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## NEW ROLE OF INDUSTRIAL FREE ZONES

### 1. INDUSTRIAL FREE ZONES IN TAIWAN

#### (1) Background and Outline

Because of the limitations of home markets, Taiwan depends heavily upon export trade in promoting industrialization. Unfortunately, however, she is not necessarily endowed with plentiful capital, resources and so on.

Nevertheless, high educational levels and abundant, low-cost labour force might well provide a powerful momentum for industrialization when combined with foreign capital and technology.

It was with this belief that in March 1965 Nationalist China government had embarked on the construction of the Kaohsiung Export Processing Zone (KEPZ), which was completed and inaugurated on December 3rd, 1966.

Before getting in touch with the main subject, we will take a look at the way in which Kaohsiung had been selected for the location.

Kaohsiung, with a population of 700,000, is the second largest city in Taiwan. Likewise it is the biggest commercial port in the Southern district, being comparable with Keelung in the North. During World War II the city flourished as a liaison base to the Japanese armed forces advanced into Southeast Asia. With many factories established around the city, Kaohsiung developed into an industrial city as well.

Reflecting the postwar decline in the trade with Japan and closer ties with Hongkong, the commercial ports of Keelung and Kaohsiung just reversed their prewar positions and Kaohsiung has become the largest international trade port in Taiwan with the annual volume of cargo handled amounting to 6 million tons, which represents more than two-thirds of total export and import figure of the country.

Such being the case, a project got underway in 1968 for expanding the outgrown Kaohsiung port. The area of 69 hectares presently covered by KEPZ is a new land reclaimed with mud from dredging the port at that time.

The plan for establishing an export processing zone there can be traced back to 1965 when the Economic Stability Committee, the Executive Yuan made the proposal. Shortly after that, however, the committee was dissolved and the plan was sidetracked for some time.

Subsequently foreign economists recommended that an international trade zone be set up at the port in conjunction with the implementation of the project for expanding the Kaohsiung port facilities. This was welcomed by domestic businessmen who expressed their desire that free port status would be imparted to Kaohsiung so that foreign capital could be attracted and international trade expanded. Under such circumstances, the government was placed in a position to examine the merit and demerit of the programme.

In May 1963 when reviewing the performance of the Investment Encouragement Regulation, the government had come to the conclusion that in view of decrease in U.S. economic aid each year there was the need for establishing the Export Processing Zone to attract foreign capital, to increase employment opportunities, and to achieve trade promotion.

The setting up of the processing zone was an epochal project with far-reaching ramifications. The Executive Yuan therefore ordered the Ministry of Economic Affairs, the Foreign Trade Council, and the American Aid Administration Committee to jointly formulate the Export Processing Zone Establishment Regulation.

As a result, the Export Processing Zone Establishment Control Regulation was promulgated on January 30th 1965 and, as mentioned previously, the construction was started in March 1965 and completed in December 1966.

It goes without saying that the principal purpose for setting up the processing zone was to induce export industries. More specifically, the objectives may be summarized as follows:

- (1) To attract industrial investments;
- (2) to expand export trade
- (3) to increase employment opportunities
- (4) to introduce the latest technology from abroad.

While the enterprises that launched themselves into the export processing zone get a variety of favourable treatments as mentioned below, the greatest merits lie in exemption from export and import duties, and simplified export and import procedures.

(A) Standard factory buildings offered

In addition to the land formation within the zone, the authority has built up so-called "standard factories" and sells them on a 10 year instalment basis to those enterprises who want to purchase.

The standard factory is a reinforced concrete building of three stores, the room size ranging from the maximum 722 square meters to the minimum 292 square meters.

Apart from this, an enterprise may construct factory to its own design, in which case the enterprise has to pay rent for the factory lot.

(B) Export and Import duties and procedures

- (1) The enterprises are exempted from import duties on machinery and equipment,
- (2) the enterprises are likewise exempted from import restrictions as well as import duties and all other taxes on raw materials and semi-finished products.
- (3) all procedures for import approval and for negotiations of bills are quickly carried out in the processing zone, without taking the trouble to go to Taipei: the arrangement offers particular convenience to the Japanese export enterprises there;
- (4) deposit required for negotiations of import bills is at 20%;
- (5) the procedure for custom inspection of exports and imports is completed within 24 hours.

(C) KEPZ Administration and supporting agencies

The Kaohsiung Export Processing Zone Administration is the highest administrative authority in the zone. The office of the Administration is at the main entrance. Besides, all the supporting agencies have set up branch offices in the Zone, which include:

1. Customs House
2. Provincial Tax Bureau
3. Bank of Taiwan
4. Post Office
5. Telecommunication Office
6. Taiwan Power Company
7. Water Works
8. Employment Service Center
9. Far East Aviation Corporation.

