high, and the interest rate is likely to rise toward the end of the year (1987). Therefore the US is unlikely to allow the level of its market penetration by foreign products to increase. It is assumed by us that over the next five years its economy will grow at around 3% annually.

EEC

The EEC economies are facing structural problems. In addition to such traditional sectors as textiles, clothing, footwear, steel etc., other industries such as petrochemicals and cars are also in trouble because of excessive production capacity and stiff competition from outside, notably from Japan. Low technical progress and little productivity improvement, as well as high social rigidities, have become perennial problems. To protect their own industries and their labour markets more protectionist measures are expected to be employed. The protectionist measures are thought to mitigate the painful effects of industrial restructuring. It is therefore assumed that the door to the West European markets cannot be opened any wider and their average GNP growth rate during the next five years is assumed to be in the range of 2.5% to 3%.

Japan

Among the industrialised nations Japan is probably best placed to live with the industrialization in these Asian NICs. Japan has encountered no serious difficulties in switching from extensive to intensive growth. Its industrial restructuring was pursued with great determination and effectiveness. The high domestic savings freed Japanese enterprises from the grip of external debt. The much talked about Japanese management style has led the nation as a whole to behave as "Japan Incorporated". Its fanatical export drive was until recently greatly facilitated by the deliberate policy of maintaining a weak yen. For a long time, the Japanese markets were practically closed to foreign suppliers. Its huge and chronic trade surplus has long been a major source of friction in international trade relations.

But since late 1985, there have been quite a few signs of policy changes in Japan. First, the yen has appreciated by more than 40% against the US dollar, making Japanese products less competitive in the international markets. Second, the government has officially encouraged its people to buy imported goods. Third, the government and private enterprises alike realise that Japan's huge trade surplus has entailed much trade friction and created great tension among the trading partners. Fourthly, the government means to launch many large scale projects to stimulate the domestic economic activities and demand. Finally, Japan plans to recycle more funds back to the deficit nations, particularly ASEAN. The combined effects of these five factors will be to make the Japanese market more open and this will lead to a more harmonious relation between Japan and its trading partners, including the Asian NICs.

Japan has superior technologies in some sectors, notably consumer electronics, cameras and other optical items, cars, and robotics. This,

together with its efficient management style and successful restructuring endeavor, has practically guaranteed that in the next decade, the Japanese economy can be assumed to enjoy an annual growth of 4-5%. In combination with a more open market, this relatively high growth rate should have strong implications for the Asian NICs and the rest of the world.

C. Mid-Range Prospects of the Asian NICs

With the assumptions (scenarios) as discussed above, we now turn to the economic outlook in each of the four Asian NICs. The time horizon under consideration is up to 1992.

South Korea

South Korea's industrialization got started only in the early 1960s. Textiles and consumer electronics were the two major industries. Their products were mainly exported to the developed countries, especially the United States.

In 1973, the government abruptly decided to establish its own heavy industries due partly to economic necessity and partly to defence considerations. A large number of costly projects were financed by foreign borrowings and a loose monetary policy. This policy quickly led to high inflation and ended in a major crisis in 1979; all its major heavy industries such as petrochemicals, aluminium and steel were in deep trouble at that time. Because of the crisis, the economy entered a period of consolidation and adjustment. But in 1984 South Korea started to launch an ambitious programme again to upgrade its economy by promoting complex industries such as cars and sophisticated electronics.

A distinctive characteristic of the South Korean economy is that, from the very outset, the economy has been dominated by a small number of big enterprises, and major investment decisions were coordinated by the head of state, often by the President himself. The extremely hierarchical, top-down nature of the decision-making process had resulted in a high degree of concentration (traditionally many sectors were monopolised by a few conglomerates which has been in sharp contrast to the case of Taiwan and Hong Kong. But in recent years the monopolistic structure in each sector (including banks which were totally controlled by the government) was loosened as industrial diversification was stressed. But this diversification has given rise to fierce competition among the big entrepreneurial groups. To illustrate this, we take a closer look at some major sectors.

South Korea is the only country among the Asian NICs which can sell its cars in the international markets. There are three major car-makers, each

of which has an ambitious expansion plan, and by the end of this century, South Korea may be able to export one million cars a year.⁶ We here summarize the strategies of the two leading car makers of South Korea, viz., Hyundai and Daewoo.

