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The Economic Development Strategy Pursued by Japan and South East Asian Newly Industrialised Countries in the Period of Their Dynamic Economic Growth

1. Introduction

The goal of this paper is to examine the role played by the state in the process of accelerating the growth of Japan and the so-called first generation newly industrialised countries (South Korea, Taiwan, Hong Kong and Singapore)[1]

Japan and the South East Asian NICs have been attracting the interest of economists for years because of their transformation from poorly developed economies at low production levels into highly industrialised countries. Japan entered the industrialisation stage a decade earlier than the so-called Asian *tigers*. The beginning of its intensive economic growth falls to the 1950s while that of the other Asian economies to the 1960s. Japan had economic development traditions dating to the pre-World War II times while the NICs lacked their own traditions of that type.

The most economically advanced economy of the Asian economies is Japan, an economic power in today's world. Although the countries in question represent different economic development levels, they have one in common - since the 1960s they have been recording dynamic GDP growth rates and high export growth rates.

Japan's post-war economic development model is copied by the remaining economies of the South East Asian region, which is due first of all to the fact that the NICs have used many of the solutions applied in the Japanese economic policy. South Korea and Taiwan have made the greatest use of the experience of Japanese economic policy in the period of their intensive economic growth. State intervention in these countries as in Japan played a decisive role in the process of fast economic growth. By using a wide gamut of direct and indirect instruments of economic policy, the state took an active part in changing the industrial structure in the examined economies and contributed to the creation of new comparative advantages. A small extent of state interference was typical of Singapore, where a more liberal economic policy was pursued by the

[1] Newly industrialised countries of the so-called second generation are Thailand, the Philippines, Malaysia, Indonesia.

government. However, full economic liberalism occurred only in Hong Kong, where the state did not apply any barriers protecting the internal market or restricting foreign trade (tariffs, import licences, import bans or export subsidies) (Trade ....., 1994, p. 67).

The paper presents two concepts of economic development: an inward-oriented and an outward-oriented development strategy. The former prevailed in the Asian economies at their early industrialisation stage whereas the latter became a basis for their development in the next years. The further section of the paper presents the major elements of the Asian development strategy - this strategy seems to have found its fullest reflection in the promotion of savings and investment and in the industrial policy pursued by the government.

2. Strategy of import substitution and export promotion

The inward-oriented strategy based on import substitution is in juxtaposition to the outward-oriented strategy based on export promotion, and they are both treated as two different types of development strategy (Gore 1996, p. 23). According to Balassa, what distinguishes the inward-oriented strategy from the outward-oriented one is the approach to the international division of labour (Balassa 1970, pp. 24-27). The former strategy minimises the advantages following from the international division of labour, supports domestic production substituting imports and satisfying the domestic needs, places domestic production before imports and export-intended production. On the other hand, the outward oriented-strategy aims at economic growth through increased participation of the national economy in the international division of labour.

In the case of the inward-oriented strategy, the state's economic policy is characterised by its direct intervention in market mechanisms, promotion of import-substituting industries, price distortions, protection of the home market from foreign competition, a rigid labour market, a re-valued foreign exchange rate and the economic results achieved thanks to this strategy are: a slow economic development rate (stagnation), a slow export growth rate, unequal income distribution and weak employment growth. On the other hand, the state's economic policy in the outward-oriented strategy is characterised by smaller intervention of the government in market mechanisms, export preference, limited price distortions, liberal trade policy, an elastic labour market, a competitive foreign exchange rate and the economic effects achieved thanks to that strategy are dynamic economic growth, dynamic export growth, increased equality of income distribution and strong increases in employment and real incomes.

In the literature (Park 1994, p. 4) it is underlined that an economy derives greater benefits from export promotion than from import substitution. The former strategy is based on promotion of competitiveness whereas the latter on protection and lack of competition. Competitiveness promotion causes the resources in the export sector to be allocated according to economic criteria, at world prices, which in turn stimulates efficient production. The outward-oriented strategy leads also to greater economies of scale and production specialisation conforming with obtained comparative advantages.

The import substitution strategy played the greatest role in Japan's economic development at the time of its post-war reconstruction (1945-1950) and in the NICs of the first generation in the 1950s and early 1960s. The argument for restricting imports and substituting them with domestic production was the need to prevent scarce foreign resources from flowing out and to protect infant industries. The import substitution strategy was justified in the case of

Japan, South Korea and Taiwan - countries with relatively large domestic markets (the import substitution strategy was not carried out in countries with small internal markets).

