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22479

# Asia-Pacific Regional Forum on Industry

Bangkok, Thailand, 23-24 September 1999

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## Industrial Reform to Enhance Industrial Competitiveness: Implications and Strategies for SME Development

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

## TABLE OF CONTENTS

I.	Introduction.....	1
II.	Emerging Trends in World Trade Affecting Industries in Asia-Pacific .....	3
III.	Main Structural Weaknesses Inherent in Industries of Asia-Pacific .....	5
IV.	Need for Industrial Restructuring and Institutional Reform.....	11
	Industrial Restructuring Directions and Focus.....	13
V.	Role of SMEs in Industrial and Economic Development.....	25
	Traditional Roles and Policies .....	25
	Assistance Programs to SMEs .....	27
	Problems of SME Support Agencies.....	28
	SME and Large Enterprises Linkages.....	29
	Emerging Roles and Policies for SME Development.....	31
	Some Considerations in SME Policy Formulation .....	33
VI.	Best Practice Policies in SME Development.....	35
	SME Promotional Policies, Laws and Measures (Japan) .....	35
	SME Development Council (Philippines) .....	35
	Technopreneurship 21 (Singapore).....	36
	SME Master Plan (Thailand) .....	36
VII.	Role of Regional Bodies in SME Development.....	38
	Asia-Pacific Economic Cooperation (APEC).....	38
	Association of Southeast Asian Nations (ASEAN) .....	38
	Asian Productivity Organization (APO).....	39
VIII.	Conclusion .....	40
	References .....	41

## I. Introduction

From a dramatic transformation as an Asian miracle with unprecedented economic growth in the past two decades, the Asian miracle turned into an Asian debacle in mid 1997. At the height and frenzy of economic growth, Asian economic leaders, mesmerized by the euphoria of newfound national prosperity, mostly ignored ominous "writing on the wall" made by seemingly "unpopular" experts.

As of August 1999, nearly all Asian economies have started to report positive growth. Financial experts would agree that the economic malaise has been contained, and that an economic turnaround has taken place. In fact, the pace of the recovery has caught many country watchers by surprise. Asian countries are revising their growth forecast upward to more optimistic figures. In general, Asian stocks are rebounding, interest rates falling, export targets overshot, agriculture performing well, inflation contained, consumer spending rising, and investor confidence gradually restored.

Consider the following favorable developments as of mid 1999: strengthening of Indonesia's rupiah and car sales increasing by 82 per cent in July, Korea expecting a GDP growth rate of about 8 per cent, Japan growing 8.1 per cent during the first quarter, manufacturing sales in Malaysia rising 13.8 per cent year-on-end in June with the economy projected to expand by about 3.8 per cent this year, Philippine imports rising to an 18-month high in June and expecting to grow by about 3.5 per cent, Singapore's economy forecast to grow by 4-5 per cent, Thailand expected to register a positive growth of around 4 per cent, and Vietnam predicted to see positive outcomes in 2000 projecting a GDP growth of 5-6 per cent as a result of measures and reforms implemented in 1999.

Despite these positive trends, it is premature to celebrate. Many economic policies and reforms either have to be formulated, enforced vigorously, or need to bear significant impacts, before a durable and broad-based recovery can be attained. Valuable lessons can be learned from the crisis by both Asia and the rest of the world.

A World Bank report (1999) cited that the current crisis has revealed basic structural weaknesses in the affected economies which need urgent addressing. If the appropriate policies are not in place, aimed not only at short-term crisis management but also at realizing long-term structural change in the economic and social fundamentals on a sustainable basis, the so-called crisis may become chronic and irreversible. It commented that various approaches to economic development adopted in selected East Asian economies have their merits but failed to adjust in line with progressive economic development to the demands imposed by ongoing and irrefutable globalization and global deregulation as well as liberalization of trade, investment and capital flows.

Among the causes of the economic crisis identified by a World Bank study (1999) is lack of long-term strategic vision and policies to sustain international competitiveness. The policies referred to include environmentally sound technology transfer and development, efficient use of natural resources, upgrading of industrial and technological skills, development of SMEs, and forging linkages with large and foreign enterprises, etc.

Hubert Neiss, Director of Asia and the Pacific Department of the International Monetary Fund (IMF) mentioned several interrelated problems as the crux of the origins of the Asian crisis. These are:

- several years of rapid growth masked underlying problems and led investors and creditors – as well as economic analysts – to take an unrealistic view of economic prospects in the affected countries. The long period of state intervention, administrative guidance, and directed lending gradually channeled resources into less and less profitable investments and eroded the countries' resilience to shock. Defects in corporate and public sector governance, the lack of transparency in financial and corporate business dealings, and the lack of timely disclosure of key information hindered the operations of markets and

prevented early and effective policy responses.

- the countries concerned were the destination of choice for much of the growing volume of capital flows. Prompted by progressive capital account liberalization in Asia and by low returns in industrial countries, capital inflows surged in the early 1990s. These inflows financed not only investments in export-intensive manufacturing and efficient import competing activities, but also the real estate boom and the government-directed projects of questionable value. A large part of these capital inflows was short-term and was channeled through weakly regulated and supervised banking sectors. This made the countries vulnerable to changes in market sentiments.
- the policy of pegging the exchange rate – more or less rigidly – to the U.S. dollar encouraged speculative foreign borrowing and greatly increased the vulnerability of the economy to adverse shocks.
- although domestic problems lay at the root of the crisis, several external developments contributed to it as well, including the decline in world semi-conductor prices, and the long recession in Japan.

The Asian crisis has also brought some positive aspects and opportunities to put the economy, corporate and political governance as well as SME focus in order. Many firms have started to realize the importance of S&T for their survival. The crisis has also a catharsis effect. Some firms were thrown out of business, usually the inefficient and the less competitive ones.

Hence, by natural attrition the structure of industry of the country is expected to get stronger when the crisis is over. At the same time, vital economic sectors such as SMEs which did not receive much attention from concerned organizations in the past, will get the support they deserve. In the case of SMEs, the support always occurred in the midst of crises, when SMEs proved once again their vaunted resiliency to weather economic downturns.

Likewise, as the whole structure of the economy gets healthier, support activities such as financial institutions will be more stable and stronger. Mismanaged firms have been discarded, others restructured, thus leading to upgrading of services to international standards. The private sector is more alert, committed and prepared to enhance its competitiveness to ward off foreign competition in domestic markets and to compete in foreign markets.

The crisis forced the firms to review their strategies – some are downsizing, others are dropping product lines, and still others are cutting unnecessary costs. Team spirit will be boosted up, especially among SME entrepreneurs and also within the firms themselves as employees' suggestions are solicited more. During the crisis, support measures from the government are delivered via consolidated institutes. SMEs will, therefore, be encouraged to join associations, clubs and cooperatives so that they will work as a team. Another beneficial side effect of the crisis is the stopping of job hopping and piracy of skilled manpower in the private sector, particularly rampant during the boom times.

On the whole, Joseph Stiglitz, chief economist and vice president of the World Bank, has these consoling words about Asia. "The crisis that beset the region over the past two years notwithstanding, East Asia remains the best model for development the world has probably ever seen. Going forward, its countries must build on the strengths of the past that led to the miracle, but at the same time address those weaknesses."

## **II. Emerging Trends in World Trade Affecting Industries in Asia-Pacific**

Current world trade and development are characterized by a significantly interdependent world. The world carefully monitors the strength of the US economy, it suffers when Japan's economy falters, not just for purely trade reasons but also for the fact that Japan is the world's largest provider of official development assistance (ODA). It shivers at the thought of a possible devaluation of the Chinese yuan.

Businesses have also become global in order to achieve world-scale economies, penetrate new markets, and at the same time tailor products to key markets. The onset of electronic commerce has resulted in virtually making consumers found in all parts of the world accessible.

In contrast to protectionism which leads to protection of inefficient industries, political conflicts, loss of entrepreneurial drive, and removal of the stimulus for development, trade liberalization is touted as the effective and efficient means of developing production technology, promoting competition, improving resources allocation, creating economies of scale, and eliminating costly economic distortions, etc.

As tariff barriers are gradually eliminated, some countries resort to non-tariff barriers to protect their domestic industries, to stimulate domestic production, or to buy more time to upgrade the efficiency of local industries. Governments of many Asian countries are under pressure to protect local, especially infant and defense-sensitive, industries through such as mechanisms as anti-dumping and countervailing measures against foreign competitors who sell below costs. Statistics indicate that developing countries tend to file more anti-dumping complaints against one another because they want to increase exports, while protecting their local industries.

Non-tariff barriers, whether justified or unjustified, are also invoked in the name of environmental, health and sanitary concerns, even human rights and child labor issues. As one author noted, "for multilateral trade agreements to work, member nations must be sincere about the elimination of tariff and non-tariff barriers. The double-edge policy wielded by some nations – being against protection in other countries but maintaining their own protectionist policies on the other – must end. World trade liberalization must be accompanied by development even for smaller countries and less developed countries which do not have competitive products."

One report cited that as multilateral agreements to reduce or remove tariffs are imposed, incidences of non-tariff barriers are poised to balloon. Thanks to the World Trade Organization (WTO) which sees to the implementation of the General Agreement on Trade and Tariff (GATT), rulings were made against unjustified non-tariff barriers.

Nobel Prize winner Arthur Lewis argued that the prosperity in the developed world during the 1950-73, which provided a conducive setting for the East Asian success, was special. He stressed that in the future developing countries could expand export, only if industrial countries were willing to allow the former a greater share of their expanding markets.

Other economists like Paul Krugman expressed optimism that developing countries adopting an export-promotion strategy coupled with correct domestic policies have ample opportunity to prosper through manufactured exports based on the following reasons:

- the developing countries have shown remarkable ability to maintain export growth even in the face of slow demand expansion, by obtaining a larger share in industrial-country markets through price competition.
- the degree of penetration of developing-country exports into industrialized country markets still remains very low even for 'traditional' manufactures; there is, therefore, a

great deal of unexplained absorptive capacity in the 'market sense'.

- the actual impact of protection is so far less strong than one presumes it to be simply because there are many ways (both legal and illegal) in which exporting countries can 'get around' it in search of an 'as-if-free-trade' solution. The globalization of the economy opens up new opportunities.

### **III. Main Structural Weaknesses Inherent in Industries of Asia-Pacific**

The East Asia region witnessed two decades of high growth rates led by the industrial sector, not seen before anywhere in the world. The Asian crisis, however, revealed some structural weaknesses of many Asian industries, both export and domestic market oriented. In general, they expose the inefficiency of many industries and their lack of competitiveness in the international market arena.

In Indonesia, the crisis hit badly import-substituting industries where importation became expensive and foreign exchange scarce. It also hit firms that were exporting to other Asian countries that were also suffering from the crisis. Among these industries were the textile, woodworking, electronics and leather industries. Generally, the agro-industries were performing well and enjoying extraordinary windfall profit due to the rupiah devaluation. Other import materials-based manufacturing industries had to lay off their employees, cut down operations or face demonstrations by workers demanding wage adjustments. Food processing companies, except for the coconut and palm oil processing industries, were able to increase their wages and contribute some of their profit to the local communities.

It is believed that the broad-based development strategy did not succeed in strengthening the industrial structure of Indonesia, hence many manufacturing industries classified as footloose industries were badly hit by the crisis. A proposed alternative is to direct more attention to the development of medium and high tech products in order to enhance the country's competitiveness in the global environment.

The crisis in Indonesia forced the government to re-prioritize its development policy and strategy. Immediate industrial development policy is now focused on the development of home and small-scale industries primarily in the rural areas. Its main objective is to alleviate the poverty of the rural people and to develop the rural economy.

In Korea, the industrial structure is based on heavy industries such as iron and steel, electronics, automobiles, petrochemicals, machinery, etc. This kind of industrial structure has characteristics of scale economies and needs huge investments. This was one of the major root causes underlying the financial crisis, since it caused excessive investment, over-competition, heavy borrowing and the weak financial structure of large conglomerates. A survey result on the need for business restructuring in Korea revealed that large firms were more pressured than SMEs. It was found that more large firms (70.2 per cent) plan to restructure than SMEs (39.2 per cent). In fact, what was felt more important for many SMEs in Korea was technological development.

In Malaysia, Rasiah (1999) mentioned that the structural change was not properly regulated. He argued that over-expansion in construction and services before achieving industrial maturity was believed to have created a big dent in the country's capacity to finance industrial and technology development. Unlike other successful industrialized countries, where the transition to services was achieved after extensive industrial deepening and productivity increment, accelerated expansion in the construction and real sector and services in Malaysia has come while its manufacturing sector is still dominated by low value added, simple and OEM activities.

Malaysia's limited learning experience also restricted its capacity to export service and construction items, thereby aggravating trade imbalance. On the contrary, construction and services contributed to massive increases in imports in the 1990s to support the construction and property market boom.

Malaysia also abandoned rather than modernized agriculture so that a significant share of its consumption has increasingly been imported. Based on the premise that manufacturing value added will always be significantly higher than agriculture, the government promoted relocation of food supplementation to neighboring countries.



The typical structural argument posited a circular price relationship between agriculture and manufacturing so that structural change would lead agriculture to support manufacturing initially, but ultimately manufacturing's productivity and its subsequent support for agriculture's modernization would lead to some equalization of the terms of exchange between the two. The disregard for agriculture in preference for industrial widening has opened basic consumption to massive imports.

The lack of commensurate deepening of innovative and productive capabilities has pushed Malaysia to an impasse as labor reserves evaporated and cheaper sites for labor-intensive operations emerged elsewhere. Malaysia faced serious skill and other labor shortages in the mid-1990s. With manufacturing increasingly becoming difficult without adequate education and training programs, Malaysia introduced measures to address these weaknesses, but coordination mechanisms need to be improved.