Hyundai is the biggest car maker in South Korea. Its leading model, Pony, has been running on the highways of many foreign countries. Its current capacity is 300,000 a year, 50% of which are exported. Hyundai received technical assistance from Mitsubishi, which provides it with engines. It has set up distribution networks in the UK and Canada and lately in the US.

Daewoo entered into a joint venture with General Motors. Its current capacity is 300,000 vehicles per year, 50% of them for the US market. In terms of capacity, Daewoo is on par with Hyundai, but temporarily it lags behind by about two years in its development. Although management is entirely under Daewoo, the cars manufactured are those of GM's design. GM entered this joint-venture with the aim of gaining a market share in the US for small cars, which was seriously penetrated by imported cars from Japan and South Korea.

From the standpoint of the South Korean national economy, the car industry plays a catalytic role in the machinery industry and constitutes the most important downstream outlet for its highly successful steel industry. South Korea's ultimate aim is to upgrade its technology so that all the auto parts and components including engines will be manufactured locally. There is wide scope for international cooperation in this sector, and opportunities for direct foreign investments, especially from European countries, are excellent.

The steel industry was firmly established in South Korea in the 1970s and is now generally regarded as a major success story for a developing country to establish its own capital and technology intensive heavy industries. Its current capacity is 12.2 million tonnes, 45% of which is exported, chiefly to the US. It is planned to increase the capacity by 2.7 million tonnes in the near future. As the US has already introduced protective measures (1.9% of the US market is the ceiling) to protect its own steel makers and there is a worldwide over-supply, the prospect for export expansion of steel is rather slim. But the rapidly growing downstream industries, notably cars, machinery and construction, should be able to absorb the additional steel output locally.

⁶ For details, see M. Fouquin, *Development Prospects for South Korea, Taiwan, Hong Kong and Singapore to the End of the Decade* (mimeo), Centre d'Etudes Prospectives et d'Informations Internationales, Paris, 1985, pp. 32-34.

The big groups in South Korea have laid a solid foundation for the microelectronics industry. Their strategy is to master the technology of VLSI (very large scale integration) completely. In 1984, Korea invested some US\$500 million (equal to 10% of the Japanese figure) in this sector. With the industrial diversification policy in full swing, practically all the leading groups have jumped onto this fast moving bandwagon, irrespective of their background. To upgrade their technological level, many big groups have entered technical agreements with pioneer producers in advanced countries.

Hyundai entered the electronics industry only in 1983. It set up plants at Incheon (South Korea) and at Santa Clara in the USA, at the same time, turning out 5-inch diameter silicon wafers (US plant) and electronic components (Incheon plant) respectively. The ultimate capacity of the Incheon plant is one billion components a year, 50% of them meant for export. At present, Hyundai's plant is specialising in 16K SRAM (non-volatile) memories or 128K ROM and PROM (read-only and programmable read-only) memories rather than standard 64K RAM. In addition, it also produces personal computers (100,000 units a year).

The present capacity of the Samsung semiconductor plant is 360,000 wafers a year increasing to 1.8 million in 1987. It specialises in 65K DRAM, and 256K DRAM; it has signed an agreement with NEC (Japan) for producing small business computers and specialised financial terminals.

Although a big group in other businesses, Daewoo is a new-comer in electronics. Following Hyundai's approach, it decided to buy a firm in the United States and build a plant in Korea.

Lucky Goldstar, another leading group in microelectronics, has entered into an agreement with A T & T to produce telecommunications equipment and related components.

Besides components and personal computers, South Korea is also a leading exporter of video tape recorders. The technology is originally from Japan, and the Japanese firms still keep a technological edge in this field. A technological breakthrough has yet to be made by the Korean producers in order to catch up with Japan in this market.

In summary, South Korea has ambitious plans in microelectronics. An immense amount of resources have been poured into this sector to carry out serious R and D programmes. But the sector is reputedly characterised by high volatility. Already too many big companies have entered the game and there is a tendency to commit the same mistakes as they did in the 1970's when heavy industries were developed. Perhaps, the lessons learned from the 1979 crisis may help and the government will this time employ

more appropriate macro-economic policies to see the high-tech industries through the economic storms which strike every now and then.

As in the past, South Korea's plans for industrialization tend to be very ambitious. The Korean market used to be closed to foreign investors. Recently it has been gradually liberalised and direct foreign investments are now welcome. With the diversification programme in full swing, the monopolistic position previously held by state-managed enterprises in each sector has been removed and instead a fierce competition among the big groups has started. A more pragmatic approach has been adopted to handle the trade issues with North Korea and particularly with China. This liberal trade policy coupled with the adoption of more prudent macro-policies should give South Korea a reasonably good chance of success in their current endeavor to restructure and upgrade their economy.