The Asian countries started to implement the inward oriented strategy by reducing imports of consumer goods turned out by the light industry. The basis for carrying out the import substitution strategy was the protection of selected industries from foreign competition. Numerous customs barriers precluded foreign producers from getting access to the domestic markets (with the exception of Hong Kong, where an open trade policy was pursued throughout the post-war period). Import impediments, however, did not cover the investment goods indispensable to start anti-import production. In time the import substitution strategy was also extended onto capital good. The goal of the strategy was to ensure self-sufficiency to the Asian economies.

The realisation that import substitution becomes inefficient and cannot be continued dates to the early 1950s in Japan and to the early 1960s in South Korea and Taiwan; the later promotion of the heavy and chemical industries in Korea and Taiwan in the 1970s is recognised as a "secondary" import substitution strategy (The East Asian ...., 1993, p. 132).

A low wage level and the related restriction on domestic demand growth turned out to be an obstacle to the further implementation of the import substitution strategy in the first generation NICs in the 1960s. Furthermore, the import restrictions led to considerable deformations of the market mechanism and distortions of prices relations in the allocation of resources to the selected industries (Lipowski 1997, p. 144). The price distortions were consequent on the state's customs protection. The state protection caused the promoted industries to turn out products which were - at least in the early stage - more expensive and often of lower quality than imports from countries having more advanced production technologies.

The inefficiency of the import substitution strategy led to a change in the development strategy pursed by Japan, South Korean and Taiwan. The outward-oriented strategy based on import promotion has dominated in Japan since the early 1950s and in the NICs of the first generation since the early 1960s. The World Bank economists (The East Asian ..., 1993, p. 18) claim that the import substitution strategy based on internal market protection did not have a positive impact on economic development of the Asian countries. A different stance is presented by the UNCTAD economists (Singh 1995, p. 20) who underline that protection played a very important role in promoting the industrial changes, productivity growth and export growth in the Asian economies. In the case of Korea and Taiwan, the import substitution strategy was of vital importance to their transformation from countries with a dominant agricultural sector into countries with prevalent industrial production.

In carrying out the export promotion strategy, the NICs and Japan did not entirely give up the protection of their domestic markets from foreign competition. Balassa recognises the liberal trade policy as one of the most important elements of the outward-oriented strategy (Balassa 1970, p. 24). The Asian countries pursued a liberal trade policy but only towards industries being competitive in international markets, and protection was used in relation to the other industries. Protection was provided to those areas of production where competitiveness was expected to appear later. The Japanese auto industry is an example of how the protection of the domestic production contributed to technological changes, increased output and improved international competitiveness (Singh 1995, p. 20). The Japanese government's intervention in the car industry development consisted in encouraging foreign capital to invest in that industry, in imposing limitations on car imports, supporting the production-rationalising efforts and providing assistance in distribution. The government introduced broad controls on imports and used various measures discouraging foreign producers from entering the Japanese markets. Import quotas and tariffs were the most widely applied instruments protecting the domestic market from foreign competition. Import quotas were used in the 1960s and customs tariff in the 1960s and early 1970s. The reduction in foreign producers' access to the Japanese auto market and the limitation of competition between domestic producers created privileged conditions for the domestic producers and led to their high profits. Thanks to increased profits, Japanese enterprises were able to raise their investment rate and improve quality and thereby to become competitive in relation to foreign producers.

It is characteristic that these areas which had been covered by state protection in Japan, South Korea and Taiwan turned into their new export specialisations.

The export promotion strategy implemented by Japan and the NICs became a basis for their accelerated economic growth. Growth via export was a necessity for countries with small internal markets and a limited resource base (Hong Kong, Singapore). Export growth allowed the Asian economies to increase their domestic production substantially, which in turn contributed to cost cuts, economies of scale and greater specialisation of production (Woronoff 1986, p. 231). Exports also facilitated faster absorption of foreign technologies, for in order to maintain competitiveness in foreign markets, production has to be continually upgraded.

The export-oriented strategy covered those industries in which a given country scored static comparative advantages and could derive benefits from international trade (Trade ...., 1993, p. 231).

Japan's export goals were formulated clearly for first time in 1951 by the Economic Stabilisation Office in its plan for economic independence (Bossak 1990, p. 86). The Korean government formulated its export goals in the five-year plan of 1963 and the Taiwanese government stated them in its plan of 1958 (East Asia ...., 1993, p. 8). On the other hand, the challenge faced by Singapore in the 1960s was to transform its re-export based economy into an economy based on exports of domestically made products. The major task for the traditionally open economy in Honk Kong was to change its export structure - replace the labour-intensive products (clothing, footwear) with products having greater inputs of capital and skilled labour (e.g. electronics).

