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Can the Second Generation Succeed?

by Ralf M. Mohs, Vienna*

The success of the newly industrializing countries of the 1970s brought with it the hope that other Third World countries would soon be able to follow a similar path to development. The conditions facing this second generation of NICs appear far more unfavourable than those which faced the first generation, however. To what extent is the latter's prescription for success still applicable?

The emergence of the Newly Industrializing Countries (NICs) in the world economy and their specific industrial development patterns have attracted a great deal of attention in the literature on foreign trade and economic development. In a 1979 study, the OECD grouped together in the NICs category Brazil, Greece, Hong Kong, the Republic of Korea, Mexico, Portugal, Singapore, Spain and Yugoslavia.¹ Although these countries differ widely in terms of population, resource endowments, political and economic systems, and the specific policies applied, a common characteristic to many of them is that they owe their economic success largely to the application of economic policies suitable to bring their development and trade patterns in line with comparative advantages.² This is particularly true of the Asian NICs, which relied more than the Latin American NICs in their development strategies on the growth potential offered by the world market for their manufactured exports. The basic mechanisms through which "opening-up" policies are regarded to transmit stimuli for industrial growth are³

- increases in domestic competition through liberal import regimes, leading to increases in the efficiency of industrial enterprises and the allocation of scarce resources in the economy in general;
- the reduced scope in the pursuance of export-oriented strategies for political interference in the "free" play of market forces, as export-promotion policies have to rely on "second-worst" policies, such as taxes, tariffs and subsidies as opposed to direct controls;
- the possibility of realizing economies of scale on the world market, for which the domestic internal markets might be too small.

Indeed, most of the NICs shifted their development policies, after initial phases of import substitution, to such an outward-looking growth pattern, promoting mainly exports of light manufactures such as leather products, textiles and clothing, toys and other consumer goods. The success of the NICs in gaining greater shares in world manufacturing production is out of question. What is in question, however, is whether from the experience of the NICs a case can be made for expecting or even advocating world-wide industrial restructuring along the lines of the "stages approach" to comparative advantage.⁴

According to this model of structural change, during the first stage of their industrial development, countries specialize in the manufacturing and export of labour-intensive, light industrial consumer goods, utilizing comparative advantages derived from their relative abundance of unskilled labour. Once a process of indigenous industrial growth has been initiated, developing countries are expected to accumulate capital, while at the same time exhausting their unskilled labour surplus. As a consequence, they would become less labour-rich relatively to the industrialized countries, which would be reflected in an upgrading of their production and export structures towards more capital-

¹ OECD: *The Impact of the Newly Industrializing Countries on Production and Trade in Manufactures*, Paris 1979.

² Using time series data for 15 NICs, for the majority of countries a statistical link could be established between the correspondence of a country's manufactured exports to its comparative advantage on the one hand, and the economic growth of that country on the other hand. Cf. Ralf-Matthias Mohs: *Exporte, komparative Vorteile und wirtschaftliche Entwicklung in den Schwellenländern*, Göttingen 1983, Chapter VI.

³ Cf. for instance Anne O. Krueger: *Trade Policy as an Input to Development*, in: *American Economic Review*, Vol. 70, 1980, Papers and Proceedings, pp. 288-292.

⁴ Cf. Bela Balassa: *A "Stages" Approach to Comparative Advantage*, World Bank Staff Working Paper No. 256, Washington D.C., 1977; and Mohs, *op. cit.*, pp. 136-164.

*UNIDO. The views expressed in this article are those of the author and do not necessarily reflect the views of the UNIDO Secretariat.

intensive consumer goods and capital goods. In other words, in the course of economic development countries are expected to "move up" the scale of comparative advantage, restructuring their production and export baskets from traditional labour-intensive manufactures to more advanced, capital-intensive products.

In the case of the established NICs, their emergence as exporters of manufactured goods in the world market did not require reductions in the output levels of import-competing branches in developed countries, but only slight reductions in their growth rates. As at the beginning of this process, market penetration ratios achieved by the LDCs in the DC's market were small and as, additionally, world trade was growing at high rates, this could initially be accomplished relatively easily. Now, however, the model of restructuring along the lines of changing comparative advantages has come to a test with the emergence of a second generation of NICs (SGNs).