Taiwan

Taiwan's development pattern (particularly in the early 1970s) was characterised by high growth (11% in real terms p.a.), a low degree of inequality of income distribution, low inflation (less than 2%), and a persistently favourable balance of payments (current foreign reserves stand at more than \$60 billion) and full employment. This remarkable achievement was made possible by its structural features. The more prominent ones are:

- a) The preponderance of small enterprises, accompanied by a high degree of flexibility of production apparatus in response to change in market conditions.
- b) A high degree of mobility of labour, with a steady rise in the real wage rate (trickle-down effect), which contributes to a low degree of inequality of income distribution.
- c) A very high savings rate (around 30%), resulting in a low foreign debt (as we note below, Taiwan has become a structural creditor, with saving continually outrunning the people in this country's domestic investment).
- d) A low degree of governmental intervention in the private sector.

The Taiwanese economic structure, however, also has important weaknesses. First, due to political uncertainty (PRC's claim on Taiwan, problem of succession etc.), private investment incentive has been rather weak. On the other hand, the domestic savings rate is very high. As a result, there is an excess supply of loanable funds and Taiwan has become a structural creditor, despite the fact that the standard of living is still low (per capita income: c.a. \$4000 in 1986). Second, the pre-dominantly small firms do not have the resources to carry out genuine R and D programmes. As a result, many manufacturers have to resort to illicit measures such as

copying or pirating, especially in the fields of personal computers, watches, and textiles. The Taiwanese economy is now facing severe challenges on two fronts. The traditional light industries (textiles, clothing, footwares, consumer electronics and electrical industries) are increasingly subject to stiff competition on the international markets from China and the near-NICs, where the labour cost is considerably lower. At the same time, it is difficult to establish high tech industries, in Taiwan owing to its weakness in R and D (the R and D expenditure used to be less than 1% of GDP).

To overcome the restructuring problems, the government in Taiwan has adopted a series of measures. The more significant ones are:

- i) A number of strategic industries are identified and actively promoted. Heavy machinery (such as car making), computers, electronics, biotechnology and other high tech industries are the centres of attention now.
- ii) Taiwan offers favourable working conditions to attract experienced Chinese scientists and engineering, as well as management experts from overseas, mostly from the USA.
- iii) Multinationals are now allowed to set up their factories or plants outside the EPZs (export processing zones), whereby the domestic markets, which are becoming increasingly important, are made accessible to them.
- iv) The government has founded an institution (ITRI) to bridge the gap between universities and private enterprises.
- v) A science park has been created 50 km to the south of Taipei. The park provides facilities and infrastructure necessary for the development of high tech industries and offers a whole package of incentives, including cheap capital.

The motto adopted by Taiwanese industries is "Drive to gain self-sufficiency". This applies mainly to steel, car and petro-chemical industries.

A very successful integrated steel mill was set up in the 1970s. Part of its output was exported. It is planned to double the capacity by 1989, because domestic demand from downstream industries (car, shipbuilding and construction) is expected to grow substantially.

However, the shipbuilding industry has been losing heavily, mainly due to a worldwide slump in this sector. Despite gloomy prospects, the capacity was recently expanded by 30%.

The car industry plays a strategic role in developing heavy machinery and the engineering industries. Taiwan already has a few auto makers. But

the size of the firms is generally small and the industry is heavily protected. In the past few years, Taiwan entered negotiations with Toyota to build a plant with a capacity of 300,000 cars per year. But the project failed over disagreement on conditions relating to sale policy and technical transfer. As a result, Taiwan may look to European or American car makers for a possible joint venture.

Taiwan has a strong textile industry, whose production of synthetic fibres generates great demand for products from petrochemicals. The capacity was recently increased by 25% despite the two oil crises. The main argument was self-sufficiency.

In Taiwan, high-tech industries mainly consist of two groups, namely those dependent on electronics/computers and biotechnologies. The former group experienced a tremendous growth in the last five years. But due to the lack of R and D, these industries can only turn out imitated or faked products. The government anticipates that electronics/computer industries will play an important role in its future industrial development and has created a science park and the research arm, ITRI, to boost the industry. Emphasis is placed on VLSI as it is generally thought that the battle for 16-bit units had been lost due to charges of pirating. Accordingly, ITRI has launched, *inter alia*, the following programmes:

- very large-scale integration (VLSI)
- micro-computers and peripherals
- automation
- robotics and machinery centres

By the early 1990s, Taiwan hopes to be able to manufacture factory, office and home automation-machines. Telecommunication is a weak link in this whole chain. But plans are on hand to catch up.