Thus all the procedures for setting up a factory are administered by these agencies within the Zone.

(D) Warehousing and transportation facilities

There is a Transportation and Warehousing Service Center that has a warehouse capable of accommodating 12,000 tons of incoming raw material and outgoing export products, equipped with cranes, forklifts, trailer trucks, container trucks, etc. to provide services to the enterprises in the zone.

(E) Water Supply and power distribution

The Zone is abundant with industrial water and electric power provided at a preferential rate for industries located in the Zone.

(F) Taxes levied on export enterprises and tax incentives

The enterprise that established a factory in the zone is subject to five kinds of taxes below mentioned, some of which involve exemption and reduction in tax rates:

- (1) Commercial concern income tax - The manufacturing enterprises that are in accord with the encouragement standard and its categories may get an initial five year tax exemption provided the application is approved and, thereafter, may apply for a ten percent reduction in the tax rate.
- (2) Stamp duty (0.1%-0.4%)
- (3) House tax (3% of existing house)
- (4) Vehicle license (domestic tax based on the types of automobiles)

(G) Welfare facilities

There is a restaurant by the side of the Administration, although Japanese-owned enterprises have in-house refectory. In addition, the Administration is constructing in the city of Kaohsiung women's dormitories to accommodate 5,000 women labourers.

(2) Latest Achievements of KEPZ

Originally at KEPZ, it was expected that 120 export enterprises would go into the zone covering an area of 69 hectares, with investments totalling US\$18 million, annual export amounting to US\$72 million, and the number of employees reaching 15,000.

As indicated in Table 1, most of these targets have been fulfilled within three years.

Table 1 - Target and Achievement of EPZ in Taiwan

Areas	No. of Enterprises			Capital Investments (US million*)			Annual Sales (US million *)			No. of employees			
	(ha)	Proj	Appr	Oper	Proj	Appr	Oper	Proj	Appr	Oper	Proj	Appr	Oper
Kaohsiung	68.5	120	225	157	18.0	58.4	45.5	72.0	405.6	290.4	15,000	67,500	53,906
Nantze	90.0	200	21	12	30.0	10.7	8.1	120.0	43.7	32.0	40,000	11,171	9,285
Taichung	23.8	50	19	10	7.5	9.8	6.2	30.0	69.3	54.3	10,000	9,772	7,034

Note: At the end of Jan. 1972 (or in 1971) Proj=Projected, Appr=Approved  
Oper=in operation.

Source: KEPZ "Export Processing Zones Essential Statistics" Jan. 1972.

At the end of January 1972, the number of enterprises operated is 157; capital investment totalled US\$45.5 million; annual exports were estimated at US\$290.4 million; the number of employees amounted to 53,906.

(a) An Analysis of Industrial Investment.

The sources of investment for 162 approved export enterprises in KEPZ, at the end of January 1972, are indicated in Table 2.

Table 2 - Sources of Capital in KEPZ

	Number of Firms	Projected investment (US\$ 1,000)	Projected number of employees
Domestic Capital	43	6,421	11,389
Overseas Chinese Capital	21	6,322	9,551
Foreign Capital	56	25,293	21,539
Joint Venture	39	8,149	12,978
Total	162	46,185	55,458

Note and Source are the same as in Table 1.

Referring to Table 2, 162 companies were authorized to invest US\$46.2 million in total at the end of January 1972, of which \$6,421,000 (13.9%) was domestic capital, \$6,322,000 (13.7%) was overseas Chinese capital, \$25,293,000 (54.8%) was foreign capital, and \$8,149,000 (17.5%) was joint ventures.

As compared with these figures to 1968, there seems increasing tendency of foreign capital and decreasing trend of joint ventures.

Similarly Table 3 shows the composition of products in 1968 and 1972.

	<u>1968</u>	<u>1972</u>
Electronics Products	8,966	21,394
Garments	1,308	5,379
Metal Products	2,476	3,625
Knitted and Woven Goods	1,760	3,596
Handicrafts	1,918	3,161
Plastic products	2,134	3,006
Total (including others)	25,867	46,185



(b) Expansion of export trade.

Export licenses endorsed in 1971 was US\$ 156.4 million (+43% to previous year).

While the accumulated total exports from September 1966 to the end of January 1972 was US\$375 million, and its construction by products is showed in Table 4.