Second Generation NICs

Different criteria have been used to identify this group. In the OECD study, two groups of prospective NICs were distinguished. Group I consists of countries which already fulfil many of the conditions for rapid industrial growth, but which have pursued inward-looking policies for too long: Argentina, Chile, Egypt, India and Pakistan. Group II countries, on the other hand, are regarded as having a less favourable basis, but these countries have pursued increasingly outward-looking policies since the seventies: Colombia, Malaysia, the Philippines and Thailand.⁵

Using a more "measurable" criterion for classifying countries, Havrylyshyn and Alikhani grouped together twelve countries whose manufactured export growth

rates exceeded those of the NICs (according to the OECD classification) in the 1970 to 1979 period. The countries in this group are: Colombia, Cyprus, Indonesia, Jordan, Malaysia, Morocco, Peru, the Philippines, Sri Lanka, Thailand, Tunisia and Uruguay.⁶ These countries were not only comparable to the NICs in terms of the successful promotion of manufactured exports, but also were found to have based their export expansion to a large degree on the same products as the NICs before them: clothing, textiles, yarns and fabrics, electrical machinery, non-metal mineral manufactures and miscellaneous manufactures. Indeed, the SGNs relied even more on the traditional labour-intensive manufactures, clothing and textiles, which accounted for 39 per cent in their manufactured exports basket in 1979 compared to 27 per cent in the NIC basket in 1970.

Apart from these similarities in the development of export patterns, there is an important difference, both in terms of the structural composition of exports and of the growth rates achieved, between the development experience of NICs and SGNs. The growth rates of per capita income in the SGNs in the 1970s were lower than the respective growth rates of the first generation NICs in this period and fell significantly short of the growth rates achieved by the NICs with a similar export pattern in the second half of the 1960s. This indicates that one might have to question the further validity of the transmission mechanisms, which proved so successful for the NICs, as the main stimuli to growth for SGNs. Among the most obvious arguments which could be advanced in favour of such doubts are:

⁵ OECD, *op. cit.*

⁶ Cf. Oli Havrylyshyn, Iradj Alikhani: Is there Cause for Export Optimism? An Inquiry into the Existence of a Second Generation of Successful Exporters, in: *Weltwirtschaftliches Archiv*, Vol. 118, 1982, pp. 651-663.

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- differences in the economic environment of SGNs regarding the demand side;
- different, more restricted conditions for the SGNs in terms of industrial financing;
- changes in technology and the structure of foreign investment invalidating the traditional transmission mechanisms;
- different internal economic and social conditions in the SGNs, tending to decrease the net benefits of industrial restructuring along the lines of traditional comparative advantage.

Differences on the Demand Side

The most direct argument against the possibility of SGNs following the development pattern of the NICs is the neo-protectionist reactions of the developed countries to the exports of the NICs. These protectionist reactions appeared despite the relatively low market penetration ratios of manufactured exports from NICs in the developed countries' markets. Cline calculated hypothetical exports from developing countries, under the assumption that a large majority of countries had relied in their economic development to a similar degree to Hong Kong, Singapore and Taiwan on the promotion of manufactured exports.⁷ Under this admittedly unrealistic assumption, he found that the share of developing countries' exports in the manufactured imports of developed countries in 1976 would have been 61 per cent, instead of the actual figure of 17 per cent.

Of course, a scenario assuming all developing countries would follow the export strategy of the South-East Asian NICs is neither realistic nor does it properly take into account changes in comparative advantage. As the NICs moved up the scale of comparative advantage, they would upgrade their product and export structures, thus freeing market shares in the developed countries for the SGNs following behind them. Just this movement up the scale of comparative advantage, however, is in serious question now. Admittedly, it can be observed, that many of the NICs have successfully started to upgrade and diversify their export baskets to include an increasing number of more sophisticated consumer and capital goods such as automobiles, ships and steel. The question remains, however, whether the NICs will be able in quantitative terms to expand exports of such new products to a degree which would allow them to assume the role which exports of labour-intensive products played in the past for the economic

development of many NICs. In the past, with a very short time-lag an "up-grading" of neo-protectionism could be observed corresponding to the up-grading of the NICs' exports and comparative advantages. Evidence for this development is given by the growing subsidies of European governments to their national shipbuilding industries, the increasing role of "voluntary" export restraints in the case of automobiles and the regulation of the international steel market.

