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Export-led Development in East Asia: A Flawed Model

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The export-oriented newly industrialising countries (NICs) of East Asia, especially Korea and Taiwan, are often cited as development models for other Third World countries. This article argues that such models are flawed because the export markets depended upon are becoming more protectionist; agriculture in those countries is being wiped out, with implications for food security; the ecological costs of industrialisation have reached crisis proportions; the working class no longer accepts the legitimacy of the model and its associated repression of labour; and the lack of a sophisticated high-technology sector in these countries means that they have not avoided severe dependency on more advanced economies, especially Japan. Some lessons can be drawn from their experience, such as the usefulness of an actively interventionist state role in industry, but the general prescriptions of the export-oriented industrialisation (EOI) model are no longer valid.

For the last two decades, the NIC or newly industrialising country model of high-speed, export-oriented industrialisation has reigned as the orthodoxy in development economics. This intellectual hegemony coincided with a period when the so-called tiger economies of the Asia-Pacific region were registering 8-10 per cent growth rates which, for many observers, constituted the most convincing proof of the merits of the model.

Today, the growth rates remain respectable, but they have not been able to hide the serious flaws which have plunged the East Asian NICs into serious difficulties and undermined the strategy of export-oriented industrialisation.

The NIC model

What exactly the NIC model is must first be clarified. On the one hand, there is the notion, common among orthodox economists, that the essence of 'NICDOM' is achieving high growth rates through liberalisation and free trade. Structural adjustment programmes are, in fact, being sold to Third World countries on the promise that liberalisation and free trade will turn them into new Taiwans and Koreas. This is, however, a misreading of the NIC experience, since even at the height of their success in the mid-eighties, Korea and Taiwan – the NICs whose experience is most relevant to the Third World – had highly protected domestic markets, extremely restrictive foreign investment codes, and strongly interventionist states.[1]

The NIC model, it is now clear, involved a strong emphasis on export manufacturing grafted on to a protected domestic market, nurtured and guided by a powerful directive state that did not hesitate to use subsidies and deploy state resources behind NIC firms that were battling for shares in extremely competitive international markets. But at the centre of the NIC strategy was a draconian effort to achieve export competitiveness by utilising repression to keep labour cheap. The crisis of the NIC model stems from the fact that the external and internal conditions of EOI – a liberal world trading order and cheap labour – no longer hold, at the same time that the costs of the strategy have caught up with the NICs in the form of a profound crisis in agriculture, massive environmental degradation, political instability, and deepening technological dependency on advanced industrial countries.

The demise of free trade

The most immediate threat is the spread of protectionism in the NICs' main markets. It is becoming increasingly clear that the NICs were the product of a unique and historically evanescent period when the US not only offered the world's largest and most dynamic market, but also served as the guardian of the post-war liberal world trading order.

From being the locomotive of East Asian growth, the US has, over the last five years, turned into an aggressively protectionist power. Indeed, a trade war against the NICs has been in progress since senior US Treasury official David Mulford issued what amounted to a declaration of hostilities in October 1987: 'Although the NICs may be regarded as tigers because they are strong, ferocious tigers, the analogy has a darker side. Tigers live in the jungle, and by the law of the jungle. They are a shrinking population.'[2]

The US protectionist offensive has been a multi-pronged effort.

- In January 1989, the US revoked the tariff-free entry of selected NIC imports under the Generalised System of Preferences (GSP). But even more damaging than this measure, which affected only about 10 per cent of NIC exports, were the quantitative restrictions on NIC exports that go by the euphemism of voluntary export restraints (VERs). Restrictive quotas placed on Korean textile imports had, in fact, already drastically reduced their rate of growth from 43 per cent per year in the 1970s to less than one per cent per year in the early 1980s. Tough restrictions have also limited Korean steel to less than two per cent of total US steel imports.