The export orientation took different forms in each of the Asian countries depending on the degree of economic liberalisation. This orientation in Hong Kong resulted primarily from the market forces while in the other Asian countries it was a conscious effort of their governments (Morita 1993, p. 3). The basic instruments of export orientation included subsidies, exemptions from and reductions in customs on raw materials, semi-manufactures and machinery necessary for export production, easier access to bank credits, preferential credit interest rates, a favourable foreign exchange rate and a wide range of tax breaks for exporting enterprises (Woronoff 1986, p. 236). Export subsidies played a important part in the early stage of the export promotion strategy; low credit interest rates and tax reductions have been the most important export stimulating measures since the early sixties in Japan and since the seventies in Korea and Taiwan.

The importance of exports for the Asian economies is shown by the share of exports in their GDP (cf. Table 1). In spite of their strong export orientation, Japan and the NICs never fully opened up and closely integrated into the world economy at the time of their accelerated economic growth (the exception is Hong Kong) (Singh 1995, p.). One of the indicators of their opening-up can be the share of industrial imports in GDP. This share amounted to 1.8% in 1961 and to 2.4% in 1979 in Japan. The other Asian countries recorded a much faster increment in that index (cf. Table no. 2).

Import liberalisation started in Japan in the sixties. It resulted on the one hand from its growing competitiveness and on the other hand from its access to international organisations (OECD, IMF, GATT). In 1965, revenues from customs accounted for 7.3% of total Japanese imports value and for 2.9% in 1975 (Trade ..., 1994, p. 58). Korea and Taiwan launched import liberalisation in the early 1980s. The average tariff rate in Korea fell from 31.7% in 1982 to 23.7% in 1993, to 12.7 in 1989 and down to 10.1% in 1992 (East Asia ..., 1993, p. 10).

In the case of the Asian economies, the outward-oriented strategy did not imply a fully free access to the domestic market. Export promotion was pusrued concurrently with protection of industries in an early development stage and having no competitive edge.

3. Role of the government in promotion of savings and investment

At the early time of Japan's industrial development, the capital accumulation rate was limited by a low level of domestic savings. That is why credits granted by the Export Import Bank of the United States and loans from the World Bank were an important source of funds for investment projects (Gore 1953-1973, p. 36).

Foreign assistance in the form of loans played an important role in funding investment projects in Korea and Taiwan, too. Foreign assistance was used to fund 80% of total fixed capital investment in Korea in 1953-1962, and in the case of Taiwan, the US assistance alone accounted for 40% of total domestic investment in the same period (Trade ...., 1994, p. 27). However, without increases in their domestic savings the Asian economies would not have been able to double their investment rates in the years 1960-1990 (Trade ...., 1994,p. 27).

The share of total domestic savings in GNP in Japan recorded a steady increase from the early 1950s. This share rose from 24% in the early fifties to 36% in the early sixties and to 40% in the early seventies (Gore 1953-1973).

Korea's domestic savings accounted for 3.3% of its GDP in the period 1951-1960, and they rose to 34.7% in the years 1991-1994. An increased share of domestic savings in GDP was observed in the other first generation NICs from the 1950s. In 1991-1994, the largest share of savings in GDP of all the NICs was recorded by Singapore (Cf. Table no. 3).

What partially accounts for such a considerable increase in domestic savings is growth of household incomes and corporate incomes. However, growth of incomes does not automatically generate growth of savings.

The considerable increase in households' savings in the case of Asian economies was possible thanks to:

- restricted welfare functions of the state and restricted consumption-crediting possibilities,
- the existence of the so-called bonus system whereby a substantial part of earnings is paid out in large periodic bonuses dependent on profits of the enterprise (this system was particularly widespread in Japan),
- provision of special tax privileges to the savers,
- relatively low inflation.

It was possible to use the considerable individual savings for increasing the Japanese production potential especially connected with international economic turnover thanks to the Fiscal Investment and Loan Program (FILP) set up in 1953. The funds on the FILP include first of all people's deposits on accounts in savings banks controlled by the state, pension contributions, life insurance premiums and resources obtained thanks to state bonds (Kodama 1996, p. 3). This Fund is at the disposal of the Japanese Development Bank and the Japanese Export-Import Bank.

