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Export processing zones in the Republic of Korea: Economic impact and social issues

by Mr. Won Sun Oh

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List of Abbreviations

- EPZ(s) - Export processing zone(s)
- FCIA - Foreign Capital Inducement Act
- FEZEA - Free Export Zone Establishment Act
- FEZAO - Free Export Zone Administration Office
- FKI - Federation of Korean Industries
- KLI - Korea Labour Institute
- OEAMFEZ - Occupant Enterprises Association of the Masan
Free Export Zone

Export processing zones in the Republic of Korea:
Economic impact and social issues

by Wonsun Oh

I. INTRODUCTION

It is widely recognized that export processing zones (EPZs) have played a significant role in promoting export-oriented industries in a number of developing economies. In the case of the Republic of Korea, EPZs were established in the early 1970s as part of the national economic development strategy. The main objective was to attract foreign capital and technology, which, when combined with an abundant supply of labour, would create favourable conditions for the development of an export-oriented pattern of industrialization.

Two EPZs were established in Masan City and Iri City in the early 1970s. Whereas operations in the EPZ in Iri remained relatively modest, those in the Masan Zone grew significantly up to 1988. Since then, there has been a decline. When considered in terms of the share of their output in total exports, the percentage of their workforce in total industrial employment and their foreign exchange earnings, the contribution of these zones to the economy of the Republic of Korea has not been large. Moreover, their importance to regional and national economic development has decreased due to the emergence of substantially larger industrial areas.

Chapter I describes the general characteristics of EPZs in the Republic of Korea and the various incentives provided by the Government to sustain the zones.

Chapter II discusses the historical development of the EPZs and their social and economic effects on the national economy, particularly with regard to export promotion, foreign exchange earnings, employment and technology transfer. The evolution and pattern of ownership of enterprises in the EPZs are dealt with in Chapter III, while Chapter IV explores the structure of employment as well as the activities in the zones.

Chapter V gives an account of working conditions and labour relations in the EPZs. Chapter VI provides a brief summary of the matters discussed in the preceding chapters and proposes future policy issues that need to be addressed.

II. GENERAL DESCRIPTION OF EXPORT PROCESSING ZONES IN THE REPUBLIC OF KOREA

II.1. Characteristics and administration of the zones

The idea of setting up EPZs in the Republic of Korea originated from two sources in the early 1960s. One was a report prepared by officials of the Federation of Korean Industries (FKI) who had visited Japanese industrial facilities in 1963. The other was a request from Korean residents in Japan for the establishment of a special export zone along the south-east coastal area. Following a series of reports and a fact-finding tour to the Kaoshiung EPZ in Taiwan, a recommendation for the creation of a special export processing zone was made by the FKI and the final decision to build a zone was taken by the Government in 1969. In the following year, a special law for the establishment and management of EPZs was promulgated.

According to the initial proposal, 150 firms with planned investment amounting to \$30 million were expected to set up operations in the zones. Of the total to be invested, \$24 million was to originate from foreign investors

and \$6 million from local entrepreneurs. Jobs were to be created for 37,500 persons and an estimated \$150 million worth of products were to be exported when the plants were fully operational. Of the seven proposed sites, Masan City was considered to have the most favourable economic conditions which could enable it to play an important role in promoting export-led industrialization and in fostering linkages with industry in coastal areas such as Pusan, Pohang and Ulsan.¹

In 1973, President Park ordered that some 65 per cent of the Iri industrial areas be utilized for the development of an EPZ which was expected to attract about 70 firms that would employ over 30,000 workers and export some \$300 million worth of products.

The Free Export Zone Establishment Act (FEZEA) was enacted in January 1970.² According to the Act, the zones were to accelerate the development of the national economy by attracting foreign investment. Through the transfer of technology and know-how, they were to promote exports, increase employment and develop the regional economy. The Act stipulated that authorization to operate in the zones would be granted to the following: enterprises involved in the manufacture, processing, or assembly of products for export; those which utilize advanced technologies and those engaged in labour-intensive activities.

In the absence of a standard definition of an export processing zone, the definition contained in the FEZEA will be used for the purpose of this working paper. An EPZ is a specially designed industrial area where enterprises with foreign participation may import raw materials and semi-finished goods in order to manufacture, process, or assemble duty-free products for export. The EPZ is a bonded area in which various national laws and regulations are not applied.³

II.2. Infrastructure and supporting facilities

The first two EPZs were established in Masan City and Iri City in 1971 and 1974 respectively. The Masan EPZ was located in an area characterized by good port facilities, relatively easy access to Japan and the availability of a young labour force. In the case of the Iri EPZ, there was an abundance of land but a lack of harbour and airport facilities to provide links with major industrial centres.

The industrial sites and standard factories were built by the Government and leased to foreign investors. In 1991, the two EPZs covered an area of 1,122,000 m² of which 817,000 m² was leased land. Since 97 per cent of the leasible land is already occupied, a new plant could be set up only if an existing firm were to close its operation. Harbours, water and electricity as well as dormitories and dining facilities for employees are provided in the zones.

In May 1992, there were 16 companies operating in standard factory units in the Masan Zone. Customs, immigration, postal, fire prevention and police services are managed by the Free Export Zone Administration Office (FEZAO). It is also responsible for the following services: the receipt and processing of applications concerning foreign investment and use of imported technology; inspection of export and import licences; licensing and supervision of supporting firms; safety management and employment-related services as well as the management of utilities and welfare facilities.

II.3. Legal and institutional incentives

II.3.1. Foreign Capital Inducement Act

The incentives provided by the Government to attract foreign investors did not apply only to EPZs. The Foreign Capital Inducement Act (FCIA) offered protection and incentives to foreign investors in all industries in which foreign participation was permitted. As a result of the growth of foreign investment and in particular, of joint ventures between local and foreign investors, the FCIA was amended in March 1991.⁴ Under the amended legislation, tax exemption for foreign enterprises was abolished except for the high technology industries. The tax benefits accorded to firms in EPZs were reduced to levels lower than those offered in Taiwan, Thailand, Bangladesh and Malaysia. It may be argued that this could have the effect of putting EPZs in the Republic of Korea at a disadvantage vis-à-vis zones in other Asian countries.

The Foreign Capital Inducement Act expressly provides for the waiving of the application of certain provisions of other laws. It also prescribes that foreign investors and nationals of the Republic of Korea be treated on an equal basis. While the Act stipulates that capital goods which are available domestically cannot be imported by foreign firms, this provision is waived in the case of EPZs. Moreover, provisions of the Labour Dispute Adjustment Act which apply to Public Utility enterprises are also applicable in the zones.⁵ Since the volume of exports increased while the area of EPZs remained the same, the Government authorized subcontracting in December 1974. Sixty per cent of the total production process can be undertaken by subcontractors outside of the zones. As a result, subcontracting increased significantly over the years.