Meanwhile, government projects on the implementation of the Second Industrial Master Plan (IMP) and the promotion of strategic industries have continued to receive strong funding. For example, the electronics industry project, intended to reverse import-dependence, strengthen local participation along cluster dynamics and experience deepening through movement in the value added chain to include wafer fabrication, designing and brand manufacturing, has received considerable funding. On the positive side, even while the credit situation in the country has not improved much, funds to support industrial and technology development have not fallen significantly.

In Vietnam, key problems of industries center on poor competitiveness compared with its more efficient neighbors and on its "marginalized" domestic private sector over lumbering state-owned enterprises. The private sector's entrepreneurial capacities can better be harnessed to exploit opportunities in the world market.

Thailand's industrial growth rates during the past two decades registered double digits annually. However, already imperceptibly recognizable in late 1995, the country was losing its comparative advantage of cheap labor resulting in the drastic drop of exports of labor-intensive light industries in 1996.

Wit Satyarakwit (1999) of the National Institute of Development Administration (NIDA) explained that during the economic boom, industrialists could make profits without much effort in improving productive efficiency or in upgrading product quality, while producers from other countries invested to raise their capabilities. At the same time, new rival countries with lower labor cost enter the market to compete with Thai producers.

A Thai Ministry of Industry study (1999) also revealed that over the years Thai producers have relied heavily on exploitation of volume and low cost based competition with foreign competitors, while ignoring value-based competition. Approximately 62 per cent of Thai business establishments regarded domestic producers, domestic joint venture firms and multinational corporations in Thailand as their biggest competitors. This indicates that most firms are competing among themselves with low degree of foreign competition such that devaluation advantage does not occur.

Foreign competitors that compete with Thai producers are those in the area of price competition, i.e., low cost category. Close to 16 per cent of the establishments regarded low cost producers (i.e., firms from China, Vietnam, Myanmar, and Laos) as their biggest competitors. In other words, Thai consumer products in general have little differentiation, have low value added and low degree of production as well as little technological enhancement to the products. Thai producers can only enjoy the benefits of such practices as long as domestic production costs remained competitively lower than those of foreign competitors.

Compounding the problem is the relatively low investment in product and process development and innovation as well as in human capital to improve product quality, production efficiency and

productivity. The inherent weaknesses of Thai industrial structure could be summarized as follows:

- 1) majority of the industries, especially SMEs, use outdated technologies. They use embodied technologies which came with the machines. Not enough effort has been put to develop production process and indigenous technology. The result is low production efficiency and high cost of production when compared to producers from other countries. For instance, in Japan many subcontractors have more advanced technologies than their parent or contracting companies.
- 2) entrepreneurs do not have enough knowledge of management, marketing, production design and product development technologies.
- 3) workers have low basic education level. Three-fourths of laborers have only primary education. This observation was corroborated by World Bank and UNESCO studies.
- 4) some export industrial goods seem to have high value, but they also have high foreign content raw material and parts. This is due to lack of supporting industries which can supply raw materials and intermediate goods for those export industries in the right standard and quantity.
- 5) industrial export goods are low end products. Producers do not have their own brand names. Their market channel is very narrow, they can deal only with importers.
- 6) SME supporting industries are not yet strong; they have low productivity, hence, only small linkages occur in the production line.
- 7) most industrial factories are located in Bangkok and peripherals. They play a very small role in creating employment and income distribution to the rural areas. On the other side, they generate high pollution in the cities.
- 8) local industries do not have an appropriate way to manage industrial hazards and pollution.
- 9) development in raw materials as well as the linkage between industries have to be promoted.
- 10) government direction, measure and policy are not clear and implemented consistently. Many laws and regulations are still obstacles for industrial investment and exports.
- 11) local industries face high cost of production. They have to pay high import tariffs for raw materials and high interest rate for capital and face the monetary liquidity problem.

In his analysis of Thailand's competitiveness problem, Sanjaya Lall (1998) pointed out two facets of the problem: firstly, the slowdown of 1996, and secondly, the longer-term upgrading of the structure, quality and efficiency of manufactured exports. He found serious structural problems of competitiveness in Thailand which, in general terms, are similar to those faced by many Asian countries, although the details differ.

Malaysia has an edge in upgrading over Thailand because of multinational companies investing more in R&D and training and in having a stronger niche than Thailand in high-tech electronics. Before the crisis, Thailand was attracting less foreign direct investment than Malaysia, China or Indonesia, while the Philippines was pulling ahead in terms of drawing electronic firms due to its higher human capital levels. China poses a serious challenge to many countries due to its efforts to upgrade its industrial capabilities systematically.

In Thailand, the strength and dynamism of local enterprises are focused on resource and labor-intensive activities, but for its long-term industrial needs, the country need to seriously upgrade the quality and quantity of its human capital and to take drastic measures to improve and increase industrial R&D and technology.

The case of the mould and die industry in Thailand illustrates this point. The sector is an important supporting industry providing vital parts and services to industries including auto parts, electrical appliances, electronic equipment and toys. At present, most moulds are imported as parts and assembled locally, taking advantage of cheap labor. Imported moulds cost the country 14.5 billion baht in 1998. The Thai Tool and Die Making Industry Association, comprising some 500 members, believes that half of this amount could be saved by making the machinery in Thailand.

Although much of the machinery in use is out of date, some factories were unwilling to pay for the latest mould-making machinery due to uncertainty of production level which would not justify the investment. The industry is seeking assistance from the government in developing local technologies and in worker training programs. Technicians with university-level qualifications are needed as employees trained at vocational schools lack the advanced skills required.

Walden Bello, co-director of Focus on the Global South attributed part of the problem to the fact that the economic growth of Thailand, which had the world's fastest growing economy between 1985 and 1995, has not been accompanied by industrial and technological deepening. This was partly due to inadequate government and private sector initiatives to implement strategic planning in the area of technology.

The perception that Thailand's technological problem is essentially a problem of human resources is true to many countries in Asia-Pacific. "Technological capability is essentially embodied in people, not in machinery. In the process of acquiring, using and diffusing, adapting and developing technology, the most important input is a technical human capital base able to assess and decide on technology matters."

Surveys of key industries in Thailand in the early 1990s indicated the growing gap between the need for trained technical personnel and actual demand. Shortage of experienced and skilled technicians, engineers and technical staff was felt in the computer industry, machine tool industry, mould and die industry and ceramic industry. This adverse condition puts SMEs at a serious disadvantage since they cannot compete with large firms in paying high wages. Technology acquisition through in-house development is barely practised in SMEs. Given these conditions, industry lobbies began to raise the demand for relaxed immigration rules to allow a more liberal entry of trained personnel.

Investment in R&D by government and private sector is dismally low in many countries in Asia-Pacific. In terms of percentage to GDP, government R&D in support of economic activities came to about 0.2 per cent in Thailand in 1997 and private firms contributed only 5.5 per cent of total R&D expenditures. Malaysia and Singapore spend 0.8 per cent and 1.2 per cent, respectively, whereas in Japan and Korea, private sector R&D investment was 2 and 2.25 per cent, respectively, and comprised more than 80 per cent of total R&D.

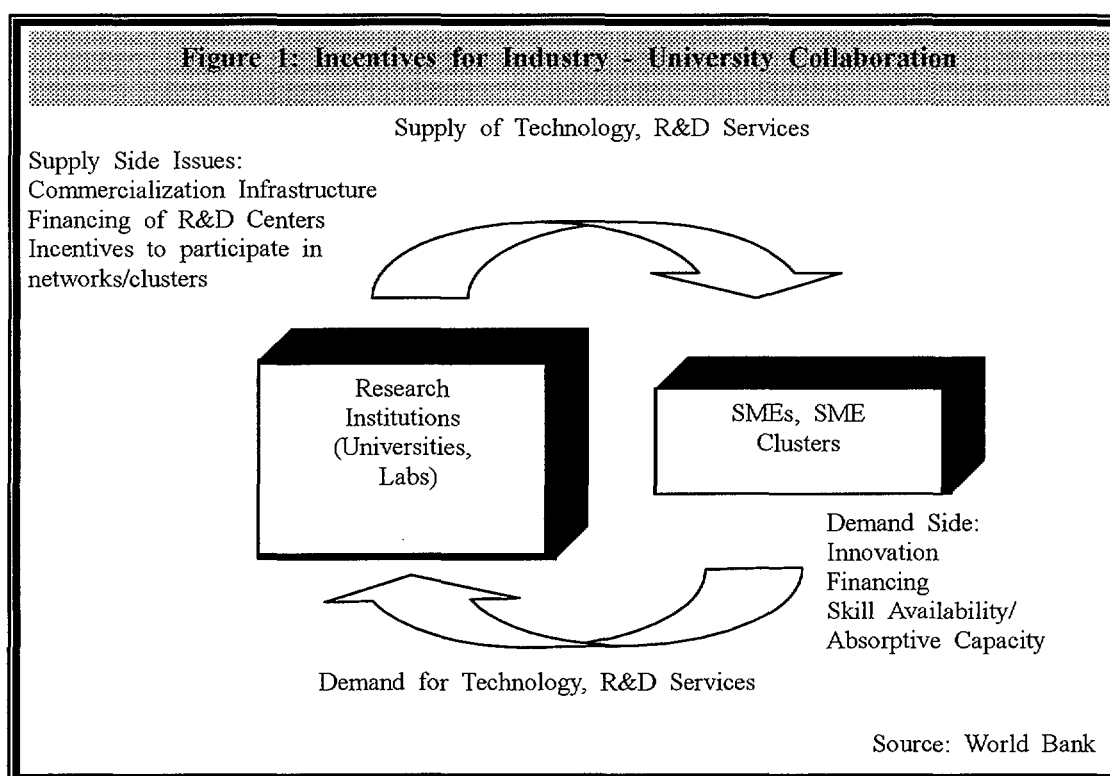
One reason for the low capacity for technology commercialization in developing countries is the weak link between the universities and the private sector and the lack of basic and applied research capability in the universities.

Thai universities' inability to develop basic research skills has been attributed to the loss of many potential scholars to the business sector during the economic boom of the early 1990s. Many engineering graduates opted to work as consultants for construction companies instead of entering academia because of the huge salaries and benefits the business world offered. The problem of brain drain may be further aggravated by the government's early retirement scheme under the downsizing program.

One official from the Thailand Research Fund deplored the private sector's apathy towards research in the sense that most businesses want to make a quick profit without long-term investment for new productivity and innovation, and would rather import technology to use in production instead of developing it at home.

This contention is supported by the findings of a Thailand Development Research Institute (TDRI) study indicated that there is low technological innovation in foreign-owned firms and joint ventures because almost all product development in the industries, particularly those for export, has so far taken place overseas. Thailand, therefore, serves not as a center of technological innovation, but as a haven of cheap labor using sophisticated equipment.

Quality of human capital is an important consideration in industrial competitiveness. But the quality of human resource and its propensity towards S&T is dependent on the quality and level of education. While many companies, particularly large firms, can afford to organize in-house training for their personnel, most SMEs can ill afford to do so. Likewise, opportunities provided by the government in terms of skills training are rather limited. Figure 1 depicts a schematic diagram of the symbiotic relationship between industry and universities in dealing with S&T and R&D issues.



The findings of a 1999 survey made by the Political and Economic Risk Consultancy Limited (PERC) indicated that Taiwan, Japan and Hong Kong were giving emphasis to quality local education, while South Korea has been spreading its skill level "too thin." It added that Thailand, Malaysia, Vietnam and Indonesia would find it difficult to graduate into knowledge-based industries because of the limitations of the labor force. Singapore and the Philippines were rated as possessing a labor force with the depth needed to move beyond a manufacturing focus to high value-added functions.

Tertiary education in many developing countries, which is important in building a technology base, is characterized by outdated curricula, insufficient practical training and little contact with the needs of industry. These constraints pose as barriers to enhancing export competitiveness, increasing local

content, technological deepening, and to attracting foreign investors.

Technological deepening is important in order to reduce dependency on imported technologies, thereby reducing cost and allowing local adaptations and inputs, but also to sustain the growth of production capabilities through capacity building in design, research and technology development. Many developing countries are caught in between two poles with one pole characterized by sophisticated industrial structure as in the case of Singapore Korea and Taiwan, and the other pole typified by Hong Kong specializing in light consumer goods with low domestic technological content.

#### IV. Need for Industrial Restructuring and Institutional Reform

An interesting analysis was made by Sanjaya Lall of Oxford University on industrial sector competitiveness of various Asian countries. One key factor he analyzed is the technological composition of exports. Using OECD's five category technological classification (resource-based, labor-intensive, scale intensive, differentiated and science-based), industries in selected countries in the Asian region were scored. See Tables 1 and 2 below for the result.

Activity Group	Major Competitive Factor	Examples	Growth Rates of World Exports (a)		Distribution of World exports	
			1980-90	1990-95	1980	1995
Resource-intensive	Access to natural resources	Aluminum, food processing, oil refining	7.4	6.6	18.8	15.1
Labor-intensive	Cost of unskilled, semi-skilled labor	Garments, footwear, toys	9.5	7.7	17.4	17.9
Scale intensive	length of production runs	Steel, autos, paper, chemicals	7.8	7.0	27.8	23.7
Differentiated	Products tailored to varied demands	Advanced mach.,TVs, power gen. equip.	8.4	8.6	24.3	23.4
Science-based	Rapid application of science to technology	Electronics, biotechnology, phamac.	12.6	13.3	11.4	19.9
Note: (a) Total world manufactured trade grew at 8.8% per annum during 1980-90 and at 8.5% during 1990-95.						
Source: Classification from OECD (1987), data from World Bank trade database.						