Although the household savings rate was at a high level in the Asian countries, these countries owe their accelerated capital accumulation first of all to a high savings rate of enterprises (Singh 1995, p. 42). The share of enterprises' savings in total savings in Japan amounted to 25% in 1951-1955 and rose to 38% in 1966-1970 whereas the share of household savings went down in the respective years from 44.3% to 41.3% (Gore 1953-1973, p. 37).

The corporate savings growth implied greater corporate abilities to fund investment projects and independence of external funding sources. The most active policy aimed at increases in corporate profits was pursued by the Japanese government and its most important components were protection of the domestic market from foreign competition and the competition law allowing establishment of cartels and other monopolistic agreements.

The factors which account for the fact that Japanese firms used their profits to increase savings and investment rather than pay high dividends were (Singh 1995, p. 42):

1. The share-holding structure in Japanese firms,
2. Instruments of economic policy encouraging enterprises to keep their profits and the underdeveloped capital market.

The specific ownership and share-holding model was one of the most important factors accountable for the dynamic growth of savings and investment not only in Japanese but also in Korean firms (Trade ...., 1994, p. 73). By subordinating the corporate activities to the group interest it was possible to diminish the pressure on dividend payment and to concentrate on long-term development of the firm.

Capital accumulation and investment promotion in the Asian countries was favoured by the fiscal and financial instruments of economic policy. These instruments increased Japanese enterprises' access to financial resources and ensured a reduction of investment costs.

The most important instrument of the state support in Japan, Korea, Taiwan and Singapore in the entire post-war period was preferential bank credit. Credits at low interest were given to a sector of enterprises on condition than this sector carried out investment projects in accordance with the assumptions of the adopted economic policy. The most important financial institutions controlled by the Japanese government and ensuring low interest credits to selected industries of importance at a given stage of economic development was the Japanese Export-Import Bank, the Japanese Development Bank and the Industrial Bank of Japan. Cheap credit was ensured by an undervalued interest rate (undervalued owing to the isolation from international financial markets)

The fiscal instruments (tax reductions, tax exemptions, accelerated amortisation) used in all the Asian economies allowed enterprises to retain profits and thereby increased their investment capacity.

4. Sectoral industrial policy and its impact on competitiveness of Asian economies

The most important feature of the post-war policy pursued by Japan and the NICs was a sectoral approach to the industrial development issue - the state exerted its influence on changes in the structure of industry by accelerating or decelerating the speed of growth of selected industries through changes in the conditions under which they operated.

Thanks to appropriate instruments of industrial policy favouring selected industries, the state interfered directly in the creation of new comparative advantages. It is a characteristic thing that first the state initiated and supported expansion of those production areas that could become competitive in international markets and next encouraged them to expand their exports. Selected industries were stimulated and promoted to expand by being provided with preferential conditions compared with other industries.

A key role in drawing up the concept and assumptions of industrial policy in Japan was played and is still played by the Ministry of International Trade and Industry. Throughout the post-war development period the MITI made prognoses and selections of these production areas which were to provide Japan with a competitive position in international markets and determined a set of economic and administrative instruments serving to carry out the development strategy (Bossak 1990, p. 12). The MITI put the following industries under special care:

- the basic industries, i.e. the manufacture of iron and steel, coal extraction, the textile industry and the shipbuilding industry were supported in the period 1945-1950 (the post-war reconstruction),
- the chemical industry (petrochemicals, man-made fibres) as well as the machine-building and electronics industry enjoyed preferential development conditions in the 1950s and 1960s,
- science-intensive areas of production - robots, microchips, biotechnology from the early 1970s.

The NICs launched their promotion of more advanced areas a decade later than Japan. The instruments of economic policy supported the development of labour-intensive industries until the beginning of the 1970s, capital-intensive industries in the 1970s and technologically advanced industries from the early 1980s onwards.

The privileged treatment of industries enjoying a priority status at a given stage of economic development had a twofold character:

1. It was expressed in protecting these industries from foreign competition (and thus in tariff and non-tariff barriers impeding foreign firms' access to the home market). The selected industries were protected until they became competitive not only in the domestic market but also in foreign markets.
2. The favoured industries received special support from the state in the form of direct financial assistance (subsidies, low interest credits) and indirect financial assistance (guarantees, tax reductions and exemptions, accelerated depreciation).