II.3.2. Motives for investing in EPZs in the Republic of Korea.

According to a recent study, the reasons for which foreign investors were attracted to the Masan EPZ have changed considerably over time. As shown in table 5, low wages, tax exemptions and high-quality location-specific conditions were main factors that attracted foreign investors in the early years of the operation of the Masan EPZ.

Table 1 : Factors motivating foreign investment in the Masan EPZ

		Strongly agree	Agree	Neutral	Strongly disagree	Disagree	Total %
Low wages	A	45.6	31.6	15.8	3.5	3.5	100
	B	3.5	3.5	15.8	31.6	45.6	100
High quality of labour	A	1.7	19.3	50.9	24.6	3.5	100
	B	7.0	28.1	47.4	14.0	3.5	100
Tax exemptions	A	42.1	38.6	14.0	5.3	0.0	100
	B	5.1	13.8	25.9	27.6	27.6	100
Active promotion	A	20.8	37.5	27.1	6.3	8.3	100
	B	21.1	16.7	35.4	31.2	14.6	100
Superior location	A	24.6	45.6	19.3	8.3	1.7	100
	B	8.8	24.6	26.3	29.8	10.5	100
Possibilities to explore the domestic market	A	3.6	5.4	8.9	33.9	48.2	100
	B	10.9	12.7	10.9	30.9	34.6	100

Note: "A" refers to considerations at the time that the initial investments were made and "B" shows their relative importance in 1990.

Source: Korea Institute for Economics and Technology, Study on the development Plan for the Masan EPZ, 1990.

However, increases in the cost of labour as well as in the level of trade union activity have been eroding certain advantages. In the mid-1980s, monthly wages in non-agricultural activities in the Republic of Korea were among the highest in the region and were over three times

higher than the comparable wages in Malaysia and Thailand (see table 2). This gap widened as the cost of Korean labour soared in the second half of the decade.

Table 2 : Monthly wages in non-agricultural activities in selected Asian Economies, 1986-88

	(US\$)		
	1986	1987	1988
Malaysia	126	131	129
Republic of Korea (a)	407	470	610
Singapore	336	362	401
Thailand	121	155	170
Taiwan, Province of China	423	572	643

(a): including family allowances and the value of payments in kind.

Source: ILO (1992), Federation of Korean industries (1989).

During that period, wage increases in the Korean EPZs surpassed the national average, largely as a result of the surge in trade-unionism following the proclamation of 29 June 1987.⁶ As part of the process of democratization, the labour laws were amended, giving unions greater freedom to exercise their rights. In the wake of those changes, most unions demanded higher wages and better working conditions. Employers generally accepted those demands in order to prevent labour unrest. Since larger companies are more likely to have unionized workers, this is undoubtedly the reason for which employers in these establishments in EPZs consider labour disputes to be a major problem.

Small and medium-sized firms cited fluctuations in the exchange rate as well as the rising cost of raw materials and intermediate goods as posing the greatest obstacles to their operations.

The relatively high turnover of staff in enterprises in the zones coupled with the unwillingness of nationals to engage in hazardous work, constitute other labour-related difficulties which enterprises in EPZs in the Republic of Korea have to face.

III. DEVELOPMENT AND ECONOMIC AND SOCIAL EFFECTS OF THE EPZs

III.1. The development of EPZs in the Republic of Korea

EPZs are said to undergo a four-stage life cycle: formation, take-off, maturity and decline.⁷ In the first stage, the volume of

investment and the number of enterprises increase very rapidly. In the take-off stage there is a slowdown in the rate of investment, while the volume of production and export rises significantly. In the mature

stage, the composition of the enterprises changes, with high value-added and capital-intensive industries replacing those that are labour-intensive. In the final stage, both the volume of investment and the competitiveness of the zones decline.

Capital inflows into the Masan EPZ increased from \$1.2 million in 1970 to \$88.9 million in 1975. Most of the enterprises were involved in labour-intensive activities and they contributed more to the creation of employment than to the earning of foreign exchange. During the late 1970s, there was a drop in the number of enterprises in the zone.

However, the level of investment kept growing and the volume of exports tripled. The number of domestically-owned firms in the EPZ increased in

the 1980s following the Government's decision to allow local firms to operate in the enclave. During that period, most of the enterprises were involved in capital-intensive activities.

The average investment per enterprise in the Masan EPZ increased from \$238,700 in 1971 to \$1,871,100 in 1986. During the 1990s, investment from foreign sources decreased slightly while that of local origin continued to rise. That may be attributed to several factors. The tax exemption period for most firms had expired, conditions in the international economy had deteriorated, wages had increased and the exchange rate was no longer favourable to foreign investors. In addition, serious labour unrest between 1987 and 1989 discouraged foreign entrepreneurs from making additional investments in the zones. There were companies (e.g. the Korea Citizen Co. and Korea T.C. Electronics) which relocated to industrial estates in other parts of the country and attempted to explore opportunities in the domestic market.

The Masan EPZ seems to have reached the late stage of maturity. Investment has fallen, exports have slowed down and employment has declined steadily since 1988. The Government continues to encourage the enterprises which operate in the zone to increase investment, to introduce advanced technology and to expand subcontracting arrangements outside the zone. Efforts are also being made to convert these zones into high-tech industrial estates.⁸

Proposals for the development of the Masan EPZ were prepared by the Occupant Enterprises Association of the Masan Free Export Zone (OEAMFEZ) in March 1991 and an implementation plan was drawn up in June 1992 by the Ministry of Trade and Industry, the MAFEZO and the OEAMFEZ. It was decided that firms producing the following would operate in the zone:

household electronics products and parts; semiconductors, computer and peripheral devices; office machines and tools; cameras and parts; timepieces and parts; lenses, optical machines and tools; communication machines and tools, and software.

The volume of goods produced by firms in EPZs which can be sold on the domestic market is limited to 100 per cent of the previous year's net exports. However in the case of televisions, radios, recording instruments, radio cassette players, stereos and timepieces, it is restricted to 5 per cent. Since the importation of these items has been liberalized, the new plan provides for the ceiling to be raised to 50 per cent. The limit for removing imported equipment and machinery from firms in the EPZs to facilities outside the zones has been shortened from five to three years. The plan also calls for the granting of tax exemption for new investment and for the waiving of taxes on inputs from domestic sources when the final products are sold on the domestic market. Currently, the domestic sales from EPZ firms are subject to the same tax as imported products even if local raw materials are used.

