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XIAMEN SPECIAL ECONOMIC ZONE: A REPORT OF A WORKSHOP

Brian Brogan

The Special Zone is a window, being the window of technology, the window of management, the window of knowledge, being also the window of the policy in opening to the outside world.

Deng Xiaoping

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Foreword

Included in this publication are a number of papers given at a seminar held at Xiamen in Fujian Province, Peoples Republic of China in July 1987.

The Introduction describes the context, summarizes the discussion and highlights the issues covered. A word of explanation is in order, however, concerning the papers themselves.

Those by Hiemenz and Spinanger, Hughes and Lin, and Wall were written especially for the occasion. They were based on the authors reading and experience concerning industrialization, free ports and export processing zones rather than on research narrowly related to China's Special Economic Zones and indeed to research undertaken for this particular workshop. That by Warr was a previously written research report based on detailed studies of export processing zones in a number of Asian countries including Korea, the Philippines and Malaysia.

The Chinese papers on the other hand were all written expressly for the Xiamen workshop. A number of such papers were given though only a selection are reproduced here. These have been chosen as representative of the ideas expressed.

They range over the current Chinese economic and institutional reforms, the role which Special Economic Zones - however defined - can play in such reforms and the progress to date of the special economic zone experiment. A number of speakers explained why Xiamen had been selected, what was planned for it and what remained to be done. These papers were presented by national and provincial government officials, academics and officials of the Xiamen Special Economic Zone. Although not a co-ordinated exposition, they addressed the theme from a variety of Chinese perspectives. As a result a range of important insights into the Special Economic Zone experiment as seen from within China is contained in this volume.

The organizers of the workshop - the Institute of Economics of the Chinese Academy of the Social Sciences, the National Centre for Development Studies at the Australian National University and the Xiamen Municipal Government - have now embarked on a three year program of research and training designed to address the problems raised in the papers and highlighted in the introduction to this report. A series of research monographs based on that program will be published by the National Centre for Development Studies and the Chinese Academy of the Social Sciences.

Deborah Hill edited the papers which was a daunting task. The Centre appreciates her efforts.

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Introduction

In 1986 Professor Helen Hughes, Director of the National Centre for Development Studies (NCDS) at the Australian National University (ANU) was invited to Xiamen in the Peoples Republic of China to discuss a number of issues connected with the development there of a Special Economic Zone (SEZ). Her visit was arranged by the Institute for Economics of the Chinese Academy of the Social Sciences in Beijing (IE, CASS) with whose Director, Professor Dong Fureng, and staff she later had lengthy talks.

A follow up workshop in Xiamen was agreed to, the basis of which was to be a general paper on SEZs which Professor Hughes agreed to write. That paper was subsequently co-authored by a Chinese PhD student at NCDS, Lin Shujuan, a seconded staff member of Xiamen University. It was translated into Chinese and presented to CASS early in 1987. A revised version is appended to this report.

The next step was to plan the actual workshop. It was to be co-hosted by CASS, NCDS and the Xiamen Municipal Government and its scope, at the request of the Xiamen authorities, was widened to embrace free ports, export processing zones and SEZs in the Chinese sense. The Chinese expressed a wish for a wide ranging discussion covering not only principles but also experience from existing zones in a number of countries; they were interested in Hamburg and Rotterdam in addition to the more obvious examples of Hong Kong and Singapore.

Dong Fureng and Helen Hughes, as initiators of the project, were involved in its planning, were participants in the workshop and will be involved in broad oversighting of all aspects of its aftermath. Brian Brogan from NCDS coordinated arrangements for the workshop and will fulfil the same role in the planned research project. Lin Shujuan also assisted both in Canberra and subsequently in China, with one of her major tasks being translating workshop papers. Peter Warr from the Economics Department of the Research School of Pacific Studies was the other ANU participant. This group was joined in China by David Wall of the University of Sussex in the United Kingdom and Ulrich Hiemenz from the Kiel Institute of World Economics in West Germany.

Hiemenz, Wall and Warr were chosen for their demonstrated excellence in the subject of the workshop and all had previously published widely in the field. Warr had done fieldwork on the topic in Southeast and East Asia, Wall in South and Southeast Asia and Hiemenz in Europe and Southeast Asia.

A further overseas participant was Mr Peter Brinkmann from the Asian Development Bank which funded his involvement. The World Bank was invited to send a representative but pressure of work prevented it; their strong support was, however, expressed.

On the Chinese side, participants included: Mr Zhou Xiaochuan, Assistant Minister of the Ministry of Foreign Economic Relations and Trade; Professor Dong Fureng, Director of the Institute for Economics of CASS, and a number of his staff; Mr Xi Jin-Ping, Deputy Mayor of Xiamen; Mr Zheng Jin-Mu, Deputy Director of the Xiamen Planning Office (effectively the Chief Executive of the Special Economic Zone); Mr Wang Luo-lin, Vice President of Xiamen University; and a number of officials from their agencies and other organizations involved in economic planning, special zones and economic research. About fifty people attended workshop sessions and close to 300 people were at the opening. A full list of participants is appended.

The workshop in detail

The overseas papers especially prepared for the workshop were:

- Ulrich Hiemenz and Dean Spinanger: *Export processing zones and free ports; overview, role and impact*;
- Helen Hughes with the assistance of Lin Shujuan: *The costs and benefits of free port and export processing zones concepts, with particular application to Xiamen*;
- David Wall: *The nature, rationale and role of export processing zones with special reference to China.*

Peter Warr drew upon his wide experience of export processing zones in the Republic of Korea and the Philippines, and of manufacturing generally in the region. Several of his papers were distributed, but he built his overall presentation around a paper prepared originally as an ASEAN/Australia Joint Research Project Working Paper: *Export processing zones: the economics of offshore manufacturing.*

A number of papers were given by Chinese speakers. Some of these were designed to acquaint the visitors with the geography and history of Xiamen and others gave very general expositions of the broad Chinese policy framework for export industries and foreign investment.

The following represents a cross section of views:

- Zhou Xiaochuan (Assistant Minister of the Chinese Ministry of Foreign Economic Relations and Trade): *Development strategy and system reform of China's foreign trade*;
- Liang Wensen (Deputy Director of Shenzen Economic Studies Centre): *The theory and praactice of China's open policy*;
- Gu Yuanyang (Institute of World Economics and Politics, Chinese Academy of Social Sciences): *International lessons from the development of free ports*;

- Dai Yuan-chen, Lin Quan-shui, Wang Zheng Zhong (Institute of Economics, Chinese Academy of Social Sciences): *Overseas experience and Xiamen's free port*;
- Chen Yongshan (Professor and Deputy Dean of Economics College, Xiamen University): *A proposal concerning the phasing in of certain free port policies by Xiamen Special Economic Zone*;
- Zheng Jin-Mu and Huang Sheng Zhi (Xiamen Municipal Research Office): *The construction and improvement of the investment environment in Xiamen Special Economic Zone.*

Papers were made available to all participants in whichever language was appropriate. The Chinese papers are in part aspirations and part descriptions of recent policy initiatives in China generally, Xiamen and to a lesser extent Shenzen.

The paper written by Minister Zhou is significant for the exposition that it gave of recent initiatives in China's trade policies and their philosophical underpinnings.

It was clear that part of Xiamen's appeal to the Chinese is its physical proximity to Taiwan and its historic links to the people of that province. Thus there is an element of bridge-building as well as a touch of chauvinism underpinning the Xiamen initiatives.

Even so, at national and regional levels there is a realization that current policies were not working, and that future planning must take adequate account of economic realities and the best international practice.

Mr Zhang Ge, from the State Council, who was not at the workshop and did not contribute a paper, made it clear in his oral presentation to the visitors in Beijing that the SEZs are in part an experiment. In a country the size of China, especially in a centrally planned socialist state, changing economic direction would be cumbersome with long lead times before policy change could be observed, let alone assessed. Furthermore the cost of unsuccessful policy change could be substantial. Thus experimenting with change in a small number of relatively distinct, isolated regional economies makes sense from the points of view of cost and national disruption and offers possibilities for cessation of these new initiatives if their effects are judged to be either too costly or too socially disruptive. In part, it is this experimental aspect of the Special Zones which has prompted the approach for NCDS involvement - it too can be tried as a possible model for future foreign involvement.

The Chinese papers

Minister Zhou Xiaochuan's comments consisted of a wide ranging review of China's current overseas trade policies. An edited version is included with this report. He begins with a brief historical and statistical section which documents recent changes in China's international trade. In the context of the Xiamen workshop perhaps one of the most interesting facts he gives is the changing mix of China's export markets since its opening up process began.

Developing countries which took a quarter of China's exports in 1982 were taking less than 10 per cent by the middle of the decade. The share of Hong Kong and Macau was declining and centrally planned economies were not gaining importance as a market, showing only slight growth from 6 per cent of total trade in 1982 to less than 8 per cent in 1985. Developed market economies were the major growth areas accounting for 68.5 per cent of all exports by 1985 compared to only 43.3 per cent in 1982. Thus the opening up process was bringing China increasingly into contact with market forces and the commercial culture of the west.

Detailed comments by Minister Zhou on particular markets confirms these broad trends and asserts China's determination to address the internal structural and institutional changes necessary if these markets are to be exploited.

He also alludes to the evolving product mix of both imports and exports, emphasizing that on both sides of the trade account, rational economic thinking - if not untrammelled market forces - helps determine the actual products traded, not solely planning dogma. This had led to a changed relativity between primary products and manufactured goods in export volumes over the period 1976-85 from 53.5 per cent and 46.5 per cent respectively to 43.7 and 56.3 per cent respectively. Imports too were gradually reflecting principles of economic efficiency instead of tradition and socialist theory.

While it is realized that exports can play a significant part in GDP growth, Minister Zhou pointed out that it was the realization that China needed substantial imports of technologically advanced goods, raw materials and agricultural commodities such as foods and fibres to make up domestic shortfalls, which was the primary impetus to export development. The need for foreign exchange plus, to a lesser extent, the realization that China needed access to new ideas and technology were the spurs to the opening up process.

Like a number of other Chinese contributors to the workshop he described the physical dimensions of the opening up process: the special policies adopted towards Guandong and Fujian, the establishment in 1980 of four Special Economic Zones at Shenzen, Shantou, Zhuhai and Xiamen, followed by the granting of substantial decentralized decision making powers to ten cities along with the decentralizing of foreign trade powers to provinces, municipalities and autonomous regions. In addition fourteen coastal port cities were opened up to foreign influences along with Hainan Island, Zhujiang River delta and the Yangtze River delta.

Minister Zhou made a number of references to the changed emphasis in foreign trade since 1979. There has not been a complete acceptance of the principle of comparative advantage, but it is edging in that direction. It is also interesting to see trade being used, not just as an agent for economic growth in the narrow sense, but for systemic and institutional change. Trade is the obvious cutting edge for the introduction of modern, outside influences. The export sector especially, if it is to achieve the foreign exchange earning goals set for it, must become internationally competitive and that requires attaining international standards of productivity and marketing.

These goals envisage exports growing significantly faster than the total economy: according to Minister Zhou, the Seventh Five Year Plan envisages annual growth rates for agriculture, GNP and exports to be 6.5 per cent each.

To remove distortions, changed approaches, including use of the exchange rate, have been introduced for the pricing of exports. Foreign trade corporations have been given decentralized authority to take account of market forces, domestically as well as internationally, in price setting.

Minister Zhou lists six broad areas in which export development is to proceed. The categories are:

- keeping the natural resources exports such as oil, coal and minerals which have been important foreign exchange earners in the past;
- traditional commodities, such as arts, crafts and Chinese medicines all of which are labour intensive;
- improving the range of farm-based exports;
- labour intensive, light manufactures;
- high technology manufactures;
- use of abundant labour to process imported materials for export.

Minister Zhou does not hold out the promise of a totally market oriented export sector; indeed he specifically says that in the context of certain key commodities which affect people's daily life the government will retain the right of veto over export volumes.

He foreshadows a number of measures designed to encourage exporters to be innovative and to improve their productivity including the right of enterprises to retain a proportion of their foreign exchange earnings. He mentions corresponding measures on the import side which he calls fair and necessary. What he calls a suitable protection, mainly delivered through administrative sanctions on purchasing policies of enterprises, is provided, but only in the context of commodities produced to international standards of price, quality and timeliness. These policies are often extended to include output of foreign joint ventures and often products produced behind such walls are permitted to be exported to earn foreign exchange. In such cases one presumes that foreign exchange earnings rather than rational resource use is the dominant criterion.

Minister Zhou suggests that in seeking markets abroad for its exports, China not only concentrates on a commercial way of finding new customers but also gives consideration to its bilateral balances with individual countries. While the innovative approach to market development emerging is encouraging, it should be pointed out that such an emphasis serves no useful purpose and could lead to inefficient resource use.

He regrets that, despite strong efforts to decentralize decision making in the foreign trade sector, to make exports more market oriented and to integrate those trends in the external sector with the domestic economy, the reform has not shaken off the old model in which there is too much direct government intervention. The specific criticisms he makes are that decisions are still too centralized and monopolized and that the principle of independent accountability and responsibility for profit and loss is still being resisted by bureaucrats.

Minister Zhou's paper is a very honest appraisal of the inefficiencies inherent in China's past trading policies and the difficulties of coordinating policy and institutional reform to address these inefficiencies.

It might be useful at this point to refer briefly to a paper given by Professor Dong Fureng at the National Centre for Development Studies in Australia. There, he gave a talk to Chinese students on China's economic reforms. An edited version of that paper is included here. It concentrates particularly on the administrative and regulatory reforms which have accompanied the post-1979 policy initiatives. As much of the discussion at Xiamen focused on the regulatory environment, his comments on these matters are pertinent.

Dong Fureng sees the thrust of China's reforms as being towards the development of a 'new socialist economic mode' (p. 34). The system in vogue prior to 1979 was very centralized, with all resource allocation decisions being made through the central plan. State owned enterprises were simply actors in a plan, with little responsibility for decisions regarding their operations. 'Compulsory administrative means such as instructions, orders and decisions were the main motivating force of economic development and the main medium to achieve economic goals.' (p. 34) There was little scope for using financial incentives in such a system.

The implementation of central policy was directed through two administrative channels: one departmental and the other regional. Enterprises, at all levels, were subsidiary to those administrative channels and had no independence in economic management.

An important point Dong Fureng makes is that there was nothing like the market to collect, transmit and process information - all flows were vertical within administrative chains, with little being transferred or shared directly between enterprises.

A considerable decentralization occurred at the time of the Great Leap Forward, with 88 per cent of all state owned enterprises being transferred to local governments. At the same time the number of state ministries was reduced by 75 per cent to only 132.

While this represented a considerable shift of power from the centre to local government and to regional away from departmental administration, it did not change the fundamental approach to economic decision making. Bureaucrats still made the ultimate decisions affecting the operations of enterprises, albeit local not national officials. To a degree, he concedes, this was a step backwards as these lower level bureaucrats were often less able to make rational and consistent policy decisions than their national counterparts.

Later, in the mid 1960s, there was a partial return to centralized decision making which again exposed the weaknesses in the fundamental Chinese system - its bureaucratic rigidity. The Cultural Revolution brought a return to the decentralist experiment of the Great Leap Forward. To paraphrase Dong Fureng, until 1979 there was regular alternation between a rigid, over centralized system and a decentralized approach which replaced rigidity with randomness and chaos.

The reforms always concentrated on which was to be the dominant tier of government - national or local - and which was to be the most influential form of government agency - departmental or regional. What was really needed was a different approach to the management of enterprises and a new concept of the network of relationships between enterprises and the state, at whatever level. Until this was done, in his view, management of enterprises would not be carried out responsibly and, at the national level, resource allocation would continue to defy economic logic.

With the system prevailing in China at the beginning of the 1980s, mistakes at the enterprise level could not be corrected as soon as they were perceived - instructions had to be awaited from the relevant government agency, a process which built in error and waste.

Dong Fureng goes on to recount the reforms since 1979, many of which focused on the enterprise level, starting in the rural areas. He points out that the priority for reform lies not in the question of how to divide powers between the centre and the region, but in the relationship between enterprises and the state.

What followed was a series of initiatives all designed, within the context of overall national economic goals, to encourage enterprises to be responsive to market information (if not market forces *per se*) and to induce enterprise management to accept responsibility for enterprise success or failure.

This has involved some experiments with letting prices float and, since 1985, a changed approach to the funding of investment in enterprises. Capital is no longer a free good channelled through the state but is arranged via the banking system, albeit a fairly regulated and directed banking system.

The opening of China's economy to foreign influences, including foreign investment, is part of this process of nudging the institutional mix towards a more market oriented one. Progress in the reforms is slow and problems remain - especially in the area of relative prices. In the interim, Dong Fureng says, a sort of dual system is in operation bringing its own problems.

As pointed out earlier, this paper was not given at the workshop but it puts into perspective much that was said there. Clearly, SEZs, in all their manifestations, are a part of the reform process. To develop Dong Fureng's concept of 'dualism', they are physically separate enclaves in which experiments may be carried out both in basic economic policy and in ways of accommodating international market forces with a mixture of regulatory and institutional reforms, especially at the enterprise level.

From the viewpoint of the workshop visitors, it was the complex of issues raised by Minister Zhou and Professor Dong Fureng which most need attention if Xiamen, and other Special Zones, are to succeed. In broad terms their advice was that the policy environment must be market oriented and open, the regulatory framework must be supportive to the participating enterprises and those enterprises themselves must be innovative and free to respond rapidly to changing market signals. No amount of interest and support from the national and zone authorities would be able to counterbalance the negative impact of an inappropriate policy and institutional environment.

The place of Special Economic Zones in China's opening up policies was explained by Liang Wensen, Deputy Director of Shenzen Economic Studies Centre. 'The theory holds that different areas of China must be opened in stages and developed step by step .... from east to west.' (p. 82) He calls it opening in gradient. It is clear that this opening is not just in relation to trade but also involves investment and finance. The process implies not only the persistence of unevenness but the use of regional differences as a tool in the process of national development.

The sequence in which areas are opened will, logically, run from east to west - from the coast inwards. It is hoped that the central areas will be opened by the mid 1990s, with the west waiting until early in the next century.

Professor Liang, like other speakers, links China's opening to the world policies with the need to become more market oriented, China

> must gradually master the skills needed for utilizing both domestic and international resources and market and use the experience, knowledge and skills which we have learnt in the development of SEZs and coastal cities and areas. The theory of opening in stages will enable us to accumulate experience in order to promote more effectively the comprehensive development of socialist modernization construction. (p. 83)

He goes on to describe the theory of opening in gradient as providing a series of test fields or filters designed to minimize the cost of mistakes inherent in China's reform process. Like Mr Zhang Ge, he sees the SEZ policy as constituting a series of cautious experimental steps in China's opening up process which is itself designed to ease China into the 21st century.

Problems will abound, he suspects, especially in regard to lack of professional, technical and managerial skills, poor quality infrastructure - especially in communications - and inadequate financial services.

During 1979 the program was discussed widely with 1980-84 being the period when it was gradually phased in. Shenzen in Guangdong Province was the first to be implemented in August 1980, but the establishment of Zhuhai, Shantou and Xiamen followed soon after. Authority was delegated to zones to plan infrastructure, approach foreign investors and to negotiate some conditions relating to tax liabilities with prospective investors. Much of their work at this stage related to the construction of physical facilities.

Between 1984 and 1986 coastal cities were further opened up.

> They form a circular open area along the eastern coast. ... The eastern open area ... is situated along the coast of the west Pacific Ocean, which comes into contact with Japan and Korea in the north, leans against Taiwan Province in the east, and connects with Hong Kong, Macao and developing countries and regions in Southeast Asia. (p. 86)

He makes it quite clear that the opening policy which he says is irreversible, is designed not simply to open China up but also, specifically, to point 'windows' of openness to areas in the region which China hopes to emulate - those windows are quite clearly designed to permit two way flows of trade, ideas and ultimately influence. They are also, of course, intended to provoke competitive responses from their hinterlands and in this sense the 'monopoly position of the zones' is intended to be short lived.

Beginning in 1987, stronger measures were introduced to attract foreign investors to both the zones and to the open cities. These related mainly to the taxation treatment of foreign joint ventures, including import taxes. Individual zones and cities have considerable autonomy in setting these inducements but, as a general rule, in the zones duties on capital goods are zero and on other necessary imports are half the normal rates. Export taxes are not paid on goods manufactured from imported inputs. Favourable income tax policies are followed, especially for technologically advanced enterprises. In the zones, for a three year period, income taxation is levied at only 15 per cent of the normal rate, followed by a further period during which rates are half the normal rate. Rates are higher in the open cities, but actual rates set are influenced by local considerations.

Foreign exchange regulations, too, are more generous and flexible in the zones but not in the open cities. As a general rule in the zones foreign exchange earnings can be retained as foreign exchange within enterprises. A small but variable proportion - in Xiamen graduated with respect to the profitability of enterprises - is collected by the local authorities, whereas in the country at large all but between 10-30 per cent (depending on location) must be exchanged for local currency.

Zones have considerable flexibility in committing public funds for the construction of infrastructure and buildings and plant for joint venture enterprises. Sums of US$10 million for non productive, US$30 million for light industry and US$50 million for heavy industry may be committed in this way. The level of user charges for public utilities is a matter for local decision within the zones. At this stage all customs duties collected in the zones are handed over to the state, but after 1989 Shenzen will be able to retain an as yet unspecified portion.

Gu Yuanyang of the Institute of World Economics and Politics of CASS, in a wide ranging survey of free ports in a number of countries, lists the major characteristics required for success:

- good location both with respect to shipping routes and lines of access to the hinterland;
- suitable harbour and access to adequate land for future developments;
- a social environment amenable to the growth of business and an administrative framework which is receptive to the business community's requirements - especially in regard to consistency and speed of bureaucratic decision making;
- a service sector which provides good quality finance, information, health and recreation facilities;
- training facilities adequate to the task of producing public officials and enterprise managers and operatives to staff the zone.

He warns that providing public facilities and infrastructure alone is not sufficient to ensure the success of a free port, or indeed of any other zone. The quality of the regulatory environment is just as important. This should include possibilities for legitimate currency flows internationally, for the untrammelled employment of necessary expatriate staff, and for the export and import of goods involved in manufacturing processes. Above all, he warns, the establishment of free ports should be carefully phased in, with each step the subject of rigourous appraisals of the economic and social costs and benefits.

Dai Yuan-chen, Lin Quan-shui and Wang Zheng Zhong of the Institute of Economics, CASS, in a historical survey of free ports, confirm much that is said in Gu Yuanyang's paper. They stress that international experience should be carefully applied, pointing out that no one international model is directly applicable to Chinese conditions. Like him they stress careful planning and step by step implementation.

In a comprehensive analysis they document the conditions necessary to ensure success in free port development. They add little to Gu's sound advice except on the topic of area delimitation. A full blown free port requires a physical barrier that prevents smuggling and ensures that the privileges of free port location are confined to those legitimately entitled to them. This is difficult and costly to provide and administer.

Thus, they advise, it is better to begin slowly, confining the free trade aspects to transit trade and manufacturing for re-export. Unlike general duty free activities these can be confined to bonded factories and warehouses which are easier to police than an extensive land area. A general duty free port can come later when the first stage has been tested.

Much the most important aspect of their paper is what they say of official government policy. They imply that SEZs, while planned to be important in their own right, are primarily expected to act as a fulcrum for China opening up to the world. Some Western observers doubt that, seeing traditional centres such as Shanghai and, ultimately, Hong Kong being more likely to serve that role. But there are no doubts in the minds of Chinese commentators. Special Economic Zones are to be their windows on the world - to help the Chinese slowly observe and absorb lessons from the outside world of market forces and modern technology and to let the outside world slowly familiarize itself with modern China.

Deng Xiaoping himself is quoted as saying:

> One guiding thought must be made clear (about a Special Economic Zone), that is: it's open rather than closed. ... The Special Zone is a window, being the window of technology, the window of management, the window of knowledge, being also the window of policy in opening to the outside world. (p. 62)

A number of papers were presented by Xiamen residents at the workshop. They are too numerous to publish separately in English, or indeed to summarize one by one, but they build up a consistent body of information on the Xiamen SEZ. They put the Xiamen development within the context of national policy and institutional change described by Minister Zhou and Professor Dong Fureng and show it as a special case of the policy discussed by Professor Liang. These included the paper by Chen Yongshan and the paper by Zheng Jin-Mu and Huang Sheng Zhi.

After explaining the rationale for SEZs Professor Chen explains in detail Xiamen's credentials for such a role. He makes the obvious points relating to lessons from the success of similar zones abroad and Xiamen's physical suitability by comparison, and then turns to the question of Taiwan Province. This is separated from the mainland, at Xiamen, by a narrow strait. Several times in the distant past Xiamen has been used as a military base from which to bring Taiwan back within the national fold. He says Xiamen has been the for Fujianese to go to Taiwan, whose indigenous inhabitants speak the same dialect. Xiamen is again to become a bridge - but this time it is to be an economic one.

Whatever the economics of the situation, it is this geographic proximity to Taiwan which has given Xiamen a crucial role in China's opening to the world. Professor Chen says, Xiamen meets the criteria for a successful special port zone. While extolling the physical virtues of its harbour and the general potential of its economy, he concedes that by comparison with other free ports internationally Xiamen is not particularly well located and admits its regional hinterland provides little to support Xiamen's port activities - either by way of material inputs or markets for finished products. This was certainly a conclusion reached by the overseas visitors to the workshop, especially given the product mix of the existing enterprises in the industrial zone.

On the other hand, he points out, differentiation between a free port and its hinterland is really the essence of what is needed to highlight the virtues of such enclaves. Strong links may not be necessary as long as its outward orientation is properly structured. Overall he sees political stability, administrative efficiency and the city economy as being much more important to the success of the initiative than either location or hinterland and it is those matters which are taken up in the paper by Zheng Jin-Mu and Huang Sheng Zhi.

Throughout, Professor Chen referred to free ports, not simply export processing zones or SEZs. It is clear that his vision is of a fully *entrepôt* free port modelled on Hong Kong or Singapore. Most of the overseas visitors to the workshop were sceptical of the possibility of approaching this goal in the near future or indeed even of the logic of thinking of it at this stage.

Zheng Jin Mu and Huang Sheng Zhi from the Xiamen Municipal Research Office, discussed the practical issues involved in establishing and running the Xiamen project.

Despite solid achievements in building infrastructure and providing an efficient administrative and legal framework, they admit that the 'investment environment in the Xiamen SEZ is not up to the requirements of foreign investors' (p. 72). They see problems more in what they call the soft area - administration and regulations - rather than in the hard area of physical facilities. From the early days of the zone in 1981, emphasis has been placed on providing physical facilities, including standardized factory buildings. Among the first developments were five factory buildings at Huli Industrial Estate, the first phase of the new international airport and Dongdu Harbour. After 1984, when the zone was expanded to include all of Xiamen Island - an area of 131 sq km - these efforts were extended to include building new housing and renovating old factories as well as continuing to build new ones.

After 1986 when the State Council announced new foreign investment guidelines, the municipality shifted its emphasis to soft conditions for foreign investment, especially administrative and regulatory systems.

The capital works emphasized transport, communications and public utilities, such as electricity supply, water and sewerage services. Three industrial areas have been built up at Huli, Yuan Dang and Dongchen. At Huli alone thirty standardized 'common' factory buildings, totalling 400,000 sq m have been constructed and prepared for foreign investors. Already thirty-seven enterprises with foreign investment totalling US$100 million exist there. Construction at the other two areas has been confined to residential building.

Old factories have been renovated at substantial cost and nearly US$60 million has been devoted to upgrading the technology of those plants. Six hundred and twenty enterprises, jointly run by the SEZ and local or departmental government agencies have been established with twenty other provinces and cities and eleven separate departments of the central government being involved in this cooperation. The authors referred to developments in the Xiamen tertiary education sector where there are now seven institutions of higher learning and a number of research and training facilities.

The regulatory environment has been simplified. Enterprises with a foreign ownership component are not required to seek official approval before importing various kinds of materials needed in their activities. Enterprises may set up bonded warehouses with the assistance of customs authorities. A zone information office exists to help enterprises with problems and a centralized agency has been established to facilitate access to difficult to get inputs. This is designed to ensure that enterprises with foreign investment can receive equal treatment to that accorded state enterprises.

Labour regulations state that such enterprises have the right to recruit and dismiss and to appoint specialized expatriate staff. A technical workers exchange centre has been set up to simplify transfer procedures and promote a reasonable flow of qualified personnel. Workshop discussion suggested that the reality was less ideal and that, for manual workers at least, workforce matters were handled through an intermediary agency which made hiring and firing of workers in response to market forces difficult, or at least cumbersome.

Banks give foreign firms preferential treatment, which means equality with state enterprises, but those with advanced technology get even more favourable treatment. Insurance companies offer 20 per cent below normal rates for foreign firms. As mentioned by Professor Liang, special arrangements, too, permit such firms to retain foreign exchange and deal with the Zone Exchange Adjustment Centre at preferential rates.

A special managerial bureau has been set up by the municipality to handle all local aspects of the opening to the outside world with a particular brief in matters concerning relations between zone authorities and central government departments.

They detail a number of other arrangements designed to simplify the regulatory and legal system, minimize local charges and taxes to businesses, and to reduce delays. A number of broad headings in which future initiatives are planned are listed. They include improved banking facilities, streamlined handling of materials and better linkages into the domestic economy as well as more efficient public utilities and transport.

The paper provides an overview of the Xiamen SEZ and the municipality's intentions for its future. Other local papers were more specific and insights into zone policies also came from participative discussion from the workshop floor.

What emerges from the papers summarized above is a strong determination from the centre to open China to the world; to proceed cautiously in this endeavour, to use the export sector and foreign investment in it as a prime vehicle, to use this process as a means of modernizing the Chinese economy and absorbing and learning from international commercial and technological experience, and to isolate this experimental process in a number of distinct locations.

At the local or regional level policies are designed to turn national intentions into specific achievements. As Professor Dong Fureng says, much is being done to reorient policy and modernize the institutional environment. In the Special Zones and open cities the municipal and regional authorities are exercising their new autonomy to provide appropriate policy initiatives, infrastructure and institutional change to ensure that their region or location plays its assigned task in this national process.

The papers by the overseas participants were not based on detailed research on China's SEZs. The authors drew on their previous experience in the region, applying conclusions developed elsewhere in very general terms. All had published widely on the topic, so their views were well known, but not necessarily to the Chinese. Their inputs to the workshop were not coordinated but our hosts were struck by the similarity of the views they expressed. The local officials also expressed keen interest both in the foreigners' knowledge of overseas zones and their initial appraisal of Xiamen.

David Wall says: 'The experimental role of the Special Economic Zones is an important feature which needs to be borne in mind when analyzing them'. (p.116) It was clear to all who attended from overseas that the zones cannot simply be assessed as entities in their own right. Their success or failure will have a large bearing on the totality of China's economic reforms. They are the laboratories within which experiments in institutional and cultural reform are being tested.

While bringing his regional experience to bear, Wall admits that there are many differences between China's SEZs and the export processing zones (EPZs) elsewhere in the region. First, the SEZs are mixed enclaves. While production for export is a major activity, it is not the only one. Direct comparisons are thus not quite valid. Also, strict EPZs are characterized by a *policy* regime which differs from the national policy regime - low or zero tariffs on imported inputs designed for export production, relative freedom from regulatory restraints particularly in the area of employment matters, as well as a favourable tax and infrastructural environment. In China they also have to be isolated and differentiated from the national *institutional* regime (or at least involve institutional *reform* at a faster than national rate) if they are to succeed because the current commercial culture inhibits the flexible, market oriented entrepreneurship which is the essence of an outward looking, competitive EPZ.

While this was admitted by the Chinese themselves it is not clear that they have yet really accepted the extent to which the zones will have to conform to international commercial standards or indeed of the impact this is likely to have on China outside the zones.

Wall also mentions the large size of the Chinese SEZs compared with their overseas competitors: Shenzen (32,750 ha), Zhuhai (1516 ha), Xiamen (12,550 ha) and Shantou (5260 ha) are compared to Kandla in India (384 ha), Bataan in the Philippines (345 ha), Katunayake in Sri Lanka (202 ha) and Masan in the Republic of Korea (175 ha).

The Chinese concepts are also more flexible, he points out, not confining foreign investors to manufacturing activities and also permitting zone activities to take place outside their formal boundaries.

He admits that, at this stage, he has few hard data on the Chinese zones but his impression is that, to date, there has been little genuinely foreign investment: 'Most listed foreign investment is undertaken by overseas Chinese, especially by those resident in Hong Kong'. (p. 117) While this may not be foreign by Wall's criteria, it is an addition to local investment resources, it does provide the opportunity to engage the experience of entrepreneurs familiar with international markets and, on another level, it involves expatriate Chinese in the homeland's economic reform.

He cites reasons for the shortage of genuine overseas investment: uncertainty about the permanency of China's reforms, a poor local environment for commercial information and inadequate standards of infrastructure and commercial services. While this comment is based on reports from Shenzen Zone it became clear during the workshop that Xiamen suffers in the same way.

Much of his paper, written without the benefit of hindsight, alludes to problems which Wall later observed in Xiamen: the difficulties enterprises face in dealing with Chinese bureaucrats; the misplaced emphasis on high technology industries which, while generating employment, lead to little worthwhile skills development and, due to their high requirement for imported componentary, do not have a large potential for net foreign exchange inflow; the high setup costs which must be faced by participating entrepreneurs due to the geographical isolation of China's zones and the sparse and poor quality infrastructure in public services.

Wall is not yet convinced that export processing zones as such are 'a cost effective way of increasing exports and generating net inflows of foreign exchange, generating inflows of capital and new technology, creating employment and stimulating regional development'. (p. 119) He is even less sure about the likely future of China's SEZs which have some but not all of the characteristics of export processing zones, which are themselves mutually diverse and which are located amidst all the uncertainties of China's current economic reforms.

Before going to China he was sceptical of the possibility of a successful export processing zone being located in an existing SEZ - paraphrasing him, export processing zones are even more sensitive to the issues bedevilling that country's current SEZs: high costs, cumbersome bureaucracy and political uncertainty. He wonders, too, whether the best thing might not be for China to use Hong Kong as its major export processing zone since it suffers only the last of these problems. His broad views were not fundamentally changed by attending the workshop, but like the other visitors he stressed to the Xiamen authorities that, in attracting foreign investment, relatives not absolutes are what matters: it is not enough for Xiamen to be an attractive site for foreign investment, it must be attractive compared to other zones or countries. Further, it is the perception of footloose foreign investors which count, not the faith of committed local officials.

Ulrich Hiemenz of the Institute of World Economics at Kiel in West Germany wrote a paper, again not on the basis of prior research in China, with a colleague Dean Spinanger. Like Wall's paper it incorporates much of their earlier work on free trade and export processing zones in Asia and Europe. They say:

> While the technical/engineering aspects of setting up a free zone can be handled with relative ease (but are not the topic of discussion here), almost the entire spectrum of economic issues comes into focus when appropriate policies for establishing efficient free zones are to be designed. (p. 151)

In fact, at the workshop, there was much discussion of the technical/engineering aspects as well as a flouting of Hiemenz/Spinanger's related point: 'the particular type of free zone has to be taken into consideration as each type places particular demands on the economic environment.' (pp. 151-2)

To the visitors it seemed that, at Xiamen, the physical problems had been dealt with first. The policy environment was developing in its aftermath broadly in accordance with national goals, while the concept of what sort of zone it was to be - an SEZ like Shenzen, an economic processing zone like Masan or a free port like Rotterdam - was slowly evolving as experience was gained. The planning sequence was around the wrong way.

Hiemenz and Spinanger cautioned that developed country precedents may have little relevance as free ports are often an attempt to bring back market forces to a small part of a developed but possibly over regulated economic environment, whereas in developing countries their purpose is to be the spearhead of industrialization. In such countries special, free or export zones are expected to attract new influences from abroad and hence 'the key problems are thus related to determining the conditions under which linkages, transfer of technology and demonstration effects can be efficiently promoted'. (p. 153)

While mentioning experiences from Ireland, the United Kingdom and the United States of America, the authors spent most time on what they called the Asian experience: India, Indonesia, and the Philippines.

India's free trade zones, Kandla established in 1965 and Santacruz in 1974, give some relief from the regulation of the Indian economy although there are still some import restrictions and local content requirements. Yet in 1980, combined employment in the zones was only 4000, proof that Indian zones were far from being structured or run in an economically efficient manner. Dismal too, in their opinion, have been the results of the experiments in Indonesia and the Philippines where the zones were established in remote locations making almost impossible the development of linkages with the domestic economies.

Malaysia and Taiwan have been more successful because their zones were established closer to existing regional economies - often adjacent to thriving towns - making possible the use of the existing infrastructure and the tapping of the labour force and service sector (with slight modifications) without the need for expensive new infrastructure. By 1984, Malaysia had eleven free trade zones, employing 75,000 people - about 13 per cent of the 1980 manufacturing workforce.

The decision to establish an export processing zone may not be sufficient in their view, to turn an inward looking country into a successful export oriented industrial economy. Generally speaking, they say, an export processing zone incorporates the following features:

- inputs are allowed to be drawn from sources at world market prices;
- output can be exported to buyers at producers' prices;
- production processes and schedules can be structured in accordance with the specific needs of the firm;
- labour is supposed to be remunerated at rates commensurate with productivity levels, given its relative abundance in the country; and
- costs induced by firms in the zone as well as services demanded by them are assumed to be paid for at market prices.

Departures from this ideal will lessen the possibility of success and should be seen in that light. They question the advantages of establishing a zone with all necessary characteristics. Broadly speaking they are

> analogous to those generated when a country moves towards free trade ... That is, by creating an undistorted environment, the factor intensity of production can be structured more clearly in line with the factor endowment of the country, thus allowing comparative advantages to be efficiently exploited. (p. 159)

As a consequence the economic base of the country will be widened as linkages with the domestic economy diversify, knowhow and technology will advance and, hopefully, additional investment - foreign or domestic - will be generated or attracted.

All of this depends on the zone being sensibly structured and administered and on the slowly developing links between the experimental enclave and the rest of the economy within which it is being nurtured. The latter is essential if the economies of scale in both the bureaucracy and infrastructure are to be reaped. A zone - whether it be free port, export processing or some other variant - in permanent isolation from its host would become an expensive luxury. In particular it would not permit the process of wide 'learning from experience' which is one of the prime justifications of such zones in the first place.

A key issue of consideration in China, therefore, if the findings of Hiemenz and Spinanger are accepted, is whether, in the long run, the will exists to permit the lessons learned from these zone experiments to be extended to the Chinese economy at large. If that will is not there, the experiment is pointless.

Peter Warr of the Australian National University also came to the workshop with previous experience of export processing zones but not of China. His paper is a self contained technical discussion on the economics of export processing zones.

He confirms many of the points made by other speakers, pointing out that

> economic activities occurring within the zones have primarily been labour-intensive light manufacturing processes such as garment production, electronics assembly, assembly of light electrical goods etc. A notable feature of the firms producing within the zones is their international mobility. (p. 121)

He points out that the rate of turnover is high, with particular firms migrating from one EPZ to another in sequence.

This is not a situation particularly conducive to learning on the part of the host country unless it is accepted that what is able to be learnt is not the art (or the technology) of manufacturing particular commodities but the art of manufacturing itself - the culture of commerce as Minister Zhou expressed it. This is a worthwhile lesson, but the patrons of the zone must recognize it as a positive return from the experiment. If they focus only on the narrow technological lessons to be gleaned they may well be disappointed.

Warr dwells on the footloose nature of the firms attracted to export processing zones, pointing out that little has been said in either theoretical or empirical literature on the subject. He takes issue with the Hiemenz/Spinanger view that setting up an export processing zone is a step in the direction of reaping the benefits of free trade. What is needed is a case by case cost benefit analysis of the impact of zones their host countries.

Where international trade theory breaks down as a conceptual framework for measuring the worth of export processing zones, he says, is in its twin assumptions of relative mobility of factors of production domestically combined with relative immobility internationally. Export processing zones illustrate the fact that some factors of production are also mobile internationally. He notes that some firms are willing to move not only capital in the classical sense (financial and entrepreneurial resources) but also capital goods - plant and equipment to those countries in which they can earn the highest rate of return.

In effect export processing zones are designed to attract such footloose capital goods, and associated entrepreneurial resources, to countries with cheap and abundant labour. They are an indirect form of labour export, a device for exploiting (in the economists' sense) the comparative advantage which such countries have in labour intensive production. To opt for a policy mix which attempts in the first instance to attract industries which are not labour intensive is to misunderstand this fundamental fact about export processing zones.

Warr goes on to list features found in most export processing zones: duty free import of raw materials for export production, a favourable tax regime sometimes featuring tax holidays, a flexible and sympathetic regulatory environment, and superior infrastructure, particularly in areas such as transport and communications, which are often subsidized.

Warr has studied the industrial structures and performance of a number of export processing zones in Indonesia, the Republic of Korea, the Philippines and Malaysia. Their performance has been variable but, at least in Indonesia, their employment creation record has induced the government to establish several more.

He reports that, except in Indonesian export processing zones, local raw materials have comprised no more than a third of total raw material use. It was less than 10 per cent in the Philippines by 1982. This is despite substantial incentives to use local goods. Generally poor and unreliable quality is the reason given, although in the context of large multinationals it is often the result of sourcing from affiliates in other countries in pursuit of what he calls 'global strategy'.

Technology transfer, too, has not taken place on the scale expected by the initiators of export processing zones, for reasons already mentioned in this summary - low levels of technology in some of the industries concerned, such as garment manufacture, and the mainly assembly nature of many of the others, including apparently sophisticated industries like electronics. Here again it is clear that what export processing zones have to offer host countries is training in the operation of a modern business sector rather than short cuts to modern technology.

Despite his warning that export processing zones have been deficient in this regard he concedes that they have contributed to foreign exchange earnings of host countries and employment creation, especially among unskilled and semi-skilled workers. Tax revenues have not benefited from most export processing zones, mainly due to the substantial concessions which have been necessary to attract the essentially footloose enterprises involved.

In conclusion, he cites the Bataan case in the Philippines to illustrate that 'the achievement of the limited benefits to be derived from export processing zones can be extremely costly'. Infrastructure was expensive due to the site's isolation and to attract firms to such a location interest rate subsidies on the local capital market had been granted. As a result over 90 per cent of all investment was financed in this way at great cost to the taxpayer.

But there are successes, as Malaysia demonstrates. This confirms Warr's view that care must be taken in planning an export processing zone and deciding on the policy regime. Cost benefit studies are essential if public resources are to be wisely used and costly mistakes avoided. He concludes that: 'the success of the liberal economic environment existing within export processing zones says a great deal about the nature of the economic environment existing outside the zones in the countries establishing them.'

Based on their work in other countries Wall, Hiemenz and Spinanger, and Warr spelt out a series of messages at the Xiamen workshop:

- define the objectives of the zone carefully;
- proceed at a manageable pace but only after careful appraisal of the likely costs and benefits;
- be realistic about the likely benefits, especially in the areas of technology transfer and linkages to the domestic economy.

All warned of the crucial importance of the regulatory environment, the availability and quality of public infrastructure and services, and access to ready supplies of good quality inputs. All stressed the importance of the labour market, not simply the obvious matters of availability and cost of labour but also the conventions under which employment was governed. All three emphasized the necessity for detailed feasibility studies and careful planning but also for the need to accept that, once arrived, new enterprises would require a flexible business environment if they were to succeed. The right mix of bureaucratic control and commercial freedom was difficult to achieve, but absolutely essential.

They advised our hosts not to expect too much too soon from the zone. In Wall's words: 'the jury is still out' when it comes to judging whether export processing zones justify the expectations placed on them. Hiemenz and Spinanger were similarly sceptical, while Warr was a qualified optimist but only in the context of careful planning and modest objectives.

Workshop discussions indicated that what was contemplated at Xiamen was not a classic export processing zone, nor were its free port aspects entirely conventional. It was to be a Chinese Special Economic Zone in which, not only some aspects of export processing zones and free ports were to be implemented, but also some experiments carried out to see what needed to be done to integrate the Chinese economy with international market capitalism.