This "up-grading" of protectionism in the developed countries tends to prevent the NICs from restructuring their industries corresponding to their new comparative advantages. What will be the consequences of this for the SGNs? The NICs will have to, and will, successfully defend their positions with traditional manufactures in the developed countries' markets, having acquired a profound knowledge of the OECD markets, being experienced in dealing with the jungle of neo-protectionist regulations and knowing ways of clearing their way through it, and having well-established trade and sales channels at their disposal.

However, the SGNs, in contrast to the experience of the NICs in the 1960s, are now facing not only competition from other, more competitive developing countries: traditionally labour-intensive industries in the developed countries have, meanwhile, successfully restructured themselves, *inter alia* through the introduction of new computerized technologies.

In sum, compared to the NICs in the past decade, the SGNs today face much heavier and much more serious competition in the developed countries' markets in their efforts to find market outlets for their labour-intensive manufactured goods. Both new actors (the NICs defending their positions) and new weapons (new technologies adopted by the import-competing industries in the developed countries) have entered the stage. It is by no means clear that the better cards in this new round of the game are in the hands of the SGNs.

The Financing Side

Shifts of the industrialization pattern from an inward to an outward looking strategy require an inflow of foreign resources in terms of know-how and capital goods, which are needed to promote new industrial branches. Part of these resources will have to be raised through external borrowing. However, the financial environment for the SGNs at the beginning of the 1980s is clearly different from the one faced by the NICs at the beginning of the 1970s. Taking the countries classified as middle-income oil importers by the World Bank, the average interest rate charged by all creditors (official and private)

⁷ William R. Cline: Can the East Asian Model of Development be Generalized? in: *World Development*, Vol. 10, 1982, pp. 81-90.

on new commitments of public debt doubled from 6.2 per cent in 1972 to 12.3 per cent in 1981. At the same time the grace period fell from 5.0 years in 1972 to 4.1 years in 1981 and, more important, the grant element of new public debt commitments fell from 23.2 per cent in 1972 to 1.2 per cent in 1980, to become negative by minus 8.5 per cent in 1981.⁸ There remains, however, a significant difference between public debt committed with official creditors and with private creditors, as the grant element of loans given by official creditors remained positive by 13.4 per cent in 1981 (having fallen from 33.7 per cent in 1972), whereas the grant element given by private creditors in 1981 was negative by -22.2 per cent (compared to 11.4 per cent in 1972).

The development of the terms of public debt, especially that committed with private creditors, indicates that the model of "indebted industrialization" followed by many NICs, at least for the time being, has

⁸ Figures from the World Bank, World Debt Tables, Washington D. C., 1983. The *grant equivalent* of a loan is its commitment (present) value, less the discounted present value of its contractual debt service; conventionally, future service payments are discounted at 10 per cent. The *grant element* of a loan is the grant equivalent expressed as a percentage of the amount committed.

come to a halt. This is underlined not only by the fact that the terms of public debt for developing countries deteriorated dramatically in the 1970s, but also by the sharp drop in international bank lending at the beginning of the 1980s. According to figures of the Bank for International Settlements, international bank lending dropped from its peak of \$ 264.9 billion in 1981 to \$ 175.0 billion in 1982.

However, SGNs at the beginning of the 1980s not only face different conditions of external financing than did the NICs at the beginning of the 1970s. Additionally, high debt-service obligations, depressed commodity prices and protectionism against their manufactured exports have reduced the potential for SGNs to generate through their own efforts those foreign exchange earnings which would be required to finance the necessary imports for a restructuring of their industries. The differences can be shown by comparing the interest-service ratios (interest payments to exports of goods and all services) of the SGNs today to the respective ratios of the NICs at the beginning of the 1970s. For the NICs in 1972, this ratio was 4.9 per cent for Brazil, 2.7 per cent for Greece, 6.2 per cent for Korea, 6.8 per cent for Mexico, 0.9 per cent for Portugal, 0.3 per

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Rolf Jungnickel/Ulrike Maenner