The protection of selected industries from foreign competition was accompanied by a policy aimed at modernising their production. This is exemplified by the production rationalisation policy conducted in Japan in the fifties (Kodama 1994, p. 3). This policy was implemented thanks to special measures which were used in selected sectors or which criss-crossed sectorally. The measures concerning the selected sectors were stated in the Steel Industry Rationalisation Plan, the Petrochemical Industry Promotion Policy, the Man-Made Fibre Promotion Policy and in the Act on Temporary Machine-building Industry Promotion Measures, the Act on Temporary Measures Promoting the Electronics Industry, and the sectorally criss-crossing measures in the Act on Rationalisation of Enterprises. The above named documents encompassed the following measures supporting the industry rationalisation policy (Kodama 1994, p. 3).

1) low interest credits available to companies applying modern technologies and developing modern production,
2) subsidies to research and development (the government tried to direct subsidies production),

3) tax reductions related to accelerated depreciation of machinery contributing to rationalisation of production and to investment projects yielding new products or implementing new technologies,
4) exemptions from customs on imported machinery contributing to production rationalisation,
5) permission to set up rationalising cartels excluded from the Anti-Monopoly Law.

The industry rationalisation policy conducted in Japan in the 1960s contributed to the creation of modern chemical, machine-building as well as iron and steel industries. Whenever their promoted industries began to lose competitiveness in international markets, the Asian countries started looking for new fields of export specialisation.

In the 1960s, the NICs of the first generation recorded a comparative advantage in the manufacture of products involving high inputs of semi-skilled labour and low tech (such an advantage was revealed a decade earlier in the case of Japanese products of the light industry).

In the early 1970s, the Asian *tigers* began losing their competitive edge in the light industry (like Japan somewhat earlier). The loss of that competitiveness resulted from the emergence of new South East Asian exporters of labour-intensive products. Thanks to low wages, the developing countries of South East Asia became more competitive in labour-intensive exports than the NICs of the first generation. The latter countries recognised that their hitherto exporting industries had no future in the international market. In order to continue their export expansion these countries decided to develop other industrial branches, at a higher processing level and simultaneously more capital-intensive. Just as Japan in the 1950s and 1960s, the NICs of the first generation started to promote the heavy and chemical industries, especially steel, non-ferrous metals, shipbuilding, machine-building, petrochemicals in the early 1970s. Of the first generation NICs, the most active policy towards the chemical and heavy industries was pursued by Korea and it was in fact a continuation of the import substitution policy but this time it covered means of production and not consumer goods (Park 1994, p. 7). The investment projects in the priority industries were on a large scale and very risky. That is why the Korean government not only supported firms investing their resources in the heavy and chemical industry but also engaged itself in investment activity by setting up state-owned companies. Taxes were an important element of the Korean industrial policy aimed at encouragement of investment into the heavy and chemical industries. Companies deciding to undertake production in these industries were exempted from income tax and paid a halved tax for the next three years (Park 1994,p. 7).

The Asian countries did not orient their industrial policy solely at promoting the potentially competitive industries. Much stress was also put on restructuring industries which were obsolete, loss-making or were steadily losing their international competitiveness. The Yen appreciation in the early 1970s and the two oil shocks of the 1970s resulted in the gradual loss of international competitiveness of products turned out by the Japanese steel, ship-building, man-made fibres and petrochemical industries. The above named industries began to suffer losses in the aftermath of increased energy prices and a considerably reduced demand in the world market (Kotowicz 1991, p. 40). Some branches of the Korean heavy and chemical industries (chiefly ship-building and petrochemicals) began losing their international competitiveness in the late seventies. The crisis which affected these industries resulted from the second oil shock and from "overinvestment" (Lipowski, Kulig 1995, p. 60).

Japan's and Korea's policy towards the heavy and chemical industries affected by the crisis was aimed at levelling their productive capacity and their modernisation. These industries were restructured by merging stronger firms with weaker ones and funding these merged firms. The government also induced banks to give financial support to big corporations endangered with bankruptcy.

The policy of restructuring the unprofitable industries was pursued concomitantly with the policy promoting industries representing high tech and requiring highly skilled labour. The intensive development of modern production areas allowed utilisation of the idle productive capacity of the industries in decline. The state has extended its special care onto science-intensive production areas since the early seventies in Japan and since the early eighties in the NICs of the first generation. The state's assistance to these industries includes both its financial aid to R&D and implementation of new technological solutions (by setting up joint state and private research projects) and traditional instruments of industrial policy - preferential credits and tax incentives. The policy supporting science intensive production areas has contributed to growth of international competitiveness of technologically advanced industries. As a result of its industrial policy, since the late seventies Japan has recorded big surpluses in its exports of manufactured goods belonging to the group of technologically advanced products (The East Asian ...., 1993, p. 308).