- To make the NICs' exports more expensive and thus less appealing to American consumers, Washington, in bilateral trade negotiations with the two NICs, forced the appreciation of the New Taiwan dollar and the Korean won by 40 per cent and 30 per cent, respectively, between 1986 and 1989. Currency warfare has been extraordinarily effective in settling US external accounts with Korea. As a high executive of a leading Korean textile firm complained, 'We can absorb wage increases, but we can't take any more appreciation.'[3]

- Protectionist measures were coupled with an aggressive drive to abolish import restrictions and lower tariff barriers to US goods in the NIC markets. Threatened by the infamous Super 301 – legislation that required the US President to take retaliatory measures against those officially tagged as 'unfair traders' – Korea and Taiwan have been forced to liberalise trade restrictions on thousands of services and commodities, from foreign banking operations to cigarettes and beef.

- Washington and US corporations have teamed up to throttle unauthorised technology transfer to the NICs. While the US government has sought to place restrictive covenants on intellectual property rights in the General Agreement on Tariffs and Trade (GATT), US high-tech companies have initiated technological warfare against Korean and Taiwanese clone makers. IBM, Texas Instruments, and Intel now stand to make hundreds of millions of dollars in royalty payments from East Asian producers, who have no choice but to pay up, given their dependence on trouble-free entry into the US market.

The US techno-trade offensive has curbed further expansion of exports from Taiwan and Korea to the US market, and drastically turned Korea's trade surplus with the US of $9.5 billion in 1987 into a deficit of $335 million in 1991.

Faced with a US market that is becoming less hospitable, the NICs have been feverishly hunting for new markets, only to be dashed against the reality that there is really no substitute for the US as a locomotive of export led growth. Efforts to export to Western Europe have intensified, but so have anti-dumping moves against NIC producers, particularly the Koreans. NIC attempts to carve out a niche for their manufactured goods at the lower end of the Japanese market have met with the full force of Japanese protectionism. For instanee, Korean knitwear manufacturers have been successfully intimidated by Japanese bnreaucrats and garment makers to limit their exports to Japan, or else.

The prospect of markets in China, the former Soviet Union and Eastern Europe has received a lot of hype in the NIC press, but recent developments have underlined the fact that these fragile post-socialist economies will generate no more than a fraction of the former US demand. The purchasing power of China's population remains extremely limited by poverty, while structural adjustment measnres which close down inefficient factories, lay off surplus workers and radically rednce social subsidies have effectively eliminated Eastern Europe and the former Soviet Union as significant mass markets, at least in the short and medium term.

The immense difficulties of diversifying from the US market in an increasingly protectionist world are suggested by the following set of statistics. In 1988, Hyundai sold over 300,000

Excel subcompact cars in the US. In contrast, in the same year, it was able to sell only 20,097 in the European community and a minuscule 150 in neighbouring Japan.[4]

With the closing up of the US market, Korea's economic growth since 1990 has, in fact, been fuelled largely by domestic demand – the unintended result of the 60 per cent rise in real wages that Korean workers were able to gain from the waves of strikes they launched between 1987 and 1990. Yet the reigning doctrine in technocrat and business circles continues to be export-led growth. For not only do Korea's conglomerates refuse to admit that they have been saved from dire economic straits by labour's successful struggle for higher wages, but they also do not wish to grant any legitimacy to a Keynesian domestic demand-driven economic development strategy which could institutionalise ever-rising wages at the expense of profits.

Table 1: Selected indicators of Korea's external trade

	1989	1990	1991
Total exports (FOB $B)	62.4	65.0	71.5
Exports to US ($B)	19.7	18.5	17.0
US share of Korea's exports	32%	28%	24%
Total imports (CIF $B)	61.5	69.8	79.0
Trade balance ($B)	.9	-4.8	-7.5
Trade balance with US ($B)	6.2	4.1	-.3*
Trade balance with Japan ($B)	-4.0	-6.0	-8.7*

Sources: Except where indicated, figures come from Office of the Pacific Basin, US Department of Commerce, July 1992
*Ministry of Finance, Republic of Korea, 1992

The ferocity of the American assault has stunned not only the NICs but also Third World countries which have adopted, at the advice of the World Bank and the International Monetary Fund, EOI programmes that are geared at also turning them into export machines that will service the US market. The more perceptive among them have begun to realise that the EOI prescription has become an ideology that no longer matches the reality of a world that is fast turning from free trade to a system of managed trade among emerging regional trading blocs.