Early planning seemed to have concentrated on a textbook approach to export processing zone development, while later attention turned to the development of a free port. The actual boundaries of either had not yet been decided, but the overall SEZ within which they were to be located had been expanded to embrace all of Xiamen Island.

Visitors felt that insufficient note had been taken of the fact that all other export processing zones were surrounded by host countries which were, at least in an embryonic way, market capitalist. Despite inefficient and cumbersome bureaucracies, they at least had the traditions of market orientation and a network of market institutions. For them, the early objectives had to concentrate on improving infrastructure and lessening the restraints of government regulation. Even in those countries mistakes have been made and export processing zones which were either too remote or too differentiated from their host economies had not succeeded.

In Xiamen, in addition to the hybrid nature of the planned zone, the problems were much more complex. The host economy itself was undergoing major institutional and attitudinal reform from a base of virtually no market orientation. The lack of zone infrastructure was thus not the unique starting point it had been in the other less developed countries.

In China, the goals and purposes of zones need to be more sharply defined than in other countries. To what extent is Xiamen to be a classic export processing zone or free port? To what extent is it to be a wider experiment in economic reform? To what extent is it expected to develop economic and institutional linkages to the rest of the Chinese economy or to be a bridge to Taiwan?

Once these questions are answered, a more modest agenda needs to be adopted for the specifically export processing zone and free port aspects of the proposal. Workshop visitors suggested concentrating, at this stage, on the export processing zone, leaving the larger free port development for later - mainly due to the problems of administering a free port - and also to minimize the further commitment of public resources to infrastructure development.

In that context they reminded officials that, to the extent to which Xiamen sought to attract foreign capital, it must appreciate that they were competing with zones in other countries for footloose entrepreneurs. Thus its facilities and general business environment had to be, not just satisfactory in an absolute sense, but more suitable to those itinerant investors than any comparable zone. Early studies to ascertain Xiamen's competitive position were therefore essential. In this regard, too heavy an emphasis on infrastructure and purpose built factories was misplaced - prospective investors would be more attracted by market access, efficient administration, productive labour and a generally conducive business environment.

It was conceded by the Xiamen officials that some of these points were valid. They had certainly read with interest the paper which had led to the workshop: *The costs and benefits of free port and export processing* *zone concepts with particular application to Xiamen*, by Helen Hughes and Lin Shujuan. This paper surveyed both the history of export processing zones and free ports and the literature on them and drew a series of broad lessons for Xiamen. While written before the workshop, it reached similar conclusions setting an agenda for research before further commitments are made in Xiamen.

It was agreed that, through the cooperation of the Chinese Academy of the Social Sciences and the National Centre for Development Studies, a program of research would be undertaken by the visitors to apply experiences of other export processing zones to Xiamen. Studies of comparative labour and capital costs in Xiamen and other export processing zones in the region, the availability, quality and cost of infrastructure, the regulatory environment, and the framework for cost-benefit studies in the context of both public and private investment decisions in Xiamen would be carried out. Associated with the latter study would be a program of training courses for Xiamen officials to implement interim research results into planning practices as soon as possible. A research timetable has been agreed which will result in a series of monographs culminating in a final report which will be presented to a second workshop in Xiamen in 1990.

1

Development strategy and system reform of China's foreign trade

Zhou Xiaochuan

China undertook a primary reform of its foreign trade system and opened its economy to the outside world in order to meet development targets. This paper will give an introduction to these major changes and discuss questions concerning the development and reform of China's foreign trade. It also provides information about recent progress in China's foreign trade.

The growth of China's foreign trade

The choice of macroeconomic policies has a decisive influence on a country's foreign trade development. By opening its economy to the outside world, China has provided the basic conditions by which to change the pattern of foreign trade from chronic fluctuations at a low level. Foreign trade has thus been given a strategic position in our national economy. The opportunity to stimulate the domestic economy has been provided.

Growth in the volume of trade. Foreign trade volume increased from US$54.43 billion in the Fourth Five Year Plan period to US$116.03 billion in the Fifth Five Year Plan period (1976-80) and in the Sixth Five Year Plan period the foreign trade volume reached US$203.4 billion, which almost doubled the figure of the fifth period. In 1985 China's total exports ranked sixteenth in world exports, while in 1980 they only ranked twenty-eighth. Although it is possible that China's foreign trade will still be in deficit in the Seventh Five Year Plan period, it is anticipated that exports will expand continuously and imports will be regulated to match exports. According to planners' predictions, the total import-export volume in 1990 will represent a 40 per cent increase on 1985 figures with a 7 per cent average yearly growth over this period. Despite the worsening effects of protectionism on international trade conditions and the slowing down of world trade, China's foreign trade growth has been steady and should continue to be so.

Structural changes in China's foreign trade. In the Sixth Five Year Plan period, in comparison with the Fifth Five Year Plan period, exports of heavy industry and light industry increased by 183 per cent and 82.5 per cent respectively. According to the SITC classification, the proportion of primary goods and manufactured goods in total exports in 1976 was 53.5:46.5. This ratio was transformed to 43.7:56.3 in 1986. Total imports of new technology, complete sets of equipment, advanced machinery/electrical equipment, instruments and other goods increased by 96 per cent; meanwhile, the import of industrial material was correspondingly increased. Of total imports, steel, copper, aluminium, lead, zinc and other metals, timber, compound fibre and fertilizer increased by 54.7 per cent, 110 per cent, 55 per cent, 120 per cent, and 82 per cent respectively, while the import of cereals, cotton and oil that had been imported for many years decreased significantly.

Improvements in China's share of world export markets. China has already established extensive contacts with both market and centrally planned economies. Japan and the United States are still China's major trading partners but the volume of trade with Western European countries has risen as has China's trade with Latin America, the Middle East, Africa, Australia, Canada, the Soviet Union and East European countries. Traditional markets in Hong Kong and Macao have remained important, but growing trade relationships provide great potential for trade development.

Effects on the domestic market. A new trading system has been created in China. The Chinese Government has adopted a special policy with respect to Guangdong, Fujian and opened Special Economic Zones in Shenzen, Shantou, Zhuhai and Xiamen early in 1980. Later the government gave independent decision making powers to ten cities and decentralized some foreign trade management to provinces, municipalities and autonomous regions. Furthermore, China has opened fourteen coastal port cities and Hainan Island, Zhujiang River delta, Yangtze River delta and the delta area in south Fujian to outside trade. These measures have opened the domestic market from east to west and south to north as well as to the world economy. The formation of an open domestic market system has become the basis of the rapid development of foreign trade.

Conditions favourable to foreign trade. In the Sixth Five Year Plan period, China invested US$15 billion (of which US$5.3 billion was direct investment) and more than 6000 projects were established. Currently thirty countries and regions invest. Investments are made in twenty-eight provinces in many sectors including energy, transportation, electronics and agriculture. Large and middle-sized productive projects have increased and more than 90 per cent of them have been profitable. China has also undertaken construction projects and labour service cooperation in seventy countries and signed contracts involving nearly US$5 billion. One hundred and seventy China-foreign joint ventures and sole China-owned enterprises have been established overseas. There has also been corresponding development in bilateral and multilateral economic and technical cooperation and economic aid. The growth of trade related activities has made it possible for China to specialize in those areas where it has an advantage.

Foreign trade has become the basis of the national economy. For a long period in the past, foreign trade played a very small role in adjusting the domestic economy. However, since 1979, China has had as a guiding principle the maximization of all opportunities for trade and consequently foreign trade has become a key factor in the success or failure of modernization. Foreign exchange earned through exports has accounted for more than 80 per cent of China's foreign exchange income. From 1979 to 1986, the accumulated total foreign exchange earned by export reached more than US$174 billion, increasing China's international liquidity greatly. In the last serious-adjustment period China imported large quantities of cereals, cotton and oils and these played an important role in the adjustment of the structure of agricultural production.

Export earnings have raised China's reputation in world trade, not only by creating favourable conditions for the utilization of foreign capital, but also by allowing principal interest repayments. China's several hundred billion US dollars in imports in recent years has made it possible for China to achieve relatively high rates of industrial and agricultural output and national economic growth. In 1985, wool and other imports each totalled more than 50 per cent of that produced domestically, some of them even totalled more than 70 per cent. Such imports are necessary in easing the restriction of short-line materials and increasing production and construction scale. Imports and exports play a significant role in increasing GNP, employment and domestic market supply, as well as improving production technology and management. In the Sixth Five Year Plan period, a million RMB yuan export could provide employment opportunities for 120 people, and the industrial production supported by a million RMB yuan imported industrial raw materials could accommodate eighty employees. Thus import and export growth have solved a considerable part of the employment problem. Since 1979, China has imported billions of US dollars in consumer goods which have directly replenished and enriched the supply in the domestic market, making people better off and increasing social welfare. Foreign trade has already become a significant part of China's economy.

China's development strategy and relevant foreign trade policies

China's foreign trade strategy has the following elements:

- to meet imports and other foreign economic activities from expanding exports;
- to realize China's comparative advantages by participating in international specialization;
- to facilitate growing domestic industrial and agricultural production through imports;
- to introduce new technology and management techniques thereby improving the quality of China's enterprises through direct contact with the outside world and by facing worldwide competition.

Generally the emphasis of this strategy has been to expand exports and thereby promote economic growth. This has meant a change from import substitution and self-reliance of the past. China believes that this strategy is more realistic, given the foreign exchange shortages that have developed in the Chinese economy.

Export policies

Export policies are of prime importance in China's foreign trade development. In opening up our economy we have a principle that the growth rate of exports should be higher than that of the national economy. The national economy becomes daily more dependent on imports and in order to facilitate a high rate of growth, China's government has adopted a complete set of administrative instruments and economic regulations to promote export growth. In the Seventh Five Year Plan period, the forecasted annual growth rate of national gross industrial and agricultural production and GNP are 6.5 per cent and 7.5 per cent respectively, and the yearly export growth is predicted as 8 per cent. This policy is embodied in the national mid-term development plan through the following measures.

The liberalization of the purchasing price of goods for export. In the situation where domestic markets and prices are being liberalized, the price of export goods in the domestic market has also been changing gradually. In 1984, we abolished the mandatory plan on purchasing export commodities and price control for most export commodities, so that the price fluctuated according to quality and the supply-demand relationship in domestic markets. At the same time, the government has clearly and definitely encouraged foreign trade corporations (FTCs) to procure goods for export through the market mechanism. For settling an unreasonable profit gap between exporters and importers, RMB yuan exchange rates have also been adjusted downward.

The adjustment of the structure of exports. In order to change the low profitability of exporting and to take advantage of domestic production capabilities and resources, China has decided to adjust the structure of exports in the Seventh Five Year Plan period as follows: (i) developing exports of natural resources which make large contributions to foreign exchange, such as oil, coal, and some ferrous and non-ferrous minerals, and increasing mining capability and stabilizing their market share by enlarging domestic investment and utilizing foreign capital; (ii) taking advantage of traditional commodities with comparatively low costs or abundant resources such as native products and animal by-products, arts and crafts, Chinese medicine and others, increasing variety and quantity; (iii) improving the pattern of exports of farm products; (iv) continuing to increase the export of labour-intensive manufactured goods such as light industrial products, textile products and others, and upgrading these products and increasing earnings per unit; (v) taking advantage of the potential capability in machinery, electronic products and other relatively technique-intensive products with a higher value-added; (vi) developing exports through processing imported materials by making use of the advantage of low labour costs and improving processing capabilities.

Regulating the relationship between domestic and external markets. There is sometimes a contradiction between domestic and overseas markets as domestic demand for potential exports may be too high. The government controls a small number of key commodities and provides more incentive to the exporter when there is competition between the two markets. For export producers, there is a policy to promote productive fund arrangements, to promote the supply of raw materials, fuel, power, packing materials, and technical know-how and transportation arrangements.

Exports are provided with a fair taxation and credit policy. The taxation system in China is being rationalized. China has implemented a policy of rebating the product tax or value-added tax paid by the final producers to exporters, and will adopt a policy of rebating accumulated indirect tax. The state organizations have also established a number of special export development funds. In terms of bank credit, the state insists on priority policy for exporters' working capital. Exporters' needs have basically been met by this policy.

Improving the foreign exchange allocation mechanism. The central bank has stipulated that all local governments, sectoral departments and enterprises who organize exporting have a certain percentage or retention right of earned foreign exchange. In order to revitalize the flow and reallocation of foreign exchange, the central bank has also started to allow those bodies to sell or buy the retention right in some markets with certain requirements. This policy has played an effective role in improving foreign exchange allocations and the marginal efficiency of spending foreign exchange.

Encouraging exporters to use new approaches to penetrate world markets. Varying approaches besides cash trade, such as transactions on account, compensation trade, bartering, re-export, multilateral trade and futures trading have been given support in policies. In fields such as solving capital difficulties, approving requirements, information services, diplomatic support and so on, the state has been supportive to exporters in their establishment of markets.

Encouraging a diversification of products for export. The stipulation that foreign investment enterprises can only export their own products has been changed and now some enterprises are allowed to export goods purchased in China's markets.

Import policies

Policy with respect to imports has had to be adjusted accordingly. In the Sixth Five Year Plan period there was an expansion in imports that decreased national reserves of foreign exchange and China's ability to import weakened. So the present impact policy has been adopted.

Improving the structure of imports. Imports have been focused more on advanced technology and key inputs that are important for national economic development whilst keeping a proper proportion of industrial materials. At the same time imports of common capital goods, processing equipment, assembly lines and desirable consumer goods have been discouraged.

Reduction on import subsidy and over-intervention in the price of imports. Because of domestic price distortion, a considerable proportion of imported commodities submit to the plan allocation at fixed prices, as the price authority does not like to accept higher prices of imported goods even though their quality is better. For this reason, the state has reduced planned import and centralized allocation; the decision making power has been transferred to local governments and enterprises, so that the domestic prices of import goods are becoming market determined. Through these measures the function of market regulation is enlarging.

Import substitution. Policies promote the use of domestic products, including the products of foreign investment enterprises. The state has implemented protection for products that can be produced domestically with quality, delivery dates, price and other specifications competitive with world markets. In some specific cases the government allows the imported substituted goods to be sold for foreign exchange to encourage the development of import substitution and to assure the effective use of foreign exchange.

Export and import linkages. In order to satisfy the import needs of exporters, the state assists in imports of technology, equipment and raw materials needed by export producers. We have a policy of tariff exemption or tariff rebates for imported material necessary for producing exports. Priority in foreign exchange and credit can be arranged for these kinds of production. Similar import facilities are also provided for foreign economic technological cooperation.

Pattern of trade

China intends to take the pattern of trade with its trading partners into consideration. Although market pattern has been substantially formulated there are some obvious problems of imbalance. China will consciously seek a better balance with these partners generally in line with consolidating markets in Japan, the United States and Western Europe while developing markets in Latin America, Africa and the Middle East. It hopes to increase the size of the Soviet Union and Eastern European markets. Japan, United States and Western Europe have already become major trading partners for China, but China has a serious trade deficit with Japan, and a growing deficit with the United States. China intends to balance imports more carefully with stress on export growth as a precondition for imports.

For example, some European market economy countries possess advanced technology and abundant capital and their export of technology is comparatively open. They provide favourable foreign trade credit and have a positive attitude towards imports from China. Hence China will strengthen foreign trade relations with these countries. China's trade with Canada, Australia and Northern European countries is still low. There is great potential for development of trade on both sides and we hope to use every channel to enlarge the scale of trade and to achieve a higher growth. Latin America, the Middle East and Africa are vast continents and their trade volumes are also sizable, but China's trade volumes with them are still rather low. Therefore, China has set up three comprehensive regional trade corporations in Latin America, the Middle East and Africa to improve trade relations with these regions. Hong Kong and Macao will remain steady in their position as traditional markets. China's trade volume with the Soviet Union and Eastern European countries accounted for 8 per cent of total trade so there is considerable room for growth. China will enlarge its long-term trade agreements with them and open up other trade channels.

The reform and development of China's foreign trade system

Further adjustments and transformations of foreign trade development strategies will be made. At present, China's foreign trade remains at a primary stage of increasing foreign exchange earned by export and meeting import needs. Compared with the pre-open period, the distinguishing feature of this strategy is the promotion of national economic development by expanding foreign exchange income instead of merely 'regulating surplus and shortage'. China's foreign economic relations will not only be confined to imports and exports but will also include and encourage multiple approaches to economic cooperation and specialization. While in our country market mechanisms and planning controls co-exist, the strategy of market-oriented import-export development will somehow be restricted by the planning section of the economy. Our traditional simple way of trading is difficult with international exchanges and specialization, which make our economy more open and involve risk taking with resources and markets both internally and externally. Therefore China's foreign trade reform and strategy should stress our deepening international economic relations. This is to say, foreign trade development strategies should be connected with the definition of modern international exchange. It is necessary for us to provide domestic and overseas industrial-commercial investment and financial services. Based on the reform principle of a socialist economy, commodity trade, service trade, financial investment, production and construction will be developed in a coordinated manner. The further transformation of foreign trade development strategies will bring about the requirements of adjustment and transformation of trade policies and provide clear and definite requirements for reforming our trade system. We believe this will be a turning point for China's foreign trade development.

The relationship between market regulation and planning in foreign trade will be adjusted. Traditional policy still stresses the mandatory allocation of important resources that affect the national plan whilst other less important resources are allowed to be regulated by the market. This is called the theory of parallel structure, but as there has been no clear division between the two mechanisms, it has been hard to operate in practice. Under the conditions of socialized large-scale production all resource allocations are interdependent - controlling one resource will possibly affect other resources. There is a shortage of foreign exchange in China and it therefore has been natural to classify foreign exchange as a planned resource affecting the national plan, but it is difficult for planners to consider what other resources are related to foreign exchange earnings. Thus it is easy to lead our economy back to over-centralization. At present the proportion of foreign trade business controlled by the mandatory plan is still too large, mainly because reform of the traditional plan in domestic investment and material allocation has not yet been completed. The relationship between the plan and the market has not been fully adjusted. For example, the state still relies too much on mandatory resource allocation rather than budgetary spending to guarantee planned key construction projects. As a result the state can only procure some low price materials by relying on mandatory production and allocation. Since the domestic material market has been partially liberalized, the state has to solve the material shortage in key construction projects by allocating foreign exchange and imported materials to support economic development under a situation of relatively centralized control of foreign exchange. Our FTCs face both home and overseas markets; insufficient competition and too much government intervention means a serious interruption of foreign trade business. Therefore, our economic reform program is aimed at market allocation for a number of materials. The import-export and foreign exchange allocation will no longer be so tightly regulated. On the basis of market development, our economic system will be more favourable to the development of modern international trade.

To meet the needs of opening up foreign trade, China began its reforms in 1979. The eight year reform has concentrated on decentralizing trade decision-making power, enriching trade channels, promoting integration of production and trade, and improving macro-control. By these measures, the traditional foreign trade system has been changed, where trade transactions are conducted at different levels, and administration is undertaken by both central and local governments. Some progress has been made. However as a whole, reforms have not shaken off the old model in which there is too much direct government intervention. Departmental administration and enterprise operations have not been clearly separated. Now the outstanding weak points of our foreign trade regime are: the following of a mandatory-planned proportion is still large and its demand for imports is too rigid; the Ministry of Foreign Economic Relations and Trade (MOFERT) undertakes some unreasonable business; for the FTCs the principle of independent accounting and responsibility for their own profit and losses has not been fully realized; department administration and enterprise operations have not been clearly separated; and trade business is still too centralized and monopolized. Meanwhile, macroeconomic control and government administration have not been as effective as we hoped. There is a lack of effective economic regulatory approach and legislation. We still have difficulty in the integration of industry and trade. Conditions for various approaches of international exchange have not yet been provided. Consideration of these essential points of foreign trade reform are as follows.

To reform the export plan and management system. The core of reform is to reduce the proportion of mandatory planning control, to implement a new regulation pattern which combines directive plans and guidance plans, and to emphasize the guidance plans. The state implements direct control on only a few commodities and lets all other commodities be regulated by economic policies and the market. As for microeconomic operations, we will adopt a model that allows only a few commodities to be dealt with by the enterprises appointed by state plans and all the other commodities to be dealt with freely by enterprises (with some controls) and be opened to the world. We will encourage exporters to organize voluntarily for trade association to improve the coordination of fair competition and strengthen the service and information work for exporters.

To reform the import plan and management system, reduce the import subsidy, and strengthen the regulation of tariff and other economic levers. The centrally planned import proportion should be reduced, and the import agency principle will be carried out. In order to coordinate with import system reform, we will strengthen the role of tariff and taxation regulating function. Domestic buyers are allowed to ask for any import agency except for a small number of sensitive import goods.

To establish and complete the foreign trade economic regulating instrument system. The focus of reforming the foreign trade regulation model is to comprehensively use price, taxation, foreign exchange rates, foreign exchange retention rights, export credits and insurance and other economic regulations instruments to set up a new policy system. The new policy system should be accurate, consistent, coordinated and effective, and should become the basic environment for a newly reformed trade system.

To separate the responsibilities of administrative departments and enterprises; to revise the relationship between foreign trade administration and enterprise operations. First, the direct subordinate relationship between MOFERT and FTCs should be abolished. Second, the administrative subordinate relationships between FTCs of each level and their administrative bodies (for example, local government) should also be abolished. This will make the administrative body focus on administration, while the FTCs will make their own business decisions and be responsible for their profits and losses. Through these means, the FTCs will be invigorated by policy and legislation, so that they will be able to make their own decisions and become multinational corporations.

To promote the combination of industry and trade. It is an important part of trade reform to break down the barriers between industrial enterprises and the world market, and to encourage industrial and service enterprises to face the world market directly.

Foreign trade reform is a complex project with a strict time schedule and a series of problems including policy consistency and coordination. Once more China's government stresses its determination to hasten the reform process. We believe that China can establish a foreign trade system suitable for open economic development.

2

China's economic structure reform: its history, present condition and problems

Dong Fureng

China is currently undertaking a reform of its economic structure, which aims at transforming the old socialist economic mode which has been stagnating China's economic development and establishing a new socialist economic mode which will ease the smooth advance of China's socialist economy. In my opinion, the socialist economic mode consists of two interrelated aspects: one is the mode of ownership of means of production and the other is the mode of socialist economic function. A brief discussion of the current economic structure reform follows.

First of all, let us discuss the characteristics and development of China's original economic structure which was established in the period of the First Five Year Plan (1953-57), and which is very much the same as that of the Soviet Union. The following are some major characteristics of the structure in the field of socialist economic function.

Decision making system. Decision making power was centralized in the central government, which was to determine the allocation of resources through the economic plan and realize the goals it had set up. State owned enterprises could not fix their own goals and had almost no economic decision making power. Almost all of their income was turned towards the central government which then distributed and spent it in a unified way. Many means of production were also handled this way by the central government. In 1953, there were 227 production means under the government's unified administration and distribution. In 1957 the number rose to 532. The purchase and marketing of many consumer goods were monopolized by state commercial departments at various levels. Urban labourers were also distributed by the state from a unified point of view.

The economic regulation system. Most national economic activities were decided and regulated by the state's direct mandatory planning. In 1953 the state issued 3381 planning quotas, and the number was still as large as 2454 in 1954. Under such a system, the market mechanism could not function.

The economic motivation system. Compulsory administrative means such as instructions, orders and decisions were the main motivating force of economic development and the main medium to achieve economic goals. There was little economic incentive. The incomes of workers and staff members of the state-owned enterprises were not linked with the management of their enterprises. State-owned enterprises were not responsible for their profits and losses and their workers and staff members could not be dismissed for laziness or poor performance.

The economic administration system. The whole national economy was conducted by the state administration which consists of two systems: the departmental administration system and the regional administration system. Enterprises were subsidiary bodies subordinate to administration at various levels, which were directly in charge of the activities of the enterprises. The enterprises themselves had no independence in economic management.

The economic information system. Economic information was generally collected, communicated, stockpiled and processed within the departmental and regional administration systems. There was little information exchange between enterprises. The market was not the main factor in the economic information system and feedback of information was slow and weak.

The following are some major characteristics of China's original structure of ownership of the means of production.

A universal public ownership of means of production. Such ownership is required in order to guarantee the unified distribution of resources and the establishment of the highly centralized economic function system. Therefore, the establishment of this system has accelerated the pace of transfer to public ownership of means of production. By 1956 96.3 per cent of the peasant households throughout the country had joined the agricultural production cooperatives and there were very few privately owned industrial enterprises. Privately owned commerce contributed only 4.2 per cent of the total social turnover from retail trade, and individually owned handicraft industry contributed only 7.1 per cent of the total product value of the country's handicraft industry.

The ownership of means of production by all the people. The more widely such ownership becomes available, the easier it is for the state to amass resources, centralize decision making and motivate the economic function through compulsory administrative means such as instructions, orders and decisions. Therefore, while the highly centralized economic function system was being established, the proportion of enterprises owned by all the people greatly increased. In 1956 the product value of industrial enterprises owned by all the people made up 67.5 per cent of the total industrial product value of the country (exclusive of the handicraft industry); and, in 1957, the turnover from retail trade of commercial businesses owned by all the people made up 62.1 per cent of that of the whole society.

The integration of the functions of government with those of the enterprises. This practice integrated more and more socialist enterprises in public ownership with administrative organs at various levels and enterprises thus became the appendages of the administrative organs which directly conducted their economic management.

The above characteristics of the ownership of means of production are suited to the characteristics of the socialist economic function, which guarantees the establishment and function of the highly centralized economic function system. This highly centralized economic structure underwent three major reforms before 1978.

The first reform occurred during the Great Leap Forward period. The reform transferred a great part of the economic decision making power to local governments. Enterprises originally directly under government departments were placed under the administration of local governments. In 1958, there were 9300 enterprises directly under the central government and the reform transferred 88 per cent of them to the local governments, so that only 1200 were left. In 1959, the number of means of production managed and distributed by the State Planning Commission, the State Administration of Supply and the ministries of the State Council dropped to only 132, a fall of 75 per cent compared with the period before the reform. Besides, the examining and approving powers in capital construction were also transferred to the local governments, allowing them to expand the scale of capital construction. Part of the power in budgeting and taxation was also transferred to the local governments, thus increasing their financial capacity. Moreover, local governments were granted greater power in employment and could employ new workers without having to ask for approval from the central government.

The reform greatly expanded the decision making power of local governments, thus placing economic management mainly under the regional administration system rather than under the government departmental administration system. However, the economic structure as a whole was not essentially reformed. Although enterprises now had more power, they were still the appendages of administrative organs at various levels. The only difference is that they now became subsidiary bodies of the local governments' administrative organs instead of being under the central government.

In the field of ownership of means of production, the above characteristics become even more obvious. During the period of the Great Leap Forward, individual peasant households, individual handicraft industries and individual businesses were all merged into the collectively owned economy; peasants' sideline production and private plots were both eliminated. Some collectively owned industrial enterprises and commercial enterprises were merged into the state owned economy. A number of urban collectively owned enterprises and the rural people's communes began to integrate the functions of government with those of economic management, which was placed directly under state administrative organs. The reform did not overcome the fundamental defects of the original economic structure; on the contrary, some of the reforms further developed existing drawbacks.

The hasty transfer of too much power to the lower levels also resulted in chaos in economic life. Therefore the reform soon stopped and the powers that had been transferred to local governments were again returned to the central government. The degree of power centralization this time exceeded that during the period of the First Five Year Plan. In 1965, for example, the number of enterprises directly under the administration of government departments rose to 10,533, from 2400 in 1959; the means of production of unified administration and distribution by the central government rose from 285 to 522 during the same period.

The second major reform started in the mid 1960s before the cultural revolution. After the economic readjustment of 1960-62 the economy, which had been seriously damaged by the Great Leap Forward, gradually recovered. However, as the decision making power was again highly centralized, defects of the original economic structure once more became obvious. Therefore the second reform started in an attempt to eliminate these defects. Economic organizations such as economic trusts were established to administer economic management; the administration of enterprises was reformed and various responsibility systems were set up inside enterprises; and the budgeting power of enterprises was expanded. The administration of means of production was also reformed and special service corporations were set up to organize the supply of means of production in various economic regions, which aimed at breaking through the bounds of different regional administration systems. Meanwhile, local governments were again given greater power in economic administration, investment in capital construction and the distribution of means of production. The reform also extended to the ownership of means of production. The structure of the people's communes, for example, underwent several reforms after 1959. As a result, the production team became the basic accounting unit. The banned private plots, sideline production of peasant households, individually owned handicraft industries and commercial businesses were all resumed. The number of self employed labourers rose from 1.06 million in 1958 to 1.71 million in 1965.

However, the real drawbacks of the economic structure had not been fully realized, so the reforms could not possibly bring about a fundamental change. For example, the reform did not change the integration of government functions with those of the economic management of the people's communes. The reform also wrongly negated the practice of fixing output quotas on a household basis. Despite these faults, the reform was undoubtedly significant. Unfortunately, it was interrupted by the cultural revolution in 1966 and was soon strongly criticized as revisionism.

The third reform started in 1970 during the cultural revolution. It repeated the mistakes of the reform in 1958, namely, transferring large numbers of enterprises to the local governments, expanding the powers of the local governments and reducing the number of means of production distributed in a unified way by the central government. In 1965 there were 10,533 enterprises directly under the administration of the central government and hardly more than 500 left in 1970. There were 579 means of production which were under unified distribution by the central government in 1966 and the number dropped by 60 per cent to 217 in 1972. However, the reform did not catch the fundamental disadvantages of the original structure and consequently caused chaos. Soon after this, powers were returned again to the central government. The number of means of production of unified distribution rose again to 617 in 1973, private plots and sideline production of peasants were banned, and the collectively owned enterprises were again merged or turned into enterprises owned by all the people. In 1975 the supply and marketing cooperatives were turned into state owned enterprises. Almost all the urban individually owned economy was banned.

We can see that all these reforms have virtually repeated themselves except for a few minor differences. The economic decision making power was transferred back and forth between the central government and the local governments. Highly centralized decision making power within the central government resulted in stagnation of economic progress; transferring power to local governments then resulted in economic disorder. In the economic administration system the emphasis was placed on the government departmental system and then on the regional system. Individual ownership of the means of production was banned, resumed and banned again; collective ownership was turned into state ownership, resumed and turned into state ownership again. Many state owned enterprises placed directly under the administration of the central government were then transferred to the local governments, and later returned to the central government. This is because we did not have a profound understanding of the essential disadvantages of the original economic structure, and as a result, no matter what changes were made, the economic structure itself was not fundamentally changed.

It is true that the highly centralized economic structure has some advantages. It could more easily concentrate the limited resources on limited objectives, such as the development of heavy industry. It could guarantee that priority be given to the construction of the nation's key projects. Such a structure could also help overcome blind economic development and maintain economic balance.

However, experience from China, the Soviet Union and some other socialist countries shows that such highly centralized economic structures also have serious defects.

First of all, with decision making power highly concentrated at the level of the central government and administrative departments at various levels, enterprises had no self governing right in their production and operation. Such an economic decision making system often resulted in serious mistakes in economic policies. The Great Leap Forward movement in 1958 and the decision to double steel production in one year are good examples of this. The system also resulted in many other problems such as selecting wrong construction projects and fixing impractical production quotas. Such a highly centralized economic structure dampened the initiative and creativity of enterprises and left them unable to conduct their economic management.

Second, since mandatory plans regulated the allocation of resources directly, the market mechanism did not function in economic regulation. This resulted in economic stagnation. Under such a regulatory system enterprises could not readjust or adapt to changed situations. They had to continue to carry on the mandatory quotas as instructed by the higher authority because only the central government and administrative organs at various levels had the right to change them.

When poor economic decisions were made - for instance, when supply and demand were unequal or the resources were wrongly allocated - the market mechanism could not regulate itself through prices, interest rates or tax. Enterprises had to wait for the instructions to be corrected. The delay often resulted in serious losses and wastage of resources.

Third, compulsory administrative measures sometimes caused an acceleration of the economic function. However, since it removed economic incentive, the initiative and creativity of workers and staff members of enterprises could not be fully utilized. Since enterprises were not responsible for their own profits and losses, their income was turned towards the state, their losses were made up by state finance and their products were purchased and marketed by state commercial departments in a unified manner. Enterprises did not have to pay attention to the economic result of their production, and neither could they under the mandatory planning system. They only had to carry out orders from above and had no goals of their own. Therefore, they did not care about changes in the market and did not try to improve their products. The practice resulted in very poor economic results and serious wastages. Hardworking people were not encouraged and lazy ones were not punished. Enterprises had no power to employ the workers they wanted. Consequently, workers were low spirited and poorly disciplined and productivity was very low.

Fourth, the administration system could not reasonably allocate resources and properly organize economic activities. The departmental administration system resulted in divisions and isolations of the national economy among various government departments. Each department tried to establish its own production system, and this caused duplication in the construction of factories. The practice restricted full and rational utilization of resources and production capability. The regional administration system also resulted in divisions and isolations of the national economy among various regions, consequently hindering the regional exchange of products. Each region tried to establish its own production system, with the same consequences in duplication of factories. This also restricted full and rational utilization of resources and production capability. Under this system, enterprises became appendages of administrative organs at various levels and their economic activities were totally subject to orders of the higher authority. Such a system could not possibly create any really competent entrepreneurs.

Fifth, the original administration system brought about low efficiency in information collecting, communicating, stockpiling and processing. The market lost its function of feeding back market information. This resulted in the economy becoming stagnant and inflexible. Reports, requests and approvals all had to be directed to the top and then sent down level by level. Such 'document tours' resulted in serious problems with bureaucracy and red tape. Under such a highly centralized administrative system, enterprises usually withheld their real production capability in order to fulfil the mandatory quotas more easily. The bureaucratic system usually made it impossible for the central government to obtain complete and accurate economic information in good time, and this very often resulted in making poor economic decisions. One of the main reasons for deciding to double steel production in 1958 was that the central government was wrongly told that the problem of food had been solved so that the emphasis of the economy could be shifted to developing industries, especially heavy industries.

Under the original economic structure, the form and structure of the ownership of means of production also caused various problems. First, in order to realize complete public ownership of means of production, almost all urban individual handicraft industry, individual service trades and individual pedlars were banned. However, while the publicly owned economy was still unable to replace the individual economy entirely, banning individual enterprise brought about many problems in the country's economic life; for example the publicly owned economy alone could not provide enough employment and the people were inconvenienced because of shortage of service trades. For instance, by 1978 the number of Beijing's shops and restaurants had dropped by 85.6 per cent to only 10,524 compared with 73,000 in the early 1950s. Meanwhile, the city's population rose from 2.65 million to 4.7 million during the same period. Consequently, it was becoming more and more difficult in Beijing to find a place to eat, to get a tailor or to shop and long queues became common.

Second, the great expansion of ownership by all the people caused many problems. For instance, collectively owned enterprises had originally been responsible for their own profits and losses and so they maintained good management by paying close attention to market demand. However, after being turned into state owned enterprises or into enterprises owned by local governments, management started to deteriorate. Managerial staff expanded and wastages were serious. Their production became entirely subject to mandatory quotas. As a consequence, many enterprises began to run at a loss. Originally, the existence of collectively owned enterprises could create competition for state owned enterprises, thus encouraging both to improve their management. Now with many collective enterprises turned into state owned enterprises, the state owned enterprises faced no competition and were reluctant to make any changes. Meanwhile, with the collective ownership turned into ownership by all the people, the output and assortment of goods of everyday use were much reduced, the circulation channels of commodities impeded and the service industries diminished. All these factors restricted the increase in employment and caused inconvenience in people's daily lives.

Third, with government functions integrated with those of enterprise management, enterprises were deprived of their self governing power and became appendages to the administrative organs at various levels. Such a system integrated the administrative means with the economic management. Leaders directed the enterprises as if they were government officials, ordering people about. This damaged the system of democratic management of socialist enterprises by the workers and staff members.

The end of the cultural revolution brought about a new political prospect for the reform of the economic structure in China. Theoretical discussions on the economic structure broke the bounds of the 'leftist' way of thinking, and the experience of some other socialist countries in their economic structure reform also provided valuable enlightenment for us. After the spring of 1978 and especially after 1979, the reform of China's economic structure entered a new period.

The unexpected success of the rural economic structure reform in the last few years has greatly accelerated rural economic development. The urban economic structure reform has also produced its first fruits. In summing up the experiences of the last few years, the CPC Central Committee passed the Decision on Reform of the Economic Structure in October 1984, outlining an overall program of reform. Here I intend to focus my discussion on the current urban economic system reform and tentative ideas of the Decision.

The economic decision making system. The highly centralized system of economic decision making within the central government and administrative organs at various levels should be turned into a much broader decision making system which involves enterprises and their workers and staff members. We have now realized that the key to economic reform does not lie in how to divide power between the central government and local government (though that problem should be properly solved) but in how to invigorate the enterprises. We should extend the decision making power to state enterprises by establishing a good relationship between the state and its enterprises. The reform started with extending the decision making power of enterprises. The Decision pointed out that enterprises should be relatively independent economic entities which should become producers of, and dealers in, commodities, that they should be independent and responsible for their own profits and losses and capable of transforming and developing themselves. Therefore, on the premise of following the state plans and subjecting itself to state control, the enterprise has the power to adopt flexible and diversified forms of operation; plan its production, supply and marketing; retain and budget funds to which it is entitled; appoint, remove, employ or elect its own personnel according to relevant regulations; decide on how to recruit and use its workforce, and on wages and rewards; and set the prices of its products within the limits prescribed by the state. While extending the decision making power of the enterprises the reform will also extend to the present leader system. Enterprises will introduce a system under which directors are to conduct the economic management in a unified manner.

The economic regulation system. The past system of regulating the economy basically through mandatory plans should be changed. It is necessary to reduce the scope of mandatory planning and extend guidance planning step by step. Mandatory planning will be applied only to some products which have a major bearing on the national economy and on people's livelihood. These will have to be allocated and distributed by the state. It will also be applied to major economic activities which may either come under guidance planning or be left entirely to the operation of the market, as the case requires. Guidance planning does not consist of instructions that enterprises have to carry out, but provides guidelines that enterprises can refer to in their own planning. The state should use economic levers such as price, interest rate and tax to guide enterprises to achieve the goals of state planning. Giving the reins to the market mechanism under state planning is one of the major aspects of the economic system reform. This may bring about improved efficiency, flexible management and quick response to the market situation. Reforms in this area have been conducted in recent years. The number of means of production of unified distribution by the central government has been cut down and the means of production started to circulate in the market. The purchase and marketing of industrial consumer goods are no longer monopolized by the state and have been taken over by commercial enterprises. Factories have even started to market their own products. The government has also ended the practice of monopolizing the purchase and marketing of agricultural products such as grain and cotton. Farmers are allowed to sell their products on the market freely after they have sold their quota at the state controlled price. Urban and rural farm trades and collectively and individually owned commercial businesses have been developing rapidly. Many enterprises have begun to pay attention to changes of supply and demand on the market and competition has started among enterprises.

The economic incentive system. The practice of motivating the economic operation through administrative means alone should be changed. Economic incentive is beginning to function. Attention has been paid to regulating the relationships among various interests in the economy. Enterprises should have their own economic interests which are linked with their performance. They should be responsible for their own profits and losses. The extent of profits they can retain is decided by their production and management. Economic incentives improve management and the quality of products designed to meet market demand. Enterprises are paying more and more attention to seeking technological progress, raising productivity and reducing production costs.

The wage system has also been reformed step by step in recent years, with the aim of ending the practice of 'egalitarianism' in disregard of contribution and effort. If the bonuses reach a certain amount, the enterprises, rather than the workers, shall turn the bonus tax over to the state. These reforms link the interests of workers and staff members to the management of their enterprises. In recent years, the role of economic levers in economic regulation is becoming increasingly obvious. For instance, the prices of some industrial products will no longer be fixed by the state and will be subject to market changes; the prices of some industrial products will be allowed to float, and some of the irrational system of pricing is being readjusted. In recent years a new system has been adopted in capital construction investment. Since 1985 the state no longer allocates and distributes free funds to enterprises for capital construction. Instead, the bank provides loans and enterprises pay back the loans and the interest by a certain time. The bank also provides loans to enterprises to use as circulation funds. The interest rates have been raised to attract more deposits. The system of taxing is also under reform.

The economic administration system. Government functions integrated with those of economic management will be divided. Government departments at all levels will no longer directly administer the management of enterprises, and enterprises will no longer function as the appendages of administrative organs but become real economic entities which can operate independently. Meanwhile government departments at various levels have been liberated from the daily management of enterprises. Recently, the Ministry of Machine Building Industry (now Machine Building Industry Commission), the Ministry of Commerce and the Ministry of Electronic Industry started to separate the functions of government from those of economic management. They will no longer administer enterprises directly.

The economic information system. Efforts have been made to strengthen information collecting and cross-communication. Enterprises are now allowed to respond to market information. As the market mechanism is beginning to play an important role in economic regulation, the market will become an important source of information. After the recent reforms, enterprises are paying growing attention to the market.

The economic system of foreign economic relations has also been under reform. The open policy has been adopted to extend economic and technological cooperation and exchange with foreign countries and regions. Reforms have also been extended to the systems of foreign trade, which have become more flexible. Special Economic Zones such as Shenzhen, Xiamen, Zhuhai and Shantou have been established: fourteen coastal cities have been opened to the outside and more cities will follow.

In accordance with reforms in the economic operation, reforms of the form and structure of the ownership of means of production have also started. Enterprises owned by the state will gradually assume sole responsibility for their own profits and losses. Many small enterprises owned by the state are being turned into enterprises owned collectively or by private individuals or leased to individual or collective workers and staff members. Collectively owned enterprises in cities will also gradually change their status as appendages of administrative organs and become really independent economic entities responsible for their own profits and losses. In short, the collectively owned and individually owned economy has been developing rapidly. The number of people engaged in individual economy has reached 2.31 million compared with 15,000 in 1978. Their proportion among urban labourers increased from 0.2 per cent to 2 per cent. The model of the traditional forms of socialist ownership (state ownership and collective ownership) has been broken down and various other forms of ownership have appeared, such as individual, private enterprises, enterprises established by several state owned enterprises, or with collectively owned and individually owned enterprises together. However, enterprises owned by all the people still constitute the leading force in China's socialist economy. Meanwhile, we should, on the basis of voluntary participation and mutual benefit, encourage diverse and flexible forms of cooperative management and economic association among the state, collective, individual and private sectors of the economy. With the continuing economic system reform, the forms of ownership of means of production will become more and more diverse.

China's economic system reform is going on, but the blueprint outlined in the Decision of the CPC Central Committee will not be turned into reality for a considerable period of time. Experience from other countries shows that such a reform is continual and will take many years.

Currently, the urban economic structure reform has spread all over the country and the reforms we have discussed are just the beginning. These reforms, however, also create some problems and raise some questions.

1. **The problem of making a smooth transition from the old economic system to the new one and avoiding too much turbulence during the reform.** Experiences and lessons obtained in some other socialist countries show that the reform would bring about great changes in the relationship between

various aspects of economic life (such as the relationship between production, supply and marketing, financial relations, wages, bonuses and prices). Without sufficient material and financial preparations such changes are too difficult to handle.

The current task is to control the growth rate. Otherwise, if the planning targets for the economic growth rate are set too high, investment will greatly increase, resulting in financial difficulty, and shortages of goods, making it impossible for the reform to continue. China's economic situation has been very encouraging and economic growth is obvious. However, while this has been too rapid for some people, others want to accelerate the growth. This has made the already overexpanded investment scale of capital construction even bigger. In recent years increase of bank loans, wages and bonuses has resulted in the rapid increase of circulation of currencies and consequent price fluctuation on the market. This is harmful to the reform and appropriate measures are being taken to solve the problems.