Source: Sanjaya Lall (Oxford University, 1997)

	Thailand			Malaysia			Indonesia			Philippines		
	1980	1990	1995	1980	1990	1995	1980	1990	1995	1980	1990	1995
Resource-based	21.7	13.8	10.7	17.6	9.9	8.6	78.5	48.2	33.6	34.0	21.8	11.1
Labour-intensive	47.0	45.5	35.8	18.7	18.9	12.7	9.6	39.2	43.3	47.9	40.8	32.3
Scale-intensive	7.8	6.3	7.7	5.2	7.7	5.9	5.1	9.3	8.3	9.0	9.9	8.3
Differentiated	22.2	14.1	19.5	12.3	23.3	26.8	0.8	2.2	10.3	4.3	9.2	13.9
Science-based	1.2	20.2	26.4	46.3	40.3	46.0	6.1	1.1	4.5	4.8	18.3	34.4
Of which:												
Technologically complex	31.3	40.6	53.6	63.8	71.3	78.7	11.9	12.7	23.1	18.1	37.4	56.7
High-tech	23.4	34.4	45.9	58.6	63.6	72.8	6.8	3.4	14.8	9.1	27.5	48.3
	Korea			Taiwan			Singapore			China		
	1980	1990	1995	1980	1990	1995	1980	1990	1995	1980	1990	1995
Resource-based	9.0	6.8	11.6	9.8	8.2	9.2	44.4	26.9	13.2	N.A.	11.6	10.2
Labour-intensive	49.2	40.8	23.2	54.3	41.2	31.0	10.6	10.3	7.6	N.A.	52.1	51.4
Scale-intensive	23.6	19.3	21.0	9.1	10.3	10.6	9.3	5.9	5.5	N.A.	17.5	12.4
Differentiated	11.3	15.6	18.7	12.4	20.6	20.4	20.5	22.3	21.2	N.A.	14.8	16.3
Science-based	6.9	17.4	25.5	14.5	19.8	28.9	15.1	34.6	52.5	N.A.	4.0	9.7
Of which:												
Technologically complex	41.8	52.3	65.2	36.0	50.6	59.9	45.0	62.8	79.2	N.A.	36.3	38.4
High-tech	18.2	33.1	44.1	26.8	40.3	49.3	35.6	56.9	73.7	N.A.	18.8	26.0
Note: "Technologically complex" products include scale-intensive, differentiated and science-based products; "high-technology" the last two categories.												

From the above tables, several interesting patterns emerge. Thailand's share of resource-based

products was much lower than the world average, but its labor-intensive exports were still about double the average. In comparison, Singapore and Malaysia have an edge over Thailand in technologically complex and high-tech products due to their specialization in electronics production under the aegis of multinational companies. Thai export structure was observed to be not very different from that of the Philippines, but was considerably more 'advanced' than that of Indonesia or China which are relatively dependent on labor-intensive process.

The difference can largely be attributed to the different times at which the countries opened up to international investment flows, rather than to underlying endowments of skill or technology. The above countries' future competitive compositions will depend crucially on how well they can gear their factor markets to the increasingly sophisticated and demanding needs of international investors.

Another indicator used by Lall is export patterns to the OECD using more conventional technological categories – low, medium and high technology with resource intensive manufactures kept separate. Compared to the so-called Tigers (Korea, Malaysia, Singapore and Taiwan), Thai exports to OECD were more concentrated in low-technology and much less in high technology products.

Here the base of domestic manufacturing skills and capabilities seem to play a more important role than a large section of high technology products where the simpler labor-intensive processes can be located in less industrialized countries. The finding is that Thailand seems to be weak in its engineering base, with the exception of the auto parts industry, hence an expansion in this direction may be one way to boost its competitive positions in the future.

Still another indicator used is the competitive positioning of a country's exports using a market positioning classification. A country is considered 'competitive' in a product in which its world market share is growing, and a product is considered 'dynamic' if its trade is growing faster than the average for all products. This is depicted in Table 3 below.

Table 3: Market Positioning Classification		
<i>Share of country's export in world trade</i>	<i>Share of Product in World Trade</i>	
		RISING
	(dynamic)	(stagnant)
RISING	Optimal	Vulnerable
(competitive)	"rising stars"	"falling stars"
FALLING	Weakness	Restructuring
(non-competitive)	"lost opportunity"	"retreat"

Using this yardstick, Lall was able to calculate market positioning based on export data for Thailand and selected countries. See Table 4 on competitive positioning of manufactured exports in 1995 below.

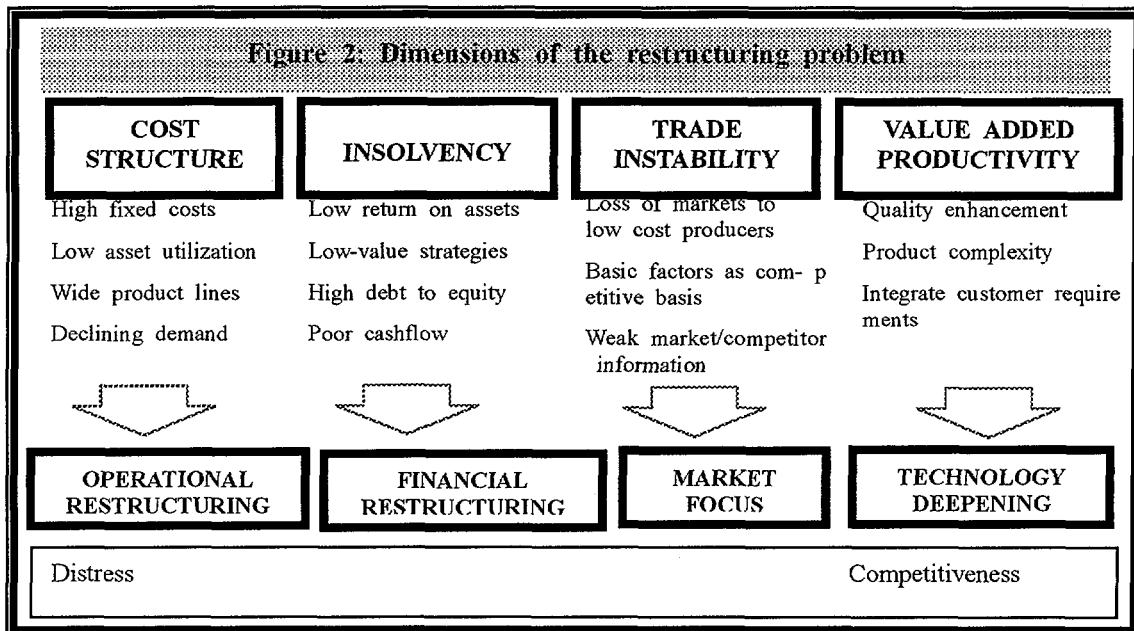
Lall cautioned us that while the figures are pre-crisis, the figures may not reflect the current reality, however to the extent that they show structural trends they may be good indicators of underlying positions. The table suggests that Thailand is relatively well positioned; some 54 per cent of its manufactured exports are 'rising stars' meaning products where it is gaining market share and which are dynamic in world trade. This is not as strong as Malaysia (73 per cent) or Singapore (69 per cent), but is better than Indonesia, China, Korea and Taiwan.

This configuration suggests that Thailand is placed to resume rapid growth of exports unless there has been a drastic deterioration in its structural competitiveness, or unless there has been a major shift in the pattern of growth of world trade. He indicated that both are unlikely.

Country	Rising Stars	Falling Stars	Lost Opportunity	Retreat	Total
Thailand	24,249.8	16,944.5	1,232.2	2,367.6	44,794.1
%	54.1	37.8	2.8	5.3	100.0
Malaysia	41,097.2	13,473.6	336.6	1,587.1	56,494.5
%	72.7	23.8	0.6	2.8	100.0
Philippines	4,123.9	1,771.1	1,224.6	448.2	7,567.8
%	54.5	23.4	16.2	5.9	100.0
Indonesia	8,579.0	11,723.9	4,039.0	387.1	24,729.0
%	34.7	47.4	16.3	1.6	100.0
Korea	48,965.8	46,667.6	10,456.6	11,482.9	117,573.0
%	41.6	39.7	8.9	9.8	100.0
Taiwan	53,364.8	21,587.5	21,050.2	8,747.8	104,750.3
%	50.9	20.6	20.1	8.4	100.0
Singapore	74,449.1	16,444.4	5,792.5	11,787.7	108,473.6
%	68.6	15.2	5.3	10.9	100.0
China	62,157.9	60,995.4	908.4	7,024.5	131,086.1
%	47.4	46.5	0.7	5.4	100.0

Note: Competitive positioning is calculated from growth rates over 1990-95. Export data are from the World Bank trade database, and differ from Thai export data from the Bank of Thailand

A World Bank report depicted the various dimensions of the restructuring problem plaguing several countries in Asia as essentially one that flows from a distress situation to one of competitiveness both at the macro and micro level, and requiring different sets of interventions. See Figure 2.



### 1. Industrial Restructuring Directions and Focus

For many Asian countries, industrial restructuring is considered a bitter pill – something nobody likes but has to be done anyway. Industrial restructuring is accepted by both public and private sectors, because it is needed to foster a sustainable industrial development in the next decade. It aims to



make firms more efficient, competitive and world class in the light of liberalization, deregulation, privatization and globalization taking place.

Butsuntorn Tawee, president of the Thai Federation of Industries, mentioned that the future direction of manufacturing industries in Asia is being driven into a stage of transition under the pressure of globalized free trade. This involves a move from resource-based and labor-intensive types of industries to skill-and knowledge-intensive and medium and high-technology industries, as well as from the widely accepted foreign direct investment to self-reliant technology.

Taking into account the causes and lessons from the Asian crisis, he put forward some areas for consideration by Asian governments and private sector. Among these are:

- 1) supporting and providing necessary assistance to SMEs in order to strengthen their capabilities,
- 2) improving the skill and quality of the work force,
- 3) developing basic infrastructures and public utilities to catch up with the demand,
- 4) bringing up the professional administrative and management system to world standard,
- 5) reforming tax and duty structures so that tax barriers will be gradually removed from the regional scene,
- 6) laying down a firm and supportive framework for the sound development of R&D projects, and
- 7) stimulating cross-border and intra-Asian cooperation and partnerships among manufacturing industries in order to strengthen their collective position in terms of marketing and technology to rise to world growth levels.

Commenting on the future direction of manufacturing industries in Asia after economic crisis, he expressed his belief that a country's competitiveness could be improved by making infrastructure and public utilities responsive to industrial needs, especially R&D and technical-oriented infrastructure, which are particularly badly needed by SMEs.

He recommended that Asian countries must be well prepared to move up the competitive ladder to enable its industrial output to compete with imports, as well as withstand the increasing competition of its exports in world markets. The basic ground for competition is essentially the improvement of production processes, cost structures, and management efficiency. He urged the shift from simple and low-tech products in labor-intensive industries to skill and knowledge-intensive industries. This requires a steady pool of highly skilled labor force which can be made available through training, retraining, on-the-job training, off-the-job training, informal learning, and distance learning.

In the analysis of TDRI's Working Group on Economic Structure, the main question in the industrial sector is how to re-engineer companies so that they can produce more efficiently and can make products which are in demand. Its recommended solution is to restructure management, administration, technology and machinery of companies as well as require them to provide training to staff so that they can adjust to the new system. Government and private sector should cooperate in setting up new institutions or launching pioneer projects to create new skills like designing, information technology, and development on rubber and food products.

The working group believes that Thailand's competitiveness need to be created from quality human resources, fundamental structures, good governance, management, and S&T. It emphasized the role of innovation as the most vital determining factor in establishing Thailand's permanent competitiveness. The group formulated a restructuring map to provide an analytical framework, as depicted in Figure 3 below.

On the other hand, the World Bank sees restructuring as a change continuum with the objective of moving from a distress situation to a competitive position. This involves moving from stabilizing

operation, restructuring debt, enhancing competitiveness, and accessing long-term capital. See Figure 4.