These observers have also begun to notice that the internal costs of high-speed EOI, which were long papered over by dazzling growth rates, have begun to catch up with the NICs.

Table 2: Selected indicators of Taiwan's external trade

	1989	1990	1991(est.)
Total exports (FOB $B)	66.2	67.2	72.4
Total exports to US ($B)	11.3	11.4	13.1
US share of Taiwan's exports	17%	17%	18%
Total imports (CIF $B)	52.2	54.7	60.7
Trade balance ($B)	14.0	12.5	11.7
Trade balance with US ($B)	12.0	11.1	9.6
Trade balance with Japan ($B)	-7.0	-7.7	-8.8

Source: Office of the Pacific Basin, US Department of Commerce, July 1992

Agriculture on the verge of extinction

Agriculture is facing extinction in both Taiwan and Korea, and this is directly related to the fact that since the mid-sixties, agriculture has been systematically subordinated to the development of export manufacturing. Not only was the sector deprived of investments, but it was deprived of both capital resources and people in order to build up the export platform, leaving it with less than 20 per cent of the population and consigning it to low productivity.

Was the subordination of agriculture intrinsic to the NIC phenomenon or simply an unfortunate by-product? The record appears to be in favour of the former: the technocrats in both Taiwan and Korea consciously squeezed agriculture to subsidise industry in order to make the latter export-competitive. Low grain price policies in Korea, says one expert in Korean agriculture, 'were adopted as a means of surplus extraction.... The state was, in effect, engaged in forming an export-oriented entrepreneurial class that was competitive in world markets. Keeping wage costs low facilitated this economic development strategy.'[5]

The subordination of agriculture to promote export industry was particularly central during the first, critical phase of EOI in the late sixties, when low grain price policies drove farm household income down, in the case of Korea, from rough parity with urban houschold income in 1965 to 67 per cent of the latter by 1970, and, in Taiwan's case, from 70 per cent to 60 per cent of urban income.[6] In Taiwan, low grain price policies were systematically employed not simply to provide cheap food for the labour force of export-oriented industries but to create that labour force itself. 'The government has intentionally held down the peasants' income,' admitted Lee Teng-Hui, a leading agricultural policy-maker before he became President of Taiwan in 1988, 'so as to transfer these people – who originally engaged in agriculture – into industries.'[7]

Low grain price policies were phased out in the 1970s, but the pattern of sacrificing agricultural interests to export industry continued, this time via an implicit 'Faustian Bargain' with the NICs' biggest market, the US: Korea and Taiwan would absorb huge amounts of subsidised US agricultural surpluses in exchange for the US market being kept open to NIC manufactures. This policy has led to the extinction or near collapse of important agricultural sectors, like wheat, soybeans, and, most recently, tobacco. US pressure, which has increased in recent years, now threatens to visit extinction on the Korean beef industry, a development that is likely to bankrupt a great number of the almost 50 per cent of Korea's farmers who depend in varying degrees on raising cattle.[8]

Even rice farmers can no longer be assured that the government will be able to prevent the dumping of US rice surpluses, and it is this fear that has galvanised Korean farmers to organise against a continuation of a policy which they describe as making agriculture the 'sacrificial lamb' of industry. Against the neoclassical concept of efficiency which the technocrats are using to justify the shutting down of the Korean countryside, farmers are now constructing alliances with workers and middle class people around the concepr of 'food security' as an element of national security. The struggle is not against food imports, as the western media have depicted it, but for a rational food import policy that would restrain the thrust of unmitigated free trade to drive the NICs' agriculture to extinction. For as the Taiwanese agricultural expert George Kuo cloquently put it, the agricultural question is not simply an issue of 'food price versus export economy but what form of balance [there should be] between food production, human value, economic growth, sustainable agriculture, and environmental integrity.'[9] As agriculture deteriorates and the number of family farms decreases, Kuo contends:

> the entire fabric of rural society is undermined. At the most personal and family level, foreclosure of a family farm is even more stressful than losing a job. At the next level, the rural community and cultural value of rural life are under siege. The loss of rural community means the loss of the rural patriarch to embrace the urban prodigal in the event of debacle in the industries. The rural crisis is affecting urban Taiwan as well. The destruction of the family farm system, whose values are inherent in the country's moral and ethical history, also affects the base on which urban centres are built. At the national level, the disappearance of food self-reliance and indigenous commodities would be a great loss for a country with a strong tradition of culinary art. The decline of agriculture, whose values are especially critical in this humid, tropical milieu, also affects the natural ecosystems on which the whole nation is based.[10]

In both Korea and Taiwan, the campaign for a rational food import policy has met with some success, leading to the very real possibility that popular pressure will force the governments of both countries to reject any GATT covenant on agriculture, which could in turn lead to further US retaliation against NIC manufactured exports.

The ecological costs of EOI

Like agriculture, the environment has been traditionally sacrificed to the demands of export-oriented manufacturing. From the very beginning of EOI in the mid-sixties, lax environmental regulation has matched low wages as an incentive for local and foreign investors in Taiwan and Korea. Official tolerance of pollution not only reduced costs for domestic exporters, making their products more competitive in the world market, but also attracted industries that were facing tighter environmental regulation in Japan in the 1970s and 1980s.

For many Korean and Taiwanese technocrats, in fact, some environmental destruction was regarded as the unavoidable price of economic growth. 'Some' however is a fairly elastic term. When processes of high-speed EOI telescope into a few decades transformations that took many more decades to unfold in earlier industrialising societies, then 'some' can be quite devastating.

In Taiwan, which has won the dubious accolade of being 'Asia's dirtiest spot', the lower reaches of virtually all of Taiwan's major rivers are now biologically dead, owing to a deadly combination of unregulated industrial and human waste dumping. Twenty per cent of farmland, the government itself admits, is now polluted by industrial waste water. As a result, 30 per cent of the rice grown on the island, claims Dr Edgar Lin, one of Taiwan's leading environmentalists, is contaminated beyond officially tolerated levels with heavy metals, including mercury, arsenic, and cadmium.[11]

It seems that in Korea these days, environmental skeletons from the past keep spilling out of the closet. Much of the country's tap water is not safe to drink owing to heavy metal content far above tolerable levels, and the country's two major rivers, the Han and the Nakdong, are said to be approaching biological death. Perhaps the most terrifying of environmental horror stories involved the Nakdong, which provides the water supply for the 10 million people who live in the Taegu-Pusan metropolitan complex, Korea's second most important industrial area. In April 1991, residents were informed by the government that the strange smell they had noticed in their tap water was caused by the surreptitious dumping of 325 tons of waste phenol, a highly toxic, cancer-causing chemical, by a subsidiary of Doosan, a Korean conglomerate. The dumping, they were informed, had been going on for over five months.[12]

Just like the agricultural question, the question of whether severe environmental damage is remediable or is inherent to export-oriented development is now a matter of intense debate. What is clear is that, in both Taiwan and Korea, environmental laws are now in place. What is equally clear is that these laws go largely unenforced, except at times of great public indignation. As a Korean Ministry of Energy report conceded: 'The efficacy of [environmental] laws, especially in rural areas, is unknown... since there is no information regarding actual practices, the level of adherence to these standards, or whether the appropriate expertise is available for determining if the pollutant concentrations require the rigorous procedures described by the law.'[13]