EIGENIMPORTE DER DEUTSCHEN INDUSTRIE (OWN IMPORTS BY GERMAN INDUSTRIAL ENTERPRISES)

Own imports by German industrial enterprises from subsidiaries and associated companies, from partners in cooperation agreements and from unrelated foreign producers, have until now been more or less ignored by empirical economic research. In deliberations on production and sales strategy own imports are becoming increasingly important for enterprise policy not least with regard to the providing of security for the enterprise and its employees in the face of growing competitive pressure. Both from a general economic perspective and from the point of view of economic policy, the question is therefore raised whether own imports, for example because of their sectoral effects on employment and income, should be judged differently than "traditional" import forms. This empirical analysis sheds light on some fundamental aspects of the problem.

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cent for Singapore and 1.5 per cent for Yugoslavia. For the SGNs in 1981, the interest-service ratios were 8.4 per cent for Colombia, 2.7 per cent for Cyprus (1980), 4.1 per cent for Indonesia, 2.5 per cent for Jordan, 2.1 per cent for Malaysia, 4.1 per cent for Morocco, 12.5 per cent for Peru, 6.0 per cent for the Philippines, 3.0 per cent for Sri Lanka, 4.3 per cent for Thailand, 6.4 per cent for Tunisia (1980) and 6.3 per cent for Uruguay (1980). On average, the interest-service ratio was 3.3 per cent for the NICs in 1972, compared to 5.2 per cent for the SGNs in 1981.

These figures indicate that changes in the international financial and trading environment tend to increase the costs and to reduce the potential for SGNs at the beginning of the 1980s to restructure their economies towards the world markets, compared to the experience of the NICs in the past.

Changes in Technology and Investment

A third difference in the economic environment which the SGNs face today compared to the NICs at the beginning of the 1970s results from changes in technology and the structure of private foreign investment. The question is whether private foreign investment, in view of technological changes, can still be expected to promote restructuring of the SGN economies along the lines of traditional models of comparative advantage. There are strong indications that the answer might be in the negative, as can be seen from the examples of the textiles and clothing and the electronics industries.

The textile industry in the developed countries has undergone and is still undergoing a period of rapid technological change, aimed at modernization and consolidation of the industry through cost-reducing process innovations. According to the Commission of the European Communities, in the clothing industry a "sweeping change in production methods as a result of automation could considerably reduce the cost disadvantage under which the Communities' industry operates as compared with its competitors in developing countries".⁹

However, the chances for successful resistance by OECD textile industries to international redeployment might be smaller than generally believed.¹⁰ In the textile sector (in particular man-made fibres, spinning, weaving and knitting), further introduction of computerized technologies will require substantial

capital investment. Persisting high interest rates and stagnating demand in the OECD markets might lead to falling profits and growing vulnerability. Beyond that, in garment manufacturing, new technological developments might even increase the attractiveness of developing countries as production sites. New generations of computer-based automation systems in grading, designing and cutting would raise the pressure to increase the effective annual utilization of such equipment. In view of the actual trends in developed countries to reduce working hours per week and considering existing labour legislation, a maximum utilization of such equipment through multiple shift work might only be possible in developing countries. In Western Europe, for instance, in the context of given labour legislation, equipment utilization is estimated to average around 5,700 hours a year, whereas in South-East Asia it often exceeds 7,000 hours.

These trends, however, should not be taken to support the argument that traditional manufactures like textiles and clothing might play a similar role for the development of SGNs as for the NICs in previous years. First, the new technologies tend to confer comparative advantages on countries having a potential of relatively cheap *skilled* labour and the infrastructure required to fully utilize new production and communication technologies. The NICs might indeed turn out to be more competitive and better endowed than the SGNs in this regard. Secondly, even if the SGNs were able to attract such foreign investment, the new technology incorporated in it would mean that the benefits to be reaped by the SGNs in terms of employment generation, skill formation, forward and backward inter-industrial integration and technological spin-offs might be smaller today and even smaller tomorrow than for the NICs in the 1960s and 1970s.

Electronics

Similar arguments can be promoted with respect to the electronics industry. Just as in the case of textiles, the assembly of consumer electronic products and semi-conductor devices was an important source of providing employment to unskilled labour in the NICs in the 1960s and 1970s. Here, too, changes in technology tend to increase the attractiveness of the NICs compared to the SGNs as production sites and reduce the development stimuli to be reaped from the establishment of such industries by the SGNs, if they could "bid" successfully for such investment in the "world market".