Table 4 - Export Construction by Products

	<u>Value</u> <u>(US\$1,000)</u>	<u>%</u>
Electronics Products	180,467	48.13
Garments	74,562	19.88
Knitted and woven goods	27,314	7.28
Plastic Products	21,425	5.71
Handicrafts	17,891	4.77
Leather products	15,535	4.14
Metal products	12,937	3.45
Electrical products	6,507	1.74
Toys	4,548	1.21
Furniture	4,223	1.13
Total (including others)	374,995	100.00

Note: Export value is accumulated since September 1966.

Although there would be a fairly wide diversity in the product mix between the present and future, the most growth would continue to be provided by labour intensive products supported by the merit of low cost labour, for instance, such as equipment like electronic products and their parts, electrical products, precision instruments and their parts as well as textiles and sundries like plastic, rubber and leather products.

Main export markets are: U.S.A. (58.2%), Japan (10.7%) Hong Kong (8.7%), West Germany (4.3%), Netherlands (3.5%), Canada (3.4%) and United Kingdom (2.2%).

(c) Creation of employment opportunities.

The number of employees in KEPZ started with only 3,000 in 1966, the number of workers topped the 5,000 mark at the end of 1967 and recorded an immense increase of 10,000 during 1968 and now totals 53,906 at the end of January 1972 of which 84% is female workers.

Age distribution of productive workers indicates next features that almost all of them are concentrated in the classes of 16-24 years old (see table 5)

Rapid expansion of KEPZ needs young women workers.

Table 5 - Sex and Age Distribution of Productive Workers in KEPZ

<u>Age</u>	<u>Male</u>	<u>Female</u>
14-15	131	3,000
16-19	1,924	18,280
20-24	1,441	8,123
25-29	1,170	1,438
30-39	626	1,042
40-49	272	439
50-60	88	25
Total	5,652	32,347

Note: Export enterprise only.

(d) Introduction of new technology.

In establishment of the export processing zone, the government might have placed its greatest aim on this point. Because there was no prospect of securing technical "know-how" from local sources, though it would have been possible to raise a certain amount of capital either locally or from overseas Chinese.

Introduction of technology is to bring in foreign technicians and managements. But for their activities, the Zone could not have seen the immediate development of technological experts such as processing of precise machine parts.

(3) The Second and Third Export Processing Zones.

In view of the fact that KEPZ is almost filled up, with little space available for further applicants, and likewise taking into account the labour and regional development problems, the government had decided in 1969 to construct the second zone, the Nantze Export Processing Zone (NEPZ), and the third, the Taichung Export Processing Zone (TEPZ), and Taichung started accepting application in January 1969 and Nantze from July 1970.

Present situation of three zones are already indicated in Table 1.

2. PROBLEMS AND PROSPECT OF "INDUSTRIAL FREE ZONE"

Industrial free zones have surely played an important role in regional development through expansion of exports and employment. However, how noticeable effects these zones have made in the sphere of industrialization of home countries?

Apart from the political problems in Asia such as the joining of People's Republic of China in the United Nations, anticipated materialization of Vietnam armistice, etc., it is an actual fact that industrial free zones involve several fundamental problems as to future prospects. Some of them will be examined hereunder.

(1) Interrupted Production Technique

There are many examples of engineering industry and electronics industry in industrial free zones. The outline of production technique is usually as follows:

## Integration of Technology - Case of Engineering Industry

Research and Development

Designing (manufacturing design  
(conceptual design

Material processing (forging, hammering  
(manufacturing of (cutting, grinding  
parts)

Assembling of (wiring  
parts (welding  
(riveting

Intermediate (painting  
process (Plating

(Packaging)

While, as stated in the above, "inhabitants of zone" bring in labour intensive parts - simple repeating process - for instance, wiring, welding or packaging — seeking for an abundant supply of cheap labour. Consequently, labourers working in this zone (female workers are numerous due to the nature of the work) cannot be grown up as workers who will be the driving force of the integrated technological system which makes possible the domestic production of radio receivers and television sets in host countries, though they are often grown up as skilled workers of wiring, welding, etc.

Free zone is isolated from domestic market (custom area) by its border, therefore, it has no connection with metallurgical products and mechanical products of outside the area, the technology standing alone mutually.

One of the advantages of free zone has been said to be a "general" level-up of industrial techniques but the free zone system will make imperfect "the technology transfer".

On the part of investor countries, it is important to cut down labour costs, therefore, there is no need to bring the whole production process. As a consequence, investors bring in materials of electronic parts by air and carry back after mechanical processing.

(2) Distortion of Industrial Structure

Generally there are the following criteria for selection of industries in free zones.

The criteria is decided by the objectives of the industrial free zone or industrialization plan of home country.

Desirable type of industries are as follows:

- (a) labour intensive industries;
- (b) export-oriented industries;
- (c) viable industries for future development;
- (d) industries based on local products;
- (e) higher added value types of industries;
- (f) industries based on modern production techniques;
- (g) industries which have greater possibilities of the forward/backward integration with existing domestic industries or traditional industries of the host country.