In an endeavour to promote good industrial relations, there are provisions for a labour office to be set up in the FEZAO and for welfare facilities such as childcare and cultural centres to be made available.

The Iri EPZ never took off in the way that the Masan Zone did. In 1991, total investment amounted to US\$49 million and there were 22 firms operating in the Iri Zone. Originally planned to stimulate the development of rural areas and boost non-agricultural employment, this zone has attracted few investors and in fact, only one third of the area has been developed. Inadequate infrastructure and lack of easy access

to raw materials are among the main reasons for the relatively poor performance of this EPZ.

III.2. Economic and social effects

III.2.1. Export promotion

Between 1971 and 1991, exports from the Masan EPZ constituted between two to four per cent of total national exports. In the 1970s, the rate of growth of exports from the zone was higher than that of national exports. From 1989 onward exports from the EPZs declined to less than three per cent of total exports. However, in terms of value of exports per worker, the export performance of the zones has been found to be either similar to or better than that of other industrial estates.

For example, the volume of exports per worker in the Masan Zone is similar to that of the Kumi industrial estate, 1.3 times that of the Guro industrial estate and 3.8 times that of the estate in Changwon. In 1991, the value of total exports from firms in the Masan EPZ was twice that of the Guro industrial site and it was about four times higher in the cases of Banwol and Changwon industrial estates.⁹

The electronics and electrical industries account for 73 per cent of total exports from the Masan EPZ, while precision tools and instruments make up 11 per cent. The main markets for these goods are Japan (47.2 %), the United States (19.7 %) and Western Europe (15.9 %).

III.2.2. Foreign exchange earnings and local procurements

Foreign exchange originating from the Masan EPZ is equivalent to about 50 per cent of the total value of exports from that zone, which amounted to US\$1,463.4 million in 1991. The EPZ contributes to the economic development of the region through the payment of wages, the procurement of goods and services from local sources, and the conclusion of subcontracting arrangements. In 1991, US\$15.5 million was paid in wages to workers in the Masan EPZ and about 45 per cent of total inputs for production was bought from local firms. Some 300 local subcontractors supplied materials to 44 enterprises in that zone.

III.2.3. Employment effects

The EPZs were established at a time when there was a surplus of labour in the Republic of Korea. The creation of employment was therefore one of the principal aims of setting up the zones. The number of jobs created in EPZs in the Republic of Korea from 1971 to 1991 is shown in Table 33.

Table 33: Trends in employment in EPZs in the Republic of Korea

	Masan	Iri	Total
1971	1,248		1,248
1975	22,586	1,333	22,919
1980	28,532	2,700	31,232
1983	30,989	3,730	34,719
1984	33,858	4,014	37,872
1985	28,983	3,801	32,784
1986	34,883	4,633	39,516
1987	36,411	5,107	41,518
1988	33,080	4,071	37,151
1989	23,076	3,558	26,634
1990	19,616	3,608	23,224
1991	18,776	3,134	21,910

Source: Ministry of Trade and Industry

The zones have had both quantitative and qualitative effects on employment. Not only have jobs been created, there have also been changes in the work environment and in opportunities for the training of workers. The workforce in EPZs reached its highest level in 1987 when the number reached 41,518. By 1991, this had fallen to 21,910 as a result of adverse economic conditions at both the domestic and international levels. Factory automation was another factor that contributed to the decline in the number of jobs.

As regards to indirect employment generated by the Masan EPZ, in 1991 there were 9,348 persons employed in firms to which enterprises in the zone had subcontracted work. In the case of the Iri Zone, the number was estimated to be 391.

Direct and indirect employment in the two zones account for approximately 0.6 per cent of all jobs in the manufacturing sector. Sixty per cent of all workers in EPZs are in the Masan Zone which has made a considerable contribution to the development of that region by creating job opportunities.

III.2.4. Training and technology transfer

The transfer of skills and know-how can be effected through study tours to a parent company, training courses provided by experts from the parent company and on-the-job experience. Up to 1991, 7,567 workers in the Masan EPZ had been on study tours to parent companies. Most of the tours were organized for workers in the electronics, electrical and precision instruments industries. No such activities were undertaken in the textile industry.

Companies in the zones also provide technical support and guidance to subcontractors in order to ensure that the quality of the products is maintained. In 1991, 330 subcontractors benefitted from such support services. The used equipment that was transferred from enterprises in the zone to other firms, as well as the mobility of skilled labour from the EPZs to firms outside of the enclaves have also contributed to the transfer of technology. However, the impact of these initiatives is difficult to assess in view of the relatively limited number of workers that have access to training, the short duration of the programmes and the fact that training is provided mainly to women workers, many of whom are unlikely to make long-term careers in the industries concerned.

IV. STRUCTURE AND OWNERSHIP OF ENTERPRISES IN THE EPZs

IV.1. Ownership patterns and origin of capital

The number of enterprises increased significantly in both zones in the years immediately after their establishment. In 1970 there were four firms in the Masan EPZ, by 1973 the number had risen sharply to 115. On average, three to four companies moved into the zone each year. As a result, notwithstanding the closure of some 111 businesses during the years 1970-1991, the Masan area was fully utilized, particularly in the mid-1970s when both the size and number of new entrants increased. Having attained the mature stage of its development, the number of enterprises has been falling steadily, reaching 69 by 1991 (see table 4). In the case of the Iri Zone, there was one firm operating in 1975 and 13 in 1978. The number reached its highest in 1990 when there were 24 enterprises and by 1991 this had decreased by two.

Table 4 : Number of operating firms and average number of workers per firm in the EPZs, by year.

Year	Masan		Iri		TOTAL
	No. of firms	Average No. of workers	No. of firms	Average No. of workers	No. of firms
1970	4	-			4
1973	115	185			115
1974	110	185			110
1975	94	240	1	333	95
1978	95	326	13	228	108
1980	85	335	11	245	96
1981	83	338	14	248	97
1982	80	325	15	237	95
1983	80	387	17	219	97
1984	77	440	19	211	96
1985	77	376	18	211	95
1986	75	465	18	257	93
1987	74	492	20	255	94
1988	73	453	21	194	94
1989	69	334	23	155	92
1990	70	280	24	128	94
1991	69	272	22	142	91

Source: Ministry of Trade and Industry

As regards the origin of investors in the two zones, Japanese firms predominate in the Masan EPZ while more than half of the enterprises in the Iri EPZ are of local origin. As of May 1992, there were 31 Japanese wholly-owned firms and 15 Japanese joint ventures in operation in the Masan Zone. Most of these are small and medium-sized firms which utilize standardized production technologies. They generally act as subcontractors for parent companies. The high share of Japanese firms in the Masan EPZ may be attributed to the geographical proximity of the two countries and the fact that the idea of establishing an EPZ originated from citizens of the Republic of Korea resident in Japan.