The structure of exports by the NICs shows an increasing share of processed, technologically advanced goods (e.g. computers, office equipment). However, exports by the NICs of first generation are characterised by an weighty share of products at a low processing level and labour-intensive ones. Wood, paper, textiles, clothing, footwear, non-metallic mineral products, toys and sports equipment accounted for 48.4% of total Hong Kong exports in 1994 (cf. Table 4). The other NICs had much lower shares of these products in their exports.

5. Position of the Asian countries in the world economy

The Asian countries have been improving their position in the world economy, which is shown by their rising shares in the world gross product and growing shares in international trade.

Japan's share in the world GDP amounted to 6.5% in 1970 and to 13.4% in 1990 (cf. Table 5). Its ever-increasing share in the global GDP results from its high GDP growth rate. The highest GDP growth rate was maintained in that economy in 1960-1970 when it averaged 10.3% (Handbook ....., 1994, p. 28). Although Japan did not score such high growth in the later years, it still boasted the highest GDP growth rate in the group of industrialised countries in the period 1970-1993. The average GDP growth rate in 1970-1993 in Japan amounted to 4% compared with 2.6% in the USA and 2.4% in France in the same years.

The dynamic development of the Japanese economy is also shown by a high although slackening export growth rate. Japan scored a particularly high export growth rate in 1970-1980 (when it amounted to 20.8%). In 1980-1990, this rate was smaller - at the level of 6.2% but nevertheless Japan had the highest export growth index in the group of industrialised countries in the years 1950-1993 with the average of 16.1% compared with 10.1% in the USA and 11.7% in France. The effect of such dynamic export growth is Japan's growing share in the world exports (cf. Table 7). In 1965-1993, Japan also increased its share in the world exports of manufactured products (cf. Table 9). This share rose from 8.5% in 1965-1969 to 12.9% in 1991-1993. The USA, Germany and the UK decreased their rates in total world exports of manufactured goods in the respective years.

The NICs of the first generation together with the newly industrialising countries increased their share in total world gross product from 1.4% in 1970 to 3.6% in 1990 (cf. Table no. 5). The GDP growth rate of the first generation NICs averaged 9.2% in 1970-1980 and 8.7% in 1980-1990 (cf. table 8).

The first generation NICs also increased their share in total world exports from 0.5% to 10.4% between 1970 and 1995(cf. table 7). This resulted from their high annual export growth rates recorded by these countries from the mid-sixties (cf. Table no. 6).

6. Summing up

Active economic policies were pursued by the governments of Japan, South Korea and Taiwan. These countries provided selected industries with privileged conditions of development. In the analysed period of time, industries recognised as strategically important at a given stage of economic development were provided with protection from foreign competition and assistance in the form of subsidies, preferential credits, credit guarantees, tax exemptions. Such support on the part of the state provided producers in selected industries with high profits. High profits in turn allowed Asian corporations to increase their investment rates, modernise their production and consequently raise their international competitiveness. Once competitiveness in international markets was reached, imports were liberalised and the previously protected industries were exposed to export stimulation incentives. In this way the state created new comparative advantages in exports.

Whenever the hitherto favoured industries started losing their competitive edge in the international market, new export specialisations were looked for. Passing to a higher stage of industrial development, the state involved itself in developing production areas with ever-increasing inputs of high tech and skilled labour.

Table 1. Export share in GDP in "first generation" NICs

Years	Hong Kong	South Korea	Singapore	Taiwan
1970-1979	67.2	20.9	81.7	29.7
1980-1984	75.9	30.0	141.2	48.0
1985-1989	102.9	33.2	142.8	50.0
1989	116.0	29.4	157.8	45.1
1990	116.7	27.1	152.1	42.6

Source: Economic Integration, OECD, Paris 1993, s.21 in: Z. Wysokińska, Dynamiczne współzależności wymiany handlowej krajów Europy Środkowej i Wschodniej w świetle teorii integracji i wymiany międzynarodowej (Dynamic Interdependences in Foreign Trade of Central and East European Countries in the Light of Integration and International Trade Theories), Łódź, 1995, p.31.