The problem, it appears, does not lie in the state's capacity for enforcement. The Korean government's record in strongarming industries to move along certain preferred policy paths is impressive. The Taiwanese state has also been an effective disciplinarian of private interests, that is, when it wants to. But despite massive public agitation for more effective environmental regulation, minimal and grudging enforcement of environmental laws continues to be the norm in both Taiwan and Korea. The main obstacle to effective environmental protection, it is clear, is the government-business consensus that effective environmental regulation can only be achieved at the expense of reducing the competitiveness of NIC manufactures in the world market.[14]

Legitimacy crisis

The 7,000 strikes that Korean workers launched between 1987 and 1990 revealed to the world another crisis overtaking NIC-style export-oriented industrialisation: it may have delivered some degree of prosperity but it has not secured popular legitimacy.

This crisis is the direct result of a historical choice made early on by the state and business elites in Taiwan and Korea: to implement EOI, they opted to secure the compliance of labour via the shortcut of repression rather than through more complex democratic mechanisms. Perhaps this was inevitable since achieving success in export markets marked by cut-throat competition meant having to drive down workers' wages below their market value. To do this one had either to prevent labour from organising, as in Taiwan and Korea, or disorganising an already organised work force, as in Singapore. Gary Rodan's observation on Singapore is just as relevant to Korea and Taiwan: '[I]t is hard to accept uncritically the notion of comparative advantage in labour costs as having any meaning in isolation from...the state's role in helping define those costs.'[15]

In Taiwan, labour was controlled from top to bottom through the different levels of organisation of the ruling Kuomintang Party, which was structured along 'democratic centralist' lines. In Korea, the main impetus for the growth of the Korean Central Intelligence Agency (KCIA) was the need to monitor labour and abort any attempt at independent labour organising.

Indeed, according to one Korean labour economist, the technocrats at the Economic Planning Board needed the KCIA to insulate 'the planning and implementation processes from any external political influences and controls, thereby minimising "distortions" and "irrationality".'[16]

The tremendous pressure that built up over two decades of tight authoritarian control finally forced decompression in both Taiwan and Korea in 1987. But when the new democratic politics arrived, it focused not on forging consensus on the strategy for economic growth but on a polarised struggle over the benefits of past growth. As the *Financial Times*, in its inimitable style, put it, 'the country's new-found democratic politics are putting wage push, labour unrest, and demands for welfare expenditure in the way of continued super-growth.'[17]

Militancy, not moderation, is the mainstream in Korean labour politics, a mood that was expressed by Lee So-Sun, one of the most respected figures in the labour movement. Asked if labour's wage demands were not posing a problem for Korea's export competitiveness, she replied: 'The government says the economy is successful. But only a few benefit from the economy.... There is nothing in it for us.'[18] Such militant class consciousness hardly lends itself to institutionalising western-style collective bargaining processes or forging a labour-management consensus on a new economic strategy.

Authoritarianism in the NICs may have delivered stunning growth rates in the short term, but it also created 'two nations' within each society whose divergent social agendas now make it very difficult to forge consensus on policies for the next stage of development. Nowhere is this currently more evident than in Korea, where business and government elites cling ever more fervently to the doctrine of export-led growth despite the fact that the economy is now largely driven by domestic demand. Acknowledging the critical role of the domestic market in future growth, they fear, could lead to recognising the importance of income redistribution, which could in turn clear the path to a greater role for labour in the determination of economic policy.

The structural squeeze

From a strategic point of view, perhaps the most serious threat to the NICs is the 'structural squeeze', that is, a condition in which they have priced themselves out of the cheap labour market at the same time that they have failed to develop the base for higher value-added, skill-intensive and technology-intensive production.