The Taiwanese government has put the development of biotechnology on a very high priority, but the plans have yet to bear fruit.

In all the above high priority industries, European presence has been conspicuously weak. The direct foreign investments mostly originated in Japan and the United States. But their technology transfer record has been slow and unsatisfactory. The government authorities and private industrialists alike seem to prefer to cooperate with European firms, because they believe that they can get a better deal from them. In view of the fact that indirect trade between China and Taiwan has been tacitly tolerated by Taipei and actively encouraged by Peking, Taiwan has become an important base for foreign firms aiming at the immense Chinese market.

Singapore

Since its foundation in 1819, Singapore has been playing the role of a regional regulator of commercial, energy (refining and storage) and financial exchange for the area lying between India and Japan.⁷ Furthermore, after it separated from Malaysia and gained political independence in 1965, the Singaporean government has been vigorously pursuing the goal of industrialization. Almost from the beginning, the strategy chosen – export-promotion – has paid off. To date this modern city state has enjoyed a per capita income on a par with that of Italy (in 1984) and Hong Kong, and has become a manufacturing centre in addition to its traditional role as an entrepot, and a centre of shipping, tourism and finance. Twenty per cent of its GDP is attributed to manufacturing activities, another 20% to the banking and financial sectors, and the rest to retailing, commerce, and construction.

Due to limits of space, Singapore decided against the establishment of a complete chain of metal industries. Despite the fact that the per capita steel consumption is very high, the limited domestic demand does not justify the setting up of an integrated steelworks. In the field of shipbuilding, emphasis is still on repair services. Recently, an industry providing aircraft repair service has been doing well. Because of a robust construction sector, Singapore has developed its own cement industry, part of whose output – about 10% – was exported. In 1982, the production capacity was 2.8 million tonnes. The capacity will be doubled by 1987, and may create an excess capacity problem. To utilize this capacity fully, one third of its output has to be exported. This may be difficult as the neighbouring countries are also more or less self-sufficient in cement.

In 1978, Singapore decided to set up a joint venture with Japan in petrochemicals as a downstream industry of its oil refining activities (the third biggest in the world). The total cost was \$2 billion, half of which was financed by Singaporean capital and the rest by Japanese capital, with involvement of both governments. Japan was interested in this project because it will secure Japan a reliable supply of the petrochemical products. But Japan alone cannot take all the extra products for export, while the prospect of exporting them to other countries, such as the EEC is also slim, because the global supply is greater than demand and the gap is widening each year. Malaysia, Indonesia, Canada and Saudi Arabia all these oil producing countries are establishing their own petrochemical industries with their products mostly meant for export. For Japan, the project may be regarded as the price of a deliberate political move, whereas for Singapore it has turned into a national liability.

⁷ See *ibid.*

Since 1980, Singapore government has given a high priority to high tech industries, such as computer equipment, industrial electronics, avionics and precision machinery. To achieve these goals, many incentives were provided; among others, the status of "pioneer enterprises" was created, which enjoyed a tax reduction of 40% for five to ten years. As a result, many multinationals, mostly from the USA and Japan, were attracted to this sector. By 1983, the three sectors, namely industrial electronics, consumer electronics and components, had nearly achieved the targets set for 1990. Singapore has become a big manufacturing centre for hard and floppy disc drives. In addition, Singapore had also become the most important centre in the ASEAN countries for software development and programming of automatic tests for computer equipment. Finally Singapore is also trying to develop into a centre for the utilization and maintenance of robots in the Southeast Asian region.

After almost two decades of excellent growth, the Singaporean economy has all of a sudden got into trouble. The problems facing Singapore are very serious. In addition to the rising costs (high wage rates and high land prices), the Singaporean economy is faced with a serious structural problem. Their main industries such as oil refining, petrochemicals, shipbuilding, and oil rigs are all in deep trouble; their electronics industries are not doing too well, and even their tourist business has almost been priced out of market. Only the financial sector is still booming. Besides, on the political front, Singapore is also faced with the problem of succession and this has retarded domestic and foreign investments. In fact, since 1985 there has been a net capital outflow of \$3 billion. But the cost reducing measures are starting to work. Therefore after a negative growth of 1.7% in 1985, Singapore managed to have a positive growth of 2% in 1986 and the prospect for the next few years is encouraging. If there is a robust upsurge in the foreign demand for the products of the main industries (oil and its related products, oil rigs, electronics, shipbuilding and petrochemicals), and there is some recovery in the tourism and property sectors, the Singaporean economy will enjoy a healthy growth in the near future.