Table 2. Industrial import penetration index in industrialised countries, 1961-1979 (share of industrial imports in GNP)

	1961	1965	1969	1973	1979
United States	1.5	2.1	3.4	4.0	4.5
EEC (6)	6.1	7.6	10.1	13.0	15.8
Japan	1.8	1.5	2.2	3.0	2.4

Source: CEPG (1979) in: A. Singh, How Did East Asia Grow So Fast? Slow Progress Towards an Analytical Consensus, UNCTAD, Discussion Papers no. 97, 1995, p. 20

Table 3. Total savings and total investment in first generation Newly Industrialised Countries, 1951-1994 (share in GDP)

Period	South Korea		Taiwan		Hong Kong		Singapore	
	Savings	Investment	Savings	Investment	Savings	Investment	Savings	Investment
1951-1960	3.3	10.0	9.8	16.3	9.2	9.1	...	11.4
1961-1970	13.7	20.0	19.7	21.9	20.4	20.6	14.9	22.3
1971-1980	22.0	28.0	31.9	30.5	28.3	26.7	28.9	41.2
1981-1990	30.4	30.7	35.4	32.9	21.9	34.0	24.8	42.1
1991-1994	34.7	37.1	27.4	23.2	34.0	27.6	48.9	36.3

Source: Trade and Development Report, UN, New York, 1996, p. 110.

Table 4. Commodity structure of exports by Newly Industrialised Countries of the first generation, 1965-1994 (percentage share)

	South Korea				Taiwan				Singapore				Hong Kong			
Commodity group	1965	1975	1985	1994	1965	1975	1985	1994	1965	1975	1985	1994	1965	1975	1985	1994
Group I	*42.8*	*17.7*	*5.9*	*5.3*	*60.0*	*19.0*	*8.6*	*7.0*	*61.1*	*36.9*	*23.3*	*8.6*	*7.5*	*3.2*	*4.0*	*5.0*
Food	17.5	14.1	4.4	2.8	53.0	16.6	6.2	4.0	21.2	11.8	7.6	4.8	4.7	1.9	2.1	2.9
Other basic products	25.3	3.6	1.5	2.5	7.0	2.4	2.4	3.0	39.9	25.1	15.7	3.8	2.8	1.3	1.9	2.1
Group II	*43.8*	*53.3*	*36.3*	*25.2*	*26.3*	*48.7*	*44.4*	*25.7*	*12.6*	*12.4*	*10.6*	*6.1*	*74.4*	*69.0*	*56.4*	*48.4*
Wood and paper	11.1	5.6	0.7	1.1	7.3	5.2	2.9	1.7	1.3	3.1	2.4	1.0	0.5	0.3	0.6	1.5
Textiles, clothing and footwear	30.9	43.9	32.1	22.7	15.8	38.9	32.6	19.4	9.1	7.8	6.5	4.0	64.2	60.4	46.7	44.8
Non-metallic mineral products	1.7	2.3	1.2	0.7	2.6	1.1	2.3	1.2	1.9	1.1	0.9	0.7	0.9	0.8	0.5	0.7
Toys and sorts equipment	0.1	1.5	2.3	0.7	0.6	3.5	6.6	3.4	0.3	0.4	0.8	0.4	8.8	7.5	8.6	1.4
Group III	*9.1*	*11.0*	*30.8*	*14.7*	*4.2*	*6.1*	*11.1*	*9.6*	*5.4*	*8.6*	*4.8*	*3.9*	*7.7*	*4.4*	*3.6*	*2.7*
Iron and steel	7.7	4.9	6.4	5.4	2.6	1.9	2.1	1.9	2.3	2.6	1.4	0.9	0.9	0.1	0.1	0.2
Processed metal products	1.3	2.6	5.2	2.8	1.2	2.7	5.4	6.1	2.5	2.0	1.7	1.3	3.6	2.9	2.5	2.3
Ships and boats	0.0	3.0	17.9	5.6	0.0	0.4	0.6	0.5	0.1	3.8	1.4	1.1	0.5	0.3	0.1	0.0
Others [a]	0.1	0.6	1.3	1.0	0.4	1.1	3.0	1.0	0.5	0.2	0.3	0.6	2.6	1.2	0.9	0.2
Group IV	*3.0*	*10.9*	*13.4*	*35.3*	*3.1*	*11.7*	*19.0*	*29.2*	*13.7*	*24.8*	*29.4*	*32.7*	*4.7*	*9.5*	*12.9*	*18.2*
Rubber and plastic products	0.7	3.7	2.0	2.2	0.3	3.1	4.1	3.9	0.8	0.6	0.8	1.1	1.0	2.8	2.3	1.8
Non-electrical machinery	1.5	0.7	2.0	5.7	1.4	2.8	4.5	8.2	4.6	8.6	8.6	7.5	0.6	0.6	1.6	3.3
Electrical machinery	0.3	6.4	7.2	20.8	1.4	5.1	9.1	15.1	1.8	13.2	19.0	23.4	3.1	6.1	9.0	13.1
Road motor vehicles	0.6	0.1	2.2	6.6	0.0	0.7	1.3	2.0	6.5	2.4	1.0	0.7	0.0	0.0	0.0	0.0
Group V	*1.4*	*7.2*	*13.5*	*19.5*	*6.4*	*14.4*	*17.0*	*28.5*	*7.4*	*17.4*	*31.9*	*48.7*	*5.8*	*13.9*	*23.1*	*25.8*
Chemicals and pharmaceuticals	0.2	1.6	3.6	7.1	4.9	2.0	2.9	6.1	5.7	6.0	8.7	6.9	1.3	0.9	1.1	4.0
Computers and office equipment	0.0	1.0	2.1	4.0	0.0	1.6	4.5	13.5	0.3	2.6	9.3	27.6	0.0	1.7	5.7	7.1
Telecommunications equipment	0.9	3.0	5.7	6.7	1.3	9.0	7.7	6.6	0.5	4.9	8.6	10.4	3.6	7.0	6.9	4.5
Others [b]	0.3	1.7	2.1	1.7	0.1	1.8	1.9	2.3	0.9	4.0	5.3	3.8	0.9	4.3	9.4	10.2