Pushed up by the rising cost of living and the drying up of labour reserves as well as by increasingly effective labour organising, the average wage in Taiwan and South Korea now stands at three times that in South-east Asia and ten times that in China. In textiles, for instance, the average cost per operator hour stands at \$3.56 in Taiwan, \$2.87 in Korea, \$0.68 in Thailand, and \$0.40 in China.[19]

But as Lester Thurow says, 'high wages and high profits are not antithetical – they go together'.[20] There is, however, a big if – if firms make the requisite investments in research and development (R&D) and upgrading the skills of workers. Instead, many loeal entrepreneurs have followed the example of US and Japanese investors who are pulling up their stakes in Korea and Taiwan and relocating their operations to Thailand, Indonesia, China, and Malaysia. Indeed, a 'hollowing out' of manufacturing such as that which happened in the US now poses a very real threat to Korea and other NICs, except that in their case it would be a very premature development since, unlike the US, they still do not have a skill-intensive, high-technology sector to fall back on as they become increasingly non-competitive in labour-intensive manufacturing activities.

The responsibility for this crisis must be laid directly at the doorstep of the *chaebol* (Korean firms) and the Taiwanese firms. In the view of the government technocrats, despite the image of Korea as a roaring tiger in the 1980s, those years were actually a 'lost decade'. As one analyst sums up the now prevailing technocratic consensus:

> The worst part of the Chun [Doo-Hwan] era was the neglect of new investment in plants and equipment, introduction of new technologies, and development of new products – all attributes of a healthy export-oriented economy. The trend was intensified by the presence of ample opportunities to make quicker returns by investing in property and service-related industries. Those industries, often condemned as economically unproductive and even socially unethical, flourished during the 1980s. Analysts argue that businesses, big and small, were busy sizing up such windfall opportunities, shifting the money they earned from manufacturing to the service sector.[21]

Taiwanese firms invested only a minuscule 0.44 per cent of sales revenue on R & D.[22] Where most of their profits went is indicated by the fact that nearly 20 per cent of Taiwan's publicly traded firms now earn more than 50 per cent of their pre-tax recurring profits from outside their principal operations – a sure sign of heavily playing the stock market.[23] Korean conglomerates, for their part, allocated only three per cent of their sales to R&D, compared to over 6 per cent in the case of Japanese firms.[24] Instead, the *chaebol* funnelled some $16 billion into the acquisition of real estate.[25]

Government technocrats are hardly in a position to criticise, however, since the state did not step into the breach in the R&D effort. In Taiwan, combined private and government expenditures in R&D came to only 0.99 per cent of GNP.[26] In Korea, where the state in the 1980s was constantly under pressure from the IMF to desist from an activist economic policy, government spending in R&D came to only 0.4 per cent of GNP, a level that was said to be even lower than that of Taiwan.[27] Indeed, total Korean R&D expenditures in 1988 came to only $3.43 billion – far short of the R&D budget of just one US company, IBM, which invested $5.9 billion in R&D.[28]

The consequences of starving the R&D sector are underlined by the following examples: Taiwan's famous 'computer industry' is actually a glorified description of the low-tech, labour-intensive mass cloning of easy-to-copy IBM models. As for Korea, its image of being a high-tech producer is belied by a few sobering realities: the bestselling Hyundai Excel may be Korea's best-known export, but its body styling is Italian in origin, its engine is designed by the Japanese firm Mitsubishi and its transmission is both designed and manufactured by Mitsubishi. Korean television sets may be competing toe-to-toe with Japanese products in the US, but Japanese components account for 85 per cent of their value. Korea may be the world's fifth largest exporter of personal computers, but only the computer cabinet is actually made in the country.[29]

Korea is said to be a leader in semiconductor technology. But Samsung, which is said to be capable of mass producing the 16-megabit DRAM (dynamic random memory) chip, is more the exception than the rule. Most of the technological capabilities of other Korean electronics firms, in fact, come from the Japanese.

The fact of the matter is that Taiwan and Korea have not been able to graduate from being mainly assembly sites for foreign and specifically Japanese components. Indeed, nearly 30 years after initiating EOI, Taiwan and Korea are now even more dependent on technologically advanced Japan. This is revealed most dramatically by the two countries' $8 billion+ trade deficits with Japan, which cannot be alleviated through simple macroeconomic manipulation of tariff and exchange rate policies owing to their structural character – that is, the trade statistics do not principally reflect normal trade movements but a fundamental technological dependency.