2. **The problem of regulating and controlling the economy during the transition.** While the new economic decision making system and economic regulation system have not yet been fully established the old ones have already begun to disintegrate. This situation is very likely to cause disorder of the economic decision making system and the regulation system, and consequently throw the economic function out of control. Under the original highly centralized system, for example, the state administrative organs had effective control over wage and bonus distribution. But the system had no built-in incentives for workers and staff members. After the new economic system was introduced, enterprises had the right to decide on wage levels. Under these circumstances, the regulation and control of the original system over the distribution of wages, bonuses and subsidies no longer have any effect. However, the new system of regulating and controlling the distribution of bonuses and subsidies has not yet been established. New systems of taxing, pricing, bank supervision over enterprises and budgeting have not been established. The result may be a reckless distribution of wages, bonuses and subsidies. Such things have happened in recent years.

One of the major tasks facing us is to try to learn to utilize all the means of regulation comprehensively. Under the new economic system, means of economic regulation (prices, credit, interest, wages, bonuses and taxes) will play an important role. Meanwhile, means of administrative regulation are also necessary. How these two means of regulation could be combined with emphasis on the economic means is still a problem that remains to be solved.

3. **The problem of pricing reform.** Reform of the pricing system consists of two aspects:

- Reforming the original administration system of pricing. Under this system most of the prices were set by the state administrative organs. Any changes in prices would have to be approved by the department in charge of pricing, or even by the highest decision making department of the central government. Such a system has denied flexibility in supply-demand regulation and resources allocation.
- Changing the pricing level and relative prices so as to maintain a normal pricing level and rational price relations among various prices. Under the original highly centralized decision making system of pricing administration, the casualness and subjectivism in decision making made it impossible for prices to reflect the changes in productivity.

There are many problems in pricing. For example, the purchasing price of major agricultural products set by the state is higher than their marketing price; the price of grain in some areas before 1979 was lower than its production costs; the price of industrial products was too high and the price of agricultural products too low; the price of processed goods was too high and that of raw materials was too low; and there was little difference in price between products of different qualities. The serious problems in pricing resulted in unbalanced allocation of resources. There has been a great surplus of expensive profitable products and a serious shortage of cheap products that could not make much profit. The selling prices of more than thirty products were lower than their purchasing prices, and this resulted in huge amounts of government financial subsidies. Such subsidies were estimated not long ago to make up one-fourth to one-third of the total financial income of the state. Therefore, the problem of pricing has become the focus of economic reform.

Pricing reform should aim at gradually reducing the scope of uniform prices set by the state and appropriately enlarging the scope of floating prices within certain limits, and of freeing prices, and gradually readjusting the irrational relative prices. Thus prices will respond rather quickly to changes in labour productivity and the relationship between market supply and demand. However, there are still many complicated problems. Changes of one price may cause chain reactions. The reform is very difficult and the government is adopting a prudent policy in working out ways of reform.

4. **The problem of the dual system.** At present, there are two dual systems existing simultaneously: one is the dual system existing during the period of transition from the old economic system to the new one, which we have discussed, and the other is that existing in the new economic system. The centralized economy and the decentralized economy both have advantages and disadvantages. People hope to establish a new system with the advantages of both but without their disadvantages. None of the socialist countries can say that they have achieved this, but we certainly should try our best. The new structure that is being outlined is likely to be a kind of dual system. The problem of how to handle a dual system needs to be discussed in theory and we need to gain experience in practice.

It is right that we should, step by step and to an appropriate extent, reduce the scope of mandatory planning and extend guidance planning.

However, the two are very different from one another in the systems of economic decision making, incentive, regulation, administration and information. The coexistence of the two will create many problems for the economic function. For example, if some enterprises carry mandatory planning, their management will not be as flexible as those carrying guidance planning and their decision making power will be much smaller. In order to apply mandatory planning in some enterprises, the original centralized distribution system of means of production, the system of state monopolized purchase and marketing, the system of state responsibility for the profit and losses of enterprises, the system of uniform pricing and the system of centralized labour distribution will accordingly have to remain to some extent. This may run into conflict with the newly established system which adopts guidance planning and gives reins to market mechanism. For example, one production means may have more than one price: the price of this product distributed by the state according to the mandatory production quotas and the price on the market. Again, one product may have more than one way of purchase and marketing, either state controlled or commercial enterprises controlled. Different prices for the same products would create many problems such as that of speculation. On the other hand, if the price of state monopolized purchases is lower than market price, enterprises under mandatory planning would not like to accept production quotas. They would hold back their production capability and output from the state. If the price of the means of production supplied by the state is lower than its market price, enterprises under mandatory planning would demand more for their products. Therefore, how to correctly combine the planning with the market is still a problem that has not been solved.

Up till now, state enterprises still have not been transformed into commodity producers under independent management with sole responsibility for their profits and losses. In China's economy, state enterprises occupy a dominant position. If they are not responsible for their own management, and their profits and losses, and if they do not play an independent economic role in market activities and fail to become commodity producers in the real sense, then not only are they unable to respond appropriately to changes in the market, but they also cannot take a vigourous part in market activities, including competition. Under such conditions, a complete market system would never be established, nor would the market perform its normal functions in relation to the economy.

Meanwhile, before the enterprises are transformed into commodity producers with self-management and independent responsibility, it is impossible to change direct state regulation and control to more indirect ones. This impossibility is due to the lack of a microeconomic basis necessary for such indirect macroeconomic regulation and control.

Furthermore, since the enterprises are not capable of instant, active and appropriate responses to state regulation and control, measures introduced indirectly through the market will take little effect and can hardly achieve the expected objective. That is why we have emphasized the transformation of state enterprises in the reform program in 1987. At present, a variety of management responsibility systems through contracts and leasing systems are being introduced all over the country and the immediate results seem to be quite positive.

3

International lessons from the development of free ports

Gu Yuanyang

Free ports are special areas where independent customs regulations are exercised. In free ports foreign ships, personnel, their goods and investment are allowed to be brought in and out freely: that is to say the port authority levies no tax on imported raw materials, spare parts, semi-finished or finished products. The purpose of having free ports is to enlarge foreign trade, increase national revenue, provide people with more jobs and encourage the country's economy to thrive. Many of the imports are subsequently processed for export or for sale in the domestic market.

Free ports have a long history. As early as 1229, a special tax free area was set up in the port of Marseille, France. The free port in Italy called Reggio, established in 1547, is accepted as the first formally proclaimed free port in the world. Four hundred and forty years afterwards, the number of free ports, their locations and functions have increased rapidly in line with the development of commercial economy and international trade.

As early as 1934 the Congress of the United States approved a bill for establishing foreign trade zones as free trade zones came to be called in that country. Foreign trade zones in New York in 1937 established facilities for loading and unloading, transportation, storage, assembling, manufacture as well as using the ports for transport by sea, land and air and for *entrepôt* trade. Goods from any country could be brought in and out freely to or from the foreign trade zones, subject only to restrictions of health, safety or public security and unrestricted by US customs regulations. Before World War II free trade zones were mainly involved in commodity storage, goods processing and *entrepôt* trade. After World War II, as world markets grew and economic activities became more international in scope, ports and areas with good traffic conditions were steadily exploited and utilized so as to drive their national economies to new heights. Free ports and free trade zones then experienced a period of accelerated growth. Although in reality this period was comparatively short, new models of free economic zones were created in the light of actual demand and the potential of each of these countries. The new models are the free trade zone model, scientific type model and Gemini type factories.

The free trade zones of the industrial type refer to special zones for export processing. During the 1960s the first area for processing exports in Asia was built up in Kaohsiung in China's Taiwan Province. A new model of processing and manufacturing for exports used foreign investment, foreign technology and imported machinery and raw materials. Compared with free ports and free trade zones, these export processing areas were enlarged forms of tax protected industrial areas which require only low technology, limited funds and a short period of time for construction. Thereafter more than thirty new processing areas for exports appeared in the developing countries on the Taiwan model.

Free trade zones of the scientific type refer to scientific parks. Keeping pace with the speedy development and progress in technology and science, the US kept its prime position in science and technology by creating scientific parks and parks for researchers. They consist of a combination of enterprises, administrative bodies and universities allowing pure and applied scientists to cooperate in applied research and technological development. Silicon Valley in the US has emerged as a model which has been adopted in developing countries to encourage the development of their own technology and industries. Such parks are an interesting stage in the development of special zones - emphasizing quality, not simply quantity, as in the case of the earlier free trade zones.

The Gemini type factories refer to the models of transnational sales which appeared at the border areas of the US and Mexico. These transnational enterprises from the US, Europe or Japan all succeeded in breaking through the tariff and non-tariff barriers by making full use of this investment strategy. The Gemini type factories are factories located in the border towns of the US and Mexico with only a fence to separate them. Factories on the Mexican side are responsible for manufacture or assembly of products while factories on the US side are responsible for the processing of the finished products and for selling. For US business personnel these Gemini type factories are more profitable than most of those established in Asian countries. There are both time and cost savings due to location. Transnational corporations from Europe and Japan have also built many Gemini type factories at the border areas between the US and Mexico. They are actually bases of production and re-transportation for the European and Japanese transnational factories to get into the markets in the US or in Mexico. In 1986 Gemini type factories numbered more than 800, employing 250,000 Mexicans, resulting in nearly half of the country's industrial output. Such enterprises are second only to the petroleum industry in earning foreign exchange for Mexico.

Many different types of zones emerged as byproducts of the free port. Their form and distribution varied as patterns of world trade and development emerged. Almost 600 free ports, free trade zones, processing areas for exports and scientific parks in nearly ninety countries were brought into being. Great Britain, for example, had no free ports at all before 1984. It has now announced six cities, including Birmingham, Liverpool and Southampton, as free ports. In the north of Australia, the port of Darwin was proclaimed as a special area for trade development. In Japan, bases for processing and commodity handling were set up around airfields and ports.

Thus free ports and free trade zones still show their great vitality after more than 400 years. However in the socialist countries free zones are not very common. In Romania, the free port of Sulina was established in 1860 and obtained its legitimate position as a renewed free port in 1978. It is worthy of note that two remarkable trends have occurred in the methods of developing the free zones.

One trend is that commercial and industrial free trade zones are interwoven with each other while the other trend is that the free trade zones of new type science and technology are constantly increasing in the wake of scientific and technological development. These trends have forced some countries and regions to revise their already existing aims and policies concerning free zones and provided newly established areas based on modern experiences, thus avoiding unnecessary mistakes and big political and economic losses.

Free ports are the oldest form of free zones. Free ports which include the port and the city where it is located are called free ports of the converged type. Free ports which include the port and only a part of the city are called free ports of the seclusion type. Economic activities in all free ports are divided into three categories.

(i) Free ports for storing and transhipping. Storage and transhipment are two basic functions for a free port importing foreign goods as a supplement to domestic needs or rendering transhipment services to other countries and regions. Up to now one could only find a few free ports like this.

(ii) Free ports with functions of storage, transhipment and industrial manufacture. Such free ports are an improvement on the abovementioned functions as they have trade markets attached to or around the ports. For example, for a long time the Colon free trade market in Panama was known for its main business services, namely storage, packaging and transhipment. But *entrepôt* trade there declined because of market depression in Central and South America. An emphasis on business orientation has emerged since the beginning of the 1980s and foreign businessmen have been encouraged to invest and set up factories within the ports, thus enhancing various processing industries and balancing the losses caused by declining *entrepôt* trade.

(iii) Free ports with multi-aims and functions. Such free ports combine trade and manufactures. Their economic activities range from industry, trade, storage, transhipment, finance, communication, housing, recreation, tourism to ship building and ship repairing, manufacture of ship engines, oil refineries. Singapore and Hong Kong are free ports with multiple aims and functions of this type.

Thus free ports have rapidly developed their economic activities from simple functions to more complicated ones. According to incomplete statistics, about sixty ports are now formally proclaimed as free ports. Free ports in both developed or developing countries have brought remarkable benefits, including economic expansion, to their host countries. In particular, free ports have provided opportunities to attract foreign investment, promote their nation's commerce and generate jobs for their people, thus showing the most effective way to increase revenue. The main reasons are firstly that the preferential treatment and convenience provided by the free ports attract various goods for storage from the four corners of the world. Hence the country would not only gain substantial returns from the storage services but could also take the opportunity to purchase the necessary materials in the free ports thus saving either time or freight expenses. As a result cost savings across a range of activities have resulted in shortages of important raw materials and economies have been minimized.

Secondly, more and more ships are allowed to pass through the free ports quickly and income collected from the commercial fleet or from the maritime provisioning services are increased. Not only are the profits to the port authority augmented but the entire regional economy shares in the multiplier effects of such developments including ship repair, maintenance and operations.

Further, the storage and transhipment of goods in free ports create opportunities in fuel supply, food supply and service industries. Jobs are generated in service areas such as repackaging, storing, sorting and processing in the free ports.

Lastly, in free ports the traders can avoid strict tariffs set up by customs and other procedures including checking and examining goods and certain foreign exchange regulations and procedures relating to commodities which need to be transhipped. Therefore traders obtain maximum profits by fully exploiting their superiority in international trade compared to non-free ports.

Despite their obvious advantages, it is not possible simply to declare new ports free. Certain conditions are necessary:

- Free ports must be located on one of the international sea ways which must not only be important but also produce large volumes of imports and exports from nearby;
- Free ports must be located in good natural harbours, ice free most of the year and provide deep water access. They also need cargo handling infrastructure and wharves;
- Free ports must be linked via transport and communication with their mainland or with foreign countries in all directions. They must ensure safe, regular and efficient passage in goods, vehicles and personnel;

- The free port and its country should have its own commercial fleet with adequate loading capacity and advanced techniques in ship-building or ship-repairing industries;
- Free ports should have a good commercial environment attracting domestic and foreign investment and provide the investors with assured profits and enough circulating funds;
- Free ports require an effective administrative body with full power to handle all the matters concerned and should be run by trained and qualified experts in economics, trade, finance, technical engineering, law and management. Efficiency in the provision of administrative services is crucial. This requires the setting up, in the port or nearby, of special facilities for training the necessary officials and imparting the relevant services;
- Special areas should be set aside for constructing recreational parks, banks, restaurants, hospitals, insurance companies, schools and living quarters. These facilities should be of world standard;
- Special policies and regulations should be promulgated and practised in the free ports. As well as favourable conditions for taxation and financial treatment, it is of great importance to allow necessary personnel, funds and materials to be exchanged or circulated. Goods, with the exception of narcotics and other prohibited items like arms, should be allowed to be imported and exported. Capital should be allowed to be invested or withdrawn freely. Profits, bonuses or other legitimate revenue should be able to be remitted abroad, converted into foreign currencies or sold on stock or securities exchange markets. In brief, complete freedom for exchanging personnel and materials or circulating funds is of key importance as a prime condition for building up free ports with multiple aims and functions. Nevertheless, the policies of interior affairs, national defence or foreign affairs which are pursued in the free ports should be the same as those prevailing in the country at large, so that free ports would not endanger national security. Even so, it is difficult to completely prevent drug or goods smuggling and other illegal activities in free ports. As a result, a demarcation line is necessary to prevent such activities spreading to the nation at large.

Developing free ports is a great strategy for exploiting the nation's economy but involves many complex elements and requires heavy investments. If the experiment fails, not only will funds have been wasted, but also substantial costs to the national economy will have been sustained. Based on past experiences, the following three points are worthy of note.

Firstly, a feasibility study and careful analysis should be done in an objective and thorough way before the free port construction begins. The feasibility study for constructing free ports should embrace the selection of location, definition of functions, land areas, absorption of investment and funds, anticipation of profits, and the financial and banking system. These all require extensive investigation, good analysis and careful study. When the decision for free port construction is finalized a series of steps should be gradually carried out such as drafting and promulgating laws and regulations, setting up administrative organizations, working out taxation and 1970s. Furthermore, countries the world over are making efforts to improve port management, cut down service charges and increase service quality in building and developing ports.

Increasing competition in world trade and the increasing popularity of free trade zones are making the environment for *entrepôt* trade and the development of free trade zones increasingly difficult. Nevertheless, traders and businessmen have changed their strategy from focusing their attention only on selling goods to multilateral or triangular trade. Moreover, although *entrepôt* trade on traditional goods becomes increasingly less popular, new *entrepôt* trade on products of advanced science and technology and on spare parts is steadily increasing. Therefore a resilient tax protected system set up in free ports or free trade zones is still significant and plays a positive role.

4

Overseas experience and Xiamen's free port

Dai Yuan-chen, Lin Quan-shui and Wang Zheng Zhong

China has decided to set up a free port in Xiamen based on current international thinking about the role such enclaves can play in economic development. It is thought that given the policies being pursued by the Chinese Government, such an initiative would be attractive to foreign investors and would ensure that modern technology and management was introduced into China. It would also complement current foreign policy trends and assist with the development of the national economy.

Experience of preferential zones in foreign countries

The trend in current economic development in the world is closer relations between countries. However a conflict between trade protectionism and liberalization of international trade exists. Many countries set up tariff and other barriers against the import of foreign goods. These include anti-dumping duties, retaliatory duties, emergency tariffs and many others as well as standard customs duties. Non tariff barriers such as import quotas, export permits and foreign exchange controls are also used. The purpose is to close up the domestic market and protect national industry and agriculture. As for the liberalization of international trade, many countries have established preferential zones which are empowered to engage freely in international trade. These two aspects supplement each other, benefiting from the development of foreign economic relations and preventing outside attacks on the domestic market.

The term preferential zone covers a number of different concepts designed to permit full involvement in world markets. Despite their differences, they are expected to promote local production and exports. Other goals involve the attraction of foreign capital, technology and management expertise. Some zones are called free ports and some free trade zones, others are called export processing zones or negative tax zones. One common feature of all preferential zones is that they enjoy some special opening policies, more effective management and simpler trade procedures in their economic and technical relations with foreign countries. While this century is often characterized as the age of trade protectionism, it is also the period when free trade and expansion of preferential zones developed.

Seventy-five preferential zones were set up before the second world war, primarily located in the United States of America, the Federal Republic of Germany and France. By the end of 1983 there were 591 widely scattered preferential zones in eighty-two countries. Oceania was one of the few areas of the world without a preferential zone. The number of zones increased fourfold within forty years, and the number of countries and regions with preferential zones increased over two and a half times. An even greater increase occurred in the developing countries. Of the 591 zones, 183 were located in fifteen developing countries, and 408 in developed countries and regions.

It is worth noting that the scale of a country's exports and the level of her economic development is not directly proportional to the number of preferential zones. Only when the preferential zones are regarded as an important component of national or regional strategic development can they reach their expected targets. Based on the experiences of some successful countries and regions we should pay attention to the following points when we set up preferential zones or free ports.

Protect and promote domestic industry while expanding foreign relations. Because preferential zones are free of tariff barriers, they play an important role in strengthening economic relations with foreign countries. They promote international exchange and cooperation and speed up development of foreign trade. The success of some countries lies in their ability to balance the need to open up to the outside world with the need to protect national industries. Protecting national industries involves not only the maintenance of local industry but also raising technical and management expertise, improving the quality of products and efficiency, and in this way gradually improving the ability to compete in world markets. Some countries put too much emphasis on the opening and development of preferential zones. It is necessary to plan economic relations between preferential zones and the hinterland. Only in this way will the expansion of foreign trade encourage development of the whole economy.

Gear industry policy to a changing world economic order. Today technological change and increasing competition are changing the comparative advantage of the international division of labour, inducing developed countries to expand into more sophisticated industries. Because of this, the developed countries try to transfer obsolete industry to the newly developed industrializing (NDI) countries. The NDI countries in turn adjust the structure of their industry, develop new industry and transfer the less beneficial and labour intensive industry to the developing countries. In this change in industry structure, the preferential zones become more attractive to investors and become the juncture for transferring and receiving. So it is important to decide which industries the preferential zones should develop, and whether emphasis should be put on accepting the obsolete traditional industry of the developed countries or on seeking new, technologically sophisticated industries. Under the guidance of good policy, free ports can make full use of preferential measures and their favourable conditions to attract investors, forming a rational industrial structure that will last.

The establishment of sound and attractive investment rules. The funds for establishing preferential zones of free ports come from both domestic and foreign sources. But many developing countries face shortages of domestic funds which hinder the development of their economies. A major reason for setting up preferential zones is to attract foreign capital and make good use of it. Thus it is very important to have characteristics which are attractive to investors.

Foreign investment takes many forms. Three common types are joint ventures, cooperative enterprises and enterprises run exclusively with foreign investment. Other forms include reinvestment by foreign enterprises from retained earnings, issuing of bonds and shares to the outside and applying to foreign financial investors for loans and credits. The form which foreign investment takes depends upon the specific conditions of the area. A flexible financial environment is important regardless of the form used.

The attraction of preferential zones to foreign investors depends on potential profits, which will depend on preferential tax, low rent of land, cheap labour force etc. The host country should not focus only on employment creation in the zone, but also on expansion of exports (through the introduction of foreign investment) and the introduction of new technology, equipment skills, materials, advanced management techniques and improved efficiency.

Since the 1960s, structural changes in the world economy have made the idea of preferential zones more attractive and have extended the use of the concept beyond the notion of free ports and free trade zones. Export processing zones, designed to increase exports and earn foreign exchange, and scientific industry zones designed to introduce investment and advanced know-how, have also emerged. These new forms have become quite common in Asia and Latin America.

From 1966 to 1975, the export processing zones in Taiwan Province exported mainly electronics, clothing, plastics, leather, and textile and weaving products. Total exports reached US$1844 million. Specifically, this included exports of electronics US$1006 million, accounting for 54.6 per cent; clothing US$249.5 million, 13.5 per cent; plastics US$117 million, 6.4 per cent; leather US$90 million, 4.9 per cent; and textiles US$82 million, 4.4 per cent. The significance is that in 1975, the EPZs' enterprises in Taiwan Province had invested on average about US$2.39 million in the optical instrument sector and US$1.02 million in the precision machinery and instruments industry. The average investment in the electronics industry was only US$724,000, while the average number of employees is 264 in optical instrument enterprises and 232 in precision machinery and instrument enterprises. By comparison, the average number of employees in the electronics industry is 409. Accordingly, the investment per worker amounts to US$9000 in optical instruments and only US$4400 in electronics. From this comparison between electronics and optical instruments, we can see that the average investment per employee in optical instruments is US$4500 more than in electronics and total employment is significantly lower.

The electronics industry takes the leading position in the structure of investment in many special zones. For example, in 1975 there were seventy-four electronics enterprises starting operation in Taiwan Province export processing zones, making up 28.5 per cent of the total number. The real investment amounted to US$53,559 million, about 44.6 per cent of the total and employment reached 30,000, about 47.4 per cent of all such employment. The investment structure of Masan free trade export zones in South Korea is quite similar to EPZs in Taiwan Province. In 1975 there were twenty-six electronics and electrical appliance enterprises. The total investment reached US$33,022 million, 37.1 percent of the investment in Masan EPZs. The number of employees was about 24.8 per cent, the exports 55.1 per cent, and the imports 56.4 per cent.

Taiwan Province and South Korea both introduced and developed electronics products on a large scale in their EPZs, which led to the sharp growth of the technology and labour intensive industry, bringing great changes to the export structure of the whole country. For instance, agricultural, aquatic and mineral products led the ten major categories of export goods in South Korea during the 1950s and 1960s. Since the 1970s the electronics industry has developed rapidly and become the second major commodity next to fibre products. In these countries, the EPZs lead the structural changes which now characterize the entire export base. Progress can only be made in this way. Some developing countries set up EPZs of electronics products but now, because of lack of coordination with the domestic economy, have no great achievements to show for it. That is also one reason that some EPZs of developing countries have little impact on the whole export structure, although they set up labour intensive electronic companies as prior investment projects.

Since the 1970s many Asian countries have established EPZs as part of their export strategies, reflecting their changed emphasis in development planning. Up to the early 1980s, the preferential zones set up in Asia totalled over 100. Some took time to develop but, after initial teething problems, became quite successful as foreign exchange earners. In some countries such as South Korea, once the zones have proved successful in attracting investment the government de-emphasizes the zones as a focal point for future inflows of foreign capital. In Taiwan Province, too, the first experiments in encouraging foreign investment were in EPZs. But with their success in attracting investment and high technology development, the

EPZs were gradually de-emphasized as a site for continuing investment inflows.

An important lesson is that while they can be successful in attracting capital and as agents of employment creation and technological change, EPZs must be seen in a transitional sense and must be part of a flexible and dynamic program of structural change.

The EPZs of most developing countries are currently in a period of growth rather than stagnation. However, some problems remain. The chief problem is the introduction of non-synthetical industrial projects by sub-transnational corporations. It means that foreign corporations only transfer the labour intensive part of the production line into the host countries. So it is mainly electronics assembly, clothing, shoes, leather, plastics, toys and sporting goods that are located in the EPZs. Low skilled labour predominates on the production line. Because of these labour intensive and unskilled activities, foreign investment is confined mainly to small scale and relatively simple activities. United Nations data show that in the 1970s individual foreign investments in EPZs in developing countries tended to be within a range from US$500,000 to US$1,000,000. The average investment per worker seldom surpassed US$5000 and was usually between US$1000 and US$2000 per worker in low skilled enterprises.

The nature of free ports is changing. Traditionally the EPZs were seen as transit trade zones, with the purpose of enlarging foreign trade and making more commercial profits. Now with the development of the world economy, processing industry is springing up in free ports with the orientation changing from transit trade to export processing. For instance, Hong Kong engaged mainly in transit trade in the 1950s. Starting from the 1960s, export processing began to appear. Twenty years later 80 per cent of Hong Kong's trade is in industrial products for export.

Transit trade and related services accounted for 57 per cent of Singapore's national output in the early 1960s. Through the development of labour intensive and export oriented manufacturing industry over 20 years, the proportion of transit trade declined and local products became the major goods for export. This great shift shows that the development of trade will promote industry and export processing industries will in turn support the expansion of trade, which will have a beneficial effect on the whole economy. At least this happened in the free ports of Hong Kong and Singapore.

Finance, real estate and tourism, while central to the early growth of Hong Kong and Singapore, are no longer the dominant factors in the total economy. Increased trade and manufacturing have created a diversified economy, providing a balanced range of activities.

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In April 1984 a new and major plan was again set out on China's open policy to the outside world: fourteen coastal port cities including Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang and Beihai as well as Hainan Island were proclaimed open as economic and technological development zones. These places were not called Special Zones, but some policies of the Special Zones were to be implemented.

Meanwhile, the Xiamen SEZ was expanded to include the whole island of Xiamen (that is to include Gulangyu, the whole area being 131 sq km). An important point was made at the time: 'Xiamen Special Zone is not to be called a free port, but some policies of the free port can be implemented.'

At the beginning of 1985 China decided to open the Changjiang Delta, the Zhujiang Delta and the triangular region in southern Fujian Province including Xiamen, Zhangzhou and Quanzhou and then the Liaodong Peninsular and the Jiaodong Peninsular as the coastal economic development regions (these three large triangles include thirteen cities and forty-eight counties and districts of five provinces and municipalities).

China's economic reform and open policy started to take effect in the coastal open cities, the coastal economic open regions, and then the inland. It was intended that it would gradually push forward from the coast inland. In the course of the last two years, experience of the open policy has been gained. On 11 October 1986 the Provisions of the State Council on the Encouragement of Foreign Investment were issued and the investment policy was further improved, thereby pushing forward the development of the open policy. The open policy and the establishment of the SEZs have been one of the most important aspects in China's foreign economic contacts ever witnessed.

The total volume of China's imports and exports during the Sixth Five Year Plan reached US$230 billion, double the figure during the Fifth Five Year Plan. The total volume of China's exports rose from 28th place in the world in 1980 to 16th place in 1984. During the Sixth Five Year Plan, the total amount of foreign loans used by China through various forms reached US$10.3 billion. At the same time China absorbed direct foreign investment valued at US$5.3 billion. During the same period, more than 10,000 projects involving foreign technology were introduced. In 1986 China's foreign economic relations were further developed. The total volume of imports and exports in that year reached US$73.8 billion, up 6.1 per cent over 1985; non-trade foreign exchange income reached US$5.6 billion, up 9.9 per cent over the previous year. The scale of foreign funds used expanded continuously. The foreign funds actually used reached US$6.99 billion, up 56.1 per cent over the previous year, of which the direct investment was US$354 million, up 21 per cent over the previous year.

Up to the present, China has a total of more than 7730 Sino-foreign joint ventures, cooperatives and sole foreign investment enterprises. Up to the end of 1986, foreign debts including investment from abroad, totalled US$20.6 billion. Foreign investment had already become an important supplement to insufficient domestic funds, strengthening foreign exchange earning capacity and improving technical and management resources. In addition, China's development in foreign contract engineering, labour service cooperation and international tourism all grew in 1986.

What should be pointed out is that not only was there expansion of the scale of foreign investment, but also perfection in various investment structures and improvement of investment results. Three hundred and fifty-nine projects were operated by Sino-foreign joint ventures, cooperatives and sole foreign investment enterprises with investment valued at US$868 million agreed upon by this time, of which 215 projects were operated by the Sino-foreign joint ventures with investment valued at US$333 million. The proportion had risen from 34.2 per cent in 1985 to 38.4 per cent in 1986. The proportion of investment agreed upon with European and American companies rose from 26 per cent in 1985 to 42.5 per cent in 1986. Projects involving advanced technology and production for export increased. In fourteen coastal port cities in 1986, 235 productive projects were signed with foreign businessmen.

In addition, considerable progress has been made in implementing such agreements speedily. From the fourteen coastal port cities opened between 1984 and the end of 1986, a total of 1540 projects were signed in the form of joint ventures and cooperative enterprises with foreign businessmen, of which 820 projects, 53.2 per cent, were formally put into production. The entire open policy taking the SEZs as the base has already made marked progress.

The basic goals of the initial phase of the four SEZs have already been accomplished. We are beginning to enter a new phase in improving production, achieving efficiency and constructing an export oriented economy. Development will now focus on attracting and consolidating industry across a broad range - including agriculture, tourism and trade.

In the initial phase the various SEZs centralized their efforts in the construction of infrastructure. Up to the end of 1985, the investment in capital construction in the four SEZs amounted to about 7.63 billion yuan. About 60 sq km of land was developed for construction of industrial factories, commercial buildings, tourism facilities and domestic housing. In the wake of the development of the SEZs, Guangdong and Fujian Provinces formulated over ten foreign economic laws and regulations in accordance with the relevant principles and policies of the central authorities.

In accordance with the preferential policies specified by the state, the various SEZs actively use foreign investment, attract advanced technologies and push forward the rapid development of the economy taking industry as the dominant factor. Up to the end of 1985, direct foreign investment actually used by the four SEZs totalled US$1.17 billion, accounting for one fifth of the total amount of the direct foreign investment used by the whole country. About 900 newly built factories in the four SEZs have been put into production, importing relatively advanced technologies and equipment. Their total industrial output value in 1985 reached 4.86 billion yuan, more than five times that of 1979. In addition to actively developing cooperation with Japan, the United States, Poland and Hungary and to operating fairly advanced industrial projects, the Xiamen SEZ has modernized 240 of the 400-odd old enterprises using imported foreign investment and technology. With their improved techniques and quality of products and their ability to earn foreign exchange, they are better able to act as the backup force in the construction of the SEZ.

A major function of the zones is to act as a window to the outside world, permitting new technology to permeate as a result of the developing links between the zones and their hinterlands. Much of the produce from the hinterlands goes to the SEZs for further processing and export.

Last year, the four SEZs achieved much more than expected. The total value of industrial and agricultural output was about 7.6 billion yuan, of which industrial output was about 6.8 billion yuan, 20 per cent up on the previous year. The SEZs paid particular attention to productive construction last year, cut non-productive projects and increased industrial investment. In thirty-four projects arranged by Xiamen SEZ last year, productive projects accounted for 91 per cent.

Products designed to earn foreign exchange have been given new emphasis. In the last year, the four SEZs all explored the international market energetically, increased the export capability of their products, with foreign exchange earned nearing US$1 billion, up 20 per cent over the previous year. The proportion of the export value of industrial products in the total industrial output value also grew by a fairly big margin, with a number of enterprises having an export ratio (export to value of input) of over 60 per cent. New export markets were developed. Trade has now spread further afield than Hong Kong or Macao, and is carried out with more than ten countries and regions including Europe, America and Japan. The export product mix has been diversified, ranging from primary products to highly sophisticated manufactures.

The quality of the imported products has improved, emphasizing export production and technologically advanced goods. In all the projects set up by Xiamen Special Zone last year, products for export averaged over 50 per cent, and most projects involved the use of advanced foreign technological equipment.

Much effort was also put into creating a good climate for business, the so-called software aspect of the environment. Xiamen SEZ set up the leading group for foreign investment works, formulated methods to improve management and service for enterprises using foreign investment, and handled various procedures jointly, cutting the time for the set up of projects by more than half. The collection of various expenses was also consolidated.

In the scientific and technological fields in 1986, the four SEZs also achieved some pleasing results. Most of the new projects established represented the technology of the late 1970s and early 1980s. Some not only established the most advanced production system in the world, but also developed products of high technology for export.

The SEZs have made particular efforts in structural reform. Formerly the zones experimented with specific ways to separate the power of ownership and the power of operation. Some attempts were also made in the reform of foreign trade management systems and the financial and banking system: the country's first foreign exchange regulation centre was trial-operated; a Renminbi loan service with foreign exchange mortgage was opened, thus expanding the fund's loan market; a securities market was also opened.

As experiments, China's SEZs have already achieved remarkable success. As a consequence, coastal areas and in time the whole country will be encouraged to practise the open policy and economic reforms. In October 1986 the State Council issued the Preferential Provisions Concerning the Encouragement of Foreign Investment. As a result, the preferential field for foreign investment further expanded as did the degree of freedom for foreign businessmen to choose the place for their investment. China's resources, however, are limited. Reforms must be slowly implemented so as not to waste these scarce resources.

A cautious, experimental, trial-by-error approach is called for within the SEZs. Layers should be added, step by step, especially in relation to changing the rules regarding foreign investment. This is all the more necessary at present when the domestic investment environment cannot be changed too rapidly if success is to be achieved. It is also necessary to move cautiously in an environment of intense international competition for foreign investment.

Xiamen as a suitable free port

Location is an important factor in the establishment of an SEZ. It should be located where communications are convenient to facilitate the development and construction of the free port region and the supply of plant, equipment, raw and semi-finished materials and other goods needed to develop its foreign economic contacts and to launch *entrepôt* trade. Substantial hinterland is required to serve as the selling market for the region's products as well as the supplier of the materials needed by the region. Land tenure and rental conditions conducive to bringing that land into use for infrastructure are required. A high quality, low cost labour force is essential if the free port region is to be attractive to foreign investors. At the same time, the existing infrastructures of the location selected for the free port region should be used as much as possible so as to economize on investment and to cut short the period for development. Most potential locations for SEZs have strong as well as weak points. All these should be carefully taken into account in order to select the best location to be developed into a free port.

Xiamen is very well endowed in the aspects of communications, labour, land, infrastructure and environment. There are regular air services from Xiamen International Airport to Beijing, Shanghai, Hong Kong and Manila. Xiamen also has a new telecommunications system able to call international numbers by direct dialling which puts Xiamen ahead of most of the country. It started out with an ideal industrial base and is well placed for further diversification.

It has institutions of higher learning like the Xiamen University and the Lujiang University. The quality and cultural level of workers are fairly high. As appraised by the executive director of Hong Kong's Kangtai Company, Xiamen's labour force is not only stable, its labour cost is also only one fifth that of Hong Kong and labour productivity is already 80 per cent or 90 per cent that of Hong Kong. Xiamen's four seasons, its beautiful scenery and graceful environment attract a number of foreign travellers. All of this is an ideal foundation on which careful future developments can be built.

Xiamen is a superior natural deepwater port. First and foremost, the free port must have good natural conditions which should include water depth, the size of the port area, length of the coastline, the tides and ocean current, ice-free, lack of silt build-up and shelter from wind.

In relation to the Pacific area, Xiamen is very well located in comparison to SEZs in competing countries. This is true in relation to Gaoxiong, opposite the Taiwan Straits. Even if the cost of using Xiamen as a port is greater it should be possible to establish a policy regime there which guarantees private and social benefits to investors which outweigh the cost differentials *vis-à-vis* Gaoxiong.

Xiamen is a port with a long history of foreign trade thus providing ideal social conditions for a free port. According to the textual research of the historians, Xiamen was known to the world because of its development of trade.

> During the Ming (1368-1644) and Qing (1644-1911) Dynasties, the Zheng father and sons retreated and occupied the sea islands, taking Xiamen as their base area. Because of financial difficulties, in order to raise and collect provisions and funds for troops, the British were

allowed to engage in free trade in Xiamen and Taiwan. From then Xiamen was gradually known to the world.[1]

Particularly after Xiamen became one of the five trading ports as specified by the Nanjing Treaty, Xiamen port occupied an outstanding position in southern China. Statistics from before liberation reveal that Xiamen had once been very active in China's import and export trade. For example, of the fifty-one trading ports listed, southern China accounted for eighteen, of which Xiamen was the most outstanding.

Xiamen's significance has increased since recent realignments in world currency values enhanced the importance of the Pacific in world trade. Not only its location, but its long history as the source - or at least the port of embarkation - of large numbers of overseas Chinese who ultimately settled in Singapore, Hong Kong, and other Southeast Asian localities, has given it a network of knowledge and loyalties throughout the region.

Xiamen's special position and role in its relations with Taiwan Province give it a major claim to be developed as a free port. Xiamen is 'the strategic pass of coastal areas and coastal seas as well as the right port to cross to Taiwan for going abroad'.[2] Xiamen port and Penghu and Jinmen in Taiwan face each other across the sea, being interlinked with the same language and similar habits. Seventy per cent of immigrant descendants in Taiwan have their original family homes in southern Fujian Province.

In the great cause of accomplishing the unification of the motherland through the form of 'one country, two systems', Xiamen shall perform a special function that no other place could perform. To date, both sides of the continent and Taiwan Province have carried on the historic and academic examination of the relations between Taiwan and Xiamen. For a very long time, since the Ming Dynasty (1368-1644), Xiamen has been the sole exit and entrance from the continent to Taiwan Province, so Xiamen's influence far exceeds its own geographical boundaries. Historically, periods of prosperity in Xiamen have been the times of closest economic contacts with Taiwan. As direct trade, communications and navigation between Taiwan and the continent revive, Xiamen is sure to become the focus within continental China for relations between the mainland and Taiwan Province. Mutual economic links will encourage political contacts.

According to overseas news reports, more than 20,000 Taiwan visitors flocked to Jinmen Island, which is just two nautical miles opposite Xiamen, in its first season this year. This figure is greater than the total number for the whole of the previous year. The numbers are still growing. The American magazine *Newsweek* wrote: 'The strongest appeal is undoubtedly that it is the closest point in Taiwan to the continent'. The Taiwan

1 Hu Jixin and others, A Study on Fujian's Foreign Trade History, 1938 edition.

2 Collection of Zhonghua Local Records - Xiamen, Taiwan Chengwen Publishing House, 1967 edition.

Tourist Administration has announced further plans for the development of tourism in Jinmen Island. This will clearly lead to increasing pressure for further contacts, even to pressure within Taiwan Province for closer contacts with the motherland.[3]

As the plans for reintegrating Hong Kong and Macao with the mainland progress, the Taiwan issue is bound to become increasingly important.

Implementing measures for Xiamen to practise the free port policy

While overseas experience is a useful input to Xiamen's planning, no one foreign model is totally relevant. In using such experience, the following matters should be kept in mind.

In deciding what to do at Xiamen it is important to take note both of China's overall economic and political policies and potential and Xiamen's special characteristics. In particular, China's socialist system and low level of development imply that some of the policies which have worked in other zones, like Hong Kong or Singapore, may not work in Xiamen.

It is suggested that what is planned is a comprehensive, free port by the year 2000. During this time frame, a series of policies should be gradually implemented which give freedom to enterprises to behave rationally; freedom to enterprises to import and export; and freedom to engage in foreign exchange dealings, to make decisions regarding disposition of income and to use expatriate personnel when needed. This does not mean a totally unregulated environment, as these freedoms will be exercised within the normal framework of government policy and administration. But it does imply that Xiamen would begin a process of being an SEZ at a higher stage than other zones because of its special characteristics. In that context, it would be very important to ensure that a number of Xiamen's enterprises had an international character.

As the SEZ is gradually developed, different free port features can be emphasized. It would be best to begin by establishing bonded factories, bonded warehouses and possibly bonded regions. Thus, initially, free trade would be confined to commercial and industrial enterprises. During this phase, transit trade should be given a high priority partly because of Xiamen's clear advantages as a port and also because this would be a useful way to develop Xiamen's service and finance industries. Xiamen could even become a port of registry for foreign owned ships engaging in such regional trade.

As a starting objective, Xiamen should be developed as a midway supply port for international ships in the Taiwan Straits. To this end, the

[3] Weekly Digest, No. 320, November 14, 1986.

corresponding port construction and water and oil supply construction should begin. According to reliable sources, more than 15,000 ships transit the Taiwan Straits each year. If only 3 per cent of these foreign ships were attracted to Xiamen for supply of oil, water, food and other provisions, the benefit to Xiamen would be substantial. It would also assist in the development of Xiamen's transit trade and through that, general economic development.

At this stage free trade should not be expanded beyond the bonded facilities into the wider community or even to tourists as is the case in Singapore and Hong Kong. This recommendation is made partly because it is felt that Xiamen's existing enterprises are not yet ready to engage in full-scale international competition. The benefits which would come from the inflow of foreign firms and techniques would be outweighed by the costs in terms of damage to existing firms if free trade were introduced too quickly. That is why tariffs are still collected on seventeen categories of commodities, while those on the bulk of commodities marketed in the SEZ will be halved. Further reductions can be gradually introduced as the zone develops.

Instituting customs free entry of goods is not all that needs to be done to develop Xiamen as a free port. Other things are necessary to ensure foreign capital inflow. Most important is a regulatory framework which permits free movement in and out of foreign currency and overseas management personnel. Sophisticated financial institutions are also necessary. Already Singapore's Dahua Bank has set up a branch and soon the International Credit and Commercial Bank plan to come.

Xiamen will have to set up both a foreign currency market and an office for efficient processing of necessary visas. Multiple re-entry visas (with a one or two year validity) should be available to foreigners and overseas Chinese who need to visit Xiamen on business.

Contradictions might appear to arise between the development of Xiamen as a free port and its contemplated future as a diversified SEZ with a full range of functions in industry, trade and tourism. Such conflicts could emerge, but not if the zone is well planned. In particular, it will be important to be constantly aware of the likely impact on existing firms of the free trade aspects of the zones. Such firms will have to be encouraged to improve their efficiency by following the example of foreign firms and by opening up their contacts with enterprises outside Xiamen in Fujian Province as part of the more general development of contacts between the zone and Fujian Province. On the whole, the trade expansion due to the existence of the free trade zone should benefit local enterprises.

Purely administrative problems might arise in physically organizing the free trade zone. Once privileges are given to a special group some attempt must be made to physically separate those entitled to the privileges and those not so entitled. In Xiamen, where should such a boundary be and what should it consist of? Some people suggest a substantial wall or boundary, others say good administration is enough. The boundary required is clearly related to the level of preference given to those behind it. It is recommended, therefore, that the wall (or boundary) should not be more substantial than the administrative regulations require.

If free trade takes the form mainly of transit trade bonded warehouses and factories should be sufficient. Those are relatively easily administered by outposted customs officers in the separate factories. If duty free shopping on a restricted basis is to be permitted, this too can easily be arranged in separate buildings with limited access to eligible persons. All that is then required, apart from a secure building, are rules relating to access and currency matters and efficient and reliable staff. As the scope of the preferential zone expands, this early experience will make it easier ultimately to extend the 'invisible line' implied in a bonded warehouse environment to the whole island (or whatever portion of it constitutes the free zone).

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The construction and improvement of the investment environment in Xiamen Special Economic Zone

Zheng Jin-Mu and Huang Sheng Zhi

Introduction

Since its establishment, Xiamen Special Economic Zone (SEZ) has gone through three stages of construction and there has been remarkable improvement both in the 'hard' and 'soft' conditions of the investment environment in the SEZ.

As regards the hard conditions, at present the fundamental facilities have begun to take shape and a comparatively solid material foundation has now been laid for foreign investors. New industrial districts provide ideal sites for foreign investors to select and use and remarkable successes have been achieved in the technical renovation of the existing enterprises. The industrial capability of the SEZ has been strengthened. Education in the SEZ is rapidly developing, turning out large numbers of qualified personnel and, consequently, providing better labour services for foreign investors.