Hong Kong

Finally, we come to the case of Hong Kong. Hong Kong never went through the stage of import substitution in its industrialization process. Its economic development was based, from the very beginning, on the export-oriented strategy and its industries specialised in the manufacturing of consumer goods, especially textiles, clothing, toys and plastics, and consumer electronics. But this development was dictated by market forces rather than designed by policy makers because under the laissez-faire economic system of Hong Kong, government intervention is kept to a minimum. The production of these consumer goods is entirely compatible

with Hong Kong's comparative advantage and so far has served Hong Kong's interest very well. However, due to high costs of labour and land, keen competition from the other NICs and the less developed nations in Asia including China, and the rising protectionism in the advanced western nations, the conventional industries may have reached their growth limits, and in some cases started to decline. The future of the Hong Kong economy lies in the improvement of quality design and the development of new products, exploration and penetration of new markets, etc.

Since the late 1970s the government and private sectors have been searching for new direction of industrial development, and in the last few years a great deal of fuss has been made about economic diversification. Hong Kong's manufacturing activities are still concentrated on a narrow range of product groups, such as clothing, textiles, watches, plastic and electronics. This is however not surprising when one considers that Hong Kong is a very small economy and as such its resources cannot be spread too thinly over too many products. Given this constraint, what the industrialists in Hong Kong can do is confined basically to improving the quality of the products and designing new products within the existing industrial groups. *Flexibility* which means that new goods can be produced according to the trend of fashion has been the key to its past success.

Since 1982, the economy of Hong Kong was deeply disturbed by the 1997 lease issue. But with the successful conclusion of the Sino-British negotiations three years ago, the political future of Hong Kong has been decided. The British administration in Hong Kong will continue until 1997 and the present social and economic systems are guaranteed to remain unchanged for 50 years after 1997. In the meantime, political confidence has been restored, new investments (although short-term in nature) have increased, and foreign capital has flown in again. One important factor contributing to this situation is the Chinese connection. Since Peking launched its four-modernizations program a few years ago, Hong Kong's entrepot activities have been revived and China has become Hong Kong's most important market second only to the U.S.A. If China's economy continues to develop under its present open-door policy, China will increasingly become an important trading partner of Hong Kong and the close economic ties will definitely be beneficial to both parties. But since 1985, China has several times clamped down on its imports, because of the rapid depletion of its foreign exchange. Consequently, both Hong Kong's domestic exports and re-exports to China have suffered. The prospect for the immediate future looks less bright than in the last few years.

As Hong Kong's manufactured goods are primarily exported, the development of the manufacturing sector can be examined by referring

mainly to their export growth. In spite of a dramatic growth in the last five years, China as an outlet for Hong Kong products is by no means as vast a market as its population size would imply. Despite the strong protectionist sentiment, the US and the EEC nations as a whole are still the most important markets for Hong Kong's products. Hong Kong's export to these advanced countries depends more on the employment situation and economic performance in these economies than anything else. If there are no strong economic recoveries in these advanced countries and their unemployment rates continue to remain at relatively high levels, the prospect of Hong Kong's export to these advanced countries is not bright. Finally, it is still very difficult to penetrate the Japanese market, and the absorption capacity of the rest of the world is still rather limited. All in all, the overall outlook for Hong Kong's manufacturing exports is not very promising.

In contrast, for the tertiary sector, the economic horizon up to 1990 is quite promising. Banking is expected to grow and Hong Kong's role as an international financial centre will gain more importance. And, despite the worldwide slump in the shipping industry, Hong Kong will continue to be one of the three most important shipping centres in the world. Finally, the tourism sector has been booming in the last few years, and will continue to prosper in the years to come owing partly to the depreciation of the Hong Kong dollar, which has been linked to the US dollar since October 1983, and partly to the opening of China to the western world.

In summary, the manufacturing industries of the NICs will have a rough time ahead because of rising wage rates and the price of office and factory space, competition from the other NICs and the near-NICs, as well as China, and the increasing protectionism in the advanced western countries, while most of the tertiary industries are expected to have a bright future.

Chinese University of Hong Kong