In 1991, more than 80 per cent of all enterprises in the Masan and Iri EPZs were wholly foreign-owned. Seventy-six per cent of total investment in Masan was of Japanese origin while local investors

accounted for 16.2 per cent. In the Iri Zone, Japanese and Korean investment were two and 77 per cent respectively. All investment from the United States went into joint ventures.

As regards the management of enterprises in the EPZs, 67 per cent of all managers in Masan are from the Republic of Korea. However, they comprise only one-third of all managers in wholly Japanese-owned companies.

Table 5 : Ownership patterns, 1991

	Domestic	Foreign	Wholly-owned	Joint venture	Total
Masan					
Korea	18				18
Japan		31		15	46
USA				5	5
Others			3	3	6
Iri					
Korea	15				15
Japan		2		7	9
Germany		1			1
Others			2	2	4

Note: Joint ventures with investors from the Republic of Korea are counted as originating from the foreign country.

Source: Masan FEZAO, Iri FEZAO

Table 6 : Level of investment by country of origin, June 1992

(US\$ 1,000)

	Wholly-owned	Joint venture	Total
Iri			
Korea	36,633 (15)	2,795 (9)	39,428 (24)
Japan	994 (2)	4,969 (7)	5,963 (9)
USA		261 (1)	261 (1)
Germany	5,148 (1)		5,148 (1)
Yemen		200 (1)	200 (1)
Total	42,775 (18)	8,225 (18)	51,000 (36)
Masan			
Japan	167,587 (31)	11,436 (15)	179,023 (46)
Korea	16,893 (18)	18,754 (22)	35,647 (40)
USA		1,685 (5)	1,685 (5)
Others		3,110 (3)	3,110 (3)
Total	184,480 (49)	34,985 (45)	219,465 (94)

Note: The numbers in the parentheses indicate the number of firms involved.

Source: Masan FEZAO, Iri FEZAO

The level of investment in the zones has increased steadily despite the decline in the number of firms. This is partly explained by the fact that while some companies either reduced production or ceased their operations, others shifted to more capital-intensive production processes. Foreign capital in the zones constituted more than 10 per cent of total foreign investment in the Republic of Korea in the the mid-1970s. However, it declined steadily in subsequent years, reaching 3.1 per cent in 1988 and there has not been an upturn in the early 1990s.

More than 80 per cent of the capital invested in the Masan EPZ is of foreign origin while the Iri Zone it is barely 25 per cent. The reasons for this low level of foreign participation in Iri were identified earlier in this text. It is of interest to note that as a result of amendments to the legislation allowing domestic firms to operate in the zone, and because of the development of adjacent industrial estates, an

increasing number of local enterprises are currently operating in the Iri EPZ. The share of domestic investment in the Masan EPZ is also on the rise.

Table 7 : Trends in domestic and foreign investment in the EPZs

(US\$ 1,000)

	MASAN			IRI		
	Domestic	Foreign	Total	Domestic	Foreign	Total
1970	200	1,236	1,436			
1972	1,977	34,918	36,895			
1975	6,185	82,810	88,995	1,881	4,888	6,769
1977	10,454	93,472	103,926	3,849	11,388	15,237
1980	19,748	93,136	112,884	2,210	5,710	7,920
1983	33,368	84,812	118,180	7,069	8,641	15,710
1986	28,134	111,032	139,166	10,611	6,703	17,314
1987	26,318	137,336	163,654	22,379	6,241	28,620
1988	31,959	164,551	196,510	34,608	10,647	45,255
1989	31,828	186,177	218,005	29,503	11,772	41,275
1990	34,464	181,353	215,817	33,072	11,372	44,444
1991	35,147	182,812	217,959	37,444	11,572	49,016

Source: Ministry of Trade and Industry

IV.2. Sectoral distribution of foreign investment

About 90 per cent of total investment in Masan is in the electronics and electrical industries as well as in those producing precision instruments and tools. In the Iri Zone, most of the plants that manufacture electronic and electrical goods employ low- and semi-skilled workers to carry out assembly work.

Table 8 : Participating/operating companies by industry, 1991

	Masan		Iri	
	Participating	Operating	Participating	Operating
Electronic and electrical products	23	23	6	5
Metal products	14	14	-	-
Non-metal products	3	3	3	3
Machinery	3	3	-	-
Precision instruments and products	10	9	-	-
Textiles	5	5	14	12
Footwear	4	4	-	-
Others	9	8	3	3
Total	71	69	26	23

Note: "Participating" firms include those in operation, those under construction and those which ceased operation in each year.

Source: Masan FEZAO, Iri FEZAO

According to the information in tables 9 and 10, about 90 per cent of Japanese investment in Masan is in the industries producing electronic, electrical and precision instruments/products, while Korean investors have concentrated on the metal industry and the manufacture of precision instruments. In sum, 67 per cent of total investment in Masan is in the electronics and electrical industries, 13 per cent in the precision products industry and 9 per cent in the metal industry. In the case of the Iri Zone, Korean firms have invested mainly in electronics, electrical and textile industries while foreign participation is mainly in textiles. Forty-five per cent of total investment in this zone is in the textile industry while 42 per cent is in the electronics and electrical industries.

Table 9 : Investment by industry and country of origin in the Masan EPZ, Dec. 1991

	(US\$ million)				
	Japan	USA	Korea	Others	Total
Electronics	138,775	1,450	2,367	2,963	145,555
Metals	5,531	0,004	14,724	-	20,259
Non-metals	0,340	0,187	0,248	-	0,775
Machinery	5,128	-	-	-	5,128
Precision prods.	20,192	0,020	7,790	-	28,002
Textiles	0,171	-	4,397	0,147	4,715
Footwear	3,272	0,025	3,649	-	6,946
Others	4,608	-	1,971	-	6,579
Total	178,017	1,685	35,147	3,110	217,959

Source: Masan FEZAO

Table 10 : Investment by industry and country of origin in the IRI EPZ, Dec. 1991

	(US\$ million)				
	Japan	USA	Korea	Others	Total
Electronics	0,899	-	18,829	-	19,728
Metals	-	-	-	-	-
Non-metals	0,994	-	0,248	-	1,242
Precision Prod.	-	-	-	-	-
Textiles	4,070	0,261	13,558	5,348	23,237
Footwear	-	-	-	-	-
Others	-	-	4,809	-	4,809
Total	5,963	0,261	37,444	5,348	49,016