As regards the soft conditions, the market system in the SEZ has, at present, been established in a preliminary way and the marketing conditions have become more and more favourable for enterprises with foreign investment. There has been a gradual improvement in the SEZ's administration and work efficiency has been greatly enhanced. The construction of the legal system has been constantly developing and foreign investors in the Xiamen SEZ now enjoy better legal protection.

However, at present the investment environment in the Xiamen SEZ is not up to the requirements of foreign investors. There still remain a few problems to be solved, especially with regard to the soft conditions, such as the economic, administrative and legal systems. In addition, the imperfection of the appurtenant works and the management of the existing fundamental facilities is still, to a certain extent, conditioning foreign investment in the zone. Therefore, we shall take full advantage of the policies of reform and the opening of China to the outside world and further improve the investment environment. By reforming the economic system, the zone's market system and mechanism are to be further strengthened and improved; by reforming the administrative setups, the zone's administration is to be further perfected. The zone's legislation, judiciary and enforcement of law concerning foreign affairs are to be strengthened. By strengthening the appurtenant works and management the existing fundamental facilities are to be brought into full play.

Since its establishment, the Xiamen SEZ investment environment has undergone three stages of construction. In the first stage, which started in 1981 when the SEZ was limited to 2.5 square kilometres in Huli District, the construction of the investment environment placed its emphasis upon erecting standardized factory buildings as well as the so-called 'five openings and one levelling'[1] of Huli Industrial District. Also under construction at this stage were the first phases of the projects of Xiamen International Airport and Dongdu Deepwater Harbour. In the second stage, which started in April 1984 when the SEZ was enlarged to the whole Xiamen Island (including Gulangyu Islet), covering an area of 131 square kilometres, in addition to continuing to improve the living service facilities in Huli Industrial District, emphasis was also placed upon the fundamental facilities prepared for the construction of foreign technology and for the renovation of the existing enterprises. As a result, foreign investment was introduced into the Xiamen SEZ on a large scale at this stage. In the third stage, which started in October 1986 when the Provisions for the Encouragement of Foreign Investment was promulgated, the Xiamen SEZ went into action to improve the soft conditions for foreign investment by focusing the reform on the economic system and policies and the legal system.

The following is a comprehensive introduction to the construction of the investment environment in the past few years in Xiamen SEZ and to the orientation of future improvements of the environment for foreign investment.

Construction of the hard investment conditions

In the past few years, remarkable achievements have been won in the construction of hard investment conditions in Xiamen SEZ.

Fundamental facilities have begun to take shape. Direct investment in the construction of such fundamental facilities as transport, telecommunications, water and power supplies has amounted to about 700 million RMB yuan, more than the total sum invested in the 30 years since the founding of the Peoples Republic of China. Xiamen International Airport, the construction of which started in 1982 and was completed within 22 months has, up to present, opened and maintained thirteen air lines, making fifty-one scheduled flights per week directly from Xiamen to Hong Kong, Manila, Singapore and more than ten domestic destinations. The first phase of the Dongdu Deepwater Harbour project has seen the construction of four 10,000-tonnage berths which have already gone into operation,

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[1] 'Five openings' refers to opening traffic, telecommunication services, water supply, power supply and gas supply; 'one levelling' refers to levelling the land into ideal sites for the construction of new districts.

enabling the Xiamen port to increase its handling capacity by one million tons and to have regular passenger ships and freighters sailing from Xiamen to Guanghou, Shanghai and Hong Kong and irregular freighters sailing directly to Singapore, Japan and Australia. The telephone system imported from Japan has been installed and provides direct links with Hong Kong, Japan, the United States and Western European countries as well as every metropolis and medium sized city in China. High voltage power lines of 11,000 volts into Xiamen Island have been erected and an emergency power station with a capacity of 97,000 kilowatts has been built, which doubles the water supply on Xiamen Island. The Tenli Hubin Road has been opened and has helped improve traffic in the city. The successful operations of these facilities have improved the conditions of traffic, telecommunications, power and water supplies in the Xiamen SEZ and a solid infrastructure has therefore been laid for foreign investment.

Since its establishment, the Xiamen SEZ has opened up Huli Industrial District, Yuandang New District and Dongcheng District. In the past few years, the total investment in capital construction of Huli Industrial District has amounted to about 300 million RMB yuan; 1,440,000 square metres of construction sites and more than thirty standardized common factory buildings (with a total area of 400,000 square metres) with service facilities and living quarters have been completed. At present there are thirty-seven enterprises with foreign investment (totalling US$100 million) in Huli Industrial District and the industrial output value amounts to 270 million RMB yuan. In Yuandang and Dongcheng districts, the so-called five openings and one levelling has been basically completed and by the end of 1985, 80,000 and 119,000 square metres of residential quarters will have been completed respectively in these two districts and special sites for industrial use will have been prepared. These developments have resulted in sites on which foreign investors can run factories.

While fundamental facilities are under construction, the SEZ has paid attention to the renovation of existing enterprises and the enhancement of their ability to form complete sets by means of external international economic and technical cooperation and internal regional and departmental links. In the past few years, a total investment of 512 million RMB yuan has been made in advanced technology including 1800 sets of advanced equipment that have been introduced from abroad into the Xiamen SEZ so as to have more than 200 existing key enterprises renovated to varying degrees. As a result, industrial production has increased, technological levels are enhanced and the ability of social production and services improved. At the same time, 620 enterprises jointly run by the SEZ and inner regions or departments have appeared with an agreed total investment of 900 million RMB yuan, the inner-regional and inner-departmental partners being from twenty provinces and cities, eleven departments of central government and twenty-three universities and scientific research bodies. By jointly running enterprises, the Xiamen SEZ has enjoyed financial, technological and personnel support from the inner regions and, consequently, increased its attractiveness to foreign investors.

Improvement of soft investment conditions

In the past few years the Xiamen SEZ has speeded up construction of soft investment conditions. Remarkable successes have been achieved in this respect.

Higher education has developed strongly. Seven institutions of higher learning, such as Lujiang University, Xiamen Correspondence University and Xiamen sparetime university, have been set up and two special training classes for cadres have been run by Xiamen University entrusted by the SEZ government. These universities have trained 3200 graduates. While making primary education universal, the Xiamen SEZ has, in the light of the reform of secondary education, set up ten senior trade middle schools with thirty-two specialities; another ten middle schools conduct senior trade classes. These schools and classes have turned out more than 1300 secondary school graduates. At the same time, twelve training centres and thirty-four sparetime middle schools have been opened and have enabled large numbers of young workers to undertake business training. In addition, there is a personnel exchange centre and a labour service company which enthusiastically invites applications for jobs in the Xiamen SEZ. They have introduced into the SEZ more than 3000 intermediate and advanced technical and managerial personnel from other parts of the country. At present the number of personnel in higher learning in the Xiamen SEZ is six times the national average and the number of secondary school personnel is 1.75 times the national average. All this has greatly improved the labour services provided for foreign investors in Xiamen.

In order to meet the requirements of foreign investors who are operating their business on the basis of market economy, and to further increase the SEZ's attraction to foreign business personnel, the SEZ has sped up its reform of the economic system and lost no time in establishing and perfecting its market system and mechanisms.

Various kinds of materials (including those restricted by the state) needed by enterprises with foreign investment can be imported without approval by the authorities and without import licences, but under the supervision and control of customs. Where conditions permit, the enterprises can set up bonded factories and warehouses which are supervised and controlled by customs officers. A material supply and marketing company has been set up to organize, coordinate and supply materials required. An SEZ information centre of material exchange has been set up, acting as a go-between between local and foreign enterprises. From now on, materials needed will be brought into line with the state plan so that the enterprises with foreign investment receive the same treatment as state run enterprises. With the approval of the authorities, products are allowed to be sold in domestic markets and enterprises have the right to fix prices for their products (excluding those commodities with prices fixed by the state). In addition, the Xiamen SEZ will further strengthen the renovation of existing enterprises, improving services, raising the level of material supply and accelerating the nationalization of products made by these enterprises.

In the labour services market, clear regulations have been defined, stating that these enterprises have the right to recruit and dismiss their workers and staff members and the right to invite and introduce technical and managerial personnel from home or abroad into their enterprises. The departments concerned shall offer support and provide corresponding services. The technical workers exchange centre has been set up to simplify transfer procedures and promote the flow and employment of qualified personnel. In addition, the Xiamen SEZ has run several training classes for Chinese managers in joint ventures to study the related policies and draw lessons so as to enhance their political and professional qualities.

In the monetary market, the current reform of the financial system has taken into consideration the state credit planning for the Xiamen SEZ and the increase of credit targets considering that these enterprises with foreign investment depend mainly on social credit in their operating and business activities. Banks in the Xiamen SEZ have diversified their means of business credit (such as mortgage credit in current exchange, capital asset credit, mortgage exchange of exports and current deposit facilities). The banks implement the principle that enterprises with foreign investment receive the same treatment as the state run enterprises, but preferential treatment is given to enterprises with advanced technology and those whose products are for export. In an effort to carry out business on an extensive scale and to simplify procedures, insurance companies in the SEZ grant enterprises with foreign investment a preferential rate of 20 per cent.

The SEZ exchange adjustment centre has been set up. Under the supervision of the Exchange Control Bureau, the exchange adjustment between these enterprises can be carried out by fixing prices through negotiation. With the approval of the authorities, enterprises with foreign investment are allowed to sell their products in the domestic market and either be paid in foreign exchange or purchase the exchange receipts for commodities in the domestic market. In this way, these enterprises are able to keep their own exchange balance. The daily capital outlay (such as payments for commodities from abroad) can be handled by the banks without submission to and approval by the authorities, but only through payment vouchers by the enterprises.

Gradual improvement of SEZ administrative management

In order to keep abreast of the requirements of foreign businessmen and enterprises with foreign investment, the Xiamen SEZ has been striving to improve the SEZ administrative management. Since last October, special attention has been paid to the following areas.

In order to strengthen the work of international economic cooperations and the trade of the city, the municipal government has appointed a leading group to take charge of international trade. The group has under its control the Managerial Bureau of Enterprises with Foreign Investment. This group is responsible for inspecting and supervising the implementation of the policies of opening up to the outside world; examining and approving contractual articles of association of enterprises with foreign investment; adjusting the relations between these enterprises and the various departments concerned and helping them with their problems. In addition, a service company has been set up, which will provide foreign businessmen and enterprises in Xiamen with related information, handle applications for running enterprises, import and export procedures and provide storage and transport services.

In order to provide better services for these enterprises, the various departments involved have simplified the procedures enterprises have to go through to set up and run their businesses. In addition, the departments concerned have been working actively to improve the professional qualities and the working style of their staff members. All the measures adopted by the departments concerned have helped enhance their working efficiency and won praise from foreign business personnel and enterprises.

The city government has rectified fee collecting items and rates fixed by municipal authorities, cancelling six types of fees such as fees for examination and approval of the imports and exports and reducing the rates of other fees levied to a level equal to that levied on state run enterprises. At the same time, enterprises with foreign investment in Huli Industrial District have been granted preferential treatment for land use fees and land taxing procedures. Selling prices and rents for common factory buildings have been decreased by 10 per cent and payments for factory buildings can be made in instalments (30 per cent paid as downpayment and the rest to be paid within 1 year).

Development of an appropriate legal system

With a view to providing the necessary legal protection for foreign business personnel and their investment, the Xiamen SEZ has formulated a series of regulations on the registration of enterprises, the use of land, labour administration, technical imports, and the control of personnel entering and leaving China at Xiamen.

All these regulations have been submitted to, approved and adopted by the Standing Committee of the Peoples Congress of Fujian Province and have been put into effect. They have been formulated in the light of the related legislation of the Peoples Republic of China, and with reference to some current international legislation, and so have provided foreign businessmen and their investment in the Xiamen SEZ with preferential treatment.

Furthermore, in the past few years, the Xiamen SEZ has improved the judicial and registration procedures. At present the Xiamen Lawyers Office of Foreign Affairs works as permanent legal consultant for thirteen enterprises with foreign investment and involves itself in the legal consultative work in about 100 joint venture programs in the SEZ.

Lectures on legislation have been given to the members of leading bodies at five levels in Xiamen and universal education on legislation among the broad masses of cadres and workers has been carried out. The drive has greatly enriched the people's concept of the legal system and common knowledge of legislation.

Due to these endeavours, the environment for foreign investment in the Xiamen SEZ has improved with regard to both the hard and soft conditions so that increasing investment from abroad has occurred. Until April, there had been 340 signed contracts on investment directly from abroad with a total amount of US$12,070 million; 259 approved contracts with a total amount of US$9200 million (including foreign investment of US$5200 million). One hundred and fifty-seven enterprises have started their businesses, with investment totalling US$280 million. In 1986 the gross industrial output value of these enterprises amounted to US$440 million, accounting for 17.86 per cent (US$2664 million) of the value of the city's output; the export value of enterprises with foreign investment amounted to US$220 million, accounting for 62.86 per cent (US$350 million) of the city total. All this indicates that enterprises with foreign investment have become the main force in industrial export production in the Xiamen Special Economic Zone.

Efforts to improve the environment for investment

In the past few years, obvious improvements have been seen in the SEZ environment for investment. However, a big gap still exists between what has been done to improve the investment environment and the requirements of foreign investors in their business activities. Problems primarily reside in the so-called soft conditions for investment, that is the economic system and policies and the legal system. Another conditioning factor is that the appurtenant works and the management of the basic facilities are yet to be perfected. Therefore, the following measures are expected to be adopted to further improve the environment for investment in the SEZ.

Reform of the SEZ's economic system. The Xiamen SEZ will take advantage of its special position and the policy of giving priority to reform and expansion of the market system. The result will be that the contradictions between the requirements of foreign businessmen and the managerial system of the SEZ will be solved effectively.

In the material market, in addition to setting up broad scale bonded factories and warehouses and simplifying the import and export procedures of materials and products of these enterprises, there will be further reform of the managerial system. The material market mechanism will be established and expanded and the ability of domestic industry to form complete sets will be increased by means of the renovation of existing enterprises and business cooperation with domestic enterprises. In this way, enterprises with foreign investment are expected to begin to conduct their production using mainly domestic raw and processed materials, auxiliary materials, spare parts and fittings so that the production will be further nationalized and foreign exchange generated by export will be greatly increased.

In the labour services market, in addition to accelerating the reform of domestic labour, wages and management and promoting a reasonable flow and use of personnel, a good social welfare insurance system should be established and services improved so as to free these enterprises from unnecessary problems. Furthermore, education in various forms should be further developed and increasing numbers of personnel with better technical and educational qualities will be available to meet the needs of the SEZ.

In the monetary market, the state authorities have decided to put into practice in Xiamen SEZ the special treatment of the state credit planning and to increase the credit target. In addition, the SEZ banks should strengthen their business cooperation with domestic banks, and increase their capital circulation so as to meet the demands of enterprises for large amounts of social credit. At the same time, the SEZ banks should strengthen their own business management and develop flexible and diversified business forms in order to satisfy the various demands of enterprises in their operating and business activities for credit loans.

In the exchange market, in addition to consolidating and further developing measures already adopted at present, the central government departments concerned are expected to issue a catalogue of commodities of 'production substituting importation' and permit these commodities to be sold in the domestic markets and to be paid for in foreign exchange. For a few enterprises which are credit worthy, permission will be given to raise funds by issuing stocks and bonds or by borrowing on the principle of borrowing on own account.

Reform of the SEZ administration. In the near future, the Xiamen SEZ will unfold the reform of the SEZ administration and further improve the political environment for investment by taking advantage of the favourable conditions that the SEZ itself benefits from as a trial city of reform. Attention will be paid to the following matters in this respect.

- The strengthening of macroeconomic management in the introduction of foreign investment. Departments concerned with the municipal government will, in the light of strategic requirements of the economic and social development of the SEZ, study and formulate an overall plan for the introduction of foreign investment. They will determine key industries and programs and direct foreign investment towards them by using preferential policies and economic levers.
- The rearrangement of the existing administration, the streamlining of administration and the delegation of more power down to the lower levels. In the reform of administration, departments and their structures will be simplified, duties incumbent upon each department or administrative level and upon each person or post will be defined and corresponding powers will be delegated to them. At the same time, intervention in enterprises with foreign investment will be further reduced and more decision making power will be given to these enterprises.

Further construction of the legal system. The work falls into three categories. Firstly the standardization of the legislation concerning foreign affairs must be completed. The SEZ legislature will regularize all the policies, regulations and rules which have proved practical and effective. The work at present is to study and formulate regulations on real estate and security mortgages, procedures for examination and approval of foreign investment, provisions for the control of resident representative offices of foreign enterprises and regulations on audit and supervision over enterprises with foreign investment.

The second task involves strengthening the enforcement of laws concerning foreign affairs. In addition to continuing the universalization of the legal system among the people, legal education among workers and staff members in the line of foreign affairs will be further strengthened so that they will become familiar with various laws and regulations related to their own work. At the same time, the judiciary should be strengthened, not only freeing it from administration but also expanding training for personnel involved in commercial affairs.

The third aspect of the legal system that will be reviewed is the need to improve legal services concerned with foreign affairs, such as legal consultation and notary services and to provide foreign businessmen with better legal services.

To bring into full play the existing fundamental facilities, the Xiamen SEZ will expand the existing facilities, for instance, extending Xiamen International Airport. The project of lengthening the main runway has been completed. Early stages of the second phase of the project of Dongdu Harbour (five deepwater berths) and the project of construction of water works are now in full swing; both projects are to be completed within the period of the Seventh Five Year Plan. In addition, the construction of Yuandang New District and Dongcheng District will be further stepped up and so will the construction of facilities in Huli Industrial District. All this will result in further improvement of the infrastructure in the Xiamen SEZ.

Secondly, the strengthening of management and the coordination of transportation departments is necessary. At present, with the approval of the authorities, the managerial system of double leadership but with domination in the local one will be exercised at the port city of Xiamen. The municipal government plans to set up a body of harbour management, coordinating harbour and shipping business and ocean transportation, in order to end the existing confusion in which various departments mind only their own business. At the same time, the municipal government plans to strengthen the division of labour among, and the cooperation between, various transport departments and to promote their cooperation through transport of all kinds, so as to bring into full play the three-pronged communication system - land, water and air.

6

The theory and practice of China's open policy

Liang Wensen

Since the Third Plenary Session of the Eleventh Party Central Committee in 1978 resolved to carry out the policy of opening up to the outside world and invigorating the domestic economy, much discussion on the open policy has taken place in economic circles and among economists. One of the main problems discussed is whether the theory of opening up gradually, or in other words whether the policy of opening up in gradient, should be put into practice.

The theory holds that different areas of China must be opened in stages and developed step by step, currently from east to west, and at the same time preferential policies of introducing foreign funds have to be carried out. In view of the recent practice of opening up to the outside world, I am inclined to believe that the theory of opening up in gradient is suited to China's circumstances.

The first reason is that the present uneven development of different areas of China is the basis of the theory of opening up in gradient. Since China is a big country, and a province of China may be bigger than a European country, the conditions and levels of economic development in different areas vary greatly. Areas can be generally classified as the more developed areas and the less developed ones; these areas each have individual strategic goals which they are required to reach. Consequently, no standardized policies and measures can be adopted in dealing with the foreign economic relationships of the areas. The degree of opening up will depend upon the specific conditions of the area: the geography, social structure, economy, level of technology, culture and the number of talented personnel. Areas with highly developed commodity economies are most suited to opening up, while the less developed areas are just beginning. With respect to this, the eastern area, central area and western area are at three different levels of development.

The development strategy of depending upon the east and extending to the west has been adopted for the economic construction of China. This important strategic measure determines the degree of opening up to the outside world to be carried out. The level of opening up reflects the imbalance of China's economic development. The guiding ideology of this economic arrangement is to combine the development of the eastern area with the exploitation of the central and western areas, and to enable all of them to support and help each other to achieve a developed economy and prosperity for the people. The present strategy being used to achieve the overall development of China by the year 2000 is to concentrate major forces to accelerate the development and construction of the eastern area, i.e. coastal areas, while at the same time developing the resources of the central and western regions in order to support the development of the eastern area, and to prepare the ground for further development of the central and western areas. Much effort will be spent on exploiting the central area in the late 1990s and large scale exploitation and construction in the western area will be carried out at the end of this century and the beginning of the 21st century. This development strategy adopted by China will entail the introduction of more foreign funds and technologies for the eastern coastal areas. Growth will result from the gradual introduction of foreign technologies and scientific management and the introduction of new ideas to the inland, which will achieve a comprehensive rise in the socialist modernization construction of all areas.

In the opening up to the outside world, a definite time is required and a certain price has to be paid for the gradual accumulation of experience. Since the founding of new China, the economy has been closed to international relations and has been self-sufficient. This transformed into the policy of opening to the outside world and developing a planned commodity economy. This included establishing Special Economic Zones in several small areas along the coast which exposed China to the challenges of competition in new technology and international markets. This presents new situations and new problems. We must gradually master the skills needed for utilizing both domestic and international resources and markets and use the experience, knowledge, and skills which we have learnt in the development of SEZs and coastal cities and areas. The theory of opening in stages will enable us to accumulate experience in order to promote more effectively the comprehensive development of socialist modernization construction.

It must be pointed out that there are still restrictive factors, which cannot to be ignored, in carrying out the open policy of China. Even in opened areas, the fundamental facilities are, to varying degrees, insufficient and imperfect. For example, the energy resources, communications and telecommunications in the opened areas are quite backward and are far from suiting the needs of developing an externally oriented economy. If the opening of the whole country does not proceed in gradient, where can we get the funds required for constructing fundamental facilities in all areas? Lack of talented professional personnel, especially the lack of talented technical personnel, foreign economic personnel, foreign trade personnel and business management and administrative personnel, will make it difficult to attract international capital.

The impact of the introduction of technology from abroad will be lost if it is not carried out step by step but rather through introducing a large number of similar items at the same time. For instance, more than ten production lines have been introduced for certain technical equipment causing a glut on the market and hindering the level of technical innovation in our country.

Any loan raised must be paid back and it is impossible for anyone involved in raising loans not to take account of the repayments. In introducing foreign funds (including direct and indirect investments) the risk will be great if neither macro-guidance or overall plans are made and all factors are not taken into consideration for repayment ability. For instance, a vast number of bonds have been issued abroad recently, but such a way of raising foreign loans will lose effectiveness if ability to repay the loan is not carefully evaluated and if there are insufficient benefits.

Thus it can be seen that if the opening to the outside world and invigoration of the domestic economy are not accomplished in a planned way on the basis of a gradient theory, but rather are carried out for quick results, without developing areas in order of priority and levels, it will actually be detrimental to development. In the process of opening up, attention must be paid to the tendency to confuse policy and to act blindly, with a lack of unified thinking, understanding and scientific guiding theory. These tendencies are detrimental to the steady and healthy development of opening up to the outside world.

The stages of development in China's opening up to the outside world

Theory is based on practice and in turn serves practice. Generally speaking, since the Third Plenary Session of the Eleventh Party Central Committee in 1978 resolved to carry out the policy of opening up to the outside world, China has given service to socialist modernization construction on the basis of the theory of opening in gradient, that is, by adopting special policies and flexible measures, and absorbing and utilizing the funds, technologies, management and knowledge of international capitalism. In the last ten years, the practice and development of opening up to the outside world has been basically successful, and four stages can be identified.

The first stage, from 1978 to 1979, was a stage for preparing ideology and public opinion. The main feature of this stage was to emancipate one's mind and renew one's concepts. The press circle began to break through the traditional ideas of closing the country to international economic relations. It became clear that the general policy of relying mainly on our own efforts made backwardness in the country and national ignorance inevitable. With the arrival of the latter half of the 20th century, there was a chance of turning the domestic economy towards the international economy. Advanced technology, which emerged rapidly, challenged us. In such an era, should we close the door, carry out development alone and spend time and money starting culture, science and technology from the very beginning? The modernization of socialist industry, agriculture, national defence and science and technology would certainly not be accomplished in this way. Therefore, to enable the country to rank among the advanced countries of the world and accomplish socialist modernization, China must be opened up to the outside world and absorb what is useful from capitalism and bring forth new ideas in the light of China's national conditions. Such a practice of 'making foreign things serve China' is suitable to the new approach of constructing socialism with Chinese features.

The second stage, from 1980 to 1984, featured SEZs as an experiment and saw the beginning of the open policy coming into full play. Regulations on SEZs in Guangdong Province were approved by the Standing Committee of the National Peoples Congress in August 1980. After that, the establishment of Shenzhen, Zhuhai, Shantou and Xiamen SEZs was announced to overseas parties and a definite right of initiative, including the jurisdiction of approving quotas for introducing items and reducing and exempting tax for foreign traders in the SEZs, was entrusted to SEZs by the central authorities. In this stage, the main task of the SEZs was to carry out large scale construction of basic facilities and to enact and promulgate economic laws and regulations in order to concentrate efforts on a series of reforms of the economic system under macro-guidance. The reforms were to be carried out by means of market regulation suitable for current international markets in order to establish a good investment environment. Meanwhile, all the SEZs started to set up unique industrial structures coinciding with their overall goals of development. Owing to the rapid development of the economy and society and the funds coming in from Hong Kong and overseas, the functions of the 'windows' of technology, knowledge, management and foreign policy as well as the sectors for domestic and foreign radiation also started to come into full play, and the great successes achieved in the construction of the SEZs became the focus of world attention. The development and practice of the SEZs have proved that the basic national policy of opening up to the outside world is absolutely correct.

The third stage, from 1984 to the end of 1986, featured the formation of a new pattern in China's opening up to the outside world by the further opening of coastal cities. At the beginning of 1984, the Party Central Committee resolved to open fourteen coastal cities and three delta areas on the basis of the experience of running the SEZs. They are: Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang, Beihai and Hainan Island, Yangtze River delta, Zhujiang River delta and Minnan (southern Fujian) delta area. They form a circular area along the eastern coast of our country from south to north. The eastern open area of China is situated along the coast of the west Pacific Ocean, which comes into contact with Japan and Korea in the north, leans against Taiwan Province in the east, and connects with Hong

Kong, Macao, and developing countries and regions in Southeast Asia in the south. The opening of the coastal cities and delta areas demonstrates the determination of the Party Central Committee in opening up China to the outside world and also indicates that the policy is non-reversible. It is important that during this stage, the opened coastal areas, coastal cities, development zones and SEZs brought competition to the domestic national markets, so ending the monopoly of the SEZs in carrying out preferential policy. It also brought about competition between domestic markets and international markets and the products from opened areas gradually filtered into the world, breaking through the protectionism of the world economy. International investors have had more choice when dealing with the broad coastal open areas of China and this in turn has encouraged the eastern open area of China to make great efforts to enhance its attraction and competitiveness. During this stage, the Sino-foreign cooperation in the coastal open area developed further.

The fourth stage, starting from the end of 1986 to the beginning of 1987, featured further improvement in the investment environment of the opened areas, and also the enacting and promulgating of a series of new policies and measures to encourage investment by foreign traders. The twenty-two articles of provisions promulgated by the State Council in October 1986 to encourage investment by foreign traders are mainly for the purpose of attracting foreign investors by giving preferential treatment. They give more benefits including a longer time for reduction and exemption in taxes and fees, an extension of the right of initiative of foreign enterprises (including the employment or dismissal of staff), and a supply of raw materials. Assistance in settling the problem of balancing foreign exchange for foreign traders and a simplification of the formalities for investments of foreign traders in China will be granted to two kinds of foreign enterprise, those producing 20 per cent of their product for export and those using advanced technology. The new policies of the country have stabilized the confidence of foreign traders in making investments in China. They also encourage the SEZs and other coastal open areas to increase exports and the earning of foreign exchange, and to make great efforts to direct their developments externally. For example, since the setting up of the four SEZs and the opening of the coastal cities, delta areas and Hainan Island, the richly endowed coastal areas have achieved a national income amounting to about 20-30 per cent of that of the whole country, with a land area of less than 2-3 per cent and 10 per cent of the country's total population. They have created a good investment environment which is attractive to foreign funds. To the end of 1986 the four SEZs contracted a total of 2401 items with investors, with an investment of US$6.46 billion by agreement, in which the foreign funds actually put into use amounted to US$2.24 billion. The number of enterprises established by investors was 1490, amounting to about one quarter of the total enterprises established by investors in the whole country. The gross export value in 1986 amounted to more than US$1.1 billion. Since 1984, the thirteen economic and technical development zones set up in the opened coastal cities have utilized 165 items of foreign funds with a total investment of US$870 million and an earning of foreign exchange from export trade of up to US$23 million. Moreover, since the opening up to the outside world, large amounts of advanced technical equipment and market information have been introduced and many of these have been transferred to the hinterland and other areas of the country. To further encourage the introduction of foreign funds and technologies, the next stage calls for further improvements in the investment environment of the coastal areas. Investment should be at a level not less than the level of Southeast Asia.

Inter-areal gradient and inter-areal comparison of China's opening-up to the outside world

In the preceding section, the staging of the development of China through the opening up to the outside world has been examined chronologically. Now a comparison of the areas opened to the outside world is carried out to examine the practicality of gradient theory in a number of areas.

From the point of view of preferential levels, the level of Special Economic Zones is the highest, that of economic development zones is the next highest, that of the opened coastal cities is less high and that of the inland is somewhat lower. For instance, the income tax rates of Chinese-foreign joint ventures cooperative enterprises and enterprises with exclusive investment of foreign traders (usually referred to as three ventures or enterprises concerning foreign investments) are 15 per cent for SEZs and development zones and 20 per cent discount of inland tax rate for the opened coastal cities. In addition, by the approval of the Ministry of Finance, a 15 per cent tax rate is applicable for technology-concentrated and intelligence-concentrated enterprises with an investment of over US$30 million and there is a long time period for the recovery of investments - 33 per cent for inland joint venture and 30-50 per cent for cooperative and exclusive investment enterprises. The SEZ and development zone exemptions are on after-tax profit of enterprises when the after tax profit is remitted abroad, but in the inland a tax of 10 per cent of the remitted amount must be paid.

Under the international double taxation avoidance pact, the preferential income tax rate for enterprises of foreign traders has the effect on capital exporting countries of encouraging their traders to make investments in the opened areas (especially the SEZs) of our country.

Foreign investors set up factories and establish enterprises in opened coastal regions of China. The tax rate on their import and export products varies between different cities. The import duties on means of production imported by SEZ enterprises with foreign investment are exempted. Import tax on commodities, except seventeen kinds of domestic electric appliances, are to be allowed a 50 per cent reduction. For the products made by SEZ enterprises and sold in the same SEZ there is an exemption from consolidated industrial and commercial tax. Export products produced by SEZ enterprises are free from export taxes if their raw materials and spare parts are imported. Income taxes levied on technologically advanced enterprises are reduced and exemptions made in accordance with the provisions of the state. After the expiration of the preferential period there may be an extension for three years at an income tax rate reduced by one half. The favourable treatment of customs duties granted to enterprises with foreign investment in development zones is almost the same as that in the SEZ, the coastal port cities followed by the inland receive slightly less favourable treatment.

In recent years preferences have been given to the SEZs together with other policies including foreign exchange control, capital construction, fees charged for land development and land use as well as the policy concerning the financial administration system. While the open coastal cities and inland zones are in the same position, they do not enjoy the same preferences as the SEZ. For instance, in terms of foreign exchange control, at first the authorities of Shenzhen and Zhuhai SEZ took the measure of requiring a share of foreign exchange receipts to be handed over to the state on the basis of taking full responsibility for fixed quotas and later it stipulated that the portion of foreign exchange receipts earned through the export of local goods and resources be permitted to be retained totally. Those who earn foreign exchange through exports, by means of organizing and collecting exporting articles and goods from inland areas or acting as their agent, are allowed to retain 30 per cent. At the same time, the foreign exchange receipts in Xiamen are allowed to be shared with the province in proportion to the profit. However, the open coastal cities and the inland divide the foreign exchange proportionately, the ratio varying between places and regions. In general, the share retained is 10-30 per cent.

In respect of the management of capital construction, the SEZ has the right to approve non-productive projects under US$0.1 billion, and heavy industry projects under US$50 million as well as light industry projects under US$30 million. The capital investment of foreign businessmen, however, is not within this limit. This special policy does not apply to the open cities and the interior areas.

At present the lump-sum payment for land development charges in Shenzhen is approximately RMB yuan 190 per square metre, while the land charges for the industrial use is only RMB yuan 1-1.6 per square metre annually. The land use fee for industrial projects with advanced and sophisticated technology can be reduced or even exempted. Even if, in the future, open bids for the land are carried out, land charges will still be much lower than in Hong Kong. For instance, the Hong Kong Hung-son Bank recently bid HK$0.84 billion for a piece of land in Zhong-guair district, that is more than HK$400,000 per square metre. The land use fee in Shenzhen is a little higher than that in Hong Kong.

In respect of the financial administration system, prior to 1989, the customs duty income of Shenzhen and Zhuhai should be handed over to the state, and the surplus can be entirely left for the localities, while in Xiamen, the customs duty income must also be handed over to the state and the industrial and commercial consolidated tax which the Customs House takes in place of levying tax will be allowed to be shared between the state and the province. It is also stipulated that the quota for the municipal financial income handed over to the province is 0.1 billion yuan, while the surplus can be set aside for the localities. In the fourteen coastal open cities and the inland areas, financial income must be divided on the basis of the ratio approved by the financial system and institutions according to need.

As ascertained from these factors, the reason why there has been a discrepancy in the adoption of preferential policies in different open areas, is that we would like to create a sound investment environment for the SEZs in order to absorb foreign capital. The final details, such as making laws and legislation, eliminating unnecessary bureaucracy and the upgrading of working efficiency, have been regarded as 'soft pieces' of the utmost importance. We should, therefore, not neglect these factors as they are necessary to form and create a favourable investment environment.

In general, just as it is stated in a survey report on Shenzhen Economic Zone of China, written by the American Stanford International Research Institute in 1985, the investment environment in China's Shenzhen Economic Zone is one of the best in Southeast Asia. It should be said that such an evaluation is very much to the point. In spite of the fact that the investment environment in Shenzhen has many improvements to make, it is still deserving of praise. In this respect, the best way for the comparison to be made is for international entrepreneurs and scholars to come and see Shenzhen. They would naturally come to realize the truth in the saying that 'it is better to see once than hear a hundred times'.

Moreover, in China's open coastal regions, particularly in Shenzhen, a further improvement will be achieved within 2-3 years in investment circumstances involving infrastructure construction (such as energy sources, sea ports, airfields, telecommunications, freeways). Improvements will also be made as the legislative body introduces industrial procedures and efficient methods. The theory of escalation concerning our open policy will gradually be examined. Hence, it will not only push forward the economic and technical development in the SEZs, the open cities and the three triangular district development areas, but it will also be an effective method of carrying all up-to-date economic technology to China's hinterland and regions of the inland. That is to say, China's general objective of opening up will be realized through the development strategy of evolving and extending construction from the east to the west, which has been carried out so far in SEZs and in other development areas as well.

Conclusion

This paper has examined the practice of opening up several development areas to the outside world and has shown that the theory of opening in gradient is of great significance, both theoretically and practically, to greatly promoting the economic development of SEZs, development zones, the hinterland and the whole country. However, there are also individual areas which introduce foreign funds without regard to the level of the opened areas and the difference in preferential policies, and compete for cheap labour, land use fees and other taxes and fees so that some areas have greater preferential treatment than the SEZs.

This brings about some negative results which include causing an arbitrarily delimited boundary and hindering the exchange and development of the commodity economy, blocking the flow of personnel and technology, hindering the development of labour and technical markets, and causing decentralization of control, resulting from unequal development of areas.

If the opening to the outside world is not carried out step by step, in levels and under the guidance of the theory of opening in gradient, then opening will take place in a manner which would make the SEZ not special and even make some areas become 'super' opened ones. Such internal competition will certainly result in economic and political confusion and bring about tremendous loss. In order to construct a socialism with Chinese character and assure the successful realization of the development strategy of depending upon east and moving gradually over to the west, I suggest that laws and regulations for both foreign and domestic purposes must be enacted throughout the country on the basis of the experience of opening to the outside world. It is unacceptable if attention is paid only to the enactment of policies for encouraging investment of foreign traders but not to policies that prevent internal competition and that enable us to face the world together. This is an important conclusion of the theory of opening in gradient in practice.

7

A proposal concerning the phasing in of certain free port policies by Xiamen Special Economic Zone

Chen Yongshan

In June 1985, the State Council promulgated a decree to extend the dimensions of the Xiamen Special Economic Zone (SEZ) to the whole Xiamen Island and to grant Xiamen SEZ the right to phase in certain free port policies. This raises many questions which will need to be answered. What is a free port? Is it feasible? What are the requirements for the implementation of free port policy by Xiamen SEZ? What model should we choose? In this paper we focus on these questions and put forward a proposal.

Definition of a free port

A free trade zone can also be called a free zone, export free zone, duty free zone, duty free trade zone. In spite of its many names, there is a homogeneity in free trade zones, that is, they are exempt from tariffs so that goods can get in and out free. The definition of the free trade zone which people often adopt is that of the Tariff Committee of the United States which states that a free trade zone is a special designated location in the port, separated from the ordinary customs area, where vessels can get into the port, load, unload, store, repack, process and transit without clearance. Foreign vessels should abide by the sanitation, immigration and security regulations of the host country.

Free trade zones can be divided into three main types. Type one is a free port. A free port is a port policy, often adopted by tariff protected countries, which makes exemptions from tariffs for imported goods whether they are to be consumed locally or transited. Type two is the *entrepôt* trade zone, in which the foreign goods imported are exempted from tariff and import regulations. However, these imported goods cannot enter the domestic market. Type three is the export processing zone, which makes exemptions from tariffs for imported goods (equipment and materials) to be processed and re-exported. Goods to be consumed domestically will have duty imposed on them.

Comparing free ports with other types of free trade zones, we draw two conclusions. Firstly, one difference between a free port and ordinary seaport is whether imported goods are exempt from tariffs. Secondly, the difference between free ports and other types of free trade zones is whether the imported goods can be consumed locally.

From the viewpoint of location and geographic coverage, free ports can include free trade zones, *entrepôt* trade zones, and export processing zones. So, among several types of free trade zones, free ports are the most complex and require the strictest conditions.

The need to implement a free port policy in Xiamen

Since 1978, China has adopted the policy of reform and opening up. In this time, the central government set up four SEZs in Guangdong and Fujian Provinces and designated fourteen port cities as open door cities. The government has also made the Yangtze delta, the Pearl River delta and southern Fujian delta open door regions. This multi-level economic opening up of the coastal belt is the bridge connecting China with the outside world.

Historically, opening up to the outside world made ancient China prosperous, so we should continue with this policy. The decree promulgated by the State Council concerning the promotion of foreign investment and the expansion of Xiamen SEZ embodied the essence of the strategy of the central government to continue opening up extensively and intensively.

Owing to the implementation of certain free port policies, Xiamen SEZ has increased its degree of openness by improving flexibility in dealing with businesses such as the import and export of goods, the flow of funds, the exchange of money, and the entry or exit of foreign businessmen. This has helped to expand the trade of imports and exports, the cooperation of economic technology, and has made the most of the 'window function' of the SEZ.

Several countries in the Asia Pacific Basin have adopted these forms of free port or other economic free zones to expand their foreign trade and economic relations. Among the famous Asian Four Small Dragons, Singapore and Hong Kong are the most outstanding free ports. Taiwan and South Korea have also had great success through setting up export processing zones since the 1960s. South Korea is preparing to set up a free trade zone and to carry out a corresponding open policy in Penghu and Jionmen. They have tried to gain an early position while the current of the world economy is moving eastward. These free ports, or free economic zones, set up by the Asian Four Small Dragons are competing with us for funds, technology and markets. Facing this challenge we should coordinate the development of our multi-level coastal open region, and speed up the construction of Xiamen free port in southeastern China. At the same time, we should continue to improve our foreign investment environment and raise efficiency, in order to compete against our rivals and expand our share in the overseas market.

China is now under a policy of all-dimensions opening. The coastal belt has the duty to help in the development of the inland economy and technology. Although the level of development of the coastal belt is higher than that of the inland, there are differences in the rates of development within the coastal belt, the southeastern region having the lowest level of development.

The backwardness of the southeastern coastal region's economy and use of technology can be judged from some main economic indices. The index of labour productivity of industry and the index of GNP per capita ranks Fujian Province the lowest among ten coastal provinces and municipalities, below the average of the whole country, and even lower than a few provinces in the western region. In 1986, of the cities with Gross Industrial Product over ten billion RMB yuan per year, two were located in the northeastern coastal region, four in the northern coastal region, eight in the eastern coastal region, two in the southern coastal region and the Pearl River delta, and none in the southeastern coastal region. The backwardness of the southeastern region is partly the result of certain historical factors and the defective guidelines used to decide the distribution of industry after liberation. However the main cause is the closed economy.

Therefore, the key to the development of the economy of the southeastern region lies in an open economy. Geographically, this region covers Wenzhou, Fuzhou, Guangzhou, Zhan-Zhou, Xiamen and other open ports.

Experts from the Academy of Science of China and from the Geographic Institute of National Planning Committee set up nine indices as a measurement of objective appraisal. The indices include the maximum berth grade available, collection and distribution conditions, the condition of foreign transportation and communication, the hinterland, the economic scale of the port city, the volume of imports and exports of the open ports, education and scientific technology levels, social and policy advantages and geographic location. A thorough study and investigation was made and the open ports were compared with each other. It was finally concluded that Xiamen qualified as the key port in the southeastern coastal belt.

With the implementation of certain free port policies, Xiamen can play the role of the key port along the coastal belt between Shanghai in the north end and Guangzhou in the south end. Xiamen free port shall cooperate with other sister ports in introducing advanced foreign scientific technology and management skills, developing and then transplanting these ideas to the inland areas. Such a policy will contribute greatly to the reform and development of the southeastern region.

The requirement of promoting the return of Taiwan and fulfilling the task of unification

Xiamen is separated from Taiwan by the narrow Taiwan Straits, and the Jinmen county is even closer at hand. Fishermen of the two ports often go fishing together and Taiwanese fishing boats often shelter in Xiamen port to evade sea storms. Three hundred years ago General Zhen Chen-Gong took Xiamen as his base to regain Taiwan. The Ching Dynasty also used Xiamen as a base to unify the whole country. Xiamen has also been the bridge to Taiwan for Fujianese. Most of the Taiwanese speak the same dialect and share the same customs as the Xiamenese and there has been a very close blood relationship between Taiwan Province and Fujian Province. So Xiamen SEZ has an advantage over the other SEZs and other coastal open cities in fulfilling the task of promoting the return of Taiwan.

The implementation of certain free port policies in Xiamen and the expansion of Xiamen SEZ to the whole island is a practical measure to stimulate the Taiwan administration to accept our policy of concerning trade, post and shipping. Until now the Taiwan administration has maintained trade, postal and shipping relations with Hong Kong and Macao but none directly with our mainland. What will the Taiwanese administration do in the years of 1997 and 1999? Will it maintain the three-way relationship with Hong Kong and Macao or not? At that time Hong Kong and Macao will return to our motherland and become the Special Administrative Zone of the Peoples Republic of China. If it does not the industrial and commercial society of Taiwan may not agree because Hong Kong is the third largest exporting market for goods made in Taiwan. It will be a great shock for Taiwan's economy and the result will be unbearable if the Taiwanese administration cuts off relations with Hong Kong and Macao. If it does then it will not matter whether the Taiwanese administration maintains relations with Hong Kong or establishes relations with the mainland. There exists the possibility that the Taiwanese administration still would not like to set up relations of trade, post and shipping with the mainland directly except through a free port. In this case, Xiamen, as a free port, is closer and more convenient to Taiwan than Hong Kong. We believe that the politicians of the Taiwanese administration are pragmatic; they should know that they are living in a real world, so it is unnecessary to put off until 1997 what they can do today. Furthermore, Xiamen free port shall push ahead with corresponding customs and regulations of an international free port, which will build a bridge across the Taiwan Straits offering the Taiwanese a convenient passage to enter into the mainland for sightseeing, investment, meeting with relatives, visiting memorial parks and retirement. The Xiamen free port shall play the role of the junction of one state with two systems.