Source: On the basis of UNCTAD calculations based on UN Commodity Trade Statistics, in Trade and Development Report, UN, New York, 1996, p. 118.

Notes: a Transport equipment other than motor vehicles, ships and aircraft and sanitary and plumbing equipment.

b Aircraft and accompanying equipment, scientific instruments with clocks and photographic equipment.

Table 5. Share of Asian countries in world GDP, 1970-1990 (percentage change)

	1970	1975	1980	1985	1990
World	100.0	100.0	100.0	100.0	100.0
Japan	6.5	8.1	9.2	10.7	13.4
Newly Industrialised Countries	1.4	2.0	2.7	3.1	3.5

Source: Calculated on the basis of official national statistics in : Z. Wysokińska, Dynamic Interdependences in Foreign Trade of Central and East European Countries in the Light of Integration and International Trade Theories, op.cit., p. 15.

Table 6. Average export growth rate in Asian countries, 1970-1995 (percentage change)

Country	1970-1980	1980-1990	1990-1991	1991-1992	1992-1993	1993-1994	1994-1995
Hong Kong	22.4	16.8	20.0	21.2	13.2	12.0	14.8
South Korea	37.2	15.0	10.5	6.6	7.3	16.8	30.3
Singapore	28.2	9.9	8.7	11.2	13.7	20.0	31.6
Taiwan	28.6	9.6	13.4	6.9	4.0	9.6	20.3
Japan	20.8	8.9	9.5	8.0	6.6	9.6	11.6

Source: Handbook of International and Trade Development Statistics, UN, New York 1997, pp. 18 and 14.

Table 7. Share of East Asian countries in world exports, 1965-1990 (percentage change)

	1970	1975	1980	1985	1990	1995
World	100.0	100.0	100.0	100.0	100.0	100.0
Japan	6.1	6.3	6.4	9.0	8.2	8.7
"First generation" NICs	0.5	2.4	3.9	5.8	7.6	10.4

Source: Calculated on the basis of Handbook of International and Trade Development Statistics, UN, New York 1997.

Table 8. Average GDP growth rate in Asian countries, 1970-1994 (percentage change)

Country	1970-1980	1980-1990	1990-1991	1991-1992	1992-1993	1993-1994
Hong Kong	9.1	6.9	5.1	6.3	5.8	5.5
South Korea	10.1	9.4	9.2	5.0	5.6	8.0
Singapore	8.3	6.4	6.7	6.3	10.1	10.2
Taiwan	9.4	8.3	7.6	6.2	6.0	6.1
Japan	4.3	4.1	4.3	1.1	-0.2	0.5

Source: Handbook of International and Trade Development Statistics, UN, New York, 1997, pp. 290 and 286.

Table 9. Share of "first generation" NICs and major industrialised countries in world industrial exports

Period	USA	UK	Germany	Japan	1st generation NICs
1965-1969	19.1	10.6	17.1	8.5	2.0
1970-1974	15.4	8.3	17.7	10.3	3.4
1975-1979	14.4	7.9	16.9	11.1	4.6
1980-1985	14.6	6.8	14.8	13.4	6.8
1986-1990	11.9	6.2	15.6	13.3	8.6
1991-1993	13.0	5.9	14.2	12.9	9.0

Source: On the basis of UNCTAD calculations based on UN Commodity Trade Statistics in: Trade and Development Report, UN, New York, 1996, p. 93.

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