As the industries which accept the abovementioned conditions are limited, same kind of industries will be desirable in every free zone. For instance, electronic industry, optical instrument industry, textile industry, rubber and leather industries, etc. can be pointed out as desirable industries. However, investors have also the right of selection of industry and therefore investments are liable to centre on specified industries (for instance, radio receivers, television sets, etc.), leading to the appearance of distortion in the industrial structure inside the zone.

What is meant by the above fact? The interrupted production techniques in an industry have been examined previously; here, the situation develops further to isolated production techniques in each industry, and the production system in all industries, or in other words, the imperfect forward/backward integration will become an issue.

(3) Concentrated Demand for Specified Labour Force.

As a natural result of the facts indicated in (1) and (2) demand will concentrate on specified labour force in a free zone.

The kinds of specified labour force demanded are for instance, wiring using a microscope for manufacturing memory plane for computers, spot welding in case of manufacturing radio receivers and television sets. As a consequence, workers with good visual power and deft handed workers are needed. Besides, when a condition of relatively cheap wage is added, a required labour is a young female worker in Asian countries, where wage differential between male and female workers still exists.

Therefore, the demand for labour force in a free zone does not bring about a balanced labour demand by sex distinction and by age. As a result, the remarkable expansion of Kaohsiung brought about at once the shortage of young female workers. A factor which accelerated this tendency was a lack of commutation facilities. In order to meet this situation, means a calling together of residents of distant places into boarding houses attached to a factory was adopted, but it is not successful. Therefore, the second Export Processing Zone (Nantze) and the third zone (Taichung) were settled.

Generally speaking, the same tendency is anticipated in other cases. There remain room for doubt about the advantage of an abundant supply of low-cost labour. A means of settling the problem is apt to entice employees of another factory with high wage, leading to the rise of wage level and the decline in the labour productivity.

(4) Isolated Enterprises in the Free Zone.

An ideal form of free zone is considered as follows:

The establishment of new industries would stimulate the development of various ancillary industries in the host country. However, the actual state is different from the above. As already repeated in the

above, inhabitant industries are isolated from each other. Those with whom they are connected are customers at a distance across the sea. Consequently, there are few, forward integration and backward integration. The same phenomena are found in free ports and further in developing countries is common. Assemblers and set makers will advance, but component makers do not intend to make in roads easily. The reason is that a mass production is ineffective owing to the narrowness of domestic market, resulting in the rise of costs.

(5) New role of Industrial Free Zones

Kaohsiung succeeded remarkably, taking a good aim with a good timing. However, industrial free zones are likely to be facing a greater problem than abovementioned individual problems.

Factors constituting the new situation are mentioned below.

(a) New political situation in Asia.

By the joining of the People's Republic of China in the United Nations realized last autumn, the expansion of Japan-China and US-China trade is expected. At the same time, the withholding of new investments in industrial free zone in Taiwan and an early realization of Vietnam armistice are anticipated. Establishment of free zone is being projected in several parts of the Indo-China Peninsula. Competition between new free zones and existing free zones is estimated to become severe.

(b) Contradiction between the domestic production policy and export Processing

Industrial free zones are based on export and processing, thereby being isolated from the domestic market. However, Asian countries are pushing forward the policy of domestic production. The isolation of inhabitant industries and local industries will become a serious issue.

Industrial free zones are required to realize the completion of production techniques and balanced increase of industrial labour force through re-investigating several premises, in order to play a new role under a new situation.

For instance, the co-operation with industrial estates will drive the domestic production policy and promote the backward or forward integration.

The time when industrial free zones will face the new situation will be different, according to the development of industrialization policy in home countries and investment policy of investor countries. At that time, free zones are required to perform a new role of adjusting the contradiction existing between the industrialization and export processing. The reason is that export processing is considered as a means of general industrialization of a country or region.

Type (or classification) of Free Trade Zones.

Type	(Home Countries) Aims (Objectives)	Means	Operations	Effects
Commercial Free Trade Zones	Foreign Exchange	Duty exemption	Distribution Warehousing	Foreign Exchange Tax revenue Employment Opportunities
Industrial Free Trade Zones	Foreign investment Foreign exchange (export) Employment	Fiscal incentives Physical incentives	Manipulating packaging Assembling Processing	Isolation of IFTZ Interruption of Production technique
New Type of IFTZ a part of "Industrial Complex".	Regional or National Development (Industrialization)	Incentives for the <i>intra</i> zone products	Assembling Processing Manufacturing	Integration of industry inside and outside the zone Technology Transfer Management Transfer