The conditions of Xiamen SEZ to implement a free port policy

A successful free port should possess an excellent port, a good location and extensive hinterland, and a stable political and economic situation.

Judging from these conditions, Xiamen possesses favourable factors for developing an important international port and putting into effect the free port policy.

The natural condition of the port. An excellent port is a prerequisite for the setting up of a free port. The natural condition of Xiamen port is a superior factor. Xiamen port is an island-port type seaport with 50 sq km of water and a long coastal line of 234 km which includes 13 km of deep water coastline available for the construction of a harbour. The navigable channels of Xiamen port are as long as 24 km, which can be divided into an inside channel and an outside channel. The inside channel runs from north to south and is 10 km in length and 800-2000 m in breadth and 10 m in depth, permitting 10,000 tons of vessel to get in and out. The outside channel runs north-west to south-east; it is 14 km in length, 1000-3000 m in breadth and 12 m in depth, permitting 50,000 tons of vessel to get in and out anytime. Xiamen port is a tidal port with two tides per day. The average tidal deviation is 4 m, with a maximum tidal deviation of 6.9 m. The Xiamen tidal harbour is free from silt because the rate of the rising tide is faster than that of the ebbing tide. In short, Xiamen port is an excellent natural port free from silt and ice with an extensive harbour range and deepwater channels.

Among the forty open ports of the country, Xiamen ranks with other famous ports such as Dalian, Chin Huang Dao, Tsingdao and Beilun. Even compared with world-famous ports, the natural conditions of Xiamen are excellent. However, the wharf facilities and the total handling capacity of Xiamen port can still be improved and increased.

Location and hinterland. While the natural conditions of a free port are a prerequisite for the development of the seaport, the geographic location and extensive hinterland are the decisive factors for development.

Xiamen is located on the southeastern coast of China and holds a strategic position in the Taiwan Straits, which is the passage for the domestic main channel off the southeastern coast and several international main channels in the western Pacific Ocean.

Xiamen, backed by mainland, facing Taiwan across the straits, is the closest Chinese seaport to Taiwan. So Xiamen free port would best play the role of developing relations with Taiwan and promoting the return of Taiwan. No other Chinese port could be substituted in this role.

Most experts agree that Xiamen has many favourable features necessary for a free port. However, there are some who doubt this. For example, one expert pointed out that the geographic location and the hinterland extension of Xiamen is poorer than that of Singapore, Hong Kong and Hamburg. It is therefore unsuitable to set up a free port in Xiamen; an SEZ would be enough for Xiamen. Other experts argued that some big port cities with strong economic power, such as Shanghai and Tianjin, are more qualified than Xiamen as the setting for a free port. Their main evidence is that Xiamen has a poor geographic location and hinterland extension. Let us further study the character of the location and hinterland of the free port.

The hinterland of Xiamen port is not sufficiently extensive. The direct hinterland covers the southern and the southwestern part of Fujian Province. The indirect hinterland only reaches the southern part of Jiangxi Province and southeastern part of Hunan Province.

Compared with other free ports in the world, Xiamen is in fact in a poor location and has insufficient hinterland. Singapore is located at the southern part of the Malaysian Peninsular, holding a strategic position between two continents (Asia and Oceania) and two great oceans (Pacific and Indian), with the whole of Southeast Asia as its hinterland. Hong Kong is located at the southern end of the Chinese mainland, holding an important geographic position. It has the Pearl River Valley and the mainland as its hinterland. Hamburg, the nearest port for Eastern Europe and Central Europe to enter the Atlantic Ocean, takes the advanced industrial region of the Elbe valley as its hinterland.

Among Chinese ports, Shanghai holds the most important geographic position. It is located at the mouth of the Yangtze, at the centre of the southern and the northern coastline of China, backed by the Yangtze valley, taking the whole country as its hinterland. Tianjin port takes northern and northwestern China as its hinterland. Dalian port takes northeastern China as its hinterland. Guangzhou port is backed by the Pearl Valley and the region covering the Guangzhou-Wuhan railway.

There do exist some differences between the geographic location and hinterland of Xiamen port and the above-mentioned seaports. This is because they are generally larger than Xiamen. However, the size of a seaport is not the only fact that determines whether it qualifies as a free port. Its establishment requires not only general conditions but also some specific conditions. What then are the specific conditions for setting up a free port?

The first condition is the character or quality of the hinterland. When the hinterland of a free port is under consideration, people are accustomed to taking into account only the area and the extent of the hinterland. The extent of social-economic formation between the free port and its hinterland is often overlooked, but the character of this formation decides whether a port is qualified to be a free port or not. The relationship between a free port and its hinterland should be that of different political or social-economic systems. Only when the port differs in political or social-economic systems with its hinterland can it become a free port or a free trade zone. If the hinterland has the same social-economic formation and system as the port it is an ordinary seaport instead of a free port. New York, London, Yokohama, Sydney and Melbourne are famous seaports. New York takes the northeastern and west-central part of America as its hinterland, London is backed by England, Yokohama takes the centre and the northeastern part of Honshu as its hinterland. Sydney and Melbourne take the extensive Australian mainland as their hinterland. These seaports hold very important geographic locations and are backed by highly advanced and extensive hinterlands. These seaports do not qualify as free ports because their social-economic formations are the same as their hinterlands. Although New York set up a foreign trade zone in Brooklyn in 1934 (there are over 100 such zones in the whole of the United States), New York is far from being a free port.

Hong Kong, Singapore and Hamburg are quite different. The British imperialists colonized Hong Kong after the Opium Wars and set up Hong Kong as a free port in 1842 as a base to invade and exploit China. It is the result of this imperialist policy that made Hong Kong a free port. After Hong Kong was occupied as a colony, the British imperialists forcibly put Hong Kong under a different political system and a different social-economic formation from mainland China. This is the fundamental condition under which Hong Kong free port could exist and develop. Before 1949 China was a semi-colonial semi-feudal society, different from Hong Kong in economic formation and political system. After 1 October 1949 the Peoples Republic of China, as a socialist country, was still quite different from British occupied Hong Kong in social-economic and political terms. In 1997, China will resume sovereignty over Hong Kong. Hong Kong will then become a Special Administrative Zone and be a part of our country politically. Under the proposal of one state with two systems, the capitalist system in Hong Kong shall remain unchanged for 50-100 years, so the economic system in Hong Kong shall be different from that of the mainland and the position of Hong Kong free port shall be unchanged.

Singapore was made a free port in 1817 when it was a British colony because of its very important geographic position and the political difference between Singapore and its hinterland of Southeast Asia. (Before World War II countries of Southeast Asia were colonies or semi-colonies belonging to different imperialist countries. They later gained independence and became sovereign countries.)

Hamburg in West Germany is under a different government administration from its hinterland of the countries in Western and Northern Europe. Furthermore, the social-economic formation of Hamburg is also different from Eastern Europe and the Soviet Union. That is why Hamburg became a free port.

Why does the relationship between the free port and its hinterland need to be of a different nature? The answer is quite siimple. The free port is the result of tariff and trade barriers (to be exact, the free port is the result of the contradiction between free trade and protective trade). No tariffs and trade barriers exist within a country. There are exceptions. That is, our country, with the policy of one state with two systems, shall resume sovereignty over Hong Kong in 1997, but the position of Hong Kong free port will remain unchanged because its economic system is different from the mainland. The reason Xiamen qualifies as a free port is that Xiamen is located at the junction of mainland China and Taiwan. Although Shanghai, Tianjin and Guangzhou ports are far larger than Xiamen port, there is no need for these seaports to become free ports because no qualitative difference exists between them and their hinterland. They therefore play the role of ordinary seaports.

The second condition for setting up a free port is the character of the separation from the national political-economic centre. Historically, countries often locate the frontier of opening up in a place which is separated from the national political and economic centre. The United Kingdom made Gibralter, Singapore and Hong Kong free ports in the 18th and 19th centuries. These free ports are far away. The seaports within the UK, such as London and Liverpool, are only ordinary ports. They were trying to protect themselves and exploit other countries. Until recently, the UK had set up a few low level free zones in order to expand foreign trade. Brazilian Manaus free port, located at the middle-stream of Amazones, is remote from Rio de Janeiro, Brasilia, Sao Paulo and other Brazilian economic-political centres. Taiwan's export processing zone is located at Gaoxiong which is far from its political-economic centre. (Taipei is at the northern end of Taiwan island and Gaoxiong is at the southern end, the other side of Taiwan.) South Korea is planning to set up a free port in Cheju-do at the southern end of the country, instead of Inchon which is near Seoul. The Soviet Union is planning to set up its free port in Vladivostok in the east. The United States has only one free port, and this is located at Guam which is far from mainland America. Japan set up its only free port in remote Okinawa-Shoto. Even the feudal emperor in ancient China adopted the principle of separation setting the open port far from the national administrative centre. For example, the Guangzhou port in the Tang Dynasty, the Chuanzhou port in the Song Dynasty and Yuan Dynasty, Yue port in the Ming Dynasty were located in southern China and the southeastern coast which were the regions remote from the ruling centre at that time.

Free ports should be separated from the political-economic centre because the development of any social-economic system must rely upon forces from the interior of the society. As for the policy of opening up, it is for the purpose of learning, comparison, examination and exchange, which can only be used as the assistant force. There are no exceptions. The development of the socialist construction and the fulfilment of the four part modernization stages of our country must rely on our socialist main-body, socialist public ownership and the planned commodities economy to push ahead. The purpose of setting up the free port is to introduce foreign knowledge, technology, management skills and information. The size of the port is not the decisive factor. There may be some ports, though small in size, that can become free ports if they meet the necessary requirements. Here we do not wish to look down on the function of the big seaports, but want to emphasize the division of labour of the different ports.

We should also point out that the conditions of the geographic location and the hinterland of the port are not unchangeable. As time passes, geographic location plays a different role for a port. The hinterland coverage of the port also changes; the port with rapid development port will expand the attractive coverage of its hinterland. The newly expanded coverage of the hinterland might involve higher costs in transportation, but there is compensation from faster despatch, and the precision and time saving nature of cargo transportation. Furthermore, the coverage of the hinterland is not only a geographic concept, but also an economic concept. Though the same in size, the hinterland with different levels of economic development will perform a different function from its ports.

The economy of the backing city. Xiamen has more than 770 industrial enterprises and forms a fairly complete industrial and agricultural system. Compared with some important industrial cities of our country and the requirements of an international port, Xiamen is still poor at the economic level. This is the weak point for the development of Xiamen port and will impede the implementation of the short-term and mid-term program.

The Chinese political situation, policy and efficiency

We offer foreign investors a stable political situation, coherent policy and good public security. At the same time we still face the problem of a bureaucracy with low efficiency and a lack of experienced and qualified cadres in the investment environment.

In order to improve administration, simplify documentary processing and raise efficiency, Xiamen SEZ has set up a special group to strengthen the leadership and the coordination of service of foreign investment. This meausre is highly praised by foreign investors.

In summary, Xiamen possesses many favourable conditions for a free port. At the same time there are some unfavourable conditions. The natural condition of Xiamen port is very good; the location and the hinterland are in accord with the requirements of a free port. Xiamen has many other favourable conditions. It has a tradition of opening up to the outside world, is a hometown and the main entry port of overseas Chinese.

It has a sufficiently qualified labour force, beautiful scenery, great potential for tourism, and is the only SEZ in Fujian Province and in the whole Shanghai Region. Further it should be pointed out that Xiamen is only a medium to small sized city, the area of which is only 1/100,000 of the whole country. So Xiamen is suitable as a selected spot for experiment.

The greatest problem facing a free port is smuggling. Since Xiamen is an island port, it is more convenient and cheaper to prevent smuggling than in other seaports. Xiamen free port is planning to take effective measures to maintain a constant sea patrol and entry check.

Furthermore, Xiamen free port is the result of the proposal of one state with two systems and is the key port of trade between the mainland and Taiwan. The important position of Xiamen port can never be substituted by other seaports. Therefore, we conclude that among coastal seaports of our country, Xiamen is the most suitable to be a free port.

Objective model and functions

In the previous sections we have set out the conceptual characteristics of free ports and analyzed the implementation of certain free port policies in Xiamen SEZ. Accordingly, we proposed that the objective model of Xiamen free port should be a dual gradient multi-function free port based on a comprehensive outward-type SEZ specializing in industry but also with tourism, commerce and financial industries, which is to be completed by the end of this century in three development stages. In short, this dual gradient multi-function free port shall be the centre of southeastern China developing economic cooperation with foreign countries, the bridge between Taiwan and the mainland, and the experimental base for the reform of the administrative-economic system of our country. Xiamen free port shall make positive contributions towards the development of the economy of southeastern China and the unification of the whole country.

Three developing stages. Our proposal involves three developing stages introducing the free port step by step, gradually raising the level of opening outward as the conditions mature. Stage one is to set up and improve the bonded warehouse business and *entrepôt* trade. Stage two is to substitute a free trade zone (*entrepôt* zone) for bonded warehouses, expanding the range of businesses. Stage three is to make the whole Xiamen Island a free port with certain limitations.

The dual gradient. Since the construction of Xiamen free port began, we have kept the structure of dual gradient open. In the first stage, there are two gradients, the small range of bonded warehouses and the SEZ of the whole island. In the second stage, the two gradients are the strictly controlled free trade zone and SEZ. Even in the last stage, there still exist two gradients, free trade zone and free port of the whole island with certain limitations. We will adopt the pattern of dual gradient opening in order to gain the benefit of free trade on one side, and perform the function of trade protection on the other side. Xiamen shall implement only certain free port policies.

Multi-function. At the end of this century, Xiamen shall have formed a multi-component special structure of market economy under macro control. Accordingly, the system of administration and economic management of Xiamen free port shall possess both the character of relative internal unification and the character of relative external independence. At that time, Xiamen shall be a multi-function port city characterized by a free trade zone, free industrial zone, free finance zone and a free tourist zone.

The characteristics of stages of development

In order to achieve these goals, we propose to adopt the strategy of expanding the free port step by step in stage and district. Considering the special character of implementing free port policy in Xiamen, we should put emphasis on dealing with the following problems: the reconstruction of existing enterprises, the reform of existing administrative and economic system, and establishment of trade, post and shipping relations with the Taiwanese administration.

The characteristics of stage one are

- engaging the import and export business of Xiamen SEZ independently;
- setting up the bonded warehouses and developing the *entrepôt* trade;
- setting up the local financial institution, regional money market and capital market, and the transactional centre of foreign exchange;
- making Xiamen free port a convenient port of entry and exit.

Characteristics of stage two are

- setting up a free trade zone in Dongdu Harbour area and Huli District, engaging independently in trade with Taiwan and establishing the transitional managing line of the whole island;
- the Sino-foreign joint ventures, cooperative enterprises and the enterprises with exclusive foreign investment will have made much progress. Huli Industrial Zone will have entered the mature stage. Setting up a second industrial zone and fulfilling the reconstruction of the existing enterprises and the adjustment of the industrial structure;
- expanding the range of the banking businesses, perfecting the local financial institutions of the SEZ and the transregional money market and capital market, loosening the limitation of the business of the foreign capital banks and forming a relatively independent financial system for Xiamen SEZ;

- developing international tourism, granting the overseas Chinese, Taiwanese, Hong Kong and Macao compatriots entry into or exit from Xiamen SEZ without a visa, and simplifying the procedure of entry and exit for foreigners.

The characteristics of stage three are

- granting goods entry into Xiamen Island duty free, upgrading the transitional managing line into free port managing line, and full development of free import and export trade with Xiamen SEZ becoming a show window of goods;
- Huli Industrial Zone will have been upgraded and regenerated into the second generation of an export processing zone, technology intensive free industrial zones and scientific industrial parks will be set up, free competition will prevail among the enterprises in Xiamen SEZ, and most of the products made in Xiamen SEZ will enter the international market;
- the formation of a free financial zone, developing off-shore financial business, money market, capital market and foreign exchange market advancing rapidly, internationalizing the financial system of Xiamen SEZ, solving the problem of the free exchange of money;
- development into a centre of international tourism,
- setting up relationships of trade, post and shipping with Taiwan.

Explanation of the model and some important strategies

To some extent, the progress of the whole island developing into a free port is subject to the rate of reconstruction of the existing enterprises and the adjustment of the industrial structure. Therefore, the related program and introductory policy should embody the following principles:

- combining the introduction of talents, capital and technology with the technological reconstruction of the existing enterprises;
- combining the technological reconstruction with the reform of management of the enterprises;
- combining the reconstruction of enterprises with the adjustment of the industrial structure;
- combining the development programs and introductory policies for the industries with scientific and technological development programs and introductory policy;
- combining the reconstruction of enterprises and the adjustment of industrial structure with the transition of the outward-type economy;
- combining the development of outward-type economy and the transplantation and diffusion of technology with the requirement of promoting the inland economy.

Xiamen is an experimental city of reform, which must march forward. It is also an important base for developing international economic cooperation. Most importantly, Xiamen bears the responsibility of fulfilling the historical task of building a bridge and passage between the mainland and Taiwan. The significance of Xiamen to the unification of our motherland is of Shenzhen to the return of Hong Kong. Considering the progress of the system of reform of the whole country, Xiamen should possess in the future more independence in administration and in its economic system than other SEZs or open cities but less than Hong Kong Special Administrative Zone, so as to fulfil the great task of unification. There exists the possibility that the Taiwanese administration shall take Xiamen free port as an exception. If the Taiwan administration is still concerned, it might as well make Jinmen island an experimental base.

Perfecting the financial system, market and related policies will involve the following steps:

- Setting up the local financial institute of Xiamen SEZ; adopting a relatively independent system of banking management of SEZ; setting up the regional money market and capital market at the same time; expanding the banking business accordingly. The effective implementation of the financial policy is subject to the reconstruction and perfection of the financial market and system.
- Setting up a committee of financial management of the SEZ to take charge of related business. The main task of this committee is to make out a set of regulations governing the financial business of SEZ. This committee shall be in charge of the supervision and coordination of the implementation of financial regulations and policies of Xiamen SEZ.
- The council of the central bank of SEZ (which is still under discussion) shall be in charge of making and implementing the financial policy of the SEZ, choosing, supplementing and changing the suitable management instruments in due time.
- Making preparations for the setting up of the free financial zone. In a narrow sense, the free financial zone is the offshore financial markets; in a broad sense, the free financial zone covers a wide range of all related foreign financial businesses which enjoy preferential treatment. This zone is not designated by the geographic boundary, but by the classification of the handling of financial business. Compared with domestic financial business, foreign financial business is not subject to the developing situation of the local economy.

Three alternative ways of implementing the program are:

- Setting up a free zone (free trade zone plus export processing zone) in Dongdu Harbour and Huli Industrial Zone, setting up a temporary managing line between the free zone and the rest of Xiamen SEZ, carrying out the principles of free port within the free zone and implementing certain free port policies outside the free zone, transition into a free port of the whole Xiamen island.
- Expanding the implementation of free port policy gradually to the whole island after a few years of preparation of public opinion and organization.

- Administering a highly open zone within Xiamen island through law and regulations but with no managing line, then expanding this highly open zone to the whole Xiamen Island.

Whatever program is chosen, we should consider adopting the measure of lifting the bans gradually on the local selling of the imported duty free goods (matching it with the developing progress of the outward model of the existing enterprises within Xiamen island). This measure would also exert pressure upon the enterprises within Xiamen island, playing the function of promotion.

The main problem of the first program is that the additional managing line would cost too much. The main problem of the third program is the great difficulty in administering it. The main problem of the second program is that it creates no free port climate in the short run and exerts practically no pressure upon the reconstruction and adjustment of the existing enterprises within Xiamen island, and the period of transition may last too long.

8

The nature, rationale and role of export processing zones with special reference to China

David Wall

1. Introduction

Recent years have seen a proliferation of export processing zones intended to support the development of export oriented manufacturing.[1] This is an indication of the acceptance by more and more countries of the need for more open economic strategies. The choice of export processing zones as a policy instrument to help implement this strategy is also a recognition that the economic environment of a country is inimical to individual domestic firms becoming export oriented. It also suggests that the government believes that without such zones its territory does not provide an attractive enough base for some foreign firms looking for production bases for international sales.

This paper proceeds by examining briefly, in Section 2, the nature of export processing zones. It then goes on, Section 3, to analyse the rationale claimed for export processing zones by advocates of their use as a means of expanding exports of manufactured goods. It goes on to show that there are alternative ways of achieving these results and then considers the benefits and costs of using export processing zones as against these alternative instruments. Section 4 assesses the role which export processing zones could play in the current state of development of China. Finally, in Section 5 some conclusions are drawn.

2. The nature of export processing zones

The export processing zones in existence all differ from each other in some way, but the original definition of an export processing zone given in an article in 1976 still stands. This argued that such zones are 'basically no more than a device whereby imports, to be used in the production of exports, can be acquired by manufacturers on a bonded duty free basis'. It went on to point out that:

1 There have been several reviews of developments in export processing zones in recent years. The reader is referred to them for further details. The three most easily accessible are: J. Currie, 1985; A. Basile, and D. Germidis, 1984; and UNIDO 1980.

> This customs device may be, and usually but not always is, made part of a package of special incentives designed to attract foreign investors to countries in which they would not otherwise invest. The precise form of the incentives should vary from country to country, depending on the nature of the factors which are perceived by foreign investors as preventing them from turning a country's comparative advantage into a competitive advantage, and which therefore lead to their unwillingness to invest (Wall 1976:479).

This article also made two other important points concerning the nature of export processing zones. First, that it was not necessary for the businesses benefiting from the policy to be physically collected together in a zone for the policy to work. It is the policy treatment of firms which is crucial, not the physical location of the plants which are given access to export processing zone policy privileges. While most countries limit export processing zone status to firms within a geographically limited area, some extend it to individual firms which qualify for privileged treatment even if they are not in established zones. In such cases the plants are usually described as being 'bonded factories'. Bangladesh, Sri Lanka and Mauritius, for example, operate their export processing zone policies in this way. Whenever the word 'zone' is used in this paper it should be taken to cover the collection of all firms which are given export processing zone status, regardless of their location.

The second important conclusion drawn by that earlier article was that export processing zones cannot create comparative advantage; they can only help remove obstacles to its exploitation. Export oriented firms may be reluctant to invest in a country because the policies of that country raise the cost of manufacturing there to the point at which production cannot be carried out on an internationally competitive basis. If, by removing policies on a selective basis, or by compensating for the effects of those policies, a government can make it possible for the firm to produce competitively, then an export processing zone policy may be effective. It may not be effective if other factors, such as political instability, are present. If effective subsidies, above and beyond the requirements for compensation for the effects of anti-export policies, are needed to bring about competitiveness, then the country does not have a comparative advantage in that line of production. Support for the industry will then involve a long term loss to the economy.

In the decade since that article was published events have suggested that a third strong conclusion can be drawn. This is, as one commentator has put it, that

> an economy can utilise the full potential of the zones and benefit from externalities it generates *only* when the overall economic environment is also being liberalised. Export processing zones by themselves cannot be expected to lead towards a gradual liberalisation of the entire economy. In an otherwise restrictive and controlled regime, their policy enclave nature gets more strengthened than

diffused. In case tariff protection and industrial controls are to be maintained [in the domestic economy] EPZs should be expected to yield only marginal gains (Kumar 1985:170, emphasis added).

Export processing zones have, as already noted, been set up in an increasing number of both developing and developed countries because they are believed to offer an easy solution to the problems associated with the stimulating comparative advantage based export growth. This is especially the case when it is the domestic policy framework of the government which is considered to be the crucial factor hampering export development. In fact, this is the only real economic logic justifying the establishment of export processing zones. Physical disadvantages are a reflection of short or long term comparative disadvantage. Such short run disadvantages can be more efficiently overcome without resort to the creation of export processing zones. The existence of long run disadvantages suggests that other ways of earning or saving foreign exchange should be explored. Thus governments which adopt export processing zones as a policy instrument are acknowledging that their domestic policy frames have a substantial anti-export bias. They are also acknowledging that there is little hope, or even desire, to remove that bias in the short to medium run.

The advantage claimed for export processing zones are all negative, in the sense that they are intended to negate the export inhibiting consequences of some domestically oriented policy instrument. They involve setting up (as noted above, not necessarily in a single physical location) a vacuum in policy space within which the writ of domestic policy does not apply, unless it is positively and specifically decided that the consequences of some individual policies should apply. In other words, locations are defined which have their own economic policy environments, different from the rest of the country. The extent of the difference can vary, depending on the degree of anti-export bias in the domestic policy frame. It also depends on the extent of positive export promotion the government wishes to apply to firms in the zones, as against simply removing the anti-export bias of domestic policy.

It is possible to establish different policy environments in different zones in the same country, each being tailored to the needs of individual industries and or locations. There are, however, several common elements in most export processing zone policy frames. These are 'one stop' bureaucracy; captive services and utilities; tailor-made reserved infrastructure; exemption from customs and excise duties; partial or complete exemption from domestic taxes; partial or complete exemption from labour laws (including those relating to the employment of expatriates), from other industrial licensing legislation (including that relating to the importation of technology), and from regulations governing the transferring abroad of capital and profits.

One-stop bureaucracy. Entrepreneurs considering investing in the manufacturing sector in developing countries frequently complain about the time it takes to deal with bureaucracies. They may have to obtain licences to establish, permission to proceed and clearances under many different policies, before they can do almost anything involved in setting up and running their plant. They also complain often of the amount of money they have to lay out, directly or indirectly, as 'sweeteners' to obtain, or speed up, the licences and clearances from corrupt bureaucracies. Bureaucracies, especially long established ones with well entrenched vested interests, are like machines. Each component needs attention and sometimes oiling, before the machine can be induced to move. Different parts of the machine may be in widely dispersed locations, or together but in a capital city well away from the industrial centres. The costs of dealing with bureaucracies in such situations may be perceived by entrepreneurs as adding so much to overall costs, that they may well decide not to invest in otherwise attractive locations.

Advocates of export processing zones argue that because investors in such zones are an easily identified subset of companies it is possible to establish a new branch of the bureaucratic machine specifically to look after their interests. Such cells may have powers delegated to them or they may be empowered to deal with the rest of the bureaucracy on behalf of the companies in the zone, or some mix of the two arrangements may be possible. Being new and therefore presumably without vested interests they can, in theory, more easily represent the interests of the zone companies. Similarly, their staffs being drawn from the civil services they will know how best to ensure that those interests are served by the bureaucracy at large. Ideally, firms will have to deal with only one office - i.e. make one-stop - which then handles all dealings with the rest of the bureaucracy on their behalf. Such earmarked cells may be located on the zones themselves. Where the zones are some distance from the main centre of government, they may be split between the zone and the centre so that the costs to zone firms of dealing with bureaucracy are substantially reduced.

Captive services and utilities. In addition to their own bureaucracies, export processing zones are also often provided with captive services and utilities. Because firms are concentrated in one location governments will often feel that it is worthwhile, depending on the size of the zones, to establish on them special branches of such state provided services as customs offices and post offices. These can then specialize in meeting the special needs of export oriented firms. They can also encourage, possibly with low cost accommodation and tax inducements, the establishment of private sector services such as packaging, shipping and forwarding agencies and banking (through which zone firms may be given priority access to foreign exchange and credit). Apart from benefits from the development of a cadre of staff who become skilled, and therefore more efficient, in meeting their specialized requirements, the proximity of these services reduces transaction costs to firms in the zones.

In many developing countries the provision of utilities cannot be guaranteed. Connection to supplies may be subject to delays and supplies may be erratic. There may be blackouts and brownouts in power supplies; international telecommunication links may be subject to delays and of variable quality; mains water may not be as pure as some industrial processes require; public transportation and worker housing may be limited, and even access to basic fuel supplies may be restricted. The geographical concentration in a zone of firms whose export activities a government wishes to support allows it to provide such facilities on an earmarked basis. Zones around the world often have their own guaranteed electricity supplies and/or standby facility, their own telephone and telex exchanges with direct international dialing, state provided worker housing and transportation links (for both personnel and freight), and priority access to fuel, water and other scarce inputs.

Reserved infrastructure. In many developing countries the availability of cleared and level sites in prime locations, well served by national and international transport facilities, and with good water supplies and waste disposal facilities is a major factor affecting the decisions of foreign investors. It can also be a significant factor affecting the decisions of local firms, considering whether or not to accept the export obligation required of firms wanting to take advantage of the privileges afforded to firms in export processing zones. In many zones advance factories are built fully connected to services and provided with all required infrastructures. The lag between the decision to invest and commencement of production is minimized. The concentration of development into zones allows economies of scale in the provision of infrastructure to be reaped, and means that the allocation of prime sites and facilities can be reserved for firms offering the largest contributions to the economy.

Exemptions from duties and taxes. In most people's minds the most obvious characteristic of export processing zones is the exemption given from payment of customs and excise duties on their participating firms' imports. Indeed, export processing zones have developed from free trade zones, or free ports, which have this single characteristic. Such zones, located at ports on major trade routes with the aim of facilitating the development of transhipment, storage and re-export activities, have a long history. They removed the need to negotiate goods through customs, both ways, and the need to have capital tied up in customs duties which will be refunded on export. These were important factors in the widespread establishment of such free trade zones. The encouragement of industrial activities in the zones is a relatively new phenomenon, introduced in the 1960s. This new type of zone is not necessarily physically contiguous with sea or air ports, in which case arrangements are made for warehousing and delivery under bond.

The arrangement for exemption of trade taxes means that zones are attractive locations for import intensive activities; the consequential savings in working capital costs will be greatest for them. Firms in export processing zones can also be given exemption from export taxes on both domestic raw materials and final products. This encourages the establishment of industries processing domestically sourced inputs before export, although in some cases it may well be that this incentive was unintentional.

Exemption from labour laws. In surveys of what factors influence their decisions to locate their plants where they do, businesses often stress the importance of flexible labour laws. Many developing countries impose heavy costs on employers in the form of limited freedom to hire and fire workers in the firm's interests without punitive redundancy payments. Legally enforced limits on the length of the working day, shift working, holidays, and sick and maternity leave also all add to operating costs. Governments and unions may be willing to consider derogation or easing of some of the regulations to firms operating within the limited geographical area of an export processing zone.

It is politically acceptable to allow such flexibility in labour laws because zones are seen as being in a sense extra-territorial; domestic firms serving the domestic market do not object as it does not involve giving a competitive edge to competitors; and workers accept the situation because firms in export processing zones usually pay higher wages. As a result zone firms do not have to carry costly redundancy funds and/or incompetent and lazy workers and can operate plants closer to their engineering efficiency output levels. In many countries one aspect of labour legislation which limits their attraction to foreign investors is the existence of restrictions on the employment of foreigners. Export processing zone legislation usually specifically allows for the employment of foreigners as managers, supervisors or in training capacities.

Exemption from licensing regulations. Because of the geographical concentration and separation of export processing zones, it is politically feasible to extend to firms on them some derogation from or easing of many forms of licensing. This is because the obligation on such firms to export all of their output means that they do not compete 'unfairly' with firms producing for the domestic market under the import substitution policies. Licensing arrangements which limit firms' ability to import state-of-the-art technology; restrict them to the use of domestic raw materials; limit their access to domestic or foreign credit facilities; constrain them to carry out all their foreign exchange transactions through domestic banks; or restrict their freedom to expand or close down capacity, can all be removed or eased on a selective basis for firms in export processing zones. In countries where stringent licensing controls are maintained and where the costs of dealing with the bureaucratic network needed to implement them can be substantial, such removal or easing can be an important element in making an export processing zone an attractive location. The need to deal with bureaucracy can never be entirely removed but the number of issues on which it has to be faced can be minimized by reducing the number of licences required. The costs of dealing with bureaucracy with respect to the controls which remain can be reduced further by the establishment of the one-stop office mentioned earlier.

Exemption from foreign exchange controls. At the end of the day foreign firms want to have the benefit of their profits in whatever location they choose and to be able to repatriate capital as the investment is amortized. If they, or domestic firms in the zones, have used foreign sourced credit or technology they will also need to be able to make interest and royalty payments abroad. As a minimum, then, firms in the export processing zones need to be able to purchase foreign exchange freely for such purposes, or to be able to run foreign exchange bank accounts.

3. The rationale of export processing zones

All of the characteristics of export processing zones can be provided in other ways. In the case of physical characteristics such as captive utilities, services and infrastructure they can be provided by using restricted access industrial estates, as in the Chinese Special Economic Zones. Similarly, many countries already offer streamlined bureaucracy in the form of one-stop offices for foreign and/or domestic export oriented firms. Exemptions from taxes and tariffs can be and are provided for in many different ways. Duty drawback schemes for refunding exporters' tariffs paid on imported inputs are maintained by many countries; some schemes include allowance for the effects of controls on prices, and refunds of some domestic taxes. Thus it is not necessary to establish single site zones, or sets of bonded factories, with their own policy frames, in order to establish a selective export promotion program.

In the case of derogations from the effects of legislation such as labour laws, controls such as investment licensing and regulations such as those governing access to foreign exchange there is no reason why the firms set to benefit must be physically constrained to locate in a given site. If a firm qualifies for exemption it can be provided with an exemption certificate which allows it to do what otherwise would be prohibited. Such arrangements are extant throughout the world.

As all of the advantages claimed for export processing zones can be provided in other ways, the question arises as to whether or not the establishment of such zones is a cost effective way of encouraging exports. The following subsections review the benefits and costs of using export processing zones as a policy instrument and then the situation in China is briefly reviewed.

Benefits. In a fundamental sense the benefits which are conceived to flow from the establishment of export processing zones can be attributed to the conviction of politicians and bureaucrats that business people and their workers cannot always be trusted. Concentrating firms into zones in which economies of scale in the provision of physical facilities are reaped also allows the minimization of the cost of policing the policies which endow valuable privileges on firms. Policing is necessary in order to ensure that only qualifying firms obtain them. In the absence of effective policing it is believed that privileged duty free or otherwise prohibited imports, and outputs embodying those imports, would escape onto the highly profitable protected domestic market. Export processing zones tend to be surrounded by security fences or walls and restricted entry gates. The walls and gates are patrolled at all times by security guards to prevent smuggling of inputs and outputs onto the domestic market.

The prevention of smuggling is seldom, if ever, complete. It probably never can be while the benefits of smuggling are large relative to the wages of security guards, customs officials, dock and airport police, and factory and office workers in general. There is clearly a trade-off between the benefits of reaping the economies of scale in operating export processing zones and the cost of policing them.

Wherever policies select out firms or individuals for privileges there will always be an incentive to corruption on the part of the officials who have to apply and enforce the policy instruments. Firms and individuals excluded from the privileges have an incentive to 'persuade' officials to extend the privileges unlawfully to them; they may be supported by, or be, corrupt politicians who bring pressure to bear on the officials.

The greater the extent to which the economy is controlled and the greater the degree of protection of the domestic market, the greater are the incentives to bribe and be bribed. Limiting privileges to firms within a secure area such as an export processing zone reduces the need for screening and policing activities and in this way restricts the scope for such 'rent seeking' activities. This is because the qualification of being physically in a given place is easily checked and difficult to pretend. This is also true of firms which are allowed to set up bonded factories outside the zones but which are large enough to justify setting up separate security and customs arrangements. Some potential benefits will be lost as some economies of scale in the provision of such customs and security services will almost always be foregone, and policing will be more difficult.

Another significant benefit is that although there are alternative policy instruments which can have the same effect, they will often raise total operating costs and thus diminish the force of market signals. In many cases the value-added in the type of firm attracted to export processing zones is quite small - not uncommonly less than 10 per cent. In such cases differences in operating costs between different locations can have a marked effect on location decisions. For example, take a firm comparing potential sites in two different countries, identical in all ways except that one operates an export processing zone and the other a duty drawback scheme. The costs of having capital tied up in the duty drawback scheme, and the cost of the resources firms required to deal with the bureaucracy which operate the scheme, will lead the firm to prefer locating in the export processing zone; for low value-added activities quite small differences in operating costs can have a major impact on location decisions.

An important potential benefit of establishing an export processing zone may be that there is no alternative way of demonstrating the gains to be made from a more open economy. Vested interests created by protection usually constitute strong lobbies against the introduction of economic liberalization processes which would threaten the gains they reap from protection. In such situations the successful establishment of export processing zones allows the gains from exporting to be demonstrated to those and other entrepreneurs and to the population at large. As a minimum it allows the country to walk on the two legs of import substitution and export promotion and at best it will provide a convincing demonstration of the benefits of more open economic policies. Sometimes the benefits are exaggerated as politicians focus attention on figures for gross exports, although the percentage of domestic value added is often quite small; but who cares, if the effect is to build up a lobby in favour of increasing the gains to be made from trade.

Costs. It is not always easy to establish the economic costs of establishing and running an export processing zone. This is because it is difficult to establish the opportunity cost of the resources used and to assess what investment would have taken place in the absence of the zone. Debate usually takes place on the basis of accounting cost, which is incorrect. For example, if a captive power plant is built for a zone, only the difference between the cost of connecting the zone to the national grid and the cost of the new plant should be attributed to the zone. On the other hand the cost of security measures - walls, gates and surveillance staff should be attributed in full. The further away from the main existing centres of industry the zones are located, the greater will be the additional costs of providing infrastructure (for example, new roads) and utilities (for example, connections to electricity and water supplies). Operating costs of firms will be increased too, as transport costs of workers and freight to and from centres of commerce and industry will have to be met.

Similarly, the costs of additional staff and supporting resources needed by the bureaucracy, to establish and run the zone authorities should be costed as a net cost of a zone. Again, how much is additional will depend on how much of the investment that the zone attracts would not have occurred without the inducements offered by the zone authorities. Some of the incentives may well be redundant. It is unlikely that none of the investment made in any zone would have taken place in the absence of the zone incentives. For those which would have taken place anyway, the cost of the extra incentives is a cost to the economy, constituting a transfer from taxpayers to the firm which receives it as additional net profit. These extra costs may, however, be offset by increased benefits if the firm is stimulated into increased activity by the extra incentives.

In addition to the direct economic costs, experience has shown that there are other costs associated with using export processing zones as an instrument of export policy. These might be called political costs, although they do impose indirect economic costs on the economy. First are the domestic political costs arising out of jealousy created in domestic economy based firms which engage in exporting. If these firms constitute an effective lobby, as they do in some countries, then either the incentives offered to firms in the zones are watered down (absolutely or relatively), or incentives offered to the domestic economy based firms are increased. In the former case the loss of incentives may make the zone less attractive and therefore some of its overheads are made redundant and a deadweight loss to the economy. In the latter case the cost of incentives to the economy for a given level of exports will be increased - in the extreme case it will make the establishment of a zone pointless. There is also the deadweight loss to the economy of the lobbying process itself, a socially unproductive and divisive activity.

Even more difficult to measure, but no less real, are external costs to an economy where the success of a zone in generating new exports sets up a protectionist reaction in importing countries. Successful development of export processing zone based exports does appear to focus the attention of import competing industries in developed countries, particularly where there is product concentration in the range of exports, such as in textiles and garments. The protectionist reaction might involve direct retaliation in the form of the imposition of quotas, voluntary export restraints or revisions to (or more rigorous application of) rules of origin.

Retaliation may be indirect in the form of campaigns based on claims about exploitation of cheap labour, especially of women, and of poor working conditions. As one of the incentives offered to potential investors in the zones is a relaxation of labour laws there is, of course, the possibility that this flexibility may be abused, with the overt or covert cooperation of officials in the host country. Sometimes the complaints of unions in developed countries seeking protection against cheap imports from developing countries are self-serving. They may be based on the false comparison of labour conditions in the export processing zones and in the developed importing country, instead of with labour conditions in the exporting country outside the zones. There is, however, evidence[2] that in some countries flexibility has been abused; fear of unemployment has led workers in zones to put up with working conditions which are exploitative beyond the level intended by the sponsoring government. In such cases the

[2] See for example, the material collected by the ILO-ARTEP research project on export processing zones in Asia, as reported in Edgren, 1982.

social costs borne by the workers should be set against the benefits of the zones to the country.

4. The role of export processing zones, with special reference to China

As explained earlier, countries established export processing zones because they believe that by so doing they will increase exports of manufactured goods, increase employment, encourage the importation of capital and technology and possibly contribute to the development of backward regions.

The Chinese experiment. China has no export processing zones as such. It does, however, have four Special Economic Zones which appear to have been cast in the same role as export processing zones in other countries. The four zones have only recently been established, and with the exception of that at Shenzhen, have apparently been slow to develop. The qualification 'apparently' has to be added because little information is available outside China about the development of, and conditions in, the zones. Such information as is available is usually anecdotal, except for the important and useful collection of studies on the Shenzhen Special Economic Zone edited by Kwan-yiu Wong and David K.Y. Chu (Wong and Chu 1985).

Information on export processing zones is in general difficult to come by. this is partly because confidentiality of firm level data is one of the incentives offered to firms in many zones; partly because not all information is collected on a zone basis - for example government expenditure on infrastructure and the provision of utilities; and partly because trade data is often corrupted by illegal practices such as over and under invoicing and transfer pricing. As all (or most) export processing zones data are trade related, this problem is one that has to be faced in all studies of export processing zones.

There is one fundamental difference between the Special Economic Zones of China and the export processing zones of other countries. This is that whereas the export processing zones of other countries are set in the context of capitalist economic systems and only represent a localized deepening of the liberal economic approach, the Special Economic Zones of China are set in a political system which has for a long time been regarded as avowedly state socialist in approach. This difference in setting is important, as we shall see, as while the former can be seen as an acceleration of the liberalization process which is inherent in current Western style capitalism, the latter is usually seen as being the antithesis of the sort of private enterprise venture the zones are intended to cultivate. In a sense then, the Special Economic Zones are also serving a political function, as a laboratory for trying out a different politico-economic system: the market approach to development.

The experimental role of the Special Economic Zones is an important feature which needs to be borne in mind when analysing them. It is, for example, given as the reason why they are all on the coast and isolated from existing concentrations of population and urban development and, except for Xiamen, without well developed port facilities. The cost of establishing the zones has therefore been increased.

Another problem which relates to the zones' role in attracting foreign investment is the uncertainty concerning the political environment in China, changes in which may spell the ending of the zone experiment. Over the lifetime of most potential investors China has seen significant political change. Until there has been a reasonably long period of political stability, there will always be a tension in the minds of some potential investors which will either make them reluctant to invest or make them seek a higher rate of return. It is also likely to make them willing only to invest in low value capital equipment with quick return periods and/or low write-off value.

Other significant differences between the Special Economic Zones and traditional export processing zones is their size and the range of activities which they are expected to encompass. The Shenzhen zone covers 32,750 hectares (ha), the Zhuhai zone 1516 ha, the Xiamen zone 250 ha (to be increased to 12,550 ha), and the Shantou zone 160 ha (to be increased to 5260 ha). These compare to the 384 ha of the Kandla export processing zone in India, the 345 ha of the Bataan zone in the Philippines, the 202 ha of the Katunayake zone in Sri Lanka and the 175 ha of the Masan zone in the Republic of Korea. Whereas foreign investors in export processing zones are usually restricted to manufacturing industry, the Chinese Special Economic Zones allow them to establish service industries including tourism, commercial real estate development and even commercial farming. They are, therefore, some way away from the specialized industrial estate concept of export processing zones.

Finally, the geographical restrictions on the Chinese zones appear not to be so rigorously imposed as is the case with other zones. The Chinese Government is apparently willing, if a convincing case of need is put forward, to extend the same privileges to investors wishing to establish facilities adjacent to but outside the boundaries of the zones.

These, albeit important, differences in setting and concept apart, the Chinese zones are similar in intended role to export processing zones and seek to attract investors with the same range of incentives: trade and other tax exemptions and reductions; discounted land and utility costs; relaxations of ownership restrictions, of restrictive legislation such as labour laws, and foreign exchange controls (especially those covering repatriation of profits); subsidized provision of infrastructure; standard factories and other operational facilities; and decentralized one-stop administration.