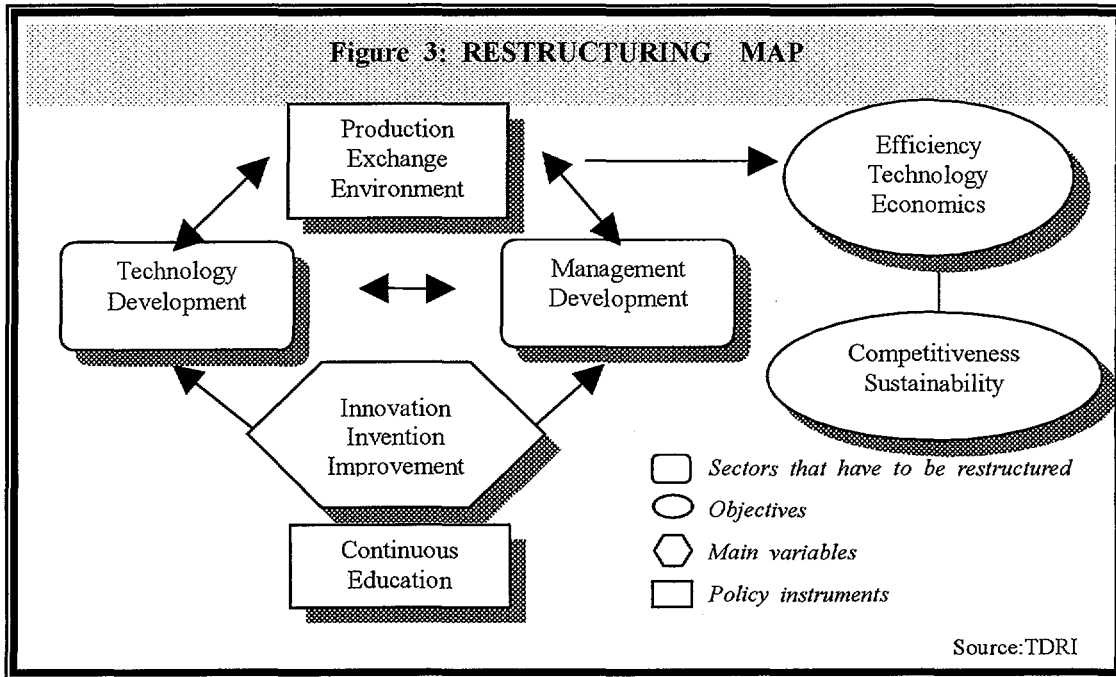
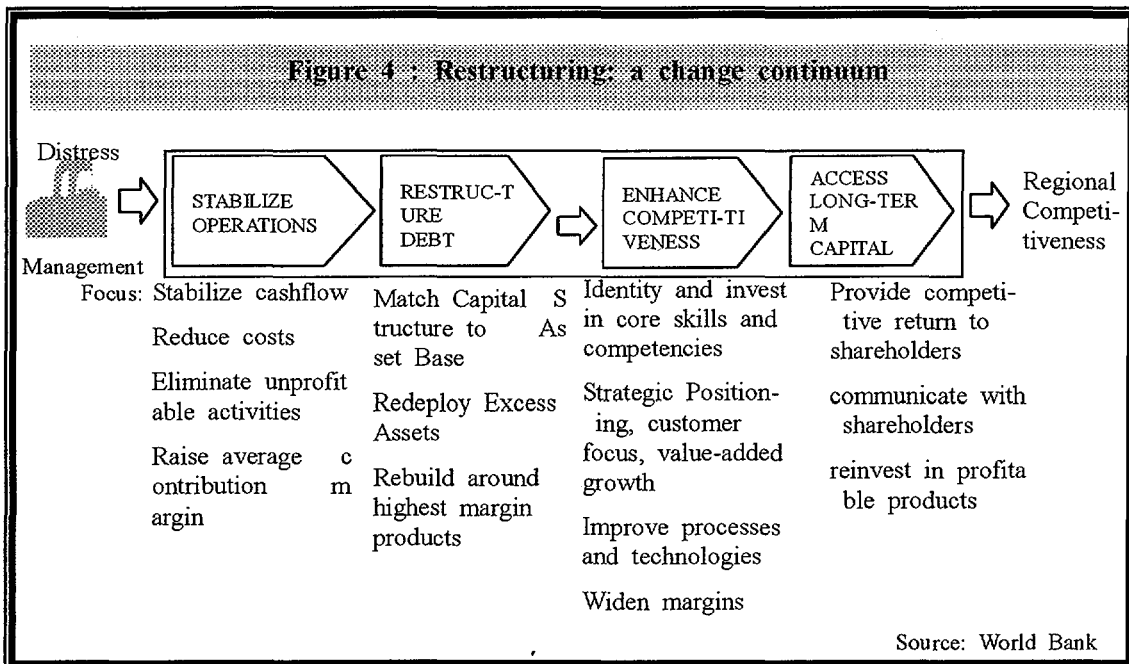


Figure 4 indicates that enhancing competitiveness does not only consist in investing in knowledge and competencies in S&T and R&D, but also in creating and satisfying demand, defining niche markets, being customer focus, determining strategic positioning, making prudent investment and strategic decisions, making bold decisions such as in shedding low-value added activities and assets. Decision making to be effective need to be information-intensive in such areas as markets, technologies available, cost structure, benchmark, including feedback and steering mechanisms.



Casper Shih, president of the Global Chinese Competitiveness Foundation, believes that to deal effectively with the Asian economic crisis, countries must address the situation from the perspective of global economic development and changes in the national industrial structure. He argued that it is important that each country possess an industrial structure unique to itself based on its own strength. This will help maintain economic balance in the world, and thereby, make continuous growth possible.

If too many countries developed industrial structures that are alike, the repetition in global division of labor could be catalytic in generating the type of economic and financial we are faced with today. There tend to be waves of countries trying to catch up with those more developed than themselves. The speed at which these countries grow is usually much faster than that of the pioneering, more advanced countries. When industrial structures become indistinguishable from one country to another, competitive advantage will suddenly disappear and this will benefit no one.

Only when there are clear differences between each country – that is, when each has discovered its own core competence and make products that can be differentiated from those of other countries – can the operations of an economy as a whole move forward in a more balanced and stable manner than what it is today.

He gave the example of Taiwan as a case in point. Over the past two decades Taiwan experienced major changes in its industrial structure. In 1982-83, this was represented by a move towards greater automation in response to the pressures to bring cost down. The result was a more technology-intensive economy. By 1986, however, the new Taiwan dollar began to appreciate at a rate that undermined competitiveness.

In such an environment, Taiwan was no longer able to rely solely on automation to guarantee growth. This led to the promotion of quality consciousness and a shift towards enhancing value-added products. The focus was on electronics and high-tech products, which are responsible for today's predominantly computer-related manufacturing base. His point is that this path to success is relevant to Taiwan only and following the path of Taiwan now would lead to failure due to different macroeconomic environment and growth conditions then and now.

## **2. Institutional Reform Policies and Implementation**

Countries that have been affected directly and indirectly by the Asian economic meltdown, operate under different macroeconomic variables as well as political and social realities. Hence, it is expected that their response to the problem situation will be unique to their particular environment. However, some commonalities exist among the countries, thus countries from learn from one another's experiences in formulating reform policies and implementing them.

Likewise, the need to look at the inter-relationships, sometimes complex and multi-faceted, of various industries is crucial in mapping out an overall industrial competitiveness strategy. For instance, in Thailand, the auto industry is a vital contributor to manufacturing growth, and the improvement in the auto industry is a key factor in strengthening Thailand's economy due to its linkages with a number of supporting industries. On the other hand, the auto industry depends on the recovery of the food sector for it to pick up.

A Japan MITI-funded study in Thailand (1999) identified several bottlenecks to enhancing industry competitiveness and to strengthening the role of regional industries. These obstacles hamper the full realization of government's objectives of regional industry dispersal, increased employment in rural areas and more equitable income distribution. The study identified absence of regional industrial development master plan as the fundamental cause followed by incomplete regional financing system, absence of regional initiatives to encourage industrial investment, absence of regional institutions to promote industrial development, inadequate access to market (information) from rural regions, and finally, lack of complete statistical data of regional industries.

Frauke Kraas of the University of Bonn (1998) corroborated the findings of the Japanese study when he analyzed the industrial structure and spatial strategies for industrial competitiveness in Thailand. He noted that Thailand's industrial structure is highly unbalanced, both in the regional context and concerning its size profile. Around 55 per cent of the population of Thailand is rural but it accounts for only 12 per cent of the country's GDP.

Based on his observations that Thailand lack a coherent regional policy, he urged that measures be taken to develop and strengthen the internal, endogenous potentials of the region in the medium and long-term. These measures must ensure that: a) relocations from the central region are taking place completely, and b) apart from relocation – more new companies start their businesses in promoted decentralized industrial areas. These measures afford an opportunity to redress the urban-rural imbalance.

Among his other recommendations are:

- a) revamping the industrial structure and focusing on growth industries (such as agro-industry, electronics, communications technology and jewelry) in which Thailand has competitive potential, and productivity but to safeguard skills availability.
- b) having a special policy supporting and strengthening medium-sized enterprises arguing that these firms, being engaged in supra-regional markets as manufacturers of finished goods or suppliers to large enterprises, are the source of innovations. He also noted that there is little local subcontracting and supporting industry, especially for the growth industries.
- c) reviewing spatial strategies of industrialization and their instruments, considering the fact that Thailand has the world's highest primary index (the gap between the largest and second largest cities).
- d) setting up an adequate industrial information structure to enable information-led planning and coordination, given the lack of coordination among the various government agencies and organizations working on industrial structure and spatial industrial planning issues.
- e) improving technological standards and strengthening the country's technological capability in industry. Although ultimately the capabilities of the private sector depend on its own interest in improving it, government policies, incentives and pressures are needed.

Corollary to the above observations and recommendations, Kraas vied for a more deconcentrated industrial structure with several growth poles and called for a definition and demarcation of economic regions. He cites the example of all highly advanced economies having and promoting a multi-polar spatial industrial structure, while all other Southeast Asian countries have a dualistic or even multi-polar spatial core structure and promote these in their regional policies.

He further recommended general guidelines in policy formulation to strengthen the country's competitiveness:

- 1) government policy should create a general economic environment that stimulates firms to improve their performance and rewards them for such improvements, including reasonable exchange and interest rates, low inflation, good growth prospects and stable macroeconomic environment.
- 2) government needs to ensure reasonably free access to inputs at international prices

and a competitive market environment. Industrial regulatory policy at present affects entry and exit in a way that weakens competitive pressure. Fiscal and financial incentives favor privileged projects unsystematically.

- 3) government should formulate overall policy planning for S&T.
- 4) evaluation of institutions and expenditures is necessary in terms of technological competitiveness, financing programs for R&D, R&D efforts in the university sector, research institutes, and the productive sector as well as in education and training for S&T.
- 5) introduction of a vocational model for the vocational training of manpower and greater involvement of private sector representatives in setting up inter-company training centers are recommended.
- 6) further developments and/or implementation of enterprise zones, science parks or research park concepts. In such new growth centers, R&D-intensive enterprises are first located in the park and then supplemented by state research institutions, not the other way around.

The Thai government has addressed the urgent needs and problems for economic and financial restructuring through a series of wide-ranging and comprehensive policy measures. Three major economic stimuli packages in a span of one year were put in place. The first package of August 1998 involved an introduction of a 300 billion baht program to recapitalize the financial sector.

The second stimulus package of April 1999, worth 130 billion baht, involved personal income, value-added and excise tax cuts worth 77 billion baht and new spending amounting to 53 billion baht (raised from the Miyazawa Plan) to help stimulate consumer demand, create up to 500,000 jobs, boost export competitiveness, and bolster the social safety net.

The third major stimulus package of August 1999 aims to cut producer costs, to support investment and to restructure SMEs, among others. To cut manufacturing cost, the government aims to : a) cut import tariffs to three per cent on 326 capital goods, including machinery and scientific instruments, b) waive or cut import tariffs on key raw materials, c) give companies more flexibility in calculating depreciation costs, and 4) waive licensing rules for gold imports and exports. Benefiting from reduced tariffs on imported raw materials are, in particular, the chemical and plastic industries, vehicles and spare parts, jewelry, ornaments, and agri-businesses dependent on imports such as fertilizers and animal feeds.

In supporting investment, the Thai government will : a) set up a \$1 billion equity fund to support investment and debt restructuring in large firms, b) set up a Thailand Recovery Fund with initial capital of \$100 million with the Asian Development Bank to invest in medium-sized firms, c) set up an SME investment fund, a 10-year closed-end fund with capital of one billion baht.

With the recognition of greater global competition and increased social awareness of a better quality of life and environmental concerns, Thailand has set twin visions of the country's future industrial development: one, of increased competitiveness of Thai industries, and second, of increased role of the industrial sector in sustainable development.

To help realize these visions, the Ministry of Industry established three guidelines for industrial development:

- a) develop industries using specialization in all sizes of industries to produce high quality and high value added products and export goods through the use of a viable production network and high technology;

- b) promote linkage with main industries, especially agro-industry where Thailand has raw material comparative advantage with the expectation of better income distribution, more employment and better quality of life in the rural areas; and
- c) develop industries using technology and skill to increase value added to products by developing basic and applied technology in cooperation with public and private academic institutions.

These guidelines were used by the Ministry in formulating the following urgent policies in support of the government's economic stimuli packages.

### *1. Short-run policies*

- a) solve the problem of liquidity for industrialists by restructuring the Small Industry Finance Corporation (SIFC) to allow for increase in working capital and reduction in interest rate.
- b) speed up tax restructuring in order to help industrialists to reduce cost and their disadvantages.
- c) speed up the establishment of independent institutions of all 13 targeted industries under the Industrial Restructuring Plan (IRP), so that they will serve as the basic foundation for each industrial sector. (There are now 10 specialized institutions operating)
- d) encourage the private sector to adopt various standard schemes such as the ISO 9000 and 14000 series. At the same time, the government will start a pilot project for governmental departments to use ISO 9000.
- e) speed up implementation of the Industrial Restructuring Plan (IRP).

### *2. Long-run policies*

- a) beef up capability of developing SMEs, by drawing up an SME master plan, pass an SME promotion law, set up a special committee to look after and supervise SMEs.
- b) promote the distribution of industries to provinces and rural areas via promotion of rural industries by helping them in the areas of technology, packaging, product design, capital market and cost of production. Encourage industries to use local raw materials to produce linkage commodities and then develop to export. Develop cottage industries so that they can work permanently; reduce interest rate for borrowing by rural industries.
- c) more strict control of highly polluting industries and encourage them to move to industrial zones; promote industry to switch to technology which produces less pollution.
- d) set up more industrial estates and encourage industries to move into the specific zone; give emphasis on controlling pollution emission.
- e) promote energy conservation via energy reserve development to avoid energy shortage in the future.
- f) build up foreign dimension in the task of the Ministry of Industry so that it can keep up with the pace of worldwide movements; to be ready with foreign information, including trade agreements, so that it can respond quickly enough to protect the interest of Thai industries.
- g) promote more foreign investments in industry by cooperating with other government departments to set up operating plans and distribution of information.

To strengthen its technology development base and to ensure the involvement of the academe, the Thai government has instituted various measures. The Ministry of University Affairs is setting up a 7-year tertiary education development program aimed at boosting the country's academic capability to produce more postgraduates. The Ministry of Industry is promoting and implementing industry standards like the ISO 9000 series, while the Ministry of Science, Technology and Environment (MOSTE) is initiating S&T related activities via grants and subsidized consultancy, research, training, information and other activities.