Source: Iri FEZAO

V. PATTERN OF EMPLOYMENT AND PRODUCTION

V.1. Employment

The workforce in the EPZs reached its highest level with 41,518 workers in 1987. It subsequently fell to 21,900 in 1991. Labour

disputes, wage increases and changes in the exchange rate which were not favourable to firms operating in the zones, accounted for this sharp decline in the workforce. Recession and changes in interest rates since 1988, also led several multinational enterprises to move their production facilities to other countries. For example, the relocation of the Korea T.C. Electronics Company (a subsidiary of Japan Sumida Electricity Corp.) resulted in the loss of almost 5,000 jobs.¹⁰ The level of unemployment in the country has remained relatively low (around 2.5 per cent) and there is a great demand for low- and semi-skilled workers. Consequently, workers who have been dismissed from enterprises in EPZs can find other jobs easily. It is of interest to note that some female workers move into the service sector rather than remain in manufacturing.

Subcontracting has also had an impact on employment in the zones since many companies resort to the use of such arrangements instead of expanding their production capacity. Rising labour costs¹¹ as well as the interest of foreign firms in gaining access to the domestic market have motivated a number of enterprises to take such action.

Table 11 : Size of workforce in firms in the Masan EPZ (by industry), June 1992

Industry	Number of workers						Total number of firms
	<50	51-100	101-300	301-500	501-1000	1,000+	
Electronics	3	5	6	3	3	3	23
Metals	6	6					12
Non-metals		3					3
Machinery		2	1				3
Precision Prod.	2		2	5			9
Textiles	2	4	2			1	9
Others	2	3	3				8
Total	15	23	14	8	4	3	67

Source: Masan FEZAO

Table 12 : Size of workforce in the Iri EPZ (by industry), June 1992

Industry	Number of workers						Number of firms
	<50	51-100	101-300	301-500	501-1,000	1,000+	
Electronics		2	2				4
Non-metals	2	1					3
Textiles	8	4		2			14
Others	2	1					3
Total	12	8	2	2			24

Source: Iri FEZAO

Up to mid-1992 there were only three firms in the electronics and electrical industries which employed more than 1,000 workers in Masan, while the largest plant in Iri employed less than 500 workers. Companies with a workforce of less than 100 accounted for more than 80 per cent of all enterprises operating in Iri and 50 per cent of those operating in the Masan area. This shows the predominance of small-sized plants in the zones.

In 1989, ten companies accounted for 63 per cent of all exports from the Masan EPZ and 48 per cent of the workforce. The value of exports of the 45 smallest companies amounted to \$202.2 million - less than that of the largest exporting firm which was said to have exported US\$214.1 million worth of goods.

As regards the composition of the workforce in EPZs, more than 70 per cent of the workers are single young women who have graduated from high school. They tend to leave these jobs when they get married. These workers are employed in low- and semi-skilled jobs in the electronics and textile industries. The firms generally prefer female workers because their wages are lower than those paid to males. Moreover, since

they have no long-term career aspirations, they are considered to be less likely to make demands on the management of enterprises in the zones to provide stable long-term employment. The percentage of women in the workforce in the zones has been falling since 1988, mainly because the transition to capital-intensive activities has reduced the need for low-and semi-skilled workers.

Table 13 : Employment by gender in the two EPZs

	Masan			Iri		
	Male	Female	Total	Male	Female	Total
1987	8,389	28,022	36,411	-	-	5,107
1988	8,105	24,975	33,080	-	-	4,071
1989	6,481	16,595	23,076	1,088	2,470	3,558
1990	5,799	13,817	19,616	1,150	2,458	3,608
1991	5,683	13,093	18,776	975	2,159	3,134

Source: Ministry of Trade and Industry

Most of the workers recruited by enterprises in the EPZs have either had no training or they have been trained for periods of less than one week or no more than two. This may be explained by the fact that the labour-intensive activities carried out in the zones consist of relatively simple and repetitive tasks. As regards the duration of employment, about half of all workers in the Masan EPZ have less than three years of service in any given company.

Table 14 : Employment by age, 1990

Age	Male workers (%)	Female workers (%)	Total number (%)
Less than 20	307 (5.4)	4,067 (26.7)	4,374 (20.9)
21 - 30	2,293 (40.0)	8,866 (58.3)	11,159 (53.2)
31 - 40	2,208 (38.5)	1,510 (9.9)	3,718 (17.7)
More than 40	929 (16.1)	782 (5.1)	1,711 (8.2)
Total	5,737 (100.0)	15,225 (100.0)	20,962 (100.0)

Note: Figures provided by 60 firms that responded to questionnaire.

Source: Korea Institute for Economics and Technology, Study on the development plan for the Masan EPZ, 1990

Table 15 : Structure of employment by length of service, 1990

Length of service	Male workers (%)	Female workers (%)	Total number (%)
Less than 1 year	464 (8.1)	972 (6.4)	1,436 (6.9)
1 - 2 years	903 (15.7)	3,758 (24.7)	4,661 (22.2)
2 - 3 years	900 (15.7)	4,367 (28.7)	5,267 (25.1)
More than 3 yrs	3,470 (60.5)	6,128 (40.2)	9,598 (45.8)
Total	5,737 (100.0)	15,225 (100.0)	20,962 (100.0)

Source: Korea Institute for Economics and Technology, Study on the development plan for Masan EPZ, 1990

V.2. Subcontracting and domestic linkages

Firms wishing to give work to enterprises outside of the zones must submit a request to the FEZAO. Subcontracting is used by a number of enterprises, particularly when there are "rush orders" to be filled. Rising wages and the decreasing workforce in the zones have made this an attractive option. In 1991, subcontractors were involved in the production of 0.5 per cent of the goods made in the Masan zone and 50 percent of all workers employed by the subcontractors were involved in production for the EPZ.

Table 16 : Patterns of subcontracting in the Masan EPZ, 1991.