Results. How well have export processing zones and the Chinese Special Economic Zones succeeded in playing the role written for them? Bearing in mind the caveats with respect to data, especially concerning the Chinese Special Economic Zones which have only been established relatively recently, doubts have been raised as to the achievements of the zones and their cost effectiveness. Some cost-benefit studies and less rigorous evaluations, of export processing zones have come up with positive results and others with negative results. Reference has already been made to the problems of obtaining data which are usually treated as confidential and to the difficulty in establishing a meaningful counterfactual. It is not surprising, then, that one observer has written about some of these studies that: 'the conclusions [of such studies] should be treated with caution' because 'only after much more experience and greater data availability will it be possible to conclude with any degree of reliability that the benefits ... are greater than the cost' (Grubel 1987:146).

Given their even more recent inception and the even greater difficulty of obtaining data, this applies *a fortiori* to the Chinese Special Economic Zones.

Wong and Chu (1985) have drawn attention to various problems that the Chinese Special Economic Zones, especially the Shenzhen zone, have encountered. Some of these arise because of their special experimental nature set in the Chinese economy. Others are similar to those encountered by export processing zones everywhere.

First, as of 1985, the Chinese zones have not had much success in attracting genuinely foreign investment. Most listed foreign investment is undertaken by overseas Chinese, especially by those resident in Hong Kong. As Wong and Chu say with respect to the more developed of the zones:

> At present, the Shenzhen SEZ is in any unfavourable position [with respect to its ability to attract foreign investors] due to the insufficiency of information available to investors, the lack of a sound legal and financial system, the inadequate provision of an infrastructure, and, most significantly, the lack of enough successful precedents to support the investor's confidence. These clouds of uncertainty concerning the structure and the operation of the SEZ have created a fairly high risk factor (Wong and Chu 1985:192).

They add that 'foreign investors still see a cloud of uncertainty over the security of their investment in a socialist country' (Wong and Chu 1985:10).

There is a catch-22 factor here. Until a sufficient number of foreign investors have demonstrated by their successful survival that the zones have been accepted politically by the Chinese as a long run element in their economic policy, and will no longer be relegated to isolated areas with limited infrastructure, then foreign investors will attach a high risk factor to investing in them. So the foreign investment which is coming in does not yet go far towards meeting the objective of bringing in Western management or market access.

Foreign investment is also discouraged by the continued difficulty of dealing with a bureaucracy which is not experienced in the ways of Western capitalists, or in the processes of capitalist business such as letters of intent and letters of credit. Similarly the decentralization of authority has not been as complete as it might have been. For example, three autonomous and independent authorities run different parts of the Shenzhen Special Economic Zone. And devolution and streamlining of administration is only as effective as the legislative system allows and as civil servants feel able to accept. Acceptance is limited as long as departmental rivalries exist and old habits of 'buck-passing' persist.

Overseas Chinese, including those from Hong Kong, who have invested in the zones in China obviously have a common language on their side, and presumably also a better informed awareness of the problems of carrying out business in China. However, they are reported (again, by Wong and Chu) to concentrate their industrial investments in simple consumer electronic products and garments. They use outmoded technology and sometimes secondhand, written off, relatively labour intensive machinery. They are not yet prepared to risk new technology and expensive new machines. So the technology which foreigners are bringing in is not fully satisfying the government's objectives for the zones.

New employment has been generated in the zones, but not necessarily leading to the development of new skills. The evidence is that the foreign investors are moving in labour intensive plants using semi-skilled and unskilled production line workers whose wages have become relatively too expensive in other Asian locations, where rents and utility charges also are higher than they are in China. Similarly the labour being used in the construction and tourist industries is not developing the new human capital which the government hoped the Special Economic Zones would cultivate.

The initial emphasis on consumer electronics, garments, tourism and construction means that the Special Economic Zones are involved primarily in activities which are usually regarded as having low potential for generating net inflows of foreign exchange. This is because they usually have a high import content or, in the case of construction, a low export sales potential. There are no data available to test this proposition in the case of the Chinese zones, but nor is there any reason to suggest that the case of China is different.

Problems may also be encountered on the political side, as labour laws have been relaxed and labour is seen to be 'exploited' by foreign capitalists. This could result in some ideological tension. As Wong and Chu graphically put it, the attitude represented by the Director of the Guangdong Bureau of Trade when he said in 1980 that in order to encourage foreign investors into the zones the Chinese would allow exploitation to a certain degree which may well

> give rise to a social problem not found in the [export processing zones] of the capitalist economies - an ideological conflict among people who are brought up in a socialist environment with a deep-rooted belief that the exploitation of workers is evil and that their government is an opponent of the capitalistic mode of production (Wong and Chu 1985:19-20).

The higher wages available to workers in the zones and their easier access to consumer goods, including television sets capable of receiving Hong Kong programs, creates a new elite which may also generate political tension.

On the cost side, the higher set up costs due to the relatively isolated location of the zones, and their low level of initial development, have already been noted. But in addition to the extra costs of setting up the infrastructure, sites and services and supporting administration, they must be made available to potential investors on an even more highly subsidized basis than they are in other countries' export processing zones. This is because China is a late entrant into the business of competing for the relatively footloose industries which can be attracted to the zones. China has to match the incentives offered by existing zones. It has to more than match them, in order to compensate for the foreign entrepreneurs' perception that establishing in China is a riskier venture.

Conclusion

The jury is still out on the question as to whether or not export processing zones are a cost effective way of increasing exports and generating net inflows of foreign exchange, generating inflows of capital and new technology, creating employment and stimulating regional development. China has embarked on a program of establishing several Special Economic Zones, which have some of the characteristics of export processing zones but not all. The existing Special Economic Zones, especially that at Shenzhen, have made some progress towards playing the role associated with export processing zones, albeit slower and less impressively than hoped for and possibly at a higher cost than necessary. As the program continues and expands, the benefits may increase and the cost may decrease as learning by doing and scale economies are reaped.

The question arises as to whether or not the creation of an export processing zone, or free port, in one or more of the Special Economic Zones might help speed up this process and lower the cost of achieving the goals. The answer must be that it is unlikely. This is because the reasons why the Special Economic Zones have been limited in their achievements and more costly to run than hoped for, will also constrain the operation of successful export processing zones or free ports. Indeed the more rigorous isolation of the export processing zones or free ports from the domestic economy, which is the only major difference between them and Special Economic Zones, may, by enforcing export orientation and strictly limiting access to domestic markets and capital, make China even less attractive to the target group of foreign investors who are already wary of investing there.

It was argued in the introduction that one of the lessons which has been learnt from the experience of existing zones is that the creation of a policy enclave does not divert attention away completely from conditions in the host economy. Export processing zones in economies which are judged to be hostile to foreign investment in general or which are considered to be politically unstable in some way, will be less attractive to investors than zones in countries in which the politico-economic environment is more stable, more welcoming to foreign capital in general and more liberal in its general economic environment. Thus the export processing zones in Taiwan Region and the Republic of Korea are generally considered to have been more successful than those in India and the Philippines.

It should also be remembered that China can already effectively use Hong Kong as an export processing zone, or free port, and that it can continue to do so more easily once that region is reintegrated. It would appear, then, that whether or not there is any point in China going to the extra expense of establishing export processing zones or free ports within the Special Economic Zones, with all the extra expense that would entail, is a moot point.

9

Export processing zones: the economics of offshore manufacturing*

Peter G. Warr

1. Introduction: export processing zones and economic welfare

Beginning in the mid-1960s, many less developed countries (LDCs) became committed to a major effort to promote additional exports of non-traditional manufactured goods. One form this effort took was the establishment, in the early 1970s, of export processing zones (EPZs). By the early 1980s, around thirty-five of these zones existed in Asia alone, with an aggregate employment of at least a quarter of a million (United Nations 1985), and probably much more. Globally, their importance was probably more than double this.

EPZs are special enclaves within the economy in which investing firms (mostly but not entirely foreign) enjoy favoured treatment with respect to imports of intermediate goods, company taxation, provision of infrastructure, and freedom from industrial regulations applying elsewhere in the country. The details of these provisions vary across countries but a universal feature is the almost complete absence of either taxation or regulation of imports of intermediate goods into the zones. These privileges are subject to the conditions that all (or almost all) of the output produced is exported and that all imported intermediate goods are utilized fully within the zones or re-exported.

The economic activities occurring within the zones have primarily been labour-intensive light manufacturing processes such as garment production, electronics assembly, assembly of light electrical goods, etc. A notable feature of the firms producing within the zones is their international mobility. The rate of turnover of firms within the EPZs is high and firms leaving an EPZ in one country are often migrating to an EPZ in another, in which conditions are somewhat more favourable.

The 'footloose' character of the firms producing within EPZs has been overlooked in most of the small amount of theoretical work that has appeared on EPZs. The theoretical literature has drawn upon the classical Heckscher-Ohlin model of production for analysing the impact of EPZs (see Hamada 1974; Rodriguez 1976; Hamilton and Svensson 1982, 1983). Insofar

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as this analysis treats capital as being internationally immobile, it fails to capture the international mobility of capital goods that is central to the functioning of EPZs. The conclusion of most of this literature is that EPZs are necessarily welfare-reducing for the countries establishing them, but this conclusion is misleading. It is heavily dependent on the Heckscher-Ohlin framework being used and is thus largely irrelevant for EPZs as they actually operate.

Empirical work on EPZs has also tended to overlook the footloose character of the EPZ firms. For example, in an otherwise useful descriptive study of EPZs, Spinanger (1985:65) writes that the establishment of EPZs tends to produce positive welfare effects analogous to those resulting from a movement towards free trade, because the elimination of tariffs and other distortions causes factor intensities of production 'to correspond more closely with the factor endowment of the host country'. This conception of the EPZ also rests on the traditional presumption that capital is internationally immobile. It assumes implicitly that the capital used in the EPZ is domestic capital in fixed total supply, which has moved to the EPZ from elsewhere within the host country. Once this assumption is discarded it is seen that the preoccupation with the factor intensity of production within EPZs, found in much of the empirical literature on the zones, is of limited relevance for an assessment of the welfare impact of the zones.

The question of whether the establishment of EPZs raises or lowers welfare in the host country has been central to most of the economic literature on the zones. Most studies have stopped short of formal benefit-cost analysis, with the explanation that the data on the zones under study are inadequate for the purpose. In fact, ample data can be obtained on the exports, imports, employment, use of utilities and other aspects of the economic performance of EPZs, along with their infrastructure costs, administrative costs, etc. The zones are closely monitored by the host country governments and, when compared with the data available for other public projects in LDCs, the data available are unusually detailed and complete. What the empirical studies have most lacked has been an analytical framework within which the benefits and costs of EPZs can be identified conceptually and then quantified empirically.

In this study, we begin in Section 2 with some elaboration of the footloose character of the EPZ firms and its implications for our understanding of the EPZs. In Section 3 we provide a brief description of the incentive package and other facilities provided in the 'typical' EPZ. Section 4 describes the economic performance of EPZs in four Asian countries. Indonesia, the Republic of Korea, Malaysia, and the Philippines. Section 5 introduces a simple conceptual framework - the 'enclave model' - within which the benefits and costs of an EPZ can be analysed, and discusses the various components of such an analysis. Section 6 then presents the results of detailed benefit-cost analyses of each of the above four EPZs. Finally, Section 7 discusses the relationship between EPZs and trade policy in general.

2. The economics of the footloose manufacturer

In its standard forms, international trade theory treats 'factors of production' - capital, labour, land - as being immobile internationally but mobile domestically. In contrast, final commodities are considered mobile across as well as within international boundaries. Export processing zones illustrate well the fact that some factors of production are also mobile internationally. This is especially true of the capital goods owned by internationally 'footloose' manufacturing firms. Export processing zones are essentially devices for attracting these firms and their capital equipment into the host country. Within the EPZs, these internationally footloose capital goods are combined with domestic labour - relatively immobile internationally - to produce traded goods which the firm sells abroad. The firm tries to move its capital equipment to those countries in which its capital goods can earn the highest rate of return.

In its most simplified form, this process can be viewed as an indirect form of labour export. The foreign firm producing within the EPZ receives the services of domestic labour in its manufacturing activity. In return, the domestic workers receive wages. Indeed, it is no coincidence that many of the countries to have established EPZs have also been involved in the direct export of labour (on a temporary basis) to the Middle East and elsewhere. In the case of export processing zones, the capital goods move to where the labour is; with direct labour export, the roles are reversed. Of course, the goods produced within the EPZs must themselves be internationally mobile - capable of being exported. No such restriction applies when the labour is exported directly - for example, 'guest workers' are often employed in the construction sector.

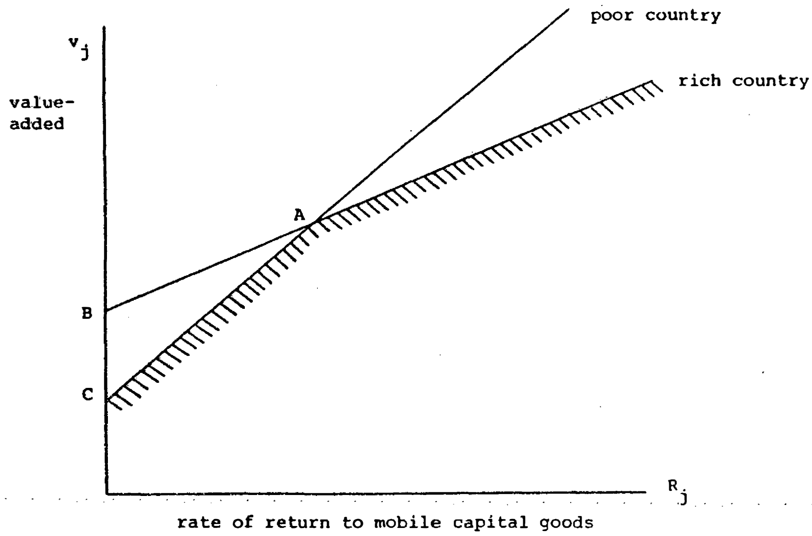
A simple model within which the international mobility of capital goods can be represented was recently developed by Jones (1980) and Caves and Jones (1985). We shall present an amended version of the Caves and Jones model to bring out the economic features which are most relevant for our understanding of EPZs.

The processing activity occurring within the zone produces final traded goods using three kinds of input: traded intermediate inputs, capital goods and labour. The traded intermediate inputs include the electronic components, plastic casings, electrical circuitry etc., used in producing electronic goods, and the textiles, buttons, cotton thread etc., used in producing garments. The prices of these goods, the wages paid, and the return to the capital goods used are formally related by

$$P_j = \Sigma_i a_{ij} P_i + a_{Kj} R + a_{Lj} w \qquad (1)$$

where P_j is the price of the final good j, P_i is the price of intermediate input i, a_{ij}, a_{Kj} and a_{Lj} are the amounts of intermediate good i, capital goods and labour, respectively, required to produce a unit of good j, and w is the wage rate. These variables then determine R_j, the rate of return to capital goods resulting from the production of good j in this country's EPZ.

Figure 1 **Movement of the footloose manufacturer**



It is convenient to define the value-added generated per unit of production of good j, by

$$v_j = P_j - \Sigma_i a_{ij} P_i \qquad (2)$$

and (1) now becomes

$$v_j = a_{Kj} R_j + a_{Lj} w \qquad (3)$$

Figure 1 now represents equation (3) for each of two countries, labelled 'poor' and 'rich'. In the rich country, unit labour costs, $a_{Lj}w$, are higher, but unit requirements of capital goods, a_{Kj}, are lower than in the poor country. The rich country's schedule thus has a higher vertical intercept (unit labour costs) - i.e. point B lies above point C - and a lower slope (unit capital good requirement) than the poor country's.

The footloose manufacturer moves to the country where the highest value of R_j can be realized and this is represented by the shaded surface in the diagram. When unit value-added is high, implying high rates of return to the capital goods specific to commodity j, the rich country is able to attract the processing activity. This occurs because in the rich country the scarce capital goods are used more efficiently (unit capital good requirements per unit of output are lower); unit labour costs are in this case relatively unimportant. But if unit value-added falls, implying a squeeze on returns to its commodity-specific capital goods, unit labour costs become relatively more important. Below point A the process migrates to the poor country.

This chain of events is consistent with the 'product cycle' process identified by Vernon (1966). It suggests a gradual migration of newly developed manufacturing processes from rich countries - where scarce capital goods are used more efficiently - to poor countries - where unit labour costs are lower - as international competition forces the unit value-added generated by these processes downwards.

3. The economic environment of the EPZ

The economic background

Japan's relaxation of restrictions on investment abroad by Japanese firms led in the early 1970s to competition among Asian countries hoping to attract these and similar foreign investments. Light manufacturing activities which are intensive in the use of unskilled and/or semi-skilled labour were identified as targets. These are activities in which low-wage countries possess a potential cost advantage and which are capable of being transported internationally at low cost. The export processing zone (EPZ) provided an economic environment especially designed to attract these 'footloose' activities.

Most of the countries hoping to attract foreign investment of this kind already possessed protected manufacturing sectors and had experimented unsuccessfully with import substitution-based industrialization policies. It was becoming clear to governments as well as to others that these inward-looking policies had inhibited the development of export-oriented manufacturing and had made it more difficult to attract export-oriented foreign investment. The potential gains from foreign exchange earnings and employment creation that a more export-oriented strategy could bring were being foregone. Nevertheless, the political power of groups benefiting from the protectionist domestic environment had become entrenched. This provided the second major attraction of the EPZ concept: it left the protection of domestic industries intact.

Export processing zones seemed to provide the opportunity for some of the advantages of export promotion to be realized without threatening the position of the existing manufacturing sector. This was achieved by offering an economic environment to export-oriented firms which was free of many of the barriers to trade and industrial regulations characterizing the domestic environment of these countries, on condition that all the output of these firms was to be sold abroad. Production was to take place within enclaves designed, on the one hand, to attract export-oriented light manufacturing firms and, on the other, to shield domestic firms from competition with the goods produced by the foreign firms producing within this liberalized enclave environment.

Characteristics of EPZs

The detailed characteristics of EPZs vary somewhat from country to country, but four features are almost universal. The following account provides a simplified description of the 'typical' export processing zone.

Duty free import of raw materials. All raw materials required for the production of exports may be imported duty free and without regard to any quantitative restrictions applying within the domestic economy. The final goods produced may then be exported without payment of export taxes, sales duties, etc. The EPZs may be physically located anywhere within the host country, but it is helpful to think of the processing activities undertaken within them as occurring 'outside' the country insofar as the jurisdiction of normal customs provisions is concerned.

Goods produced within EPZs may not normally be sold within the domestic economy. Despite this, when consignments are rejected by foreign buyers, fail to meet delivery deadlines etc., permission can be given for their domestic sale. In such cases, these sales are usually treated as imports into the domestic economy and attract the normal customs duties applying to other imports. Sales of this kind simply displace imports which would otherwise have occurred from other sources.

In addition, EPZ firms' purchases of raw materials and intermediate goods from within the domestic economy frequently attract subsidies. These subsidies, commonly called 'rebates' or 'drawbacks', are intended to counteract the effects of domestic protection on the prices of these goods. The rates of subsidy are in principle equal to the tax (import duty, excise tax, sales tax etc.) component of the domestic prices of these goods. The subsidies are intended to encourage backward linkages between EPZ firms and the domestic economy. In the early 1970s it was hoped that linkages of this kind would generate substantial benefits to the local economy both because the social costs of producing these goods was below their market prices and also because commercial contact between domestic suppliers and EPZ firms would benefit the former through 'technology transfer'.

Company income tax holidays. Exemptions from normal company income tax provisions are frequently offered. The exemptions are not permanent, with an official duration of from three to ten years, but it is common for EPZ firms to negotiate successfully for continuation of these tax holidays long beyond their official expiration. With some credibility, firms are able to claim that if the present host country does not extend the tax free period the firm will simply relocate to an EPZ in another country. Once it has relocated, the firm's tax free holiday begins again.

The Philippines does not offer company income tax holidays but does offer a generous schedule of deductions. Very little tax revenue has been raised from the Philippines' EPZs because most firms declare overall trading losses. Many firms have declared losses every year for over a decade while still continuing to produce and, in some cases, to expand operations considerably. It is well understood that vertically integrated firms utilize transfer pricing in an effort to relocate their profits internationally. The minimization of global tax burdens and the avoidance of political risk are motives for this behaviour. Experience in the Philippines suggests that the use of check-pricing methods to monitor transfer pricing is ineffective. In short, tax holidays are less important than they may appear.

Streamlined administration. EPZ firms are typically provided with streamlined customs documentation requirements for imported raw materials and capital goods and for exported final products. This is intended to expedite their clearance. It is also common for EPZ firms to be exempted from some regulations applying elsewhere within the local economy.

In most of the countries establishing EPZs, a separate branch of the administration has been created to handle these matters, its mandate being specifically to provide assistance to EPZ firms. Examples are the Philippines' Export Processing Zone Authority and the Republic of Korea's Free Export Zone Administration Office. These bodies are intended to act as intermediaries between EPZ firms and the rest of the government. The aim is to reduce EPZ firms' administrative costs in dealing with the various government departments and to prevent unnecessary and costly production delays from occurring. The degree to which these bodies are themselves empowered to act on behalf of the rest of the government varies greatly among countries, but a common administrative problem is that other government departments resent interference with their 'normal' functions and occasionally become uncooperative with the EPZ bodies.

The regulations applying within the domestic economy but from which EPZ firms are exempted typically include: restrictions on the degree of foreign ownership of investing firms (EPZ firms are usually allowed to be fully foreign-owned); restrictions on repatriation of profits; restrictions on the employment of foreign nationals in managerial, supervisory and technical roles; and requirements for special approvals for the importation and installation of labour-saving capital equipment. EPZ firms may also be granted access to the host country's allocation of import quotas. This is a very important matter for garment producers wishing to export to the European Economic Community.

Superior physical infrastructure and subsidized utilities. An EPZ consists of a heavily fenced area with a perimeter and gates policed by customs officials. Policing is necessary to prevent materials which entered the country duty free from being smuggled into the domestic economy. Within this area, infrastructure facilities such as roads, telephone and telex communications are normally superior to those found outside. Nevertheless, these facilities are still generally inferior to those found in the industrial areas of developed countries.

In addition, utilities are sometimes subsidized. Electricity tariffs are especially important in this regard because the light manufacturing enterprises found in EPZs are heavy users of electrical power. The rates charged within EPZs are frequently below, and are never above, industrial rates charged elsewhere in the host country.

EPZs almost invariably include standard-construction factory buildings, constructed and managed by government authorities, within which investing firms may rent floor space if they wish. Rental rates charged for floor space within the standard factory buildings are generally lower than commercial industrial rates elsewhere within the country. Alternatively, firms may lease land within the zone and construct their own buildings. If firms which have constructed their own buildings later leave the zone, they may sell or lease these buildings to other EPZ firms.

4. The economic record of EPZs in four Asian countries

Aggregate economic performance

This section summarizes the results of detailed studies of EPZs in four Asian countries. These are:

- Indonesia: Jakarta Export Processing Zone
- Republic of Korea: Masan Free Export Zone
- Malaysia: Penang Free Trade Zone
- Philippines: Bataan Export Processing Zone

Each of these zones began operations in the early 1970s. Each is the largest and longest operating EPZ in the country concerned. Our discussion in this section draws on detailed case studies of these four zones previously conducted by the present author.[1]

Tables 1 to 4 summarize the aggregate economic performance of each of these zones up to 1982. Between them, the four EPZs depicted in these tables employed roughly 90,000 people in 1982. In itself, this is not especially impressive, but these zones are representative of the many such EPZs in Asia with a total employment of at least three times this number. The Indonesian zone is less representative of EPZs in general than the other three. It is small and has a number of unusual characteristics. Nevertheless, it is worthy of examination in that it was begun as an

[1] These case studies are: Indonesia (Warr 1983), Republic of Korea (Warr 1984); Malaysia (Warr 1985a); and the Philippines (Warr 1985b, 1987). Readers wishing to obtain more detail on individual cases may refer to these studies.

experimental project and, partly on the basis of its performance, the Indonesian government has decided to establish several more EPZs.

A feature of the zones not revealed by the tables is their industrial composition. A typical pattern is that in the earliest years of the zones garment production dominates, but electronics subsequently becomes more important. Indonesia and Malaysia are exceptions in that garments have always been the dominant industry in the former and electronics in the latter. These two industries are quite different. Garment production is generally far more labour intensive and utilizes a low level of technology. Some production processes in electronics production and assembly are also labour-intensive, but generally speaking both capital intensity and the level of technology employed are much higher than in garments production.

Table 1 **Indonesia: aggregate economic performance of Jakarta EPZ, 1977-82**

	Unit	1977	1978	1979	1980	1981	1982
No. of firms	Firms	4	7	15	18	18	18
Employment	Persons	773	1653	4317	6374	7520	7742
Exports	US$m	0.9	12.8	5.9	18.7	28.7	37.5
Imports of raw materials	US$m	1.2	11.8	6.4	13.0	13.5	13.8
Local raw materials	US$m	-	0.01	0.6	1.9	5.2	9.5
Imports of capital goods	US$m	0.1	1.0	1.0	1.2	0.8	0.3
Local capital goods	US$m	-	-	0.03	0.01	0.03	0.01
Local/total raw materials	%	-	0.08	9	13	28	41
Local/total capital goods	%	-	-	2.9	0.8	4.6	3.2
Total official taxes	US$m	0.01	0.15	0.33	0.40	0.56	0.56
Estimated unofficial taxes	US$m	0.23	3.11	1.32	2.76	3.6	3.6

Sources: Bonded Warehouses Indonesia, Jakarta; International Monetary Fund, *International Financial Statistics*, various issues; and Warr (1983).

Local raw material use and technology transfer

One of the host country benefits which was anticipated when the zones were established was that EPZ firms would gradually increase their purchases of raw materials from the local economy. It was thought that the commercial contacts accompanying these backward linkages would benefit domestic firms through 'technology transfer'. The record in this regard has been disappointing. Except for Indonesia, local raw materials comprise no more than a third of total raw material use. In Indonesia, local textiles are purchased significantly by the zone's garment producers. In the Republic of Korea, some electrical and electronic components are purchased by electronics producers, along with the textiles purchased by garment producers. In contrast with this, in Malaysia and the Philippines, the use of local raw materials is quite low. In Malaysia, local raw materials comprise only a few per cent of total raw material use. Purchases of raw materials and intermediate goods produced by *other* EPZ

Table 2 **Republic of Korea: aggregate economic performance of Masan EPZ**

	Unit	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
No. of firms	Firms	70	115	110	105	99	99	97	94	88	89	83
Employment	Persons	7072	21240	20822	22248	29615	28401	30960	31153	28532	28016	26012
Exports	US$m	23.9	145.5	298.0	257.1	441.0	496.5	579.2	621.7	577.3	664.4	601.3
Local sales	US$m	0.0	0.0	6.2	7.9	25.2	28.1	81.7	90.7	82.5	99.0	92.1
Imports of raw materials	US$m	16.5	91.7	176.7	137.8	216.7	239.3	270.7	293.0	266.2	295.9	281.7
Local raw materials	US$m	1.0	23.1	48.6	44.6	92.7	120.0	130.0	149.4	131.3	144.0	142.7
Local/total raw materials	%	6	20	22	24	30	33	32	34	33	33	34
Total wages paid	US$m	5.9	17.9	18.9	23.2	36.2	41.4	47.5	51.5	49.4	59.0	59.6
Total electricity	US$m	0.2	1.3	2.3	2.0	3.4	3.8	4.5	4.8	4.5	5.1	5.3
Total taxes paid	US$m	0.0	1.44	1.79	1.55	1.71	1.50	1.85	1.78	1.74	2.31	2.17

Note: All monetary quantities are in current prices.
Sources: Administration Office, Masan Free Export zone, Masan; International Monetary Fund, *International Financial Statistics*, various issues; and Warr (1984).

Table 3 **Malaysia: aggregate economic performance of Penang EPZ**

	Unit	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
No. of firms	Firms	10	21	31	32	33	34	35	38	41	49	50
Employment	Persons	-	15627	18569	22412	25780	27895	30372	35379	38355	38078	36298
Exports	US$m	2.1	53.6	94.2	192.2	274.3	226.1	591.5	1085.2	972.9	717.5	714.9
Local sales	US$m	-	0.1	2.3	1.7	6.9	4.6	9.4	2.6	0.06	14.5	47.1
Imported raw materials	US$m	1.3	55.0	127.8	185.1	237.2	193.6	425.6	492.4	707.0	523.1	520.6
Local raw materials	US$m	0.07	0.9	2.8	7.1	6.7	10.5	13.3	14.5	14.5	16.9	22.8
Raw material from EPZs	US$m	-	-	-	5.8	12.0	13.1	40.3	64.5	76.6	48.9	82.3
Imported capital equipment	US$m	0.4	13.4	54.7	29.7	9.5	15.2	120.0	53.9	36.6	36.7	36.6
Local capital equipment	US$m	0	1.8	18.9	27.0	2.2	3.6	2.6	21.7	3.3	4.0	3.9
Local raw material/total raw material	%	5	2	2	4	3	5	3	3	2	3	4
Local capital equipment/total capital equipment	%	0	12	26	48	19	19	18	29	8	10	10
Total wages paid	US$m	0.9	6.3	5.2	14.7	17.4	25	43.2	56.6	72.3	80.5	83.4
Total electricity used	US$m	0.4	0.7	1.7	5.7	6.9	7.0	8.6	12.1	17.8	23.5	23.2
Total taxes paid	US$m	-	-	-	-	-	-	0.14	0.15	0.09	0.74	1.29

Note: All monetary quantities are in current prices.
Sources: Penang Development Corporation, Penang; International Monetary Fund, *International Financial Statistics*, various issues; and Warr (1985a).

Table 4 **Philippines: aggregate economic performance of Bataan EPZ**

	Unit	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
No of firms	Firms	1	5	14	16	39	38	47	51	51	52	52
Employment	Persons	-	1298	3321	5502	8962	12821	17495	18877	19204	19858	19410
Exports	US$m	0.4	0.9	2.1	7.3	22.4	39.7	73.1	98.2	122.7	134.0	159.6
Local sales	US$m	-	3.9	6.8	4.3	11.7	13.6	14.8	16.5	13.3	8.2	5.0
Imports of raw materials	US$m	0.2	0.5	2.9	7.8	15.8	38.5	47.3	66.4	77.3	81.2	122.3
Local raw materials	US$m	0.07	0.2	0.3	0.8	4.2	9.9	3.8	7.9	9.5	7.4	8.5
Local/total raw materials	%	30	30	8	10	21	20	7	11	14	9	6
Total wages paid	US$m	..	0.6	1.5	2.5	4.3	6.6	9.3	14.4	20.4	22.4	21.8
Total electricity used	US$m	..	0.1	0.3	0.5	0.7	0.9	1.2	1.6	1.5	1.7	1.6
Total taxes paid	US$m	..	-	0.07	0.3	0.4	0.6	1.5	2.2	1.9	1.7	1.4
Total domestic borrowings	US$m	1.8	22.8	61.4	117.8	85.9	89.4	3.3	2.8	2.3	1.9	1.5

Note: All monetary quantitites are in current prices.
Sources: Export Processing Zone Authority, Manila; International Monetary Fund, *International Financial Statistics*, various issues; and Warr (1985b).

firms are more than three times as important. In the Philippines, the share of local raw materials had declined to less than 10 per cent by 1982.

The reluctance of EPZ firms to purchase local raw materials is not due primarily to a lack of financial incentive to do so. 'Drawback' and similar schemes are nearly always in place. Rather, the managers of EPZ firms consistently report that the low and unreliable quality of locally purchased raw materials is the main obstacle to their use in the EPZs. Entire shipments of finished goods can be rejected if raw materials or intermediate goods of inferior quality have been used. A second factor is the changing industrial composition of the EPZs. In LDCs generally, garment and footwear manufacture typically uses a much higher proportion of local raw materials than electronics assembly. As the composition of the EPZ shifts toward electronics, the proportion of local raw materials used declines correspondingly.

A third factor explaining the reluctance to rely upon local raw materials derives from the global strategies of the corporations involved. Especially in electronics, the parent firms wish to preserve a high level of international mobility for their processing operations. Developing long term commercial relationships with suppliers in the countries in which EPZs happen to be located does not serve this goal. It is more expedient to source these purchases internationally if the corporation wishes to retain the capacity to relocate its processing activities internationally at short notice.

Quite aside from the sourcing of raw materials, it is generally recognized that the 'technology transfer' that was initially hoped for has not occurred. Of course, many of the firms producing in EPZs possess no technology that is not universally available. Labour intensive garment production is a good example. Those that do, of which electronics firms are the best example, guard their technological secrets carefully, even from their own workforces. This information is a valuable corporate asset and at least some of the firms' competitors in the international market place are generally also producing within the same EPZ. To hand technological knowledge to the locals is also to hand it to one's competitors. Technological knowledge is costly to produce and it is hardly surprising that it is not readily given away; it has to be purchased.

Working conditions and wages

The working conditions provided in EPZs have been widely criticized by writers from industrialized countries. This criticism has commonly rested on a comparison between an exaggerated picture of harsh working conditions and low wages in EPZs, on the one hand, with the more favourable conditions to be found in industrialized countries, on the other. Often this perspective is combined with the insistence that EPZ firms are 'exploiting' their workers and enjoying enormous profits, all at the expense of potential employment in similar labour-intensive industries in the industrialized countries. This type of discussion has usually not reflected familiarity with the employment conditions and wages existing outside the EPZs in the developing countries concerned. It has thus ignored the possibility that workers are better off being 'exploited' in an EPZ than they would be in its absence.

Useful information on working conditions, wages and worker characteristics in the Philippines' Bataan EPZ, and in similar industries elsewhere in that country, was provided by Castro (1982). Zone workers are typically female (74 per cent of total employment), unmarried (two-thirds of Castro's sample) and between the ages of seventeen and twenty-four years. Most have no previous factory experience (two-thirds of Castro's sample) and turnover rates are high. The average duration of zone employment is around three years. Most of the workers in Castro's sample were temporarily absent members of larger households (average size six members) and the income of the zone worker represented roughly half the combined cash incomes of these households.

Of those workers in Castro's sample who had worked previously in paid employment, average EPZ earnings were 35 per cent higher than previous earnings. According to Castro's survey, almost half of all zone workers worked overtime and the average working week was fifty-four hours. Castro concludes that there was a clear income gain from moving to a job in the EPZ.

Data provided in a survey conducted by the Philippines' Ministry of Trade and Industry[2] suggest that, allowing for differences in living costs, real wages of unskilled workers are roughly the same in the EPZ as in similar employment in the city. Real wages for skilled workers were somewhat higher in the EPZ. Skilled workers must be recruited from the capital city, requiring a premium to attract them, whereas unskilled workers may be drawn from any part of the country, including rural areas.

EPZ firms appear generally to adhere to minimum wage laws, when these exist. Firms operating within the domestic manufacturing sector may often avoid these regulations but the greater visibility of the EPZs and their politically sensitive position apparently makes violations of minimum wage restrictions more difficult within the zones.

5. The enclave model and the welfare economics of EPZs

The enclave model

We now consider the net welfare impact of an EPZ. We wish to identify the *net* benefits and costs resulting from the EPZ's existence, as

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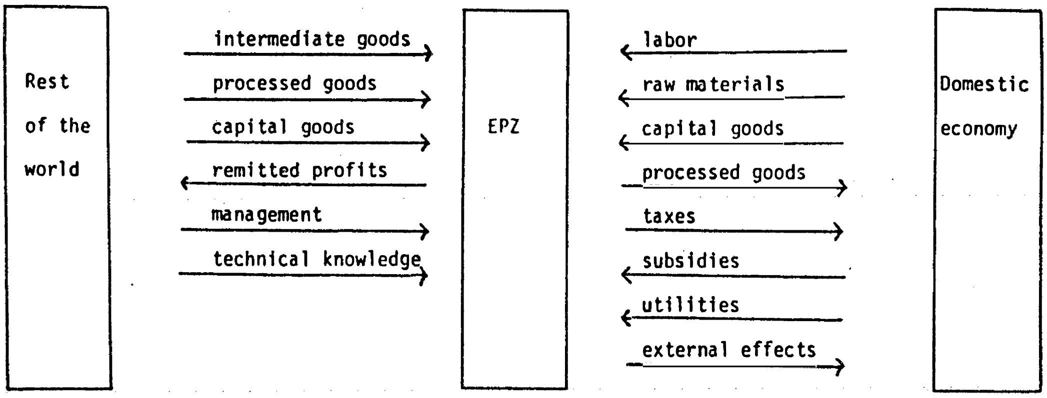
[2] Details are provided in Warr 1985b.

experienced by citizens of the host country.[3] Our aim is thus to compare the observed situation in which the zone is present with the hypothetical one in which it is absent. The foreign ownership of firms and the 'offshore' nature of the zones themselves suggests a simple framework within which their impact on the domestic economy can be analysed. This framework can be termed the 'enclave approach' following Corden (1974, 1985). It is depicted in Figure 2.

Figure 2 **The enclave model**



Consider the flows of goods and services and the financial flows which occur, on the one hand, between the EPZ and the rest of the world and, on the other hand, the flows occurring between the EPZ and the domestic economy of the host country. The essence of the enclave approach is that flows of the second kind are relevant for the evaluation of the welfare impact of the zone on citizens of the host country but that flows of the first kind are not.

The EPZ firms purchase intermediate goods and capital goods from abroad and these flows are accompanied by financial flows in foreign currency in the opposite direction.[4] In vertically integrated firms these transactions occur within the firm, giving rise to questions of transfer pricing. The firm may also repatriate profits to parent companies abroad. The thrust of the enclave approach is that all these transactions between the EPZ firms and the outside world are irrelevant for an evaluation of the effects of the zone on economic welfare within the host country, except insofar as they impinge on linkages between the EPZ and the domestic economy.

The issue of transfer pricing provides a good illustration of this point. Suppose first that there is no company income taxation applying to EPZ

[3] Our discussion will disregard income distributional considerations within the host country.

[4] To keep Figure 2 simple these financial flows are not indicated in the diagram. Most of the flows shown in the diagram are accompanied by financial flows in the opposite direction, but exceptions are taxes and subsidies and external effects such as transfers of managerial and technical knowledge.

firms within the host country - an accurate assumption for many countries possessing EPZs. Transfer pricing influences whether a firm's profits will be realized, in accounting terms, in the host country or elsewhere. But so long as these profits are earned by the (foreign) EPZ firm, whether they are realized in the host country or abroad, whether they are repatriated or retained by the EPZ subsidiary, is essentially irrelevant for economic welfare in the host country. But now, if these profits are subject to domestic taxation within the host country, transfer pricing affects the magnitude of these taxes and becomes highly relevant.

We discuss below the main forms of economic linkage between EPZ firms and the domestic economy and their welfare significance. This leads to an algebraic expression for the net benefits of an EPZ.

Components of a benefit-cost analysis of EPZs

Firms' profits and losses. Most firms occupying EPZs are foreign-owned. The profits or losses of these foreign firms, to the extent that they are retained or incurred by the firms themselves, do not enter our calculations directly. The *domestically* owned portion of profits and losses from firms in the zone properly belongs in a national economic evaluation of the zone but these profits can seldom be estimated satisfactorily from the available data.

To the extent that they are collected, data on firm's profits and losses are unreliable. Many firms report losses every year while still expanding their operations. These data in any case normally suggest that if the profits of domestic firms were to be measured accurately they would comprise only a miniscule proportion of the overall benefits from the EPZs.

In the benefit-cost analysis component of this study firms in the zones will be treated, for the most part, as if they were fully foreign-owned. Therefore, the profits of domestically owned firms will be omitted. This is generally unavoidable, given data limitations, but in view of the small proportion of overall investment in the EPZs that these firms typically represent, this omission is minor.

Foreign exchange earnings. Public discussion of the benefits of EPZs has placed considerable stress on the foreign exchange earnings derived from the zones. This discussion has tended to reflect the presumption that these earnings have direct welfare relevance for the host country. For example, the possible effects that the transfer pricing practices of multinational corporations may have on the country's foreign exchange earnings from the zones has been widely discussed. But to a first order of approximation, the foreign exchange earnings of foreign-owned firms in the zones merely constitute transactions between these firms and firms abroad. Transactions of this sort have no direct effects on the economic welfare of domestic nationals and are therefore essentially irrelevant for the calculation of the host country's net gain from the zones.

It must be realized that, regardless of the difference between a firm's officially declared exports and imports for a given year, the corresponding amount of foreign exchange remains the property of the firm itself (leaving possible taxation aside for the moment). It would be incorrect to call this amount the host country's foreign exchange earnings. These funds may be:

(i) held in liquid form in foreign exchange accounts, whether inside or outside the host country;

(ii) used for the purchase of imported capital equipment; or

(iii) converted into the domestic currency to be spent on wages and purchases from the local economy.

In a country where foreign exchange and capital markets are relatively open, (i) is of little welfare importance and reduces simply to a decision as to where the firm chooses to do its banking; (ii) can also be disregarded if the imported capital equipment is ultimately disposed of abroad or scrapped; (iii) does have welfare importance because the opportunity costs of labour and raw material purchases are commonly thought to be less than the prices paid by the EPZ firms. This is due in part to distortions in the domestic price system. That is, a net benefit may accrue to the host country from these purchases. Thus, providing the estimation of these benefits is treated separately, the foreign exchange earnings of EPZ firms is not in itself an important issue.

To purchase domestic raw materials and services from the domestic economy and to hire local workers, EPZ firms must convert sufficient of their foreign exchange earnings into the domestic currency to met these expenses. The conversion of foreign exchange into domestic currency is made through the central bank at the official exchange rate. The question therefore arises whether the social value of the foreign exchange received by the host country's central bank exceeds the value of the domestic currency the firms are given in exchange.

The value of the foreign exchange received must be understood to mean the domestic value of the additional traded goods and services the host country may absorb as a result of the addition to its foreign exchange holdings. The value of the domestic currency given in exchange to EPZ firms means the domestic value (opportunity cost) of the domestic factors of production and intermediate goods and services purchased by EPZ firms with these funds. In the circumstance where exchange controls and domestic protection imply that the social value of foreign exchange in terms of the domestic currency exceeds the official exchange rate, the requirement that these currency conversions must be made through the central bank at the official exchange rate constitutes, in effect, a form of taxation.

It is helpful to think of this calculation in two separate steps. The first step is the calculation of the value in domestic currency of the additional traded goods the host country is able to absorb as a result of foreign currency received from EPZ firms relative to the amount of domestic currency given up. This ratio is equivalent to the shadow price of foreign exchange divided by the official exchange rate. The second step is the calculation of the social opportunity cost of the domestic factors and intermediate goods purchased by the firms relative to the market prices of these items, also in domestic currency. This part of the calculation, involving the shadow prices of domestic factors and raw materials, is best handled separately.

Of course, the firms' true foreign exchange earnings will presumably differ from their conversion of foreign exchange into domestic currency. Transfer pricing may be one of the mechanisms by which this profit is realized, but for an *ex post* measurement of the host country's actual gains, the firm's actual foreign exchange conversion is the relevant statistic.

Employment. The host country government's concern for the employment generated by the zone presumably reflects the view that the social benefits derived from generating an additional job outweigh the costs. In economic terms, therefore, the wage received by the worker is considered to exceed the social opportunity cost of employment in the zone. Difficulty arises when attempting to measure the relevant opportunity costs. Wages paid in the zones are normally equal to, or slightly above, wages paid in similar types of employment within the manufacturing sector outside the EPZ. Nevertheless, estimates of the social opportunity cost of unskilled and semi-skilled labour commonly suggest that it is substantially less than wages paid in the manufacturing sector.

Estimates of the social opportunity cost (shadow price) of skilled and unskilled labour can be found for most LDCs. A difficulty in applying these estimates arises in relation to the transfer of skills to EPZ employees. The estimated value of these transfers, from a domestic standpoint, could in principle be incorporated either by reducing the estimated opportunity cost of labour parameter, or by increasing appropriately the wage received parameter. Either way, the ratio of the estimated opportunity cost of labour to the effective wage received would be reduced. However, in the absence of detailed estimates of the value of these transfers there is no solid basis for making such an adjustment. Consequently, some arbitrariness cannot be avoided.