The National Science and Technology Development Agency (NSTDA) opened its first Science Park adjacent to Thammasat University and the Asian Institute of Technology, to support and implement

R&D and to invest in S&T. The Park aims to promote and to facilitate tripartite cooperation between the private sector (technology user), the academic institutions (technology generators) and NSTDA (facilitator). The National Electronics and Computer Technology Center (NECTEC) under MOSTE holds an annual Youth Scientists Competition to promote skills in science and computer technology among young people.

Kasetsart University, a state university, is embarking on a 1-billion baht scheme to develop the country's first special higher educational institution linking its students into the operations of industries on the eastern seaboard of the country. The new facilities, located in its Sriracha campus and complete with research and training centers, will make it the first Thai university to have a campus located in an industrial estate. Students will have the opportunity to have on-the-job experience in the laboratories and workplaces of manufacturers, and hopefully will have a better chance of being employed by the same companies after graduation.

The Philippines established three key bodies with representation from both private and public sectors to work closely together for the development of a particular economic sector. These are the Industry Development Council, the Export Development Council and the Small and Medium Enterprise Development Council. These bodies are actively involved in formulating policies and measures to enhance the competitiveness of Philippine industries.

The Philippine government seeks to add more value to its manufacturing by promoting greater processing activities and the use of intensive industries that link manufacturing with countryside resources. It is implementing various plans such as Industry Competitiveness Action Plan (ICAP), Industrial Development Plan of the Philippines (IDPP), Philippine Export Development Plan (PEDP), Small and Medium Enterprise Development Strategy, and Developing Rural Industries and Village Enterprises (DRIVE) program.

Developed in July 1997, the Philippine ICAP focused on six key areas affecting both industrial and agricultural sectors. The areas of concern are: 1) macroeconomic issues such as tariffs, exchange rate and incentives; 2) infrastructure, 3) productivity, 4) human resource development, 5) transport and distribution, 6) industry cluster approach. Each of the areas has a separate detailed plan identifying strategies and measures to be undertaken in the next four years (1998-2002).

The Philippine IDPP includes 16 winning industries identified based on actual competitiveness, industry size, impact on jobs, and where the Philippines enjoys comparative advantage over other ASEAN countries and the rest of the world. Among the priority industries where SMEs are dominant include decorative crafts, footwear and leather goods, furniture, garments, metal products, processed food, and motor vehicle components.

The IDPP includes short, medium and long-term concerns of the industry sectors with the following features: 1) *short-term goal* is for industries to survive, addressing immediate concerns of the industries, and laying down the foundations for sustainable development such as basic sciences and advanced technologies; 2) *medium-term plans* focus on moving the country to sustainable growth and improved scientific and technological competence; and 3) *long-term plans* are geared towards ensuring competitiveness in high value added products and services.

In Korea, there are moves to transform the economy from its present industrial structure into a more knowledge-based industries consisting of primary, manufacturing and service industries. Korea believes that in a world where the economy is rapidly globalizing and innovation is largely based on information technology, the importance of traditional factors of production such as capital, labor and land is diminishing in production activity, while the production factors like information and knowledge is gaining importance. According to one study, support of knowledge-based industries by the government will generate an additional 770,000 jobs for the next four years.

In Vietnam, reforms and bold measures implemented during 1999 are expected to take effect in 2000

aimed at improving the business climate regarded by investors as one of Asia's most bureaucratic and creating a wider and more open legislative environment.

### 3. *Best Practices in Industrial Restructuring and Institutional Reform in Asia-Pacific*

#### a. **Industrial Restructuring Plan (IRP), Thailand**

In Thailand, a five-year Industrial Restructuring Plan (IRP), was approved by Cabinet in September 1997 as a component of its overall economic recovery package. The Cabinet likewise approved the Industrial Restructuring Master Plan in January 1998 to serve as IRP's implementing guidelines. The objectives of IRP are to increase competitiveness of Thai industries and to expand the role of the Thai industrial sector with job creation and industrial pollution reduction in mind. The Ministry of Industry set the policy guidelines for industrial restructuring as follows:

- a) move towards production of high value added products for the middle-to-higher markets, with higher quality standards by upgrading technology and machinery as well as quality management and by developing product designs in line with market preferences,
- b) improve efficiency in terms of production costs, streamline production process, improve delivery and quick response, as well as improve management capability,
- c) upgrade knowledge and production skills of industrial personnel,
- d) create production and trading alliances among both domestic and overseas to penetrate and expand the markets and to enhance technology transfer,
- e) lessen industrial pollution through the adoption of clean technology and industrial zoning policies
- f) disperse industrial employment to regional and rural areas.

The IRP has eight main programs divided into two clusters.

The first cluster is concerned with industrial restructuring to increase global competitiveness and consists of four programs related to: 1) improving productivity and streamlining process to reduce cost and speed up delivery, 2) upgrading production technologies and machinery in targeted industries, 3) promoting product designs & development and market channels, and 4) providing inducement for foreign direct investment in industries using advanced technologies.

The second cluster is concerned with social condition adjustment through dispersal of industrial employment and reduction of industrial pollution and consists of four programs related to: 1) upgrading skilled labor for the targeted industries, 2) promoting incubation and strengthening SMEs in regional and rural areas, 3) stimulating dispersion and relocation of labor-intensive and low-pollution industries to regional and rural areas to support job distribution and income generation, and 4) facilitating the relocation of hazardous and polluting industries to designated industrial zones, and promoting the use of clean technology to reduce pollution.

Some 13 priority industrial sectors were selected because they comprise 95 per cent or 110,000 factories of the total 130,000 existing factories and employ three million workers. They include food and animal food, textile and garment, footwear and leather products, wooden products and furniture, pharmaceutical and chemical products, rubber and rubber products, plastic products, ceramics and glassware, electrical appliances and electronics, automobile and parts, gems and jewelry, iron and steel and petrochemical products.

In addition, the twin criteria of importance and urgency for development were used to group the 13 industry sectors into four categories, namely: a) utmost important and urgent industries (five sectors), moderate importance (five sectors), and not of immediate urgency but some promotion activities should be undertaken (three sectors). The categorization allows for differentiated types and intensity of promotional measures.

Action plans to carry out the eight programs in 13 priority industries are presently implemented via 24



projects. The National Industrial Development Committee has been set up to supervise industrial restructuring by carrying out 24 approved projects.

Pursuant to IRP, representatives from the public and private sectors agree to adopt the following approaches for incubation and strengthening SMEs:

- a) *information and awareness campaign* – through nationwide seminars and road shows with the objectives of educating entrepreneurs of the need for change, of providing information about support measures for SMEs, and of changing entrepreneurs' mindset to be more market-driven and customer oriented.
- b) *industry association and business linkages promotion* – with the objectives of providing incentives for SMEs to form associations and to become members of industry associations, strengthening the role of industry associations, of encouraging business linkage between SMEs and large enterprises, and of providing incentives to encourage SMEs to form cooperatives.
- c) *incentives scheme and financing* – with the objectives, among others, of encouraging commercial banks to increase their long-term loans to SMEs especially to priority industry sectors, providing venture capital funds to high-tech products and companies, and of encouraging urban SMEs to relocate.
- d) *improving efficiency of small industry financing institutions* – with the objective of strengthening the role and operation of the Small Industry Finance Corporation and the Small Industry Credit Guarantee Corporation to be more responsive to markets.
- e) *provision of technical assistance* – with objectives of assisting SMEs to have better accounting and financial system, of establishing a consultants' licensing system, of establishing a training institute for entrepreneurship, management and technology training, and of developing cooperation with various agencies in providing business development services (BDS).

#### **b. Innovation Centre (IC), Singapore**

The establishment of Singapore's Innovation Centre (IC) serves as a significant milestone in enhancing effective links between university and industry and provides a successful model of academe-industry partnership by creating a conducive environment for both SMEs and large companies to work hand-in-hand in product development and technology advancement.

The IC was established at Nanyang Technological University (NTU) as part of the university's science park to take advantage of the concentration of scientific expertise and facilities at the university, to serve as a catalyst in bringing innovative ideas from companies to commercial fruition through R&D with the university, to nurture entrepreneurs with innovative ideas, to jointly exploit and commercialize university R&D results with industries, and to provide training for NTU students and research industries from industries.

The IC signed a memo of understanding with the Singapore Manufacturers Association to develop joint establishment of a technology data base, and organize joint activities to facilitate a closer link between the university and industry, etc. It also assists in technological development in the form of special assistance for start-ups, patents and licensing, technology identification and development, sourcing of funds for R&D such as the government's Innovator's Assistance Scheme. More than 80 companies have collaborated with the IC in R&D and successfully completed their projects at the centre.

With a total lease area of 4,000 sq. meters, with unit sizes ranging from 32 to 220 square meters, IC develops entrepreneurship by providing units for small business development and incubator programs, providing secretarial/business support services, and assisting in sourcing start up funds. It adopts the twin policies of keeping fees nominal to provide opportunities for companies to commit more resources to R&D work and of having short-term tenancy (3 years with option to renew) in line with industry/business objectives for a faster development cycle. It presently houses 21 companies of which 15 are start-up companies.

In early 1999, a Technology Centrum was established at the IC as the focal point to showcase the scientific and technological innovations of the university staff and students, especially those breakthroughs that are ready for commercialization. It serves as a one-stop centre where interested industrialists and investors can have access to new technologies and meet up with the inventors to further explore opportunities for commercial exploitation.

Parallel to the establishment of IC, the university set up NTU Ventures Private Limited (a university holding company) which participates in equity to give impetus in attracting industry or other venture capital firms as partners in the commercialization of staff research results.

### **c. Business Development Services (BDS)**

This paper will not be complete without mentioning business development services (BDS) concept and practices which of late have received much worldwide attention among development circles. In contrast, financial services for SMEs are well developed, monitored and evaluated. The Committee of Donor Agencies for Small Enterprise Development has been active in the field of BDS since 1995. Early this year in March, an international conference on “Building a Modern and Effective BDS Industry” was held in Rio de Janeiro, Brazil.

The UN Conference on Trade and Development (UNCTAD) also picked up the topic during its June 1999 Commission on Enterprise, Business Facilitation and Development Expert Meeting on Sustainable Financial and Non-Financial Services for SME Development. The World Bank is sponsoring an Asian regional conference on BDS in Vietnam in April 2000.

All countries promoting SMEs render various business development services (BDS) in one form or another such as management and technical training, marketing, consultancy, information, research and other non-financial services. Governments have supported the creation of BDS to assist SMEs to overcome market imperfections and the lack of access to technology and information, and to enable them to compete more effectively. However, it has been found that in general existing BDS have not proven to be very successful due to poorly staffed and badly managed setup, hence many have proved costly and have benefited only a small number of SMEs in limited geographical areas. These BDS, often provided by government agencies and semi-government institutions, have mostly offered supply-driven services without assessing the true needs of the SME sector.

What is needed is an effective demand-driven BDS, hence a number of core principles of best practice emerged as a collective effort of practitioners, donors and scholars. Among these principles are:

- a) *demand-side orientation and adaptation to users' needs* – it is useful to stimulate a dialogue with SMEs, help them identify and evaluate their own needs, and strengthen their linkages with local service providers and support institutions.
- b) *subsidiarity* – BDS must be brought as physically close and made as convenient as possible for SMEs; this requires maximum feasible vertical and territorial decentralization in organizing BDS as conditions permit.
- c) *focused, strategic and collective approach* – BDS can be extremely cost-effective when provided to clusters of SMEs operating in close geographical proximity, and can provide

unique opportunities for fostering and strengthening links between SMEs themselves.

- d) *market-oriented and businesslike* – because of past limitations and failures of public agencies in delivering BDS, more and more attention is now being paid to the possibility of increasing the participation of the private sector in offering BDS; private sector includes trade or industry associations, semi-public institutions, private consultants and non-governmental organizations (NGOs).
- e) *cost recovery* – BDS are costly, especially if consultancy or extension services are offered one-on-one basis; some of the costs can be reduced by providing services to groups of similar businesses, similar problems or of the same geographical location. This also means fee for service and subsidy in the early years of the BDS development process or for micro entrepreneurs.
- f) *cross-subsidization of services and clients* – as some BDS by nature of their services such as marketing, technology, accounting and legal services allow for easier cost recovery and have proven their financial viability, revenues earned by viable BDS can finance or subsidize less viable complementary services such as training or access to information because the need is not clearly perceived.
- g) *sustainability (financial and institutional)* – the delivery of BDS and their financing need to be monitored with the ultimate objective of achieving sustainability; there are divergent opinions regarding sustainability depending on whose viewpoint (donor, implementor, client).
- h) *monitoring and performance measurement* – a number of criteria are needed to monitor and measure the performance of BDS at all levels (outreach, efficiency, effectiveness and sustainability); this includes regular monitoring and evaluation of the direct impact of the BDS on the assisted SMEs as regards improvements in output, quality, profitability, sales, employment, income, exports, regional development, introduction of new technologies, etc.

## **V. Role of SMEs in Industrial and Economic Development**

Many Asia-Pacific countries embarked on a path of development stressing rapid industrialization characterized by massive infrastructure spending, strong market orientation, private sector promotion and foreign investment attraction. They likewise adopted a similar pattern of development starting off with import substitution to an export-oriented growth strategy. All these were pursued in the name of competitiveness but sometimes to the disadvantage of SMEs.

Generally, however, SMEs are considered the engine of economic growth in most Asian economies by their sheer number and by virtue of their significant contributions to employment generation, value added and foreign exchange earnings and savings, as well as other economic and social contributions. Hence, the search for national competitiveness and promotion of SMEs are not a dichotomy, but a necessary complement.