	Elec- tronics	Pre- cision	Metals	Foot- wear	Others	Total
Number of EPZ firms	20	8	7	2	7	44
Number of subcontractors	188	81	30	12	19	330
Employment in subcontracting firms	6,585	1,542	202	742	277	9,348
Value of goods produced by subcontractors (US\$1,000)	46,188	12,081	2,863	5,417	1,704	68,253

Source: Masan FEZAO

Table 17 : Patterns of subcontracting in the Iri EPZ, 1991

	Textile	Electronics	Others
Number of EPZ firms	5	3	1
Number of subcontracting cases	283	40	68
Subcontracting amount (US\$1,000)	11,850	8,236	3,150

Source: Iri FEZAO

As the volume of export increased and the capacity of enterprises in the EPZs reached its limits, the FEZAO in April 1988 extended its list of cases in which subcontracting was authorized.¹² The number grew from 115 to 682 and the procedure for handling the applications was simplified. Subcontracting can now account for as much as, but no more than 60 per cent of the production process as opposed to the previous limit of 30 per cent. The amended regulation also allows for the necessary equipment in the zone to be made available to the subcontractors. The products cannot be sold as final goods, they must

be used for the assembly or manufacture of goods in the EPZs. The period of the subcontracting arrangement is limited to one year. Conditions of work in subcontracting firms are generally unsatisfactory and the nature of the arrangements causes certain disadvantages for the host community.

On the one hand, EPZs have positive effects on the host community by creating jobs, diffusing production technologies and various methods of industrial management, and by providing work for subcontractors. On the other, the lack of support for local activities, the adverse effects of certain operations on the environment and the presence of foreign personnel have been known to provoke conflicts in the relations between enterprises in EPZs and actors in the host country.

Table 18: Average output per company and per worker in the Masan EPZ, 1986-1991

V.3. Production

Production in the Masan EPZ reached its highest level (15 billion won) in 1988 and fell slightly thereafter. Several developments in both the domestic and international contexts accounted for that decrease. Average output per company declined since 1989 (see table 18). However, the value of output per worker increased from US\$33,000 in 1986 to US\$72,000 in 1991.

As firms in the EPZ become more capital-intensive, productivity increases. Consequently, while the absolute amount of total production may decline due to the closure of firms and the reduction of personnel, productivity increased since 1988 with the introduction of capital-intensive production methods.

Table 18 : Trends in the level of production in the Masan EPZ, 1986-91
Billion won, (%)

Year	Total Prod. Billion won (%)	Prod per company %	Prod. per employee %
1986	9,074 (25.9)	121 (31.1)	0.26 (4.6)
1987	10,513 (15.9)	142 (17.4)	0.29 (11.0)
1988	12,219 (17.0)	169 (18.6)	0.37 (28.8)
1989	11,593 (- 5.7)	168 (- 0.3)	0.50 (31.5)
1990	10,171 (-12.3)	145 (-13.5)	0.52 (3.2)
1991	10,683 (5.0)	155 (6.9)	0.57 (9.6)

Note: The numbers in parentheses show the percentage change over the previous year.

Source: Masan FEZAO

As regards investment in research and development (R & D) and in techniques for improving productivity, firms in EPZs do not invest in the former and devote no more than five per cent of total expenditure on the latter. The electronics and electrical, and precision instruments industries invested the least in R & D. In this regard, foreign companies tend to invest less than their domestic counterparts. The inputs for production by enterprises in the zones are generally imported from the parent companies. In 1990, 51.3 per cent of all material used was imported. In the case of Japanese firms, it was 70.5 per cent with the electronics and electrical industries, accounting for 91 per cent of total imports. The share of imported inputs is on the decline as the quality of domestic materials improve and goods become more readily available in the local market.¹³

VI. WORKING CONDITIONS AND LABOUR RELATIONS

VI.1. Remuneration and working conditions

Until 1987, average wages in the zones were lower than those in the rest of the economy. However, workers in foreign-owned firms outside the

zones were generally paid higher wages than workers in domestic firms.¹⁴ Since 1987, the labour movement has become more active and there has been a general increase in wages. Between 1986-1991, wages grew at an average of 19.5 per cent for male workers and 27 per cent for female workers in the Masan EPZ (see table 19). The most significant wage increases in the EPZs were slightly above the national average. That was the case particularly for female workers whose numbers in the workforce fell by almost 50 per cent. Wages in capital-intensive industries are generally higher than those in labour-intensive industries. The higher levels of productivity and longer working hours in the former are largely responsible for this. As the difference between wages in enterprises outside and within EPZs narrowed, so did the gap between the wages paid to male and female workers.

The Labour Standards Law prescribes an eight-hour work day and a 44-hour work week, not including the daily rest period. It may be argued that the long working hours in the zones merely reflect the national practice. Until the late 1980s, overtime work and the three-shift system were common in firms both in and outside the zones. However, overtime work has been gradually reduced and most manufacturing enterprises have a two-shift system. According to a recent survey, average working time in the EPZ is between 8-10 hours per day, with workers in the capital-intensive industries having longer hours than those in the other industries.

Table 19 : Working hours in the Masan EPZ by industry, 1990

Industry	8 hrs	8-10 hrs	> 11 hrs	Total no. of firms
Electronics & electrical	10	11	-	21
Metal	1	8	3	12
Machinery		2	1	3
Precision Prod.	3	5		8
Textiles	1	4		5
Others	4	5	2	11
Total	19	35	6	60

Source: Korea Institute for Economics and Technology; Study on the development plan for the Masan EPZ, 1990

Table 20 : National average weekly working hours, 1986-1991

Working hours	1986	1987	1988	1989	1990	1991
Total	52.5	52.0	51.1	49.2	48.2	47.9
Regular	44.6	44.2	43.9	42.6	41.8	41.7
Overtime	7.9	7.8	7.2	6.6	6.4	6.2

Source: Ministry of Labour, Republic of Korea.

As regards housing, it was identified as the most serious concern of employees. However, employers in more than half of the firms surveyed (34) and especially in those that are small and medium-sized did not give any consideration to this issue. With respect to the provision of dormitories, the Masan EPZ has four, with 336 rooms which can accommodate 600 workers. The occupancy rate is only 46 per cent and this is largely because the buildings were constructed in 1972 and the quality of the facilities has deteriorated. In Iri, only two large-scale electronics companies have their own dormitories while others either rent apartments for their employees or pay part of the accommodation costs. Most workers do not reside in Iri City. The companies provide

transportation to and from the workplace. On the whole, the standard of amenities offered in the EPZ is lower than outside of the zones, and this also accounts for the relatively quick turnover of staff. There are no childcare facilities in the zone. In 1992, the Ministry of Labour ordered that nurseries be set up to serve firms with more than 500 female workers. However, only a few employers have complied with this regulation. It would be difficult for the firms to build additional

facilities, given the limited space that is available in the zones.

Major industrial accidents are very rare. Health and safety inspection is carried out on a regular basis as prescribed by the labour legislation. Pensions and the granting of prior notice in the event of dismissals are important issues that have been raised by the workers.

However, employers in the zones and particularly those in large companies have reportedly not taken these concerns into account.