Technology transfer. During the planning of the EPZs it was usually hoped that the zones would enhance transfers of technology and skills to firms in the domestic economy. It is generally agreed among zone administrators that the zones have been a major disappointment in this respect. Those firms which do possess technological knowledge from which local firms could benefit (most notably electronics and electrical firms) have been largely isolated from the domestic economy. Little of the raw materials and capital equipment purchased by these firms has in fact come from local sources. This is understandable, given the difficulty experienced by EPZ firms in finding local sources for their raw material requirements which can meet the necessary standards of quality and reliability of supply, but since these backward linkages are a major potential source of technology transfer it must be said that the benefits hoped for from this source have not been realized.

Managerial techniques and methods of product quality control are inevitably transferred to the local middle level managers the firms employ. If these workers then seek employment in domestic industry, the managerial training they have received confers a benefit to the domestic economy. This is not fully captured in the wages these workers have received in the EPZs. After a period of employment by foreign firms in the zones these managers can obtain significantly higher salaries than they could have obtained after a similar period of employment elsewhere, and this suggests that these benefits do exist. One way of treating this is to say that the social opportunity cost of the employment of these workers in the EPZ is lowered by such training. These externality effects can be incorporated in principle by adjusting the opportunity cost of labour parameter.

Domestic sales. Almost all of the output of EPZs must be sold abroad, but domestic sales are sometimes permitted when, for example, finished consumer goods are for some reason rejected by foreign buyers. In this case, these sales are typically treated as imports into the host country and duty must be paid at the normal rate. The economic effect of these sales is that they substitute for imports which would otherwise have occurred. The net value to the host country of the goods consumed is the value at c.i.f. prices of the imports which are displaced, but this is also the net price actually paid to the EPZ firm for the goods. The net price paid is the tariff-inclusive domestic price minus the duty. Thus, as these sales have no net welfare effects, they can be ignored in the benefit-cost analysis.

Purchase of domestic raw materials and capital goods. Governments typically wish to encourage the use of domestically produced raw materials, intermediate inputs and capital goods by EPZ firms. This can be interpreted as meaning that the prices paid by firms for these materials are thought to exceed the marginal social costs of supplying them. Locally produced raw materials and capital goods generally compete with imported substitutes and the rates of duty applied to these imports provides the basis for the estimation of the difference between the social opportunity cost of providing these imports (their border c.i.f. prices) and the prices paid (tariff inclusive). When EPZ firms receive a rebate (drawback) from the host government equivalent to the amount of duty which would have been paid on these imported inputs, there remains no net welfare effect from their purchase by EPZ firms.

Electricity use. EPZ firms, especially garment and textile producers, are major users of electricity. The benefit-cost analysis must compare the tariff rates paid with estimates of the long run marginal cost (LRMC) of supplying additional power. If the average tariff exceeded the LRMC, the use of electricity by EPZ firms would entail a net tax. In the reverse case, there would be a net subsidy.

Domestic borrowing. One of the inducements sometimes offered to attract foreign investors has been the freedom to borrow on local capital markets, sometimes combined with government guarantees of the repayment of these loans. The freedom to borrow locally would be relatively unimportant if the capital markets of the host country were open to private capital flows to and from other countries because these loans would then simply induce private capital inflows from abroad. They would not displace local investment, but when local capital markets are closed, and interest rates deliberately suppressed, the analysis is quite different. This combination of factors is common among Latin American countries (Diaz-Alejandro 1970) and also occurs in the Philippines.

The implication of the suppression of domestic interest rates is that the value of domestic output foregone as a result of additional borrowings by (foreign) firms operating in an EPZ exceeds the value of the compensation ultimately received from the EPZ firms in the form of interest and principal repayments. Another way of stating this is that the ratio of the shadow price of capital to the market price, S_K^*, will then exceed unity.

Taxes. The taxes raised from EPZ firms are generally quite small, but they nevertheless represent a clear source of economic benefit for the domestic economy. They would not be received if the firms were not present, generally speaking, but firms which transfer to the zones from elsewhere in the host country, or foreign firms which would have entered in any case, if the zones were not present, represent exceptions. These exceptions seem certain to be unimportant. Most of the investment is foreign and, according to firm managers interviewed, very few of these firms would have entered the host countries in the absence of the package of incentives represented by the EPZs. The full value of taxes received is therefore counted as a net benefit to the host country.

Development and recurrent costs. The establishment of the zone site, its maintenance and administration all represent economic costs of the zone and in principle all should be evaluated at shadow prices. Reliance on financial costs is to some extent inevitable in the absence of disaggregated data. Against these costs must be placed the payments made by zone firms for land leasing and any other charges levied on zone firms, not counted elsewhere in the analysis.

Net benefits of an EPZ

It is now possible to present a simplified algebraic expression for the net economic benefit derived from an EPZ, evaluated from the point of view of the host country. In a given year, t, the net benefit can be written

$$N_t = (L_t w + M_t P_M + E_t P_E + R_t + T_t) S_F^*$$

$$- (l_t w^* + R_t P_R + {}_t P_E + B_t S_K^*) - A_t - K_t \qquad (4)$$

where:

- L_t denotes employment in year t;
- w denotes the wage paid;
- M_t denotes raw material used in year t;
- P_M denotes the price paid for this raw material;
- E_t denotes the utilities (e.g. electricity) used in year t;
- P_E denotes the price paid for these utilities;
- T_t denotes taxes paid in year t;
- R_t denotes interest and principal repayments of domestic loans in year t;
- S_F^* denotes the ratio of the social value of foreign exchange to the official exchange rate;
- w^* denotes the shadow price of labour;
- P_M^* denotes the shadow price of domestic raw material;
- P_E^* denotes the shadow price of utilities;
- B_t denotes domestic borrowing in year t;
- S_K^* denotes the ratio of the shadow price of capital to its market price;
- A_t denotes the administrative costs of the zone in year t;
- K_t denotes the capital costs (including maintenance) of the physical infrastructure of the EPZ provided by the host government in year t.

Purely for simplicity, the above expression assumes all market and shadow prices to be constant over time. This restriction will not apply to our empirical results, presented later.

The first bracketed term represents the payments made by the EPZ firm to employ labour, purchase raw materials and electricity, to repay domestic loans and to pay taxes. These payments must be made in the domestic currency and so sufficient foreign exchange must be converted to domestic currency (at the official exchange rate) to finance these payments. This accounts for the term S_F outside the brackets, the ratio of the social value of foreign exchange to the official exchange rate.

The second bracketed term represents the social opportunity cost of the labour, raw materials, utilities and financial capital absorbed by the EPZ firms. The final two terms, A_t and K_t, denote the administrative and construction costs of the zone. During the construction of the zone these may be the only non-zero items. The net present value of the zone is then calculated by discounting N_t over the life of the zone.

6. Benefits and costs of EPZs: evidence from four Asian countries

In this section we summarize and compare the results of detailed benefit-cost analyses of EPZs conducted for each of the four Asian countries discussed earlier: Indonesia, the Republic of Korea, Malaysia and the Philippines. First, we summarize the basis for the cost-benefit analyses, in particular, the sources of the shadow prices which were used. Next, results of the benefit-cost analyses are presented, and these results are then compared and analysed.

Sources of shadow prices

Estimates of the shadow prices of labour, foreign exchange, capital, etc., are available for most developing countries. In some cases, these estimates lie buried in consultants' reports, government studies and other unpublished manuscripts, but they can be found. Their quality varies widely. In this study, the best available estimates of the shadow prices and other relevant parameters for each country have been drawn upon. These were:

- Indonesia: Hughes (1983), Pitt (1981) and Munasinghe (1980)
- Republic of Korea: Koo (1981) and Nam (1981a, 1981b)
- Malaysia: Veitch (1977, 1979, 1984)
- Philippines: Medalla and Power (1984) and Manalaysay (1979)

The above studies provided the basis for the shadow prices used but variations were made in some cases to update or correct the estimates they contain or to amend them to a form more suitable for the evaluation of EPZs in the country concerned. In several cases the 'correct' values of the relevant shadow prices remain highly uncertain and in such cases a range of values was used. We summarize below the values used for the most important shadow prices in the 'base case' calculations. These are the seemingly 'most likely' values in each case. They are summarized in Table 5 as ratios of the estimated shadow prices to market prices.

Results of the benefit-cost analysis

Table 6 summarizes the contributions of each of the major benefit-cost categories to the calculated aggregate net present value (NPV) of the EPZs. Net costs appear as negative items. The calculations each assume a real discount rate of 7.5 per cent and total life for the EPZ of twenty-five years. The final row of Table 6 displays the calculated internal ratio of return for each of the EPZs. Table 7 presents the NPV computations in somewhat more convenient form by expressing the various components as a percentage of the *gross* benefits of the EPZ (the sum of all positive NPV items appearing in Table 6).

Table 5 **Estimated ratios of shadow prices to market prices**

	Indonesia	Rep of Korea	Malaysia	Philippines
Labour	0.75	0.91	0.83	0.64
Foreign exchange	1.00[a]	1.08	1.11	1.25
Domestic raw material	0.85	0.92	0.90	0.96
Domestic capital equipment	0.85	0.98	0.91	0.96
Electricity	1.05	1.33	0.93	1.30
Domestic financial capital	..	..	..	1.58

[a]Hughes (1983) concluded that the effects of Indonesia's import barriers (tariffs and quotas) which raise domestic prices above border prices, and subsidies on the consumption of traded goods (such as rice and petroleum products) roughly cancelled, implying that the shadow price of foreign exchange was approximately roughly equal to the official rate.

Components of computed net benefits and costs

A methodological digression on foreign exchange earnings. Before discussing the results in Tables 6 and 7 in detail it is useful to focus attention on a methodological point: the distinction between the benefits deriving from 'foreign exchange earnings' and those deriving from other sources. As explained above, the benefits attributed to foreign exchange earnings arise from the fact that EPZ firms must convert foreign exchange into domestic currency in order to meet their domestic costs. These costs include their wage bills, purchases of domestic raw materials and capital equipment, taxes, utility bills, factory rentals, etc.

It is analytically possible to separate the net gains arising from the conversion of foreign exchange into domestic currency, on the one hand, from those arising from the subsequent domestic payments on the other, as reflected in Tables 6 and 7. Alternatively, the two can be combined. Indirectly, foreign exchange is being paid to domestic workers, raw materials suppliers etc. The separation of the benefits deriving from 'foreign exchange earnings' from those arising from the subsequent domestic payments is potentially misleading.

Table 6 **Welfare impact of EPZs: composition of net present value** (US$ million, 1982 prices)

	Indonesia	Rep of Korea	Malaysia	Philippines
Employment	4	39	111	59
Foreign exchange earnings	-	65	94	72
Local raw materials	5	16	18	3
Local capital equipment	-	-	10	-
Taxes and other revenue	23	18	10	11
Electricity use	-1	-13	-53	-4
Administrative costs	-13	-17	-4	-23
Infrastructure costs/subsidies	-3	-68	-43	-196
Domestic borrowings	-	-	-	-147
Total NPV	15	40	143	-225
(IRR, %)	(26)	(15)	(28)	(-3)

Consider a hypothetical example: the conversion of US$1 million into Philippine pesos at the official (1982) exchange rate of 9.17 pesos = US$1 for the payment of local wages. When the US$1 million is converted into pesos, there is a net gain to the Philippines arising from the difference between the official exchange rate and the shadow price of foreign exchange - the social value of this foreign exchange. The estimated value

Table 7 **Percentage composition of net present value** (per cent of gross benefits)

	Indonesia	Rep of Korea	Malaysia	Philippines
Employment	13	28	46	41
Foreign exchange earnings	-	47	39	50
Local raw materials	16	12	7	2
Local capital equipment	-	-	4	-
Taxes and other revenue	72	13	4	8
Electricity use	-3	-9	-22	-3
Administrative costs	-41	-12	-2	-16
Infrastructure costs/subsidies	-9	-49	-18	-135
Domestic borrowings	-	-	-	-101
Total	47	29	59	-155

of 1.25 for the ratio of the shadow price to the official rate implies a net gain of 2.29 million pesos. Now when the 9.17 million pesos is paid to the Philippine workers there is a second net gain arising from the difference between the social opportunity cost of labour and the market wage. The

estimated value of 0.64 for the ratio of these two quantities implies a net gain of 3.3 million pesos. The distinction between these two sources of gain arises from the way our shadow prices have been defined. But the two are aspects of the one phenomenon: the (indirect) payment of US$1 million to hire domestic workers. Philippine workers are indirectly earning US$1 million in foreign exchange, generating a net gain to the Philippines of 4.59 million pesos.[5]

Table 8 now shows the re-estimated distribution of net benefits taking the above argument into account. This table substitutes for the first five rows of Table 7. The gains from 'foreign exchange earnings' have been redistributed among the other benefit-cost categories. The results for Indonesia are unchanged from Table 7 because the estimated net gains from foreign exchange earnings were zero in that case (see note (a) to Table 5) The percentage totals do not add to 100 because only part of the firms' foreign exchange conversions can be attributed to the four categories appearing in the table.

Table 8 **Percentage composition of net present value with exchange earnings distributed** (per cent of gross benefits)

	Indonesia	Rep of Korea	Malaysia	Philippines
Employment	13	55	68	69
Local raw materials	16	14	15	3
Local capital equipment	-	-	8	0
Taxes and revenue	72	14	5	9

Net benefits. We shall discuss first the composition of the estimated net benefits from EPZs (the positive elements of Tables 6 to 8) and then turn to the cost items. Since the results for Indonesia require special explanation it is convenient to begin with the results for the other three countries.

From Table 7 it is clear that the major sources of gain in the Republic of Korea, Malaysia and the Philippines derive from employment and foreign exchange earnings. With the gain from foreign exchange earnings distributed as in Table 8, employment accounts for more than half the gross benefits in each case. Local raw material use and tax revenues are of much smaller importance and across the three countries the overall importance of these two sources of gain is roughly similar. For these three countries, it is a useful approximation to say that the EPZs represent a form of indirect labour export; other sources of benefit are of minor importance.

5 The welfare outcome for the Philippines would have been essentially no different if the US$1 million had been paid directly to Philippine workers, who then converted it into the domestic currency.

Turning to the results for Indonesia, two unusual features of the Jakarta EPZ must be stressed. First, an unusually high proportion of the raw materials used are sourced from within Indonesia. These are primarily Indonesian textiles used in the manufacture of garments. By 1982 over 40 per cent of all raw materials used were purchased from within Indonesia. The estimated net gains from this source actually outweigh the estimated net gains from employment generation.

The second unusual feature is the importance of the 'tax and other revenue' category. The composition of the US$22.6 million net gain from this source appearing in Table 6 is: property tax $2.9 million; other official taxes $0.9 million; 'unofficial' taxes $25.9 million; and expenditure on the drawback scheme -$7.1 million.[6] The 'unofficial' tax item is discussed in detail elsewhere (Warr 1983; Gray 1979). It represents the outcome of rent-seeking behaviour on the part of government officials.

Although it seems appropriate to include the 'unofficial' tax item as a net benefit to Indonesia it is important to draw attention to it, both because of what it reveals about the way the net benefits from the zone are distributed across individuals and because the collection of these rents is achieved at considerable social cost. A labyrinth of regulations and a highly 'personalized' administration of both these regulations and the normal customs provisions provide the opportunity for heavy costs to be imposed on uncooperative firms. The outcome is clearly a wasteful form of revenue collection. If these revenues are excluded from the benefit-cost analysis, the NPV of $15 million appearing in Table 6 becomes -$11 million, and the IRR becomes negative (Warr 1983).

The $7.1 million expenditure on the 'drawback' scheme is a subsidy to the use of domestic raw material. This is intended to counteract the effects of protection on the costs of the imported items used in the production of these raw materials. Insofar as the estimated net gain from the use of these raw materials is smaller than this amount ($4.9 million), it appears from these calculations that the 'drawback' provisions are costing Indonesia more than they are worth.

Net costs. The net costs of achieving the benefits discussed above are summarized by the negative elements of Tables 6 and 7. In Table 7 they are expressed as a percentage of the sum of all net benefit items. The striking features of this table are the enormous infrastructure cost of the Philippines' Bataan EPZ and the heavy cost resulting from the granting to EPZ firms of (subsidized) access to the Philippine capital market. Each of these items is by itself sufficiently large to outweigh the sum of all net benefits derived by the Philippines from its EPZ.

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[6] The negative sign draws attention to the fact that this item is a revenue outlay - a subsidy - rather than a tax receipt.

Another feature of the table is the low administrative and infrastructure cost of Malaysia's Penang Free Trade Zone. On the other hand, it is notable that the cost of Malaysia's subsidization of electricity effectively outweighs the combined benefits derived from the use of local raw materials, use of local capital equipment and all tax revenues raised from EPZ firms.

7. Summary and conclusions: EPZs and trade policy

EPZs are vehicles for attracting foreign investment in export-oriented light manufacturing activities. At the time the zones were becoming popular, in the early 1970s, the governments establishing them almost invariably mentioned three objectives for the zones: foreign exchange earnings, employment, and technology transfer. The competition among host countries for 'footloose' processing activities meant that individual countries generally found it more difficult than they had expected to attract this kind of investment. Nevertheless, to the extent that firms were attracted, the first two objectives of the zones were met.

The zones have contributed significantly to employment of unskilled and semi-skilled workers. Moreover, the conversions of foreign exchange into the domestic currency that were necessary to pay these workers contributed to the host country's foreign exchange earnings. Indirectly, EPZ workers were being paid in foreign exchange and in this respect EPZs were similar to the direct export of labour. Indeed, most of the countries establishing EPZs have also been exporting labour directly, on a temporary basis, to the Middle East in particular.

The EPZs are generally isolated from the domestic economy. The substantial gains from 'technology transfer' that were initially hoped for do not seem to have occurred. It had been hoped that the commercial contacts between EPZ firms and domestic firms that would accompany backward linkages from the zones to the domestic economy would lead to externalities of this sort, to the benefit of the domestic firms. The use of domestic raw materials by EPZs have been less significant than had been hoped, and these linkages have generally been in areas where 'technology transfer' is not particularly likely.

EPZ firms have made little contribution to tax revenue. This has been equally true in countries which have granted company income tax holidays to investing firms and countries which have not. In the latter case (e.g. the Philippines) transfer pricing practices have been used to minimize the firms' global tax burdens. Many firms have declared operating losses every year for over a decade while still continuing to expand production. In those countries where tax holidays have been granted, the threat to leave the EPZ on expiration of the holiday has enabled many firms to extend the holidays well beyond their official expiration dates.

The example of the Philippines shows that the achievement of the limited benefits to be derived from EPZs can be extremely costly. The Philippines' first and largest EPZ, the Bataan EPZ, was used as an instrument of regional decentralization. The infrastructure costs of constructing an EPZ in the isolated site chosen were very high. Moreover, to attract foreign firms into the zone, the Philippine government granted EPZ firms preferential access to the Philippines capital market at suppressed interest rates and with government guarantees of the loans. Not surprisingly, most of the firms' investments in the zone were financed in this way (Warr 1985b, 1987) - over 90 per cent of the total! The heavy subsidy that was implicit in this policy led to a heavy cost for the Philippines.

Despite this, the example of Malaysia shows that EPZs can be established and operated at relatively low cost. The Malaysian and Korean examples show that, viewed as public investments, EPZs can yield acceptable social rates of return. Of course, in these benefit-cost calculations all other policy instruments, and in particular all other instruments of trade policy, are being held constant. It is possible to look at the EPZs in this partial manner, but this exercise raises the question of whether it would have been possible to achieve the benefits available from EPZs in another, more cost-effective way.

Export processing zones always provide for the duty free importation of raw materials and intermediate goods for use in export production. In recent years, several of the countries to have established EPZs in the 1970s have made this provision available to firms producing for export but located outside the EPZs. The duty free raw materials are held in bond on the factory site until required for production. The Philippines, Malaysia and the Republic of Korea are good examples. To some extent, this change of policy undermined the advantages of the EPZs, but it showed that construction of expensive special zones was not necessary for the duty free characteristic of EPZs to be made available to other firms (whether producing for export or not).

Duty free importation of raw materials and intermediate goods is not the only attraction of EPZs. Reduced 'red tape', through the simplification of customs procedures, clarification or elimination of regulations, and the upgrading of industrial infrastructure are also important. There is no necessity for these provisions to be confined to the EPZs. A point that managers of foreign firms mention frequently is the importance of stable and clear policies in the attraction of foreign investment. This obviously applies as much outside the EPZs as within. In short, most of the features that have enabled EPZs to attract foreign investment could be applied outside the zones, presumably with similar effectiveness, and without the necessity to establish new special enclave areas, potentially at high cost.

The same features of the domestic economic environment which impede the attraction of foreign investment, and which EPZs are intended partly to counteract, also impede the development of efficient domestic industries. To the extent that creating a liberalized environment within the EPZs deflects attention from these matters, the net outcome could well be worse than what would have occurred in the absence of the zones.

The benefits from EPZs are very limited. They are definitely not 'engines of development'. For countries in the early stages of development, the zones can provide an efficient and productive means of absorbing surplus labour. Even then, the zones could never be expected to provide more than a modest part of the solution to the employment problems of these countries. The problem is much too vast. As industrial development proceeds, and the surplus labour which characterized the earlier stages of industrialization is absorbed, interest in EPZs tends to wane. Examples are Taiwan and the Republic of Korea. Having been pioneers in the establishment of EPZs in the late 1960s and early 1970s, these countries have more recently become considerably less interested in this type of enclave development. Perhaps in the next couple of decades a similar change of attitude can be expected in many of the LDCs now actively promoting EPZs.

Finally, it must be stressed that the success of the liberal economic environment existing within EPZs says a great deal about the nature of the economic environment existing outside the zones in the countries establishing them. In cases where EPZs have been successful in attracting new foreign investment, earning foreign exchange, generating employment etc., two kinds of lesson can be drawn. Within a partial context, something is revealed about the utility of the export processing zone concept itself, but something far more important is also revealed about the degree to which restraints on trade, unnecessary bureaucracy and restrictive regulations have inhibited and continue to inhibit economic activity outside the zones.

10

Export processing zones and free ports: overview, role and impact

Ulrich Hiemenz and Dean Spinanger

Introduction

In recent years export processing zones (EPZs) and free ports have become increasingly viewed as a dependable way of attracting foreign investments, promoting industrialization, generating exports and jobs as well as income and gaining access to foreign knowledge, know-how and technology. To a large degree the surge in interest can probably be attributed to the success which the Republic of Korea and Taiwan as well as the free-zone city-states of Hong Kong and Singapore seem to have had with this approach. What is concluded to be particularly appealing in the former cases is simply that a country can profit from the advantages of free trade - without having to open up the entire country - by merely delimiting a specific area and allowing economic activities therein to be subjected to far fewer distortions than in the rest of the economy. Aside

Table 1 **Development of EPZs in Asia**

Country	<1970	1970-79	>1979
Bangladesh	-	-	1
Burma[a]	-	-	1
China, Peoples Republic of	-	-	18
China, Taiwan	1	2	1
India	1	1	-
Indonesia	-	2	-
Korea, Republic of	-	2	-
Malaysia	-	10	1
Pakistan	-	-	1
Philippines	-	3	3
Sri Lanka	-	1	1
Thailand	-	-	1
Vietnam[a]	-	-	1
Total	2	21	29

[a]Exact status not known.

from the development potential assumed to be embodied in the concept, the fact that foreign investments are to be limited to an easily controlled area no doubt enhances the attractiveness to countries worried about the impact of foreign competition on budding or potential domestic producers.

Such general reasoning clearly underlies the decision to establish EPZs in the Peoples Republic of China. However, what is not clear is the degree to which the decision to establish EPZs in this country also fully embraced the preconditions, which need be observed in order to emulate the abovementioned success stories. This paper attempts to shed light on these necessary preconditions by assessing the experience with EPZs both in industrialized and in developing countries. Based on this analysis the paper concludes with recommendations on how EPZ policies should be structured to effectively achieve the stated aims. These recommendations are made in light of postulated changes in international economic parameters and under the assumption that establishing an EPZ today - with more than fifty already established in Asia (see Table 1) - means that much effort must be invested to ensure that firms will become interested in tapping the potential of a country which otherwise made it difficult to access its comparative advantages. This statement also embodies the basic philosophy behind the thrust of this paper.

Conceptual issues and experiences in selected countries

Of the various types of free economic activity zones (FZs) listed in Table 2, free trade zones and free ports are but two possibilities out of a wide spectrum of examples. Their common denominator with all other FZs is that certain laws and regulations otherwise applied to the domestic economy are not applied to them. The non-application or exemption principle, however, applies only to the zone/port area, i.e. the free trade zones are locationally delineated from the rest of the economy.[1] The success of a free zone depends on whether in its entirety it offers the right services and facilities at the right place for the right price. Reworded this means its success is influenced by its accessibility to all necessary inputs (be they in the form of transportation and communications infrastructure, labour, services, etc.) and its competitive position relative to other zones in terms of the price and quality of its services.[2] While the technical/engineering aspects of setting up a free zone can be handled with relative ease (but are not the topic of discussion here), almost the entire spectrum of economic issues comes into focus when appropriate policies for establishing efficient free zones are to be designed. Furthermore, the particular type of free zone has to be taken into consideration as each

[1] Generally speaking the exemption is limited to the collection of customs' duties and taxes as well as to documentation customs and formalities. Other laws and regulations dealing with occupational hazards, environmental pollution, employment, etc. are usually still applied. For sure criminal and civil laws of the host country are in full force in the zone. In the case of restrictive business laws (e.g. no foreign control of local companies) these are often waived or at least weakened for companies establishing operations in free trade zones.

[2] In an analysis of free ports in Europe, written (in 1914) with the purpose to gather support for the establishment of such facilities in the USA, it was noted (Kennedy 1914:37-9) that although - inter alia - total charges for a specific cargo were considerably higher for Hamburg than for other European ports, it was the most successful port. It was thus concluded that the package offered in Hamburg was such that it was in its entirety superior to the other ports.

type places particular demands on the economic environment. Obviously the sale of duty/tax free items to tourists has other implications than the establishment of an EPZ, and there are basic differences between developing countries and industrialized countries in terms of the problems faced and hence the type of measures and facilities necessary. While such differences are probably not so relevant in connection with free ports for transhipping, as concerns EPZs or other free economic activity zones inherent differences would seem to exist.

Table 2 Overview of various types of free zones

Type of zone	Specifics (1); Delineation (2a); Application (2b); Expected impact (3); Examples (4)
Duty/tax free area, free ports, bonded warehouses	1. Tariffs, import taxes and indirect taxes not applied. 2a. Locational delineation 2b. Appplies to goods entering domestic custom area or entering with a delay. 3. Serves transhipment/storage and processing/manufacturing of goods. 4. Free port in Hamburg, bonded warehouses in Bangladesh and Malaysia, free trade zones in US and other similar facilities in many countries.
Duty/tax free sales	1. Tariffs and indirect taxes eliminated. 2a. Delineation based on object of economic activity. 2b. Applies to persons living abroad and/or going abroad. 3. Increases domestic sales and - to the extent the domestic goods are concerned - domestic production. 4. Duty free shops at airports or in special stores (e.g. Philippines), rebates for tourists at borders.
Free banking zones	1. Elimination of minimum reserves requirements, interest rate regulations, exchange controls. 2a. Delineation based on object of economic activity. 2b. Applies to foreign customers or to customers accessing foreign markets. 3. Increases international competitive position of domestic banks or makes country more attractive for foreign investments. 4. Euromarket banks, i.e. Panama, Luxembourg, London, New York.
Free insurance zones	1. Elimination of restrictive, state-imposed insurance regulations 2a. Delineation based on object of economic activity. 2b. Applies to foreign customers. 3. Increases international competitive position of domestic insurance companies. 4. Lloyds of London, New York Free Insurance Zone.
Free trade zones; export processing zones	1. Elimination of tariffs, direct/indirect taxes, distortions export in factor/ financial markets and bureaucratic red tape. 2a. Locational delineation. 2b. Applies to production of products to be exported. 3. Promotes economic development of a country via increased employment/labour incomes, technology/know-how transfer and demand for domestic inputs. 4. Bangladesh, Shannon (Ireland), Malaysia, Republic of Korea, Sri Lanka.
Free economic activity zones	1. Elimination of taxes, tariffs, import distortions. 2a. Locational delineation. 2b. Applies to all research development, production and end-use activities in a zone. 3. Promotes economic development in an otherwise distorted economy.

In industrialized countries FZs are perceived as being a measure capable of helping to revive those market forces which have become entangled in the web of bureaucracy and well-meant social legislation woven into modern welfare states. Activities moving into these zones would probably come primarily from the domestic economy, i.e. from areas particularly afflicted by rigidities caused by laws and regulations. Entrepreneurs setting up in these zones might be surfacing from the underground economy or they might be intramarginal producers just moving into the zone to avoid closing shop in the normal economy. There might also be entrepreneurs who have just shifted locations to profit from the additional benefits (free rider).

In the developing countries the problems are of a different nature as the goal in these cases is to speed up the industrialization process, to widen the industrial base and to gain access to new technologies and production methods. Since most of the impulses are expected to come from the outside in the form of foreign investment, the free-rider problems would be minimal or at least irrelevant to the country concerned. In the developing countries the key problems are thus related to determining the conditions under which linkages, transfer of technology and demonstration effects can be efficiently promoted. Although answers to these questions are of prime importance to the countries seeking practical advice as well as to international organizations (like the World Bank) financially and technically promoting industrialization strategies, at the moment only tentative responses can be given, deduced from experience made in various countries. Mistakes can be avoided when setting up zones if note is taken of experience in other countries.

Ireland: Shannon airport export free zone - from a potential ruin to a potent motor of industrialization

It did not take long after the expansion of the Shannon airport in the mid 50s before it was realized that the new airport facilities, set up to profit from the refuelling stops necessary for the propeller driven planes on the North Atlantic run, would soon become a white elephant. With the introduction of jet planes in the late 50s refuelling in Shannon was no longer necessary and hence its days as a key stopover were numbered. However, following its own example of being the first to establish a duty free shop for passengers in transit, it turned unused land bordering on the airport into a free zone. In order to attract foreign investment into the zone (and in addition to the duty free import of all necessary inputs) red tape was reduced considerably and certain taxes eliminated. Not only did the zone absorb more employees than jobs lost at the airport,[3] it also quickly began to account for noticeable export shares.[4] Furthermore, it paved the way for a new influx of investors into Ireland, who had become aware of the country's potential through the success of the Shannon free zone. By doing so the zone proved to be instrumental in helping Ireland industrialize.

Great Britain: enterprise zones and free ports - emulating Hong Kong?

After the decline of the British Empire and the secular decrease in world trade shares, Great Britain experienced a decay of many of its cities as inhabitants and firms migrated out of them to the suburbs or to other more prosperous regions. Concomitant with and induced by this loss of human capital and entrepreneurs the tax base of the cities eroded and

[3] By 1962 the employees in the zones outnumbered those at the airport (see Kellehrer 1976, for details).

[4] At one point in time in the 60s exports from the Shannon free zone accounted for over 30 per cent of total exports.

social welfare costs increased. By the second half of the 70s a solution to the ensuing economic difficulties hardly seemed to be forthcoming from time-tried, run-of-the-mill incentive programs - what was called for was something which would invigorate city centres and act as a catalyst for further economic development. The approach chosen seemed to be both simple and convincing: emulate Hong Kong in Liverpool. Free enterprise zones would be established in which - in addition to the usual free port arrangements - the government's involvement was to be kept to a bare minimum.[5]

As it turned out, however, the Hong Kong principle is hardly reflected in the measures enacted to create the twenty-five enterprise zones now in existence. Instead of being free of interference, the enterprise zones offer, for instance, indirect subsidies (i.e. increased depreciation and tax holidays) which prompted the erection of capital structures rather than the promotion of new entrepreneurial activities or jobs. Although 8000 jobs were created in the zones by 1983, most of the new firms admitted that they would have started up anyway, i.e. without subsidies.[6] Whether or not the six recently established free ports will fare better is an open question - there need to be some signs that a different approach is being taken there.

USA: foreign trade zones and the internationalization of the American economy

At the beginning of the century and up through the early 70s the United States remained a country whose involvement in international trade was quite nominal.[7] However, during the 70s and 80s seemingly radical changes took place in the USA as - largely because of the dollar devaluation and the ensuing revaluation - American entrepreneurs began to discover foreign markets and foreign entrepreneurs began investing heavily in the US. As a direct result of these changes an old piece of legislation, the 1934 Foreign Trade Zones Act, began to take on a new meaning for entrepreneurs, who quickly realized how important such facilities can be in an increasingly competitive environment. By 1970 (i.e. 36 years after the Zones Act became law) only ten foreign trade zones had been approved, of which three had already closed down permanently. Since then (i.e. up to 1984) ninety-seven new zones plus sixty subzones have been established or approved (of which four have closed down) and seventeen applications are still on the books (see Table 3). While this rapid increase was first concentrated (up through 1979) in the so-called 'frost-belt' in the United States (this covers roughly the northeast and north central regions), since

[5] See Butler (1979:95-128) for background information and a more detailed description of the enterprise zone concept. For a discussion of US enterprise zones also see Urban Affairs Quarterly 18(1):3-71).

[6] For an interesting analysis of the zones through 1983 see Tym and Partners.

[7] Exports as a share of GNP were less than 4 per cent around 1900, about 5 per cent in the mid 20s and roughly 6.5 per cent in 1970; in the following ten years this figure increased by 100 per cent to 13 per cent.

then the zones have spread across all regions with particular stress in the sun belt.[8] Accompanying this boom in foreign trade zones was a shift in their location *vis-à-vis* transportation infrastructures - zones directly connected to airports or located on major highways/rail lines now prevail over those located in coastal or inland ports.

Table 3 **Number of Foreign Trade Zones[a] in USA by transportation facilities and region: 1934-84**

	1934 -49	1950 -69	1970 -74	1975 -79	1980 -81	1982 -84	Total
Adjacent to or in							
Harbour	4	6	2	13	5	-	30
Airport	-	1	1	13	8	-	23
Other	-	3	5	17	17	-	42
Northeast							
New England	-	-	-	5	5	3	13
Mid Atlantic	1	1	-	12	1	3	18
North Central							
East North Central	-	2	1	9	2	13	27
West North Central	-	-	3	2	2	3	10
South							
South Atlantic[b]	-	2	-	8	10	8	28
East South Central	-	-	-	1	3	10	14
West South Central	1	2	2	2	4	7	18
West							
Mountain	-	-	-	2	2	2	6
Pacific	2	3	2	2	1	5	15
Total	4	10	8	43	30	54	149

[a] Subzones and some non-contiguous zones are counted separately.
[b] Includes Puerto Rico.
Source: Own calculations based on Foreign Trade Zones Board (various years) for data through 1981 and *Journal of Commerce*, Nov. 1, 1984:5c-8c, for 1982-84.

The advantage of the US Trade Zone Act lies in the possibility of designating parts of factories or warehouses as a subzone and then perform within this zone any processing or production activities on imported goods (if necessary with imported machines as well) without having to pay any import duties.[9] Only when the goods officially enter the US customs area are duties applied to the imported product.[10] The success of these zones is

[8] If pending applications are included only five states do not have a foreign trade zone as of October 1984. While it is contended by some that too many zones have been created and the measure has gotten out of hand (see Journal of Commerce 1984:1c), actually the strong demand for such facilities indicates that much yet can be done to release trade and production from the shackles of restrictions.

[9] For instance subzone 33A encompasses 147 acres (out of 300 acres) of the VW plant in Westmoreland County, Pennsylvania. Although the VW zone was one of the first 'automobile subzones', as of 1984 forty of the sixty subzones now in existence were specifically set up for the automobile industry.

[10] In 1984 US customs law was changed so as to have customs apply only to the value of the imported product and not to the additional value added it may have accumulated in the US foreign trade zone outside official US customs boundaries. Furthermore, the duty is not necessarily calculated on the imported product itself, but rather on the finished product into which it has been incorporated - and such finished products usually have considerably lower duties than those on parts or components.

documented first of all by the rapid expansion of merchandise passing through these zones (1970: US$100 million; 1984: US$3.5 billion). Secondly, since the share of manufacturing exports from the zones is twice as high in the total US manufacturing industry (i.e. roughly 40 per cent vs. 20 per cent), the competitive edge which these zones yield would seem to be aptly demonstrated.

The Asian experience: from India's half-hearted flirt to Taiwan's freelancing spin-offs

With about half the world's population living in a dozen or so developing countries along the western rim of the Pacific and the northern rim of the Indian Ocean, a major thrust of free trade zones in these countries would obviously be to provide additional employment opportunities.[11] Aside from Hong Kong and Singapore (a near free zone), India, where the creation of an area free of the ubiquitous bureaucratic distortions would be a boon for investors, began relatively early with a free zone approach. First in Kandla (1965) and then in Santa Cruz (1974) zones were established in which red tape was reduced considerably but some import restrictions as well as domestic content requirements remained. It seemed to be a cautious attempt rather than a clean cut with the past. Further complicating the situation in Kandla was the intention to use the free trade zone as a vehicle to provide strong industrialization impulses to an undeveloped area. This attempt failed as the lack of transportation and communications infrastructure proved to be an insurmountable barrier for potential investors.[12]

The fact that only slightly more than 4000 persons were employed in both zones (around 1980) reveals quite openly that Indian zones were far from being structured or run in an economically efficient manner.

Accompanying India in establishing free trade zones in a less than economically efficient manner were Indonesia and the Philippines. In Indonesia,[13] the third most populous land among the 'rim' countries, the attempt to convert the virtually unpopulated island of Batam (just across the Straits from Singapore) into a new growth pole far removed from existing population centres in Indonesia has yet to meet with interest on the part of investors. While it is true that the Indonesian government has been practicing a policy of massive population dispersal from the island of Java, the major resettling of Indonesians to an artificially created economic system with almost no (voluntary) linkage possibilities would not seem to be a viable approach to providing more job opportunities. The situation was

11 For a recent overview and analysis of some of these zones see Spinanger (1984a); for comments on free zones in economic development see Spinanger (1984b). A somewhat different viewpoint is expressed in the ILO/ARTEP studies by Edgren and Maex as well as the ILO review by Kreye et al.; see also sources quoted therein.

12 Before the Kandla port could accept containers, most imports and exports had to be routed via Bombay, 800 km away. Background information on the Indian zones can be found in Business International (1982:12-27) and Wolf (1982:110-12).

13 For an analysis see Warr (1983a), who also analysed the zones in Korea in a similar vein (1983b).

similar in the Philippines where the major zone at Bataan had to be provided with newly created infrastructure (including housing for the workers), because the site was carved out of a virtually uninhabited area.[14] As in the case of Kandla, regional goals were aimed at in setting up Bataan. This included hooking up the zone to Manila via a new highway and establishing port facilities so goods could be transhipped to the Manila harbour or airport. While the zone does employ some 20,000 persons (1981), the massive investments necessary to set it up (and the lack of linkages as well as the capital intensity of the investments) make the expenditures for the zone look less than beneficial to the economy.

Contrasting with these three countries there are the rather positive developments in Malaysia and Taiwan.[15] In Malaysia, with eleven free trade zones in existence by 1984, over 75,000 jobs (or about 13 per cent of the total manufacturing labour force in 1980) were created in a period of only eight years. This was not only accomplished with relatively nominal expenditures for infrastructure, but the types of industry attracted to the zones were quite labour intensive (i.e. mainly in electronics). Furthermore the urban location of most of the zones offered all the facilities required by foreign investors and even allowed some linkages to develop. Perhaps most indicative of the success of the zones is the fact that Malaysia is the largest non-OECD supplier of numerous electronic components to the United States.[16] Even more successful in terms of generating employment, exports and linkages, were the three zones in Taiwan. It was probably not only the relatively well trained labour force which supported this development, but also the policy package (i.e. low tax rates and incentives aimed at increasing productivity). The most evident display of the success of the zones in spreading technology and know-how to domestic industries is the appearance of cloned computers (e.g. 'Pineapples' instead of 'Apples'), possibly just as good as the originals. For former zone employees to venture so successfully into such spin-off activities could well be interpreted as meaning that the economic environment with which the zones were interfaced was relatively efficiently structured.

In summarizing the above experiences it can be initially concluded that EPZs, while meant as an initial step in the process of opening up an otherwise inward-looking economy, are not a sufficient measure to shoulder the process alone. Certainly, they do not seem to be an efficient measure to industrialize scarcely populated areas conceived to attract multinational corporations, whose demand for services and industrial infrastructure can only be fulfilled in urban agglomerations. An urban location also enhances

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[14] For an analysis of the Philippines' free trade zones see Warr (1987), Spinanger (1984a) and Castro (1983).

[15] Spinanger (1984a) analyses the zones in these two countries. For an analysis of EPZs within the context of industrialization policies see Spinanger (1986).

[16] In 1983 Malaysia's share (11.1 per cent) in the OECD's imports of products from the electronics industry (from non-OECD countries) was almost as high as Hong Kong's (11.7 per cent). It was exceeded only by Taiwan (19.1 per cent), Singapore (16 per cent) and the Republic of Korea (14 per cent). In analysing the shares over time a close correlation can be determined between the introduction of EPZs in a given country and a rapid increase in the share of the given country in the OECD's electronics industry imports (see Spinanger 1987).

the generation of linkages between firms operating in the zones and the domestic firms, thus providing an important stimulus to the industrialization process. It is probably not a coincidence that the most successful EPZs were located in urban areas with good harbour and airport facilities. However, there are more pre-conditions to a well functioning EPZ than just infrastructural facilities as the above examples of failure amply demonstrate.

Tapping the free zone potentials: approaches and policy implications

Let us recall the basic reason for establishing EPZs or free ports, which are but two possibilities out of a whole set of free economic activity zones. They represent a second-best solution for a country wanting to profit from a greater and more efficient integration into the world economy. By definition the EPZ or the free port is an area legally and geographically delineated from the rest of the economy. Generally speaking an EPZ incorporates the following features:

- inputs are allowed to be drawn from sources at world market prices;
- output can be exported to buyers at producers' prices;
- production processes and schedules can be structured in accordance with the specific needs of the firm;
- labour is supposed to be remunerated at rates commensurate with productivity levels, given its relative abundance in the country; and
- costs induced by firms in the zone as well as services demanded by them are assumed to be paid for at market prices.

Deviations from this ideal constellation can represent (a) an attempt to specifically limit the aims of the zone or (b) a knowingly/unknowingly induced perversion/weakening of the free zone idea. For instance, in the first case the zone might be designed to limit access to duty/tax-free raw materials or intermediate inputs. Bonded warehouses (or for that matter any type of duty drawback scheme) can also be construed as falling into this category, since they are basically no more than a detached free zone idea.[17] If the deviation is due to a perversion of the free zone idea, then the government has knowingly (or unknowingly) allowed distortions to prevail. For instance the government might have decided to dictate the application of minimum wages to workers in the zone. Assuming that the minimum wage rates lie above wage rates that would otherwise prevail, then the government's decision to attempt to maintain certain wage levels can be interpreted as adversely influencing employment goals as well as distorting factor intensities away from efficient levels. But perhaps the government has consciously followed stipulated EPZ guidelines as concerns factor and product markets, but failed to realize the implication of

[17] Whether such detached approaches are equivalent in all respects is a question which is not addressed here.

measures affecting, for instance, financial transactions or foreign know-how in the form of foreign managers or technicians. In such cases of incomplete information the remedy can usually be effected through a zone authority empowered to act to ensure that the zone does function according to set principles. Failure to act results in the same inefficiencies as occurred after knowingly instituting distortions.

With the efficient establishment of an EPZ, it is assumed that positive welfare effects - analogous to those generated when a country moves toward free trade - will be forthcoming. That is, by creating an undistorted environment the factor intensity of production can be structured more clearly in line with the factor endowment of the country, thus allowing comparative advantages to be efficiently exploited. At the bottom line of this approach for a given LDC the following benefits are posited as being engendered:

- additional investment (foreign or domestic) is attracted, which in turn generates jobs, labour income and net foreign exchange;
- linkages are developed to the domestic economy via the demand for conventional and non-conventional inputs;
- the industrial base is widened through impulses stemming from the demand for new products/services or demonstration effects;
- know-how, knowledge and technology in specific industries are passed on to the host economy; and
- increased experience in dealing with international trade and financial matters helps to lower barriers for indigenous firms wanting to export in the future.