### **1. Traditional Roles and Policies**

Many Asian-Pacific countries consider SMEs, comprising about 95 per cent of all establishments, as the backbone of their economies and recognize their important role in socio-economic development. SMEs are perceived as key players in: a) ensuring market economy with competition in the market, b) modernizing industrial structure to penetrate new markets, c) contributing to the improvement of balance of payment, d) contributing to socio-economic development of the regions, and 5) creating job opportunities.

SMEs are also promoted as they contribute in the building up of a middle class group in society, otherwise known as the missing middle and in helping to distribute income equitably. They are a source of innovation and a breeding ground for entrepreneurs and technopreneurs.

In analyzing national competitiveness with reference to SMEs, we can refer to the classic work of Michael Porter (*Competitive Advantage of Nations*, 1990). He formulated his "diamond" of four conditions which affect SMEs and countries, namely: (a) factor conditions, (b) demand, (c) firm strategy and structure, and (d) related and supporting industries.

The resource-based and labor-intensive nature of majority of SMEs in many developing Asian countries is consistent with the structure of their comparative advantage. In principle, firms in the provinces should have an advantage over firms in the urban areas because of their access to natural resources and cheap labor pool. However, Porter suggests that firms employing natural resources may lack incentives to improve product quality and to innovate in order to be competitive. Therefore, they are not well equipped to function within a dynamic environment. SMEs lack the human resources, financial resources, knowledge, and infrastructure available to large enterprises.

In some Asian countries, the share of SMEs' total sales in the domestic market is greater than that of large enterprises. In Thailand, it has been observed that SMEs in the provinces sell products to regional markets while large enterprises sell to Bangkok or export their products. This may be explained by the fact that demand in Bangkok and in the export market is more dynamic, and consumers are more sophisticated in the export market. Thus, these demand conditions appear to reinforce the static tendencies of SMEs. The market is also quite narrow for SMEs, especially in the provinces, because the growth of regional demand is slow. Gross regional product of greater Bangkok metropolitan area is much greater than in the provinces. Market is one major constraint for SMEs.

In terms of firm strategy and structure, SMEs are at a disadvantage because of the characteristics of the entrepreneurs and management. Because of shortcomings caused by low levels of education, management by experience, family-type business, domestic market orientation, and lack of

commitment to improve product quality and productivity, the development of SMEs has rather been retarded in several Asian countries.

However, since the new generation of entrepreneurs are better educated, these conditions are changing. The new breed of entrepreneurs including second generation entrepreneurs are beginning to operate their businesses using modern management techniques. In Thailand, the openness of the Thai economy and the dynamics of the export market make the external market more attractive to both large and SMEs.

Related and supporting industries are typically SMEs. The effect of the crisis on SMEs depends on the extent of existing backward and forward linkages with larger companies and foreign investors. Because linkages are strong with their mother (contracting) firms in terms of derived demand, the economic welfare of SME supporting industries is dependent on the situation of large enterprises.

Supporting industries that provide parts and services to companies catering to the domestic market would have a tough time as demand slowed down over the past two years, although there are indications especially during the last quarter, as experienced in Thailand for example, that consumer confidence is building up. However, supporting industries that are attached to export-oriented large enterprises and multinational firms such as in the electronics, appliances and automobile parts, are surviving.

On the whole, there are advantages and disadvantages for the supporting industries. On the positive side, consolidation and upgrading in the supporting industries will occur and the more viable and competitive ones will emerge.

SMEs face a shortage of professional management capability to improve their efficiency and the quality of products to meet internationally accepted standards. He advocated assistance to be provided in terms of long-term capital supply and low-interest loans, which would help and motivate SMEs to move and gain a cost advantage by modifying production processes and relocating factories, where labor costs are still cheap. As for long-term planning, he encouraged a larger ratio of SME run by technical entrepreneurs, or technopreneurs. Along this line, he commented that at present educational institutes are places for teaching, not for learning.

A survey of SMEs was undertaken in Thailand in view of the economic crisis. Two groups of industries were selected, namely, supporting industries and general consumer goods. For the supporting industries, the situation was that car assemblers were switching from domestic market to export market due to the slump in domestic demand. However, the parts industry in Thailand is not able to catch up with this trend in terms of competitiveness so that parts are about to be replaced by imported ones.

As for the general consumer goods, the serious problems were that manufacturers for export market face stiff competition from China and the neighboring countries in the lower-grade goods markets. Likewise, manufacturers for domestic market have anxiety to be defeated by imported goods under the circumstances of trade liberalization.

A related study was conducted to determine the urgent issues of SMEs and to determine the result of the 1999 survey with that of the 1994 study in the order of importance of the problems. In both years (1994 and 1999), manpower development was considered the most critical issue. In the 1999 study, marketing development came a close second, while in 1994, this factor ranked number eight. Machinery & equipment, financing and quality control technology more or less maintained their positions, however production technology ranked third in 1994 fell to eight position. The SMEs surveyed identified their needs for government support with marketing and sales promotion as number one followed by tax incentives/subsidies, easy access to financing, reliable and continuous SME policy, technology upgrading, and human resource development.

## 2. Assistance Programs to SMEs

In restructuring SMEs as part of the Industrial Restructuring Plan, the Thai government will : a) set up a four billion baht for the Small Industry Credit Guarantee Corporation to expand its scope to include firms with assets up to 100 million baht and annual guarantees of up to 20 million baht, b) provide additional funding of 2.5 billion baht for the Small Industry Finance Corporation, and c) set up an SME Financial Advisory Centre to provide consulting services.

To increase the access of SMEs for capital funds, Thailand plans to launch a new trading bourse for SMEs to time it with the rise of investor confidence in the stock market. Under the proposed terms and conditions, SMEs wanting to be listed on the second board will be required to have registered capital of at least 40 million baht with a two-year track record.

Thailand recently set up the Institute for Small and Medium Enterprise Development (ISMED) as a joint undertaking of the Ministry of Industry and Thammasat University. The Institute was established to train a pool of trainers, consultants and researchers to provide services in the field of entrepreneurship, management, as well as technical and business advisory support to SMEs.

To operationalize its mandate, ISMED established a network of eight major universities and institutions in the regional areas. The objectives are: (a) to develop and strengthen the roles of public organizations and SME development agencies – with the objectives of developing close cooperation between state and public organizations in providing business development services (BDS); (b) to strengthen organizations to render better BDS; and (c) to establish an agency dedicated to SME policy research, monitoring of impacts of policies, etc.

Singapore's SME Development Plan adopted in 1988 articulates that promotion of local entrepreneurship in terms of availability of a core of high-calibre entrepreneurs and world-class enterprises, is a key component of the strategy to develop Singapore into a major node in global business and a total business center. Through collaboration with the multinational companies, local SMEs are assisted to build up a strong supporting industry and service base, and further develop themselves into specialty manufacturers or service companies for the world market.

Local enterprises shall be a receptacle for international technology and knowledge transfer, and a link in the value chain of global business. "Entrepreneurship, innovation, strong customer orientation, sound management practices, high value added and technological content, as well as a global perspective shall be the hallmarks of Singapore enterprises."

The strategy of Singapore's SME Master Plan is to stimulate local enterprises by creating a more pro-enterprise environment, provide help for self-help, and accelerating the pace of growth with incentives. The Plan's five strategic thrusts were chosen to minimize start-up risks and guide SMEs to transform and growth. They are : a) technology adoption, application and innovation; b) business planning and finance; c) human resource management; d) productivity improvement and training; and e) international marketing and business collaboration. The Plan seeks to:

- 1) continue to improve and provide a conducive business environment that promotes entrepreneurship and innovation,
- 2) increase market efficiency by encouraging information exchange and improving the provision of information about new methods and opportunities,
- 3) promote best practices in business through easy access to consultancy, technology adoption and training, and
- 4) encourage local enterprises to grow and go international.

Indonesia has long been promoting a strong relationship between large firms and small firms and cooperatives through various measures, among them the foster father system. The government puts emphasis on an economic system that stimulates social justice and aims to expedite the adoption of

the Law on Prohibiting Monopolistic Practices and Unfair Competition. The reform also means correction of all kinds of concentration of productive assets. This is not to be perceived as an anti-big business or anti-certain economic group policy, but is instead an attempt to encourage genuine partnership between small and medium enterprises (SMEs) and cooperatives with big business groups.

In Indonesia, while 98 per cent of enterprises are considered SMEs, their turnover is about 15 per cent compared to large enterprises' share of 85 per cent of total enterprise turnover. Many large enterprises collapsed as a result of the crisis and dragged many SMEs to their death even those who had a low debt-equity ratio and had entirely local operations.

Various recommendations have been put forward to the government of Indonesia to assist SMEs, particularly in terms of stronger commitment for reforms, of pro-SME laws and regulations, of protecting SMEs, of establishing a banking system for the development of SMEs, of establishing a special body to help marketing SME products through the Internet, of setting up a joint marketing board to coordinate and promote SME products, of improving trading performance by re-evaluating existing policies in the area of allocating export quota to enterprises, of strengthening business associations, of building strategic business alliances between the academe and the private industry, and of focusing technological development to support agriculture and agro-industries on which more than 70 per cent of the population are dependent.

In Japan, government policies aimed at promoting modernization of equipment, improvement of technology, rationalization of management, structural upgrading, prevention of excessive competition, subcontracting promotion, demand stimulation, ensuring fair opportunities for business activities, and an appropriate labor-management relations.

In the Philippines where SMEs constitute 99 per cent of business establishments, employ 55 per cent of the labor force, and contribute some 25 per cent of value added, the welfare of small and medium enterprises is in the hands of the Small and Medium Enterprise Development Council. Composed of representatives from the public and private sectors, the Council identified the principles of viability and competitiveness, private sector led initiatives, and market driven responses in the promotion and development of SMEs.

Based on the above principles, the following programs were formulated: 1) narrowing the focus by identifying priority sectors, promoting mutually beneficial linkages among small and large firms, 3) strengthening technology and research and development initiatives, 4) bolstering human resource development, improving access to financing, and f) ensuring harmony and complementarity in government and private sector partnership.

### **3. Problems of SME Support Agencies**

Analysis of the impacts of various SME support agencies and their assistance schemes indicates that the most successful schemes tend to be those in which incentives are used to increase the absorptive capacities of SMEs in order to make them attractive to large enterprises and to encourage them to export their goods. Where schemes have failed, the causes often revolve around ineffective implementation of policies.

One of the causes is communication problem due to lack of strong coordinating agency among government agencies. In the countries that used the multi-agency approaches and failed to produce the desired results, reasons for failure include: (a) lack of private sector involvement, (b) inconsistencies in implementation, (c) lack of communication between agencies, (d) unfair regulatory burdens placed on SMEs, and e) lack of managerial accountability.

To stimulate the growth of SMEs, Malaysia introduced three important programs: the umbrella concept of marketing (UCM), the subcontract exchange (SEP) and anchor company (ACP). Despite active promotion and assistance from various government assistance agencies, Rasiah (1999) felt that

SMEs have yet to develop effective support capacities. Production linkages have been strongest in state-sponsored firms due to captive rents offered by government controlled management.

Five important reasons account for the general weakness of SME support mechanisms in Malaysia:

- a) a significant number of SMEs have been start-ups begun largely to boost bumiputera participation in industry, their lack of entrepreneurial experience has often led to poor management;
- b) captive rents offered by state sponsored anchor firms have not been tied to time bound performance standards, hence there has been little pressure or competition to improve efficiency;
- c) the 30 per cent domestic sourcing condition for firms applying for pioneer status and investment tax allowance (a scheme popular in many countries) has been redundant with strategic industries, and thus carried serious loopholes;
- d) the 30 per cent domestic sourcing condition has not discriminated against foreign owned firms, thus several multinational companies met the domestic content requirement by purchasing from their subsidiaries; and
- e) quasi government participation in learning spin-off process so as to match the right SMEs with multinational companies – including by stimulating potentially capable SMEs – has not been strong, except in Penang.

#### 4. SME and Large Enterprises Linkages

SMEs play an ever increasing role in the industrial structures of Asia-Pacific countries. Various factors such as trends in technology, management techniques, firm sizes, global investment, and trade liberalization have led to significant changes in industrial structure. These changes can lead to opportunities for greater linkage between SMEs and large enterprises, hence Asian nations can exploit these changes. See Figure 5 for a schematic diagram of Industrial Structure and SME Development: Major Links.

A World Bank study supporting this greater linkage commented that an industry's vitality depends on low levels of market friction and a high degree of flexibility. These twin objectives can be met within the context of a broad based industrial structure with strong inter-firm linkages. Market frictions are lowered as repeated transactions between firms lower transaction costs of obtaining and acting upon information, while standardizing market norms. Higher flexibility is realized as dependable subcontracting relationships allow firms to meet production needs as they occur, without having to maintain high levels of inventory. However, the largest benefit of inter-firm linkages is also the largest constraint to its development: the increased absorptive capacities of SMEs.