Japan, of course, has not hesitated to manipulate this dependency to keep Korea and Taiwan in line: despite Korean government demands for more liberal technology transfer, the Japanese government has prohibited the transfer of 200 ultramodern high technologies to Korea until the year 1995, by which time the Japanese corporations will have exploited most of the market potential of these frontier technologies.

Instead of transferring state-of-the-art high technology, Japan is using the transfer of second-class technology to integrate Korean and Taiwanese firms as subordiuate elements within an Asia-Pacific-wide division of labour designed by Japanese firms to enhance Japanese corporate profitability. The Japanese firm Hitachi, for instance, licensed its 1-megabit DRAM technology to the Korean firm Lucky-Goldstar to acquire a subordinate firm that could specialise in turning out a product that was no longer state-of-the-art while it focused on developing a more profitable advanced product, the 4-megabit chip. As one analyst saw it:

> While one megabit DRAMS are currently the industry standard, Japanese producers are gearing up to produce chips that can hold four times as much information. Hitachi apparently can guarantee a stable source of one-megabit DRAMs through Goldstar, while concentrating on the more complicated and expensive four-megabit market.[30]

Practically all Taiwanese carmakers now have significant Japanese equity, and they have been reoriented into a division of labour which, in the words of one Japanese expert, 'is not an equal division of labour as seen in the European Community countries, but a vertical one within the automobile industry as a whole.'[31] In this 'inter-product division of labour', the Taiwanese firms will specialise in 'low-price compact cars which have fewer parts and a higher percentage of labour in the entire process'.[32] Perhaps unwittingly using historically loaded terms, the analyst concludes: 'China-Taiwan aims for coexistence and coprosperity with Japan by producing the items that are not economically suitable for Japan.'[33]

Was the structural squeeze unavoidable? The loss of the cheap-labour advantage to other Third World countries was probably inevitable, given the inexorable rise in living costs and the tightening of the labour market owing to the drying up of the pool of cheap rural labour in Taiwan and Korea. But the failure to move up to higher value-added, more skill-intensive production was probably not inherent to the model. In fact, the R&D debacle of the 1980s probably stemmed from a departure from one feature of the NIC model – from the weakening of the directive role of the state that marked the first two decades of EOI. Under pressure from the IMF, the US and liberalisers within the technocracy itself, the Korean state, for example, began to pull back from a more activist involvement in strategic economic planning, leaving much of this function to the *chaebol*. Increasingly free of technocratic oversight, the conglomerates promptly channelled their investments, not into risky R&D, but into speculative activities that promised quick, easy and high profits.

Conclusion

In sum, the NIC strategy of high-speed EOI is being unravelled by the conjunction of unfavourable external and internal conditions. The liberal world trading environment that allowed the NICs to flourish from the mid-sixties to the mid-eighties is fast disappearing while the long-suppressed internal costs of EOI have caught up with the NICs. This fatal coincidence of negative trends has left the ailing tigers stranded in the perilous zone between the developed and underdeveloped worlds, and it will take a new, bold set of economic policies to keep them from sliding back to the Third World in the 1990s.

The crisis of the NICs reminds one of the truth in the ancient saying that 'the owl of Minerva flies only at dusk'. Ideas congeal into doctrine only when the circumstances in the real world that they reflected have disappeared. Such is the cunning of history that the NIC model – be it the mistaken neoclassical liberal interpretation or the more accurate version of state-led pursuit of export-oriented industrialisation – has become orthodoxy at the very moment that it has become obsolete. While there are certainly some features of the NIC strategy that might be usefully adopted by Third World countries, like the presence of an activist, directive state, the essence of the model – high speed economic growth achieved through export orientation and the subordination of agriculture, environment, and class relationships to the logic of EOI – is a questionable prescription for breaking out of underdevelopment under conditions prevailing in the last decade of the twentieth century.

Footnotes

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