The degree to which all these benefits accrue to an economy and the time frame which prevails is - assuming the zone is properly structured - probably largely dependent upon the smoothness of the interfacing between the zone and domestic/foreign inputs and markets. In this context it is not only a question of the zone's location and layout but also one of its operations.

Obviously the above-listed benefits are common to other export/investment promotion and industrialization measures as well. However, it is generally believed that EPZs have the advantage of being able to embody all essential ingredients in one package, thereby achieving economies of scale on the bureaucratic side as well as in the development of infrastructure facilities. In the former case, that is to the extent that the remaining administrative matters are efficiently channelled through a centralized zone authority, both the state as well as the individual firm can profit from lower costs. Likewise, economies of scale in the production of infrastructure means that less capital has to be employed and thus overall development costs are reduced. If such savings are at least partially passed on to those investing in the zone, then lower rents for the individual firms will result. It might also be added that the concentration of economic activities in a zone is posited as producing agglomeration economies and promoting interindustry linkages. Both factors can lead to lower costs.

Deducing from available evidence on the success or failure of EPZs in numerous countries, there is sufficient reason to believe that if a country carves out an EPZ from its territory and effectively as well as efficiently runs the zone and heeds the basic principle of non-intervention by the government in economic activity in the zone, it will have a good chance of attracting a sufficient number of investors to the zone. This of course presupposes that the general investment climate in the country (i.e. political and social stability prevail) is otherwise perceived as being acceptable. Under such conditions a country which - prior to setting up a free zone - hindered investment activities because of a veritable jungle of bureaucratic barriers becomes attractive. Since many countries suffer from the effects of regulation inefficiencies, it seems quite logical that their elimination (or reduction) for a specifically delineated area could very well lead to an increase in investment activities, be it due to attracting foreigners or entrepreneurs from the domestic economy. In the same context, it might be noted that the more efficient an economy is, the smaller the actual need for such zones can be assumed to be.

One obvious constraint placed on countries known for a high degree of regimentation and/or bureaucratic inflexibility is the simple difficulty to effectively achieve the necessary amount of a 'break' between a zone and the rest of the economy. That is to say, since zones in a given region compete with one another for new investors, it is not the relative amount of deregulation accomplished for a zone *vis-à-vis* the highly regulated rest of the economy which counts, but rather it is the level of deregulation *vis-à-vis* competing zones, which determines the competitive position of a given zone. A highly bureaucratic country must thus eliminate relatively more distortions than less bureaucratic countries. A case in point is India. In this country the two free zones were - despite fewer distortions than in the domestic economy - still burdened with so many restrictions that they attracted few firms - thus generating little employment and few export receipts.

One particularly crucial area where difficulties have arisen in the EPZs concerns the monetary side. Obviously, in countries with nonconvertible currencies or with severe exchange restrictions, special attention must be paid to ensuring that the appropriate banking facilities are created to efficiently handle the increased flow of foreign exchange induced by this foreign investment and increased foreign trade. As a matter of fact it can be considered an essential condition for the success of a free zone that liberalization on the factor and product market side be accompanied by the appropriate measures on the financial side. In essence this means that foreign firms and expatriate employees of these firms need access to internationally acceptable banking facilities. After all, the basic reason for the presence of foreign firms and their expatriate employees in a given country is - from the firms' point of view - to earn money. Thus restricting their access to money earned or not allowing them to profit from interest-bearing deposits may well result in potential investors avoiding such countries. Logically speaking, since a free zone is an 'offshore' manufacturing facility, offshore banking facilities (i.e. within existing commercial banks) would be an appropriate complement.

Whereas the above conditions cover what should prevail in and around export processing zones given the real world environment, EPZs already in existence have been covered by a wide range of fiscal investment incentives. As a matter of fact EPZs have become virtually synonymous with tax holidays and subsidies. Such incentives notwithstanding, they do *not* belong fundamentally to the EPZ package. Quite the contrary, since they exert an influence on economic activities in the free zone, they run counter to basic EPZ principles. Furthermore, as has been often demonstrated, fiscal incentives do not usually belong to the primary set of preconditions placed upon a location by potential investors. That is to say, if the overall investment climate and conditions interface with stipulated demands, then only at the margin might fiscal incentives prove to be important.

The basic reasons behind such fiscal incentives are thus derived from this final point made, namely that they are necessary at the margin. Without having hard information on the specific contribution of fiscal incentives to a positive decision to invest in an EPZ, it cannot be denied that for a new EPZ it might be prudent to ensure its competitive position is as attractive as possible and thus offer fiscal incentives. Tax holidays could also probably be condoned under the assumption that the EPZ investment itself and costs otherwise induced by companies operating in the zone are covered by the fees charged. It must be stipulated, however, that whatever incentives are instituted, they need be structured so as to not distort the factor intensity of investments away from the comparative advantages of the country.

Drawing on the entire spectrum of experience countries have had with EPZs it becomes evident that the lower the level of income of a country, the longer the time period during which linkages to the domestic economy remain small, i.e. dominated by labour income and payments for services. This is not implying that EPZs cannot achieve their goal in generating backward linkages to the domestic economy in low-income countries, but rather that the lack of a diversified industrial base acts as a barrier against the establishment of linkages. Hence to expect that an EPZ in a low-income country will quickly develop linkages beyond the demand for non-conventional inputs is to ignore the reality of firms operating in international markets. But even where a broader industrial base has developed, industries which could conceivably deliver to firms in EPZs usually reveal sizeable cost and quality disadvantages due to inefficient production methods and distorted input prices. Thus an EPZ alone cannot act as a sufficient measure to generate the desired linkages, complementary measures in the domestic economy are therefore necessary. Aside from balancing efficient protection and export promotion measures, these lie in the area of the transfer of know-how, knowledge and technology - through them the most effective impact can be expected.

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The costs and benefits of free port and export processing zone concepts with particular application to Xiamen

Helen Hughes with the assistance of Lin Shujuan

Summary and conclusions

Xiamen is well located to become a manufacturing centre for foreign and domestic markets. In China's transition to more market oriented policies, Xiamen needs to be able to replicate free trade conditions for exporters; this can be achieved through an improvement of its special zone conditions.

The principal attraction that Xiamen has for transnational exporting trade is a potentially low cost workforce. At present this potential is not realized. The organization of labour would have to be changed substantially to realize Xiamen's potential for exports.

Exporting firms require efficient public services operating at internationally competitive prices. It is not clear that these are available in Xiamen. High capital intensity in construction, in the port and in the economy generally, suggests that while labour is overpriced in relation to its productivity, capital is underpriced, making for excessive capital and technological intensity and hence for unnecessarily high operating costs.

To attract transnational corporations to export from Xiamen, the administrative structure needs to be simplified into a 'one stop shop' that will drastically cut down negotiating times at all stages of investment and production. Relatively minor changes in the customs administration, for example, could result in close approximation to free port conditions for exporters.

China's large domestic market is potentially a very valuable bargaining component in attracting foreign investment. However, to avoid capital/labour distortions and the exploitation of the domestic market by foreign firms, transnational firms should be subjected to competition in the domestic environment so that they are forced to adopt appropriate technology and capital/labour ratios.

Studies of successful and unsuccessful export zones suggest that transnational corporations are not attracted by 'give away' export incentives such as tax holidays but by the suitability of the overall

environment. To attract exporting firms an entrepreneurial approach has to be combined with an efficiently functioning economic environment.

Free ports and export processing zones

Free ports. Taxes on trade have traditionally been important sources of revenue and a means of protecting local producers against international competition. However, it was also seen at an early stage of economic development that trade led to specialization, the exploitation of economies of scale and transfer of technology all of which led to rising employment and incomes. The concept of free ports has a long history, linked to the benefits of abolishing impediments to the international movement of goods, services, capital and people.

The modern concept of free ports evolved around trading centres such as Hamburg, Rotterdam, Aden, Singapore, and Hong Kong as they sought to take advantage of intermediary services around cargo 'breaking' for transhipment. At the end of World War II tariff and non-tariff barriers were high. The war had interrupted trade, 'beggar my neighbour' trade policies of the 1920s and 1930s were still enshrined in national legislation, and there was little output to trade. Industrial countries, however, began to reduce their non tariff and tariff barriers rapidly from the late 1940s with a concomitant growth of trade. By the end of the 1960s trade in non-agricultural goods was more free among industrial countries than it had been since 1914. With the exception of clothing, textiles and footwear most imports from developing to industrial countries were also free, and even in the restricted areas imports continued to grow at more than 10 per cent a year (Hughes and Waelbroeck 1983).

Rotterdam and Hamburg expanded their free port facilities in the 1940s to attract intermediary services to cargo breaking for continental Europe. Administatively, the free port concept is simple: the customs administration discriminates among destinations. Through traffic to other countries is duty free while goods for domestic markets are charged normal, that is, European Communities (EC) rates. Bonded warehouses are run very efficiently mainly by commercial enterprises so that charges for goods awaiting transhipment are low. The rationale for these free ports lies in the very considerable economies of scale that can be created in transhipment services. Ports such as New York and Baltimore play a similar role, but because they mainly serve one country in the bulk of their import trade, bonded warehouses to store goods destined for other countries play a limited role.

As developing countries adopted protectionist policies after World War II, some traditional cargo breaking ports lost their business. Sri Lanka's Colombo is a case in point. Others, however, developed their intermediary activities by investing in both port and associated trading, processing, banking and tourist facilities. These ports - including Hong Kong, Macau, Malta, the Netherlands Antilles, Singapore and Trinidad - did not require to distinguish goods by destination. Practically all goods entered duty free, or with nominal duties, and there were no tariff barriers (except on firearms and drugs).

Hong Kong was the first of the free ports to utilize its potential for manufacturing for export. Hong Kong's traditional role of exporting manufactures from China and importing raw materials to China had created a sales, packaging, manufacturing and banking *entrepôt* base on which manufacturing for exports could be developed in the 1950s. Singapore, also traditionally an *entrepôt* free port, faced the other way; manufactures were imported for distribution in surrounding countries in return for the raw materials that were exported through Singapore. Although there were some rubber, tin, vegetable oil and other raw material processing, Singapore did not have Hong Kong's manufacturing skills. The trading companies had no experience in selling manufactures abroad. It took Singapore much longer than Hong Kong to get started as a manufacturing *entrepôt* and private direct foreign investment had to be used to do so (Hughes and You Poh Seng 1969). In all the free ports all manufacturers can import any inputs they need and there are no export taxes.

All the free ports in developing countries were initially very labour intensive to take advantage of low labour costs and avoid high capital costs. Lightering was widely used. But skilful management led to high productivity and rapid turn around avoided delays to ships coming to load and unload. Port charges were kept low and yet port returns were high so that the ports could gradually be modernized out of their own income. The growing intermediary activities contributed to public revenues through taxes thus also creating resources for modernization.

In a modified approach to the free port concept some countries use bonded warehouses to store goods for manufacturing for export until they are needed. Malaysia and Mexico use such bonded warehouses. Raw materials, components and capital equipment for manufacturing for export can thus enter the country duty free, but customs officers have to be located at the factory site to ensure that none of the duty free goods are used for manufactures which will be disposed of on the more profitable, protected local markets. In other countries, notably Indonesia, bonded warehouses did not lead to the growth of manufacturing for export.

A free trade port has limited application for the development of exports, particularly in a large country where transhipment to other countries will not be a source of service industry earnings. The principal function of a free port is to provide free access to imported inputs. Since goods not destined for manufacturing for export still have to pay import duties, free ports continue to be limited to politically independent areas that seek to promote exports of services such as cargo breaking, packaging, quality control and wholesale distribution. Large scale operations enable them to be very competitive in providing these services. The absence of barriers to trade also encourages manufacturing for exports. Free ports generally have low costs of living and may stimulate tourism. While it might be economically desirable for all these reasons to make such cities as Bombay or Jogjakarta free ports, politically this has not proved feasible.

Industrial estates. Infrastructural facilities are necessary for all industrial development whether for domestic output or exports. They include land, physical facilities (water supply, power, waste disposal, transportation of goods and people), social facilities (education, health, housing and recreation) and an administrative infrastructure.

In most developing countries it is not possible to develop adequate infrastructural facilities simultaneously throughout the country. Land may be communally owned or otherwise scarce and not readily available commercially in parcels necessary for large factories let alone the spatial economies of scale (economies of agglomeration) necessary for the growth of export oriented manufacturing. To overcome infrastructural bottlenecks for industrial development, public utilities were concentrated in some countries in selected areas called industrial estates or parks.

Industrial estates originated in depressed industrial areas in the United Kingdom in the 1930s. Land, modern buildings and public utilities were to be provided to attract entrepreneurs to revive old industrial areas. A special effort was made to attract small entrepreneurs by providing 'flatted factories', that is buildings that could be partitioned according to small firms' changing needs and that had some common services. Like many later industrial estates these pioneering ones were badly located and failed for the most part. Industrial estates have only succeeded if they have been established in a suitable area.

In developing countries an early application of the industrial estate concept was in Malaysia in the 1950s. Many other countries followed with various attempts to create industrial estates in the 1960s, but without success. Hong Kong and Singapore, however, with their emphasis on land development and commercially viable infrastructural facilities were in some senses 'industrial estates' from the beginning. Hong Kong developed several new settlement areas on this model and Singapore's Jurong was an early export oriented industrial estate. Hong Kong and Singapore demonstrated the importance of location for industrial estates. They had to be close to large markets for goods and services, have efficient transport (by ship and aeroplane) to foreign markets, sufficient housing nearby to attract an appropriately structured and educated labour force, and facilities for ongoing study, housing and recreation for the workers.

Facilities in industrial estates vary. In some only service land sites are available for factories and housing. These are usually the most efficient because freehold or long leasehold, well situated, land that has power, water, waste disposal and road access is available at prices commensurate with its suitability for manufacturing. Manufacturers build their own factories to their own specifications. Serviced sites may also be made available for small-scale manufacturing enterprises and traders and for housing for workers. Pre-built factories (in the Malaysian industrial estates and in Jurong) were found to be costly to build and to run. Not being designed by the businesses for which they were intended they were excessively spacious, had low occupation ratios and excessive cooling (and heating) costs. Manufacturers usually prefer to build their own factories to minimize construction and maintenance costs. The opportunity cost of government expenditures on factory buildings was very high. They often had to subsidize them to make them commercially viable.

The absence of facilities for small-scale repair shops, sub-contractors, hawkers, food stalls and other ancillary activities such as banks substantially increased the cost of production in many industrial estates. In Hong Kong and Singapore in contrast, such activities were incorporated into land development. Flatted factories were built in both cities at early stages before commercial developers were able to undertake such functions. Malaysia successfully accommodated ancillary activities on the edges of estates. However, where such measures were not undertaken, the estates often failed to develop a momentum of their own. They had to rely on government subsidies for decades.

Export processing zones. The concepts and practices developed in free ports and industrial estates were brought together in export processing zones which sought to combine the free availability of inputs into manufacturing for export with the availability of physical and social infrastructure.

In the 1950s Ireland pioneered an export processing zone near Shannon airport and Puerto Rico saw the early development of export processing for the United States market (to which Puerto Rico had free access) at this time. The application of the export processing zone concept was carried by the forerunner of the United States Agency for International Development (USAID) from Puerto Rico to Taiwan and then to the Republic of Korea. Many other countries established export processing zones. By the early 1980s some 35 such zones existed in Asia alone, and there were as many operating ones in other developing countries. Many more had been planned but had never got off the ground. Employment in the Asian zones were estimated at 250,000 in 1985 (United Nations 1985b). But not all of this is additional in the sense that it would not have existed without the zones. Only a few export zones have been successful in stimulating a considerable volume of manufacturing for export at economic cost, that is, without the need for subsidies. Enough experience thus exists to enable the reasons for success and failure to be clearly identified. For such a cost benefit evaluation, however, it is necessary to relate export processing zones to the exporting environment.

Export processing zones have the following principal features:

- The firms operating in the zone are expected to produce largely for export. This enables complex tariff and other trade barrier exemption systems to be replaced by the free entry of inputs used for manufacturing for export. Firms can also be recompensed for the high cost of inputs (higher than import prices) purchased from the domestic economy.

- The host countries use export processing zones largely to attract foreign firms. Many of these firms are 'footloose'. That is they 'shop' (choose) among export processing zones to find the best location, taking into account the total environment as well as specific incentives. Some of these firms intend to settle for the long run and establish backward linkages. Other (fly-by-night) firms are merely interested in exploiting special advantages, such as tax holidays, and will move on when such incentives expire.

- The principal source of comparative advantage of the export processing zones lies in their ample supply of labour. The main activities in export processing zones are therefore labour intensive. That is, while labour is relatively immobile, capital and management skills are mobile.

- Export processing zones can provide a more reliable infrastructure than other locations in developing countries. This includes international transport (ports and airfields), power, water supply and sewerage.

- Export processing zones must provide easy access for a highly motivated labour force able to acquire increasing levels of skills so that labour costs remain low despite wage increases through rapidly rising productivity. They must be able to provide education and training. Technical schools and facilities may be provided in one or two areas in which an export zone may specialize, for example in electronics or food processing. In some cases manufacturers provide such facilities themselves.

- Export processing zones can cater to special needs of foreign investors such as language requirements, schools and clubs.

- Some export processing zones have tax exemptions additional to those already operating in the country. They may be totally tax free.

- The most important aspect of export processing zones is the simplification of administration of the various government regimes which control trade and production. At best, these are organized in a 'one stop shop' that can deal with issues from waste disposal to labour disputes. At worst they can exacerbate delays by having to refer to other authorities, duplicating long lead times in decision making. This was the case, for example, in the first Indian export processing zone. Its growth of exports was accordingly very slow.

- Export processing zones have linkage effects to the rest of the economy as they increase their use of locally made inputs. At first there may be difficulties with quality and the timeliness of delivery but these improve over time. Linkages usually develop less rapidly than in a non-enclave environment.

Export processing zones are largely designed to offset the high costs of operating in a protectionist and otherwise regulated economic environment. Export processing zones can play an important role in a country that has very serious policy distortions and cannot remove them quickly, but wants to expand exports. In such circumstances an export processing zone provides an enclave environment which approximates to a free port with its benefits for exports. However, even in these circumstances an export processing zone has limitations. Some export processing zones have taken a long time to get off the ground (India, Philippines). Linkages to the rest of the economy have taken a long time to develop. They have remained low skill, low wage areas (Philippines). As countries liberalize their economy to develop their exporting capacity, export processing zones become less important. The growth of Kaohsiung in Taiwan, for example, only became rapid after the first low skill industry stage, when the rest of the economy had become considerably liberalized. The net benefits of export processing zones (as indicated below) largely depend on the way in which they are established and managed.

Exporting from a protectionist environment

After World War II it became conventional wisdom in developing countries that:

- terms of trade were biased against primary exporters;
- developing countries could not compete in domestic or foreign markets in manufactures;
- developing countries needed to protect their manufacturing 'infant' industries for structural and balance of payments reasons.

All three propositions have been proven wrong. Barter terms of trade have fluctuated, but income terms of trade have favoured countries that increased their volume of exports. Balance of payments deteriorated with protection. Many developing countries (Brazil, Costa Rica, Philippines) were able to compete in manufactures internationally in the late 1940s, but once protection was adopted - as it was in almost all countries between the late 1940s and the end of the 1960s - manufacturing did become uncompetitive because protection induced high costs. The main obstacles for countries wishing to export manufactures were their own protectionist policies (Little, Scitovsky and Scott 1971). These had to be abolished or offset before exporting became feasible.

To improve the efficiency of a protectionist policy the 'first best' policy is to abandon protection. But in most countries this is not possible for humanitarian and political reasons. Some workers and entrepreneurs in protected industries would lose their businesses and employment in the short run if protection were abandoned. They protest at their likely loss of livelihood. Those who would benefit - those employed in future manufacturing and other activities for the domestic market and export - do not know of the benefits they would reap. The transition can be carefully managed over a decade or so as Taiwan, the only economy to liberalize effectively, has demonstrated. However, most protectionist countries, because of a lack of political will have chosen a 'second best' route, that is, to offset the barriers to exports by export incentives which are intended to equalize the profitability of producing for home and export markets. Given the higher risks in exports than in production for the domestic market this means aiming at higher profits in export than in domestic markets. The 'second best' approach involves the following steps.

Inputs into exports have to be exempted from tariffs. This may be done by allowing imports of all such inputs duty free, or compensating importers for paying duties on inputs after their finished goods are exported. The former measure is susceptible to corruption. Duty free inputs find their way into goods for domestic production. The latter is costly to exporters, particularly if compensation takes a long time. In India it may take 12 months. In both cases the success of such an offset to protectionist tariffs depends on administrative efficiency.

Non-tariff barriers on imports of inputs into exports have to be lifted. There is again a danger of such inputs finding their way into production for the domestic market, or, if controls are inept and ineffective, of raising costs of production.

Direct offsets to protectionist barriers are not incentives to exporters. They merely remove a distortion. If administrative arrangements are inadequate, however, the barriers are only partially removed.

Protection leads to inefficiency, usually referred to as 'X inefficiency' to indicate a wide variety of problems in product design, engineering practices, low labour productivity, low quality and so on. For exporters this means uncompetitively high production costs. There is thus an argument for an overall benefit to exporters to offset the relatively high profitability of the domestic market. Various export bonus schemes have therefore been devised including 'wastage allowances'[1] which enable manufacturers to import some inputs duty free for the domestic market (Republic of Korea), permission to produce for the protected domestic market as well as for exports where entry would otherwise be restricted (Indonesia), permission to charge relatively high prices in the domestic market (Republic of Korea), cash bonuses related to export earnings (Colombia late 1960s) or to value added in export earnings (Colombia and Brazil early 1970s).

Access to a protected domestic market has been used widely in medium to large scale countries to attract foreign investors to use a country as an export base despite an unfavourable policy environment for

[1] In calculating the amount of textile imports allowable to an exporter of garments, for example, a generous 'wastage' allowance is applied so that the manufacturer can also use some of the duty free material for domestic production.

exports. To avoid the exploitation of the protected domestic market by such foreign corporations at the cost of domestic enterprises necessitates complex individual contracts for each foreign firm specifying limits to domestic market access and laying down export targets. India has chosen this route of attracting foreign investment for exports with very limited results.

Some countries give limited access to foreign investors because they fear, correctly, that in a protectionist environment, a foreign firm will be able to earn monopoly profits. Every effort to involve a foreign firm in production for the local market, mainly to transfer modern technology, becomes a major negotiation. India and the Republic of Korea have taken this route. Latin American countries (such as Brazil, Argentina, Chile, Uruguay, Peru, Columbia and Venezuela) have encouraged relatively free access to foreign firms, which have as a result earned high monopolistic profits in their domestic markets. Brazil, an exception for the combination of free entry with a large domestic market, has over some 20 years replaced import competition by domestic competition.

In seeking to attract foreign investors to become exporters, the principal offset to disincentives are not incentives, but guarantees that the original capital and profits can be repatriated at equilibrium exchange rates and protection against rationalization without compensation.

Protectionist policies lead to an overvalued exchange rate. Most countries therefore had to devalue sharply in seeking to become exporters (Taiwan in 1957-59 and the Republic of Korea in 1963-65) and maintain a realistic exchange rate either by keeping their inflation below international levels or by constant devaluations (which are, however, very harmful to the economy, particularly in income distribution terms). Maintaining an equilibrium exchange is again not an incentive but merely an essential removal of a barrier to exporting. However, some countries seek to maintain an undervalued exchange rate as a deterrent to import competition and as a subsidy to exports. But such a policy is a 'beggar my neighbour' policy and hence against the 'rules of the game' set by the International Monetary Fund (IMF) and the General Agreement on Tariffs and Trade (GATT). Ultimately it rebounds against its practitioners (as the recent sudden increase in the value of the yen has done).

Privileged access to domestic and foreign credit has been used as an incentive to exporters in some countries. In countries with 'repressed' financial systems, that is, where real interest rates do not reflect the country's scarcity of capital (Republic of Korea, Philippines) so that savings are inadequate, capital has to be rationed. Export firms are then usually allocated credit from domestic sources and such credit is subsidized by the low prevailing interest rate. In countries which ration capital imports from foreign sources, exporters may be given privileged access to such foreign credit directly or through foreign financed development banks. A further subsidy accrues if the government guarantees such foreign loans (Argentina, Brazil and Philippines).

Some countries use tax reductions, tax holidays, forward loss carrying provisions and accelerated depreciation on earnings to stimulate exports. In many countries such measures are part of an incentive fiscal package for both domestic and foreign entrants into any economic activities; in others they are restricted to 'essential' industries and in others still to exports (Singapore).

Workers employed in manufacturing often share in the high profits created by protection through relatively high wages and fringe benefits and/or a slow pace of work. Labour costs may be relatively high though wages are low and hours long. To attract firms that can develop exports, special offsetting conditions may be created, principally by tying remuneration to productivity. Exporting firms may thus be exempted from labour regulations to enable productivity to be raised. Labour conditions are generally easier to amend in a special zone than throughout a country.

One of the major causes of X inefficiency is the bureaucratic framework created by protectionist regimes, repressed financial systems, complex tax laws and other regulations. Streamlining administration is an essential component of offsetting protectionist policies.

An export promotion policy generally consists of two parts: offsets to protectionist and associated measures plus 'on top' incentives to raise profitability in export markets. Offsets to protectionist measures are essential to overcoming obstacles to exports. But just as protectionist regimes lead to unintended distortions that result in X inefficiency, so do export incentives. A cost benefit analysis is necessary to evaluate the contribution made by the various incentives.

Costs and benefits of export incentives

Most countries have recognized the relationship between increasing exports, employment and income growth. No country, not even a large one, has been able to grow faster than its exports grow over the long run. Countries that have attempted to do so have run into sharp balance of payment problems. The market oriented industrial countries, but also Hong Kong, Malta, Singapore and Taiwan and some other developing economies have adopted very liberal economic policies. Almost all the other developing countries have adopted an extensive package of export incentives. However, merchandise exports from developing countries continue to be dominated by a handful of economies in East Asia. In terms of merchandise exports per capita, Hong Kong and Singapore clearly lead the world by a considerable margin, with Taiwan, Republic of Korea, Thailand and Malaysia following. Taiwan, Republic of Korea, Hong Kong and Singapore account for about 50 per cent of developing country exports of manufacturers. In many other developing countries in the region, and in other developing countries, the adoption of a large number of export incentives on a generous scale has not led to market export success. The reasons for the failure of so many export incentive packages are clear.

A large package of export incentives leads to the misallocation and under utilization of resources in the same way that protectionist measures distort an economy. Export incentives also increase X inefficiency. Enterprises, their managers and often even their workers, receive unduly high rewards by exploiting, often inadvertently, the loopholes created by the imposition of export incentive packages on top of import substituting and associated distortions. But in such a situation entrants into exports, particularly from abroad, are few, employment does not grow and returns on public investment in infrastructure for export are low. Export incentives create unintended damaging side effects (just as import substitution measures do) that may be greater than their positive intended effects.

Table 1 **Performance of principal developing country exporters (non mineral merchandise exports), 1984**

	Population (millions) mid-1984	Non-mineral merchandise exports US$ billion	Per capita US$
Taiwan	19.0	30	1579
Republic of Korea	40.1	28	700
Hong Kong	5.4	27	5000
Brazil	132.6	23	173
China	1029.2	19	18
Singapore	2.5	17	6800
Malaysia	15.3	10	654
Yugoslavia	23.0	9	391
Mexico	76.8	9	117
Thailand	50.0	7	140
Hungary	10.7	7	654

Sources: World Bank, *World Development Report 1986*, New York, Oxford University Press, 1986; *Statistical Yearbook of the Republic of China*, 1985.

These strictures do not apply to direct offsets to import substitution distortions such as tariff exemptions and exemptions from import prohibitions if these are well administered in accordance with exporters' needs, that is, without bureaucratic delays. The intended benefits are then obtained by exporters whose costs can accordingly be internationally competitive. The principal costs of such arrangements are associated with leakages into the domestic economy. These can have beneficial effects by making domestic procedures more competitive than they would otherwise be, but their foreign exchange costs and profit distorting effects must be taken into account.

Cash bonuses were given to exporters in some Latin American countries in preference to administratively more complex measures to offset X inefficiency costs. It was argued in their favour that they did not discriminate among firms or industries and therefore caused a minimum of distortions in the allocation of resources. It was soon found that it was wasteful to relate the bonuses to the value of exports because the value of output is not related to value added in production. However, even the value added form of cash bonuses has largely had to be abandoned because of the opportunities for cheating.

Privileged access to the domestic market is often favoured because domestic consumers rather than the government bear the cost of this incentive. This is the intention of wastage allowances and similar arrangements. But privileged entry often exacerbates monopoly trends and raises prices if competition among domestic producers is inadequate (because the market is dominated by a few enterprises or because goods are in short supply). Foreign firms in particular may be able to dominate production because in a differential market (such as in soft drinks, cigarettes or electronic goods) a well known product (such as Coca Cola) may be preferred to local ones. If a monopolistic situation exists, a foreign manufacturer will tend to use excessively capital and technology intensive designs and production processes at the cost of employment and at relatively high total cost. Such trends are particularly evident if the host country is not concerned with the appropriateness of technology. It is often extremely difficult to force manufacturing firms that are attracted mainly by the potential of a large domestic market to fulfil their exporting obligations. They usually argue that their costs are too high for international markets. Firms that are interested in both the domestic and export markets are somewhat easier to manage, depending on the size of the domestic market. The firms interested in using a country as an export base are, of course, the best performers in exports.

The floating of exchange rates has complicated exporters' pricing problems and governments' foreign exchange management problems, but the maintenance of an equilibrium exchange rate is essential to exporting. An overvalued exchange rate typical of a protectionist economy makes it impossible to compete in international markets. An equilibrium exchange rate is of course also essential to the development of non-merchandise exports such as tourism. It enables domestic industries to compete effectively. Exporters find it extremely difficult to operate when domestic inflation is rapid, particularly if inflation is not accompanied by appropriate devaluation. Constant devaluation, however, makes economic management difficult and tends to harm lower income groups.

Economies as different as Western Germany, Japan and Republic of Korea have used undervaluation of their currencies as an export incentive during their export expansion effort. A minor tendency to devaluation is generally accepted by the international community in these circumstances. However, persistent and flagrant undervaluation of currency brings a country into disrepute.

Financial incentives needed to meet international competition, such as export contract insurance and export credits for capital goods, though damaging to all participants in world trade, have come to be accepted, within limits, for political reasons as part of international 'rules of the game'. They are not of great importance to countries at relatively early stages of development because the latter's comparative advantage is in labour extensive exports.

Privileged access to credit arising out of the 'repression' of the domestic financial system, however, has very damaging unanticipated effects. First, privileged access to capital, particularly at low interest rates, encourages monopolistic economic structures. Only a few enterprises can be favoured. In the Republic of Korea, for example, privileged access to local capital at highly subsidized interest rates and to foreign capital led to the promotion of a dozen or so large exporting conglomerates that came to dominate the Republic of Korea's exports. The export capacities of smaller firms were neglected. Consequently, the Republic of Korea has not been able to exploit smaller markets in large countries, and small country markets as well as its principal competitors (Taiwan and Hong Kong). It has also found it more difficult to move up-market than its competitors. The Republic of Korea's per capita exports are accordingly lower than its competitors and it has lost export earnings, employment and growth opportunities as a result of its credit policies.

If the cost of capital is below its 'shadow price' (that is its value to the economy), it is subsidized. In most developing countries the shadow price of capital is at least 15 per cent a year in real terms (net of inflation), and it may be much higher. The prices charged in free markets are often up to 20 per cent a month or more. They are better indicators of the value of capital to the economy than official interest rates. Interest rates below the shadow price level create subsidies that have another detrimental effect. By making capital artificially cheap in relation to labour, they lead to unduly capital intensive construction and production and also to a choice of capital intensive and complex technologies that are inappropriate to the country's endowment.

A country's real capital and labour endowment is ignored in such circumstances. The premature use of excessively advanced rather than appropriate technologies makes demands on human skills that cannot be met. As a result high capital intensity is combined with low capital utilization. Employment does not increase and costs are unnecessarily high.

The management of foreign investment is extremely difficult in countries in which policy distortions create opportunities for monopoly profits. Small, not well established foreign firms often take advantage of various loopholes created by policy distortions, yet they are the only firms often willing to undertake the high costs (in management time) that prolonged negotiations require. Open, free trade economies such as Singapore and Hong Kong have particular advantages in dealing with foreign firms because they do not need to negotiate individually but can work from laws applicable to all. In highly regulated countries administrative skills are correspondingly important. Ensuring the availability of land for investors, transportation for goods and people, law and order and public utilities are all essential to an exporting base. Such 'public goods' have to be supplied at prices that match world costs and prices. If excessive costs lead to a demand for subsidies to ensure international competitiveness, other parts of the domestic economy will have to be charged for the costs of such subsidies. Public services are usually too capital and technology intensive, over-manned and under-managed. In contrast, Hong Kong, Taiwan, Republic of Korea and Singapore all started with very labour intensive public sector development to utilize their underemployment manpower. They only gradually increased capital and technological intensity as labour productivity and wages rose. Such an approach requires an emphasis on training managers and raising the productivity of the labour force.

A great deal of analytical work has been done on the impact of fiscal incentives on domestic and foreign investors since the late 1960s. It has been found advisable to have the same fiscal incentives for domestic and foreign firms in terms of equity, but also for practical reasons. Changing compositions of domestic and foreign participation otherwise leads to administrative and substantive problems. Indonesia was the only major country to give fiscal benefits only to foreign investors until China took this route. The problems created quickly led Indonesia to unify tax incentives for all firms.

The main problem with fiscal incentives lies in their lack of effectiveness, particularly for foreign investors. Foreign firms seeking to make a major investment, either in production for the domestic market or exports, or a combination of both, do not expect to make a profit in the early years of operation. Transnational corporations are accustomed to paying taxes. Tax reductions and tax holidays are more likely to be attractive to small foreign firms and to local enterprises. It is important to note that some countries' corporations, notably those of the United States, do not benefit from lowered taxes and tax holidays. The United States Treasury does not practice tax 'sparing'. When profits are repatriated any difference between taxes paid in the host country and United States taxes has to be paid to the United States Treasury. Except for profits reinvested in the host country, there is thus a transfer of funds from the host (developing country) to the United States Treasury. The

Philippines has no tax holidays because it relies heavily on foreign investment from the United States. Most other 'home' countries do practice tax 'sparing' so that funds are not transferred from the 'host' to the 'home' country. However, the analytical work carried out during the last 20 years or so indicates that tax holidays are largely redundant for large transnational corporations (United Nations 1986). Countries seeking to attract such firms should not waste their resources on tax holidays. All countries should calculate the opportunity cost of tax holidays, that is, how much revenue they are giving up. Countries should also be aware that the calculation of transfer prices - to correct pricing at other than arm's length in intra-firm transactions - has generally been found to be impossible. It is as well to save resources by tackling transfer pricing issues through policies such as taxation rather than directly.

Accelerated depreciation provisions are a more useful policy tool than tax holidays, particularly if they are tied to shift work. Shifts increase capital utilization and lower the incremental capital labour ratio: that is, if three shifts rather than one shift are worked, the capital needed to place an additional worker in the workforce can be reduced by two-thirds.

Not only do most export incentives have very considerable costs, but the combination of several incentives leads to an incentive 'overkill' raising costs, opportunities for manipulating regulations, and leading to even greater X inefficiency. Basic problems are not tackled, but exporters demand ever increasing subsidies to offset the rising costs that follow from inefficiency. An argument may be made for offsetting biases against exports, and even for one or two modest subsidies with a finite life (sunset clauses) to enable 'infant' exporters to become competitive. A wide array of export incentives does not, however, achieve this objective. For example Colombia has higher incentives than the Republic of Korea for clothing and textiles, but despite its geographic proximity to the United States exports less of these goods there than the Republic of Korea (Morawetz 1981).

Labour costs tend to be excessive in manufacturing in developing countries for a number of reasons. Whether explicitly or not, workers usually take a share of the monopoly 'rents' accruing to protected industries. To be internationally competitive in terms of labour costs, countries must generally reorganize their labour structure to make workers more productive. In almost every case this is socially desirable because it leads to higher earnings. Education, formal training, training on the job and opportunities for part-time education are relevant to this process. The proportion of costs borne by the government, enterprises and the workers themselves vary with social organization. Other relevant investments are in housing and recreation. In general public investment in such areas, notably in housing, has proved to be costly and not likely to satisfy workers. Site and service developments where workers are able to build their own dwellings have proved to be much more efficient than public housing which is usually capital intensive.

Application to Xiamen

It seems clear that the strategy of creating export processing zones to operate during China's transition to a more market oriented price system than presently persists is in line both with economic theory and the experience of other countries. The Huli district in particular and Xiamen more generally are suitable locations for an export processing zone. Xiamen is well located with regard to sea and air transport and labour supply, the two most important factors in the development of export processing zones. There are also some possibilities of complementary tourist development. It is not, however, clear that in making a further change toward the establishment of a free port the benefits would exceed the costs. It would seem more efficient to develop the existing economic environment in a direction that would simultaneously attract more foreign producers and be less costly in terms of public resources by approximating more closely to the free port ideal without incurring its costs.

Advantages of Xiamen for export processing. In addition to access to transport and labour, Xiamen has several advantages for export processing: an educational base, particularly strong in the teaching of English, many linkages to overseas Chinese communities, a mild climate, a countryside that can supply food, a relatively well developed commercial sector and recreational facilities for the workforce. There are tourism possibilities in Fujian province. However, there are also some problems. The supply of water to Xiamen is limited, and ensuring a reliable supply of water for the long run will require major capital investment. If Xiamen grows as expected as an exporting centre with strong linkages to the domestic economy the causeway will have to be widened to carry the traffic likely to be generated, and this too would require major capital expenditures. The development of international tourism would also require some capital expenditures and much human capital development. However, all these problems are for the longer term. More immediate issues are concerned with the economic environment.

The principal purpose of an export processing zone is to provide goods and services at world prices. Primarily this means disposing of barriers to trade. This is at present not the case. Exporters have to prepare annual plans of their proposed input imports. Once these are approved, the goods can be imported duty free, but any variation has to be approved. This is not a viable system. The amount of imports required cannot be set several months ahead as in a planned economy. Markets change, and so do orders. Hopefully, in a period of export growth, imports of inputs though fluctuating from month to month would be growing overall.

Proposal for a free port. The establishment of a free port thus seems an attractive idea. Either all goods could come in without duty and the customs point would be shifted to the end of the causeway to the mainland or goods would be sorted by destination, and all goods destined for Xiamen would be duty free while normal duties and limitations would apply to other goods.

Several problems would arise. In close proximity to the highly controlled Chinese economy hungry for consumer goods and quality inputs into manufacturing at world prices, smuggling would be very difficult to suppress. The availability of such goods could not be restricted to foreign citizens. To attempt to do so, even if practicable, would run against current policy trends. However, to give Xiamen citizens access to free imports would be regarded as inequitable by the rest of China.

Xiamen plays a considerable role as an *entrepôt* port toward the rest of China with considerable benefits. A move toward a free port could undermine its position. It could be argued that cargo breaking should take place at a new customs line beyond the causeway.

Proposals for improving the economic environment in Xiamen. Following the experience of successful processing zones in other countries, it would seem that several steps can be taken to improve the economic climate in Xiamen without creating the problems likely to be faced in a free port.

(i) Customs. A reform of customs arrangements to enable duty free clearances to be made without the submission of annual import plans would substantially improve the operational environment. In enterprises producing for China export bonded stores could be established in factories to ensure that there is no cheating. Such a policy could be presented as a 'free port' policy.

(ii) Administration. Xiamen needs an effective 'one stop shop' for foreign investors. An entrepreneurially oriented group of administrators with language skills should be able to handle most of the bureaucratic obstacles to starting and continuing production for export. The time taken to negotiate market entry should be sharply reduced.

Movement toward the replacement of individual negotiations by general rules, particularly where entry into the domestic market is at issue, will be a necessity if foreign investors are to be attracted on a large scale. Clear demarcation lines should be made to indicate to investors what can be decided in Xiamen and what has to go to Fujian and Beijing for decision.

(iii) Planning. Physical planning should be restricted to land use planning and to the social and physical infrastructure, leaving planning, construction and so on to local or foreign enterprises. Planning should be indicative seeking to encourage rather than divert foreign and local enterprises.

Table 2 **Cost of public utilities and land**

Country	Cost of power ($ per Kwh)	Cost of water ($ per '000 litres)	Cost of land ($ per sq m per year)
India			
Kandla FTZ	1.57	0.05	
Malaysia			
Penang	2.4	0.61	29.60
Selangor (Sungai Way FTZ)		0.95	or 14.00
Johore (Senai FTZ)		0.95	
Philippines			
Bataan EPZ	1.71	0.27	
Singapore			5.4-21.00
Taiwan			
Kaohsiang	2.36	0.02	2.5
Nantze	2.36	0.08	2.5
Taichung	2.36	0.06	2.5

Source: Compiled from country sources.

(iv) Price of capital. The cost of capital should be increased toward its social level to increase more labour intensive techniques and higher capital utilization. Most of the capital in Xiamen - in manufacturing and in service industries - is idle much of the time. Buildings are wasteful in terms of space and recurrent costs. For example, hotel rooms are still being built with high ceilings to use sea breezes as if they were not air conditioned. Such high spaces make cooling and heating costs unnecessarily high.

(v) Cost of labour. Labour policy for the processing zone should be reviewed. While it is theoretically possible to dismiss workers who are not interested in high productivity, in practice only people who commit criminal offences are discharged. In some cases incompetent workers are told to stay away from work to avoid their influence on other workers.

While contract labour spreads the opportunities of working in the export zone through the country and province, it does not build up a skilled and committed workforce of ever growing productivity. Hours may be too long for high productivity. Shift work would substantially increase capital utilization and reduce the capital required to place additional workers in the workforce.

Table 3 **Indicative wage costs in Asia**

Country	Unskilled	Cost of labour Semi-skilled	Skilled
India			
Kandla FTZ		0.33[a]	
Malaysia			
Penang	0.23-0.40	0.30-0.44	0.27-0.54
Selangor (Sungai Way FTZ)	0.30-0.34	0.55-0.60	0.66+
Johore (Senai FTZ)	0.21-0.24	0.21-0.24	0.21-0.24
Philippines			
Bataan EPZ	0.17	0.19-0.22	0.24+
Singapore		0.96	
Republic of Korea			
Masan and Iri		1.14[a]	
Taiwan			
Kaohsiung		1.01[a]	
Nantze		1.01[a]	
Taichung	0.36-0.53		0.40-0.67
Hong Kong		1.25[a]	

[a] Average

Source: Compiled from country sources.

A higher productivity workforce would require more appropriate housing. Self help methods should be investigated to achieve this.

(vi) Labour training. Improving labour skills through formal education and on-the-job teaching should receive even more attention than it does now.

(vii) Appropriate technology. A wide spectrum of production techniques ranging from the very labour intensive to the very capital intensive, with corresponding ranges of skill exists for most products. It is often economic to combine various capital/labour intensities in one production plant to ensure that the overall mix is appropriate. In an economy with ample labour supply the premature use of capital intensive techniques undermines growth and development because high capital intensity technologies are wasteful of foreign exchange and capital. The emphasis should therefore be on the choice of appropriate technology. This requires corresponding attention to quality control, inspection and labour force management. Rising productivity will lead to higher technology possibilities at economic cost.

(viii) Management. Improved management is necessary at many levels. The problem of organizing such skills should be faced particularly in public utilities and the administration of Xiamen. A movement to more market oriented criteria will require new skills in production design, production engineering, quality control and labour management which all require greater attention.

(ix) Facilities for foreign staff and tourists. The quality of such facilities could be improved without major capital expenditures but with attention to management.

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