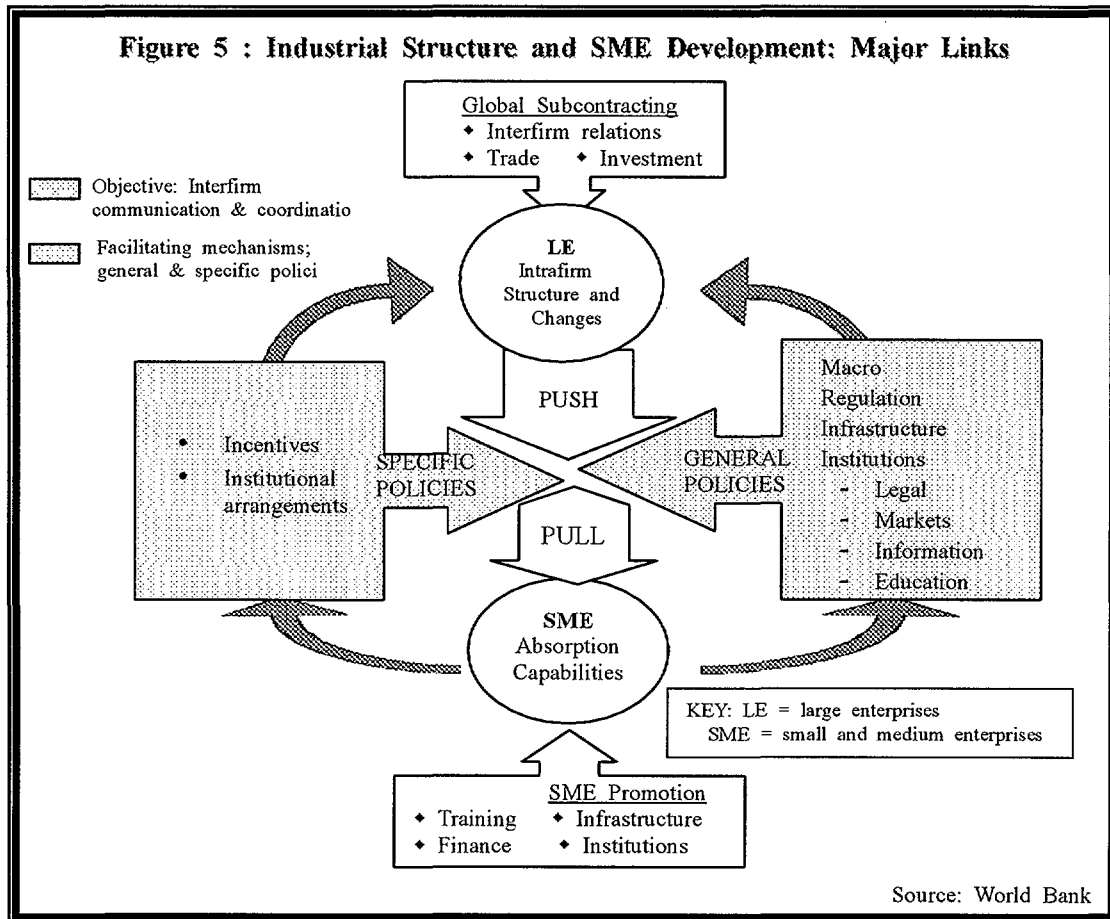
The report attributed the breakup of large enterprises as the most extensive and important trend in today's industrial structure. This breakup is the result of decentralization, vertical disintegration, and downsizing. Factors which contributed to the inevitability of this breakup are the arrival of new technologies which allow for more differentiated products at lower costs. Also included are niche marketing, shorter product cycles, and just-in-time inventory management techniques which are cutting down on organizational waste.

The potential value of linkages between large enterprises and SMEs in creating a broad and sustainable industrial structure is significant in the face of these trends. However, before a country can take advantage of this opportunity, the appropriate human resource infrastructure must be in place in order to facilitate efficient skills transfer. Cheap and unskilled labor with low absorptive capacities has a very limited value in today's fast changing global economy. In addition, quality management must exist to turn technological advances into cost reductions.

Large enterprises at the global level are following fragmentation strategies, focusing on product differentiation. This has created an opportunity for middle income developing nations to create



inter-firm linkages through subcontracting, particularly with the advent of niche marketing that can allow SMEs to specialize production without incurring heavy overhead expenses. As the value chain from supplier to buyer has expanded across national borders, the structure of international trade and investments has also changed.



Cost factors have also affected corporate strategies of large enterprises. With increased competition, firms are looking for ways to increase their flexibility and broaden their consumer markets. The need for product differentiation has led to a new dynamic manufacturing concepts such as CNC machines which make possible a high degree of variation in product runs and product specialization, which in turn, have lowered barriers to entry for SMEs.

The role of the government in facilitating inter-firm linkages is very vital. The World Bank study mentioned three possibilities: (a) allow market forces to create linkages, (b) use ‘market friendly’ incentives, and c) force linkages through government intervention (for instance, in the case of local content requirement popular in the vehicle industry).

Specific policies have been initiated by several countries in Asia to enhance SME linkage development. These include *tax incentives* in Malaysia and Singapore to promote subcontracting between multinational companies and local SMEs.

Another scheme is *specific institutional arrangements* such as the “umbrella strategy” of Malaysia in which one umbrella company, possessing the necessary financial resources and expertise, helps to coordinate production and marketing for SMEs. The SMEs receive valuable skills and management training, while the umbrella firm is offered inducements (in one case the SME’s products are marketed

under the umbrella firm's name, in another the umbrella is offered government contracts without competitive bidding).

This concept is similar to the foster-father plan in Indonesia where a large firm acts as foster father and 'adopts' certain SMEs. Singapore promotes interfirm linkages through its Local Industry Upgrading Program (LIUP), while Thailand has the BUILD (BOI Unit for Industry Linkage Development) program together with the Department of Industrial Promotion (DIP) which acts as matchmaker between SMEs and large enterprises. Taiwan has the Center-Satellite Factory System (CSFS) to help coordinate linkages between individual SMEs that perform complementary functions.

Other schemes to promote inter-firm linkages are *vendor development schemes* to induce large enterprises to give focused assistance to local SMEs. This has been successfully demonstrated in the vehicle industry in Korea and Malaysia. The *local contents requirement* is used by most countries with mixed results. A related policy is the levy procurement requirements imposed on multinational enterprises. The *information provision and exchange* scheme is designed to enhance the flow of information to SMEs who are too small to effectively obtain it themselves. In Malaysia an application of this scheme is known as Subcontracting Exchange Scheme (SCX), in the Philippines Subconex. The scheme serves as a clearinghouse, linking component-producing SMEs with component-using multinational firms.

*Cluster creation* scheme induces the clustering of complementary enterprises to allow them to use market forces effectively as incentives for availing many of the other schemes mentioned above. Indonesia, Malaysia, Philippines, Singapore and Thailand take prominence in using this scheme, with Indonesia under BIPIK (Small-Scale Industries Development Program) having the longest history.

A UNIDO study referred to industrial clustering and networking as an innovative and effective approach in industrial development strategy. It cited their positive impacts in establishing closer linkage and cooperation between SMEs and large enterprises, in providing higher level of economies of scale, and in inducing optimum productivity of capital and product specialization. It indicated that a cluster characterized by agglomeration of closer inter-firm linkages or related activities comprising industries, suppliers, critical support services, requisite infrastructure and institutions, can stimulate the formation of strategic alliances with suppliers and even with competitors.

A World Bank report called for a review of SME development policies with the view of increasing SMEs' absorptive capabilities and maximizing the pull factors that will bring large enterprises voluntarily into linkages with SMEs. Support measures should include improving infrastructure (physical, finance, human resources development) and export financing. They should focus on increasing capabilities, improving firm infrastructures, and arranging institutional skills training, particularly focusing on technology skills. Measures that were found effective include: self-help programs, multi-agency networks (with a strong coordinating agency), user-fee charges, and cooperation with non-governmental organizations.

Specific linkage creation policies could be designed to enhance the pull factors and encourage the push factors by lowering transaction cost. Several Asian countries presently use a variety of similar initiatives such as: subcontracting exchanges, incentives, agencies, venture capital schemes, local content requirements, regulations, market reservations, and targeting former employees of multinational companies as subcontractors through financing schemes.

## **5. Emerging Roles and Policies for SME Development**

Policy measures in the 21<sup>st</sup> century should include the removal of remaining policy biases against SMEs in the trade and investment programs as well as handicaps imposed by the smallness of their business operation as against large enterprises. SME development policy in the 21<sup>st</sup> century should have a new dimension as SMEs become integrated into the global economy and have to be part of the quest for international competitiveness.

Government's role in promoting SMEs will require some paradigm shift as a desirable response to, and in anticipation of changes in the national and international environments. Some of these environmental considerations include demands for increasing industry productivity, enhancing competitiveness locally and internationally; shifting comparative advantages, technology development in hardware and software; technology management, shift from resource and skilled-labor industries to knowledge-based industries, reduced government budget for personnel, and the implementation of various regional and multi-lateral trade agreements, etc.

Among these paradigm shifts are:

a. Self-Reliant Policy

Government assistance policies to SMEs will be characterized by the following principles: (a) help SMEs to help themselves, (b) extend assistance, not protection to SMEs, (c) integrate SMEs in overall economic development, and (d) maintain a pro-business environment.

b. Stronger Private Sector Empowerment

The private sector, especially membership organizations like industry associations, chambers and other interest groups, is becoming assertive in its advocacy role. They will require greater role in policy deliberations and decision making in matters that affect them. This means that there will be more public-private sector partnerships in government SME development councils and promotional bodies as well as joint sponsorship of activities. This includes empowering membership organizations to self-regulate their ranks and to perform regulatory functions usually done by government at present such as registration and certification schemes. This trend is also consistent with government's de-regulation, outsourcing and decentralization efforts.

c. Private and Non-Governmental Business Development Services (BDS)

While more SMEs demand better, more efficient, and timely delivery of services, governments' ability to achieve greater and wider access of BDS will be hampered due to plans for leaner but more effective government machinery. Governments will surrender some of their traditional role of providing a wide gamut of BDS to the private sector.

In the face of reduced personnel, governments will stop being a supermarket and one-stop facility for various services, but rather will become 'godfathers' or sponsors in institution building and strengthening of private and non-governmental organizations (NGOs) rendering BDS. They will facilitate and support the rise of private and non-governmental business development services to provide assistance in management, marketing, technology, finance, etc.

Governments will also tend to outsource from the private sector, subcontract services, and even enter into selective schemes such as concessions, joint ventures, management contracts, leasing contracts, and turnkey projects. This also includes subsidizing services, at least temporarily, rendered by the private sector to assist SMEs and implementing grants scheme such as voucher system and funds subsidy to stimulate market demand for BDS by both SME clients and service providers.

d. Information-Technology Driven Assistance

Following the wave of information revolution, governments will give emphasis in investing in information technology infrastructure to raise the technological and competitive consciousness of industries and to provide entrepreneurs with greater access to opportunities in the domestic and world markets. It will promote greater use of computer applications, e-commerce, virtual enterprises, etc. This thrust will also involve educational institutions to prepare the students for skills demanded by the private industry for the 21<sup>st</sup> millennium, to produce more local talents in information technology, and

to develop innovative technologies.

e. **Greater Linkage between SMEs and Large Enterprises**

Governments will continue to give greater emphasis in stimulating greater linkage between SMEs and large enterprises through various incentives and services. The direction will go beyond promotion of existing subcontracting arrangements and foster relationship, business matching or need-seed information exchange. It will move in the direction of mentoring and incubation system wherein BDS providers, whether government, private consulting firms, or large enterprises, will systematically coach and guide the startup, growth, management and technological upgrading of selected SMEs.

f. **Industry Cluster Approach**

To achieve positive synergies in quantity and quality of assistance, governments will move towards promoting market-driven industry clusters and networks. Important clusters may be selected based on geographical concentration, sectoral specialization, ancillary relationships, value added as well as supplier-vendor value chain contributions. Collective growth approaches have been proven to help SMEs in lowering transaction cost, facilitating mutual learning, sharing best practices and facilities, as well as in enhancing the beneficiary industry's domestic and international competitiveness.

Characterized by high connectivity, industry clusters have also been known to effect innovations in production and processes, product designs, packaging, purchasing, and distribution.

**6. Some Considerations in SME Policy Formulation**

UNCTAD (1999) offers some advice to policy makers particularly those concerned with technology transfer and development in SMEs. It stated that governments must engage in an ongoing learning process as they endeavor to formulate and adjust policies to stimulate and support technological change and innovation at the firm level and create an environment conducive to learning. Different firms learn at different rates and it is not easy for SMEs to pursue innovation strategies. From a policy perspective, therefore, flexibility will be needed in the types of policy instruments used, their timing and sequencing.

Policy dynamics, that is, interaction between policies and dialogues that involves all principal actors in the enterprise development process – will be very useful. So, too, will coherence that strengthens and/or weakens market forces and thus minimizes cross-signals in setting the parameters within which enterprises make decisions about innovations, investment and exporting.

According to UNCTAD, potentially SMEs could be the most significant winners in the emerging global information economy, provided that the quality and competitiveness of their products meet international standards. Electronic commerce in particular offers SMEs unprecedented possibilities to compete in global markets and to weave strategic and networking alliances with other players around the world.

However, such potential may remain out of reach for many SMEs, especially in developing countries, if certain preconditions are not met and skills provided. Among these are: access to reliable and cost-effective telecommunications infrastructure, ability to master information technology and e-commerce techniques, ability to introduce national content in the dominant Anglo-Saxon business models, and ability to provide effective guarantees for payments and safeguards against defaults.

The impact of globalization and liberalization can be perceived from two viewpoints. It can open new opportunities for SMEs in developing countries to acquire technology from abroad and that increased competitiveness in technology markets has made technologies cheaper and more accessible. This may indeed in some industries and sectors, while in others technology remains costly and access is still difficult for SMEs in the developing world. Acquiring technologies and the technological

capacities needed to master technologies involve time, effort, cost and risk, and complex interactions between firms as well as between firms and institutions.

However, effective technology transfer does not depend solely on the accessibility and the terms and conditions for the acquisition of technology, but also on the local demand conditions and on the prior building up of the technical and managerial capabilities which determine the ability of firms to absorb and master the acquired technology.

On the demand side, the inherent smallness of most SMEs and markets in developing countries, as well as weak distribution systems and marketing channels and the lack of support structures are impediments to obtaining technology. Other impediments include lack of capacity and the skills to select, acquire, adapt and assimilate technologies, financial constraints and lack of awareness of, as well as relevant information on, available technologies. Few SMEs have the networking and monitoring capabilities that would enable them to access and evaluate technological information.