⁹ Commission of the European Communities: Commission communication to the Council on the situation and prospects of the textiles and clothing industries in the Community, COM 81/388 final, p. 45.

¹⁰ Cf. UNIDO: Fourth General Conference of UNIDO, World Industrial Restructuring and Redeployment, ID/CONF. 5/3, 11 January 1984.

Computer-based automation is penetrating all stages of the design, production, application and maintenance of electronic hardware and complementary software. This is accompanied by sky-rocketing capital outlays and an upsurge in capital intensity. Despite this, developing countries might remain attractive as production sites. In the developed countries, an emerging severe shortage of skilled labour is threatening to become a bottleneck to the progressive automation of industrial production.¹¹ Among the most acute shortages are wafer-processing engineers, maintenance and test technicians, application engineers with multi-disciplinary skills and experience in micro-electronic applications, and design engineers with good software skills. Although companies based in the developed countries try to reduce these emerging bottlenecks through measures such as increased in-house training, the availability of skilled labour at substantially lower cost in developing countries might be an important asset in the attraction of private foreign investment. In fact, in India for example there is a surplus of programmers, systems analysts, solid-state physicists and design engineers. Countries like the Republic of Korea and Singapore are conducting government-funded crash training programmes for programmers, systems analysts and electronic engineers.

Again, as in the case of textiles and clothing, the competitive edge in attracting such industries might be expected to be with the NICs, leaving the SGNs empty-handed. Although some countries such as Malaysia, the Philippines and Thailand have started programmes to increase their resource-base with respect to technically trained human capital, this might not be sufficient to out-compete the established NICs, which still would have comparative advantages with respect to the broadness of their human capital base and the technological and communications infrastructure they can provide.

To sum up, both the textiles/clothing and the electronics sector give examples of industries which provided important contributions to the economic development of the NICs in their early stages. In the 1980s, however, it cannot be expected that the SGNs will move into those positions which the NICs used to have in the world market in previous years. Instead, new technological developments tend to leave comparative advantages with the NICs or even to transfer them to the developed countries. Finally, even if this view were too pessimistic with respect to one or both groups of industries, the benefits which the SGNs could expect

from the attraction of such industries in terms of employment generation, skill formation, stimulation of industrial development through inter-sectoral linkages and technological spin-offs would be smaller today and can be expected even to be further reduced in the future.

Different Socio-economic Conditions

A final argument refers to differences between the stage of industrial development of many SGNs compared to the economic structures of many of the NICs in the mid-sixties and early seventies. Many of the SGNs have entered advanced stages of import substitution, on a country or regional basis, and are characterized by an already much more diversified industrial base than the NICs had when they shifted to outward-looking policies.

A fundamental shift of the industrial structure towards traditional comparative advantages, therefore, would require much more industrial capacity in the SGNs to be given up in order to free resources and transfer them to new sectors, unless it is assumed that the SGNs could achieve very high overall industrial growth rates, enabling them to restructure their economies without having to reduce output in less efficient sectors.

As the experience of many Latin American countries such as Argentina, Chile and Peru shows, this process of transferring resources from less to more productive sectors cannot be expected to be without serious ruptures. In fact, in many cases it ended in deep economic recession. In other words, the adjustment costs in terms of output and foreign exchange savings foregone, for the least in the first phases of the restructuring process, tend to be higher in countries which have already developed a wider industrial base. Very high efficiency gains might be required to be reaped for a very long time in order to offset the properly discounted output losses which an SGN with a diversified industrial base would have to bear in the restructuring process, before new, competitive economic activities are established. However, whether these gains could ever be reaped in view of

- the insecurity regarding future comparative advantages in previously labour-intensive sectors, due to technological change,
 - the resulting smaller benefits in terms of employment and production linkages which could be reaped from sectors on which the NICs founded their success, and
 - the dim prospects for a dramatic opening of OECD markets for exports from developing countries,
- remains very much in the open.

¹¹ Cf. UNIDO, *op. cit.*, p. 18.