VI.2. Industrial relations

Before 1987 there were no significant labour disputes in the zones. Trade unions and industrial action were prohibited by law in order to attract potential investors. Following the Declaration of 29 June 1987 which lifted those and other restrictions, there was a surge of trade union activity which inevitably had an impact on labour-management relations both within and outside of the zones. In the latter half of 1987, twenty-two unions were formed and there were 40 labour disputes.

As of May 1992 there were 35 unions in the zone. Of them, 22 have adopted a "closed shop" policy while the others have an "open shop" system. About 74.3 per cent of all workers in the EPZs are unionized. Eighty-three per cent of women workers and 55 per cent of

male workers belong to unions. The relatively high percentage of unionized women may be explained by the fact that they perform most of the low- and semi-skilled tasks and, in terms of numbers, they are highly represented in the workforce. The policies of the companies operating in the zones are determined by the management of the parent company. Decisions are made by both the parent company and the subsidiaries located in the zone. The style of management and decision-making processes differ from those of domestic firms. Moreover, cultural differences between the local staff and foreign managers coupled with the fact that workers do not expect to spend all of their working life with the enterprise, could also lead to strained relations.

Table 21 : Trends in union organization in the EPZs, 1987-1991

Number of firms with organized labour	1987	1988	1989	1990	1991	1992
Masan EPZ	22	37	43	41	41	40
Iri EPZ	-	-	6	5	5	5

Source: Masan FEZAO, Iri FEZAO

Table 22 : The incidence of labour disputes in the Masan EPZ, 1987-91

	1987	1988	1989	1990	1991
Number of disputes	40	16	27	30	17
Frequency per company	1.82	0.43	0.63	0.73	0.41
Duration range of disputes (days)	2-15	5-113	2-87	2-96	1-45

Source: Masan FEZAO

The statutory dispute settlement procedures that apply to the Public Utilities also apply to enterprises in the EPZs. Industrial action cannot be taken before 15 days after the receipt of notice of the grievance by the Labour Relations Commission. If the matter is referred

to arbitration, no industrial action may be taken prior to 15 days after the date of referral.

The causes and incidence of labour disputes changed with the growth of the labour movement. In the beginning, the contentious issues centred around freedom of association and the right to organize, wage increases and the improvement of working conditions. On average, the firms with organized labour experienced more than one dispute. More than half of the disputes arose because of the lack of consensus on a standard wage and the basis upon which it should be fixed. The unions demanded higher wages based on the increase in the cost of living while the employers argued that those demands could only be accommodated taking into account the productivity and solvency of the enterprise. While the number of disputes fell from 30 in 1990 to 17 in the following year, the average duration became longer (see table 23). In six cases out of 17, the workers resorted to strike action or other work stoppages. All six firms involved had a workforce of less than 300. One was a locally owned firm in the footwear industry. The other five were Japanese affiliates engaged in the manufacturing of electronic products or precision instruments.

Some firms in the Masan area experienced violent labour unrest in which union activists in the Masan and Changwon areas were said to be deeply involved. The laws governing labour disputes were reportedly not respected by the unions, and the government and employers resorted to the use of force. Moreover, the managers who had the authority to negotiate with the union leaders in an endeavour to resolve the conflict were not on the site. Those who were, had almost no authority to deal with the issues at stake.

Table 23 : The duration of labour disputes in the Masan EPZ, 1991
(number of days)

	<u>1-7</u>	<u>8-14</u>	<u>15-30</u>	<u>31 +</u>	<u>Total</u>
Electrical and electronic products	4	1	3		8
Precision products	1	1	1	2	5
Metal products		1	1		2
Footwear			2		2
Total	5	3	7	2	17

Note: Duration refers to the period of time taken to settle the dispute since this latter was reported to the Labour Relations Commission.

Source: Masan FEZAO

Recent wage increases and the expiry of tax holiday periods have prompted some companies to begin relocating their production facilities to other less developed countries. As a result, employment in the zones has been falling and security of employment is being compromised. Employment has therefore become of greater concern to the unions.

The problems have been more acute in those cases in which relocation has taken place with no prior notice being given to the employees. One such example, is that of the Korea Sumida Electricity Company. The management at headquarters unilaterally decided to close the enterprise. It notified the site manager and dismissed all the employees without following the procedures laid down in the collective agreement in force. The union leaders went to Japan, and with the help of union leaders in the parent company and other authoritative bodies,¹⁸ sought to have the company resume its activities. After almost eight months of discussions the company agreed to pay wages for the duration of the dispute as well as other entitlements, and the union accepted the

decision of the parent company to terminate operations in the Republic of Korea.

This example illustrates that when disputes arise, foreign owners may avoid dialogue with union leaders, leave the responsibility to the Government of the host country to resolve the problem or relocate their operations. It may also be argued that the settlement of industrial disputes may be made more difficult because of the approach of union leaders to negotiating with foreign management as well as their lack of knowledge of the structure and decision-making processes in multinational enterprises.

VII. CONCLUSION AND FUTURE POLICY ISSUES

EPZs played an important role in promoting the export-led industrial development of the Republic of Korea. Regional development was also stimulated as a result of increased employment opportunities and other social benefits. However, the economic significance of the EPZs has diminished over the years. The Masan Zone went through the full life cycle of an EPZ. First, it expanded rapidly and inflows of investment and capital were significant. Then, as labour costs soared, capital-intensive production gradually replaced labour-intensive activities. Conditions of employment and industrial relations also underwent noticeable changes over the years. In contrast, the history of the Iri EPZ is quite different. None of the original objectives with regard to exports, employment and technology transfer have been attained. The poor choice of location, a misconception by the policymakers of the role of the zone in the economy and the requirements for its success, all contributed to its failure.

In terms of exports and productivity EPZs were more efficient than the industrial estates in which local firms operated. Their performance was heavily influenced by factors such as economic developments in the domestic and international contexts. Changes in foreign exchange rates, in wages and in the climate of industrial relations since 1987, had adverse effects on the competitiveness of the EPZs in the Republic of Korea. The liberalization of foreign investment regulations and the reduction of benefits in the package of incentives offered to foreign investors served to erode the advantages of the zones vis-à-vis other industrial estates in the country.

Rising labour costs and the availability of highly-qualified manpower led in large part to changes from low-cost labour-intensive industries to relatively technologically advanced capital-intensive production.

It may be argued that as a result of the liberalization of foreign investment throughout the country, the need to create and expand EPZs in order to boost exports and foreign exchange earnings is no longer as critical as it was years ago. However, there is also the view that the zones should be maintained, that more generous incentives should be offered and that regulatory reforms should be undertaken to meet the needs of foreign investors. The Government and employers in the zones should cooperate in efforts to give qualified workers further training in fields that are critical for maintaining competitiveness.