## **VI. Best Practice Policies in SME Development**

The following describes best practice policies in selected Asia-Pacific countries with regard to SME promotion. They have been especially selected due to their proven national effectiveness and impacts, hence their potential to serve as role models for other countries.

### **1. SME Promotional Policies, Laws and Measures (Japan)**

Japan is considered to have the most comprehensive promotional policies and measures for SMEs embodied in various laws. Aside from the basic law enacted in the early 1950s that provides, among others, the general framework and the creation of an SME Policy Making Council, there are in operation various laws aimed at strengthening the management base of SMEs which deal with organization, management guidance, making proper subcontracting and credit guarantee. The measures provided under these laws seek to rectify economic and social disadvantages SMEs face, and to provide an environment that supports the self-help efforts of SMEs in becoming good competitors.

There are also policies supporting structural reforms covering measures by industry (e.g., modernization, rationalization of distribution), measures by issue (support for new business and ventures, shortening of work-time securing manpower, technological development, environment, and internationalization), and measures for promotion of local SMEs. These laws seek to support SMEs to facilitate their adaptation to changes in the economic and social environment and to their structural reform.

There are specific policies related to SME organizations, cooperative association, human resource education and training, information-oriented management, modernization promotion, creation of the SME Agency, the Japan Small Business Corporation, the SME Institutes, and the Regional Information Centers for SMEs, mutual relief, financing and taxation, bankruptcy, subcontracting promotion, even on prevention of delay in the payment of subcontracting charges. Altogether, there are more than 14 laws related to the promotion of SMEs covering manufacturing, trade and service sectors.

These laws are implemented by various national, prefectural and city governments with the involvement of private associations such as the national and prefectural associations for promotion of subcontracting enterprises, chambers of commerce and industry, federations of SME organizations, federations for promotion of shopping districts, etc.

### **2. SME Development Council (Philippines)**

The SME Development (SMED) Council is one of the three major components of the Magna Carta for Small Enterprises which was passed by Philippine Congress in 1991 and amended in 1997 as a landmark legislation that calls for fostering a dynamic SME sector and for stimulating the Filipino entrepreneurial spirit by providing a business climate conducive to SMEs. The other two components are the mandatory allocation by the banks of loanable funds for SMEs, and the creation of the Small Business Guarantee and Finance Corporation.

The SMED Council was created to be the primary agency for the promotion, growth, and development of SMEs in the country by way of facilitating and closely coordinating national efforts to promote the viability and growth of SMEs. It aims to promote the development of a modern and competitive SMEs that will contribute to the industrial development and competitiveness of the Philippines towards the 21<sup>st</sup> century.

The Council is attached to the Department (Ministry) of Trade and Industry and is composed of public

and private sector representatives. The Council is headed by the Secretary (Ministry) of Trade and Industry as Chairman. The Council is composed of the following members: the Director General of the National Economic and Development Authority; the Secretaries (Ministers) of Agriculture, Labor, Environment and Natural Resources, Science and Technology, and Tourism; the Chairmen of the Monetary Board, Small Business Guarantee and Finance Corporation, and Small Enterprise Promotion Agency; three representatives from the private sector based on geographical representation; three representatives from the banking sector; and one representative from the SME sector.

The Bureau of Small and Medium Business Development of the Department of Trade and Industry serves as Council Secretariat. One of the functions of the Council is to submit to the President and the Congress an annual report on the status of SMEs in the country, including the progress and impact of all relevant government policies, programs and legislation, as well as private sector activities. Government enterprise-supporting institutions are mandated to synchronize their activities. So far, three institutions involved in these initiatives operate in a spirit of complementarity. These are the SMED Council, the Industry Development Council and the Export Development Council.

### **3. Technopreneurship 21 (Singapore)**

In April 1999, the Singapore government launched Technopreneurship 21 (or T21) as a strategy to rapidly transition the economy from a capital-intensive manufacturing and services economy to a globally competitive advanced knowledge economy with a strong and vibrant technopreneurship sector. The National Science and Technology Board (NSTB) was designated as the lead government agency to provide focus and direction to the technopreneurship drive.

The four pillars of T21 include financing, creating the environment to stimulate dynamic entrepreneurship, creating the physical environment and creating an education system that nurtures creativity and enterprise. To carry out its mandate under T21, the NSTB adopts six key thrusts that include growing technopreneurial businesses, promoting finance and investment for new enterprises, developing a conducive environment, strengthening the technology infrastructure, developing manpower for technopreneurship and R&D, and enhancing international linkages.

Promoting technopreneurship includes reducing the barriers to start T-companies. The means to reduce barriers are policies/programs and investment tools. Policies/programs cover Technopreneur Home Office Scheme, Bankruptcy Law, Employee Stock Option Scheme, Work Passes and Long Term Social Visit Passes, and Technology Investment Incentive. The Investment Tools encompass the Business Angel Fund, the Incubator Management Companies, and Technology Investment Fund.

### **4. SME Master Plan (Thailand)**

Thailand's Ministry of Industry unveiled in August 1999 an SME master plan which incorporates three strategies and six targets dealing with 1) managerial and technology upgrading, 2) manpower development, 3) expanding market exposure, 4) strengthening financial capabilities, 5) improving the business environment, and 6) cultivating micro enterprises.

The three strategies comprised a) developing SMEs on a sectoral basis, b) improving supporting industries, and c) offering assistance to rural SMEs. The implementation of the SME master plan is expected to coincide with the passage of the SME law which creates a high-level policy making SME promotion committee headed by the Prime Minister and an SME promotion office which is responsible for coordinating the formulation of the SME action plan and for managing the SME promotion fund.

Under each strategy in the proposed SME master plan, various project ideas were identified, as follows:

*Strategy 1 (Strengthening of SME financing)*

- a) restructuring of the credit guarantee system
- b) strengthening of the SME banking system
- c) establishment of an equity participation system for SMEs

*Strategy 2 (Upgrading of technological and managerial capability of SMEs)*

- a) establishment of a factory evaluation system
- b) introduction of a circular technical guidance system
- c) development of total quality management system for Thailand
- d) provision of assistance package for incubation of SMEs
- e) enhancement of technology transfer from large enterprises to SMEs

*Strategy 3 (Development of human resources for SMEs)*

- a) establishment of Institute for SME Development (ISMED)
- b) institutional support for securing manpower for SMEs
- c) establishment of a certified skill-standards in cooperation with the private sector

*Strategy 4 (Securing of SMEs' market)*

- a) introduction of preferential purchase of SME products by the public sector
- b) strengthening of export promotion activities

*Strategy 5 (Improvement of business environment for SMEs)*

- a) development of information technologies and networks for SMEs
- b) improvement of standards and conformance infrastructure to promote export

*Strategy 6 (Support to micro enterprises)*

- a) formulation of clear and transparent policies for micro enterprises
- b) setting up of mechanisms to improve policies, laws and management of micro enterprises
- c) support in the development of new tools
- d) promotion and upgrading of cooperative groups



## **VII. Role of Regional Bodies in SME Development**

National efforts in promoting SMEs are significantly enhanced or influenced by the participation and actions of the following regional bodies. They provide vital support and added impetus in focusing assistance to SMEs in various concerns. Likewise, they greatly influence in shaping the competitiveness of industries in Asia-Pacific.

### **1. Asia-Pacific Economic Cooperation (APEC)**

The 21-member economies body has actively espoused the promotion of SMEs as reaffirmed at the Leaders' Meeting in Seattle (1993) and subsequent meetings. Coordinating mechanisms such as the APEC SME Ministerial Meeting, the SME Policy Level Group (PLG), and the APEC Business Advisory Council (ABAC) were institutionalized. Five priority areas for SMEs were identified in subsequent meetings. These include human resource development, finance, technology and technology sharing, access to markets, and access to information.

An SME Policy Level Group (PLG), established in 1994 to help SMEs improve their competitiveness and to facilitate their transition to a more open trade and investment environment, provides a central focus for SME activities in APEC. In response to calls by Leaders and Ministers for the 'incorporation of SME priorities throughout the APEC agenda', a Framework for SME Activities was adopted in 1997.

According to the Guidelines of the Framework, APEC initiatives and activities related to SMEs should: a) directly benefit SMEs, b) be of broad benefit to APEC economies, c) complement private sector activities, d) complement and advance the SME work of other APEC working groups, e) provide opportunities for public-private sector dialogue and cooperation.

Many initiatives have been carried out as a result of this policy mandate. These range from the formulation and implementation of an SME Integrated Plan of Action (SPAN), establishment of the APEC Center for Technology Exchange and Training for SMEs (ACTETSME), conferences/workshops on human resource development, women entrepreneurs, education and venture capital, SME business network promotion project, promotion of diagnostic and guidance skills workshop, proposal for an APEC Center for Entrepreneurship, etc.

APEC has also worked out an agreement on trade liberalization including a timeframe of tariff reform by 2010 for developed countries and 2020 for developing nations. APEC leaders had agreed to the principle of early liberalization in 15 sectors during the Vancouver summit in 1997, in fact a few months before the financial crisis erupted.

### **2. Association of Southeast Asian Nations (ASEAN)**

The 10-member Association of Southeast Asians (ASEAN) launched in 1993 the ASEAN Free Trade Agreement (AFTA) as part of its strategy to form a sub-regional economic bloc or a common market in order to encourage an expanded intra-ASEAN trade under a liberalized trading environment. The Agreement takes effect in 2003 and involves substantial tariff cuts by up to five per cent of raw materials, intermediate and finished goods imports from member countries. This would mean a broad tax restructuring. ASEAN also launched the ASEAN Industrial Cooperation Scheme (AICO) in 1996 aimed at increasing competitiveness of ASEAN countries and involves private sector cooperation in initially 23 projects. The body adopted ASEAN Vision 2020 which calls for regional community of caring, vibrant and open societies.

A survey of regional executives which accompanied the Economic Intelligence Unit Report Planning for ASEAN, indicates that a majority of businesses predict a substantial corporate impact from AFTA.

It is viewed as inevitable that AFTA will greatly alter the market environment over the coming five years, accelerating the trend towards regional manufacturing and sourcing. Most believe AFTA's impact will, on balance, be positive.

AFTA creates enticing opportunities as the potential to reap economies of scale by tapping a larger market exists. It will force many companies to review their strategies in the region and to rationalize their manufacturing and marketing operations as well as management structure around the region. Even for customers, AFTA will mean a boon as it will lead to efficiency in distribution of products. As AFTA is expected to result in stiffer competition among businesses, this will mean reviewing their partnering strategies and looking strategic partners. Regional competition will be more intense as a result of extensive trade liberalization programs such as the World Trade Organization (WTO) and the Asia Pacific Economic Cooperation (APEC).

### **3. Asian Productivity Organization (APO)**

Although the Asian Productivity Organization (APO) has been undertaking programs and activities relevant to SMEs, it was only in June 1999 that its Governing Body during 41s Session approved the adoption of "*Strengthening of Small and Medium Enterprises (SMEs) and Integrated Local Community Development*" as new thrust areas. This was in a way its formal recognition of the contributions of SMEs to the economies in its member nations. The existing four thrust areas, namely, Total Quality Management, Information Technology, Development of National Productivity Organizations and Green Productivity, are also directly or indirectly of significance to SMEs.

The APO also promotes rural-based small industries. A seminar held for this purpose perceived the following main issues in promoting rural industries: (a) institution and capacity building as a neglected critical area, (b) globalization and decentralization of authority, (c) development of rural-urban linkages, (d) changing role of the government from regulator to facilitator, (e) human resource development, (f) institutional financing, and (g) coordinating actions for rural development. Various recommendations were put forward under each main issue.

## VIII. Conclusion

The economic prosperity that characterized the region over the past two decades lulled many countries into complacency and euphoria and made them disregard the fundamentals of economic, fiscal and monetary policies as well as good governance. The economic crisis that hit the region starting in mid-1997 revealed structural weaknesses of the affected economies.

The Asian crisis taught many costly but valuable lessons. Despite the mild recovery, the World Bank noted that both corporate restructuring and SME lending programs cite viability risk as key obstacles to more rapid progress. To alleviate risk, they demand higher quality financial information and business plans. The Bank also noted that debt-financed investments created excess assets, high fixed costs and low margins. For SMEs in particular, the key issues are to review their cost structure and demand determination. Cost structure is indicated by high fixed costs, low asset utilization, wide product lines and declining demand.

With the inevitability and even the realization of trade liberalization and globalization, SMEs must learn to face the challenge and be ready for competition. Hence, government assistance and public support are crucial. Government can start to foster a competitive environment and to level the playing field. Pressures and lobbies from domestic industries to preserve sacred turf are expected. And they will be difficult to contend with objectively if there is lack of transparency and where good governance is in question. It will be like making extreme choices between a politically expedient decision and a hardly palatable and unpopular, yet economically and socially viable solution.

Governments should also reduce barriers to enterprise entry and exit, while providing a climate conducive to enterprise such as better access to credit and information on market opportunities. Public support and understanding is needed as entrepreneurial undertakings are risky and failures are bound to take place. The social and cultural stigma of failure and loss of face should be eliminated, if not minimized. This requires a change in mindset in people's perception, but to accept that failure is a learning experience, albeit unpleasant.

The onset of trade liberalization and borderless economies has arrived. On one hand, it has brought many uncertainties on the part of industrialists and governments – uncertainties as to whether local industries can survive competition for both domestic and export markets, or whether the playing field is level. On the other hand, it opens doors to opportunities to find new markets, new cooperation models, and more innovative ways in doing vertical and horizontal collaboration.

A few years ago, the meteoric rise of the Asian economies gave sanguine optimism that the next century will be the "Pacific Century". Given the painful experiences in the last two years and our prognosis of the future, will this aspiration ever remain as a rising expectation, become a reality or will it just be another grand illusion?

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