There are certain areas in which action is required to maximize the advantages that may be derived from EPZs. First, additional incentives should be offered to attract new investment in high-tech industries. The terms and conditions for investing should be such that value-added

activities will be promoted in the EPZs and the operations would not be predominantly in the small and medium-sized enterprises.

Secondly, the legislation should be amended to facilitate the replacement of equipment and machinery at the end of three instead of five years. This would enable enterprises in the zones to introduce advanced production technologies as required, in order to maintain their competitiveness.

Thirdly, a division responsible for labour matters should be established within the FEZAO to deal with problems which could pose a threat to industrial peace if they are not settled expeditiously. Since most of the labour disputes have so far arisen in enterprises in which the management is Japanese, it may be desirable to increase progressively the number of local managers, in an endeavour to minimize the cultural differences that may account for some of the problems that have arisen in the past. Efforts are also required to encourage labour-management consultations on matters of mutual concern.

If the host country and the investors are to derive mutual benefits from the EPZs, the latter also have to play a significant role in improving the conditions that would help in this regard. Employers in the zones need to recognize the importance of providing training, housing and childcare facilities, as well as better conditions of work and pay.

EPZs in the Republic of Korea have made an important but relatively limited contribution to the promotion of export-oriented industrialization and technological progress in the country. The future of these zones would depend on the extent to which governmental policies

and regulations provide favourable conditions for their conversion to high-tech industrial estates that would attract significant investment in higher value-added industries, and provide employment for large numbers of skilled workers as well as technical and professional employees.

NOTES

¹ In the mid-1970s, the south-east coastal areas which include Pohang, Masan and Ulsan were the major sites for industrial estates in which heavy industry and chemical plants were located. They made a significant contribution to the economic development of the country. The role of the Masan EPZ in this development is uncertain.

² Between the year of its introduction and 1983, the FEZEA was amended six times. In 1989, the Government tried to integrate the law with the Industry Arrangement and Factory Establishment Act that was designed for industrial estates and local companies. That initiative failed because of differences in the principles and scope of application of the FEZEA. Other efforts to amend the Law are under way.

³ In this study, the terms export processing zone and free export zone are used interchangeably. The term used by companies and authorities in the Republic of Korea is "free export zone". A recent publication by the Ministry of Trade and Industry used the term export processing zone rather than free export zone. For a discussion of the definitions and terminology used to designate these enclaves, see ILO: Economic and social effects of multinational enterprises in export processing zones, pp. 4-7.

⁴ In the past, domestic partners involved in joint ventures with foreign investors enjoyed the same benefits as the foreigners. Under the amended law, only those local firms in high-tech industries and EPZs continue to get this special treatment.

⁵ The term "public utility" refers to a service that is vital to the public and the suspension or discontinuation of which would pose a danger to the national economy. The following qualify as public utilities: public transport; water, electricity and gas supplies; petroleum refining services; public sanitation and health services; banking; broadcasting and communications. In the case of public utilities no industrial action may be taken until 15 days after the Labour Relations Commission receives notification of the dispute. In other cases the period is 10 days. The Ministry of Labour can decide that the matter must be settled with the utmost urgency. When such a decision is announced, no industrial action may be taken until 20 days after the date on which the announcement was made.

⁶ Before 30 June 1987 there were 2,742 unions. The number increased to 4,103 by the end of 1987. The rate of unionization grew by 22 per cent in 1988. As regards labour disputes, the number soared from 276 in 1986 to 3,749 in the following year.

⁷ For a discussion of the life cycle of EPZs, see ILO: Economic and social effects of multinational enterprises in EPZs, op. cit. The Masan EPZ is discussed in A study on the development plan for the Masan export processing zone.

⁸ Members of the Masan FEZAO and the OEAMFEZ make a constant effort to sustain and develop the Masan EPZ. There are plans to make changes that would take into account the economic and social conditions that affect the zone and the factors for maintaining its competitiveness vis-à-vis EPZs in other Asian countries.

⁹ As of 30 September 1992, there are two EPZs, nine government industrial estates and 32 private industrial estates. Most industrial estates were built after the EPZs. Public industrial estates occupy a total of 129,312,000 square meters while private industrial estates take up an area of 67,136,000 square meters.

¹⁰ The Korea Sumida Co., relocated its factories to Malaysia, while the Korea T.C. Co. moved its facilities to a subsidiary in the Kwangju industrial estate.

¹¹ According to the United Nations System of National Accounts, 1967, the compensation of employees/workers "comprises all payments by producers of wages and salaries to their employees, in kind as well as in cash, and of contributions in respect of their employees to social security and to private pension, casualty insurance, life insurance and other schemes ...". Hourly compensation of workers in manufacturing increased from US\$10 in 1986 to US\$26 in 1990. For the same period, it increased from US\$17 to US\$26 in Singapore and from US\$13 to US\$27 in Taiwan.

¹² Subcontracting is authorized for one year. Consequently, contracts must be renewed after that period expires.

¹³ Of the total inputs used 58 per cent was imported in 1987. By 1990, this had fallen to 51.3 per cent.

¹⁴ Wage comparison between domestic firms and firms with foreign participation.

	(1,000 won)			
	1971	1975	1980	1986
Domestic firms				
all industry	247	552	2,113	4,212
manufacturing sector	203	479	1,759	3,534
Firms with foreign participation				
all industry	530	960	2,740	4,429
manufacturing sector	420	820	2,330	4,180

¹⁵ According to a recent survey, about 30 per cent of firms in the Masan EPZ have a system of prior notice in the case of dismissals and 27 per cent have plans to pay an "unemployment allowance". For details, see, K.I.E.T: A study on the development plan for the Masan EPZ, op. cit.

¹⁶ Basically, Korean unions have an "open shop" system. However, Article 39 of the Trade Union Law provides for the adoption of the "closed shop" system when unions represent more than two-thirds of all workers in the given enterprise. According to the ILO Thesaurus (1991), the term "closed shop" refers to a "union security arrangement where the employer is required to hire only trade union members, and membership is also a condition of continued employment".

17 In a recent survey, about 40 per cent of the enterprises in the zones reported that outside interference was the most difficult problem in dealing with labour disputes. That was the case particularly in wholly foreign-owned and large companies. See K.I.E.T.: A study on the development plan for the Masan export processing zone.

18 For the extensive analysis of this case, see C.H. Lee: Multinational enterprises and the labour movement, 1990.

1988	125,1	114	605	10100
1989	147,2	100	517	10100
1990	161,4	118	600	10100

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