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# DEVELOPMENTAL SITUATIONS & PERFORMANCE OF THE RURAL INDUSTRIAL PARK PROGRAM IN KOREA

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## I. Introduction

Rural industrialization has increasingly been an important policy issue in Korea. Major concerns on the development of rural industry largely come from two sources: One is the rural economy and the other is the national economy.

In the view of rural economy, rural industrial development is considered as a rural development policy that increases incomes of the small farmers. Rural industrialization can provide rural people with more employment opportunities in the rural areas. The creation of off-farm job opportunity contributes to the increase of rural income and narrows down the income gap between both rural and urban households and also among the farm households in rural areas. In addition, rural industrial development can change the patterns of farmers' job holdings and job mobility, and change the agricultural structure in the long run.

From the standpoint of national economy, rural industrial development contributes to the balanced regional economic development. Rural industrialization also can serve as one of the important policy instruments to control and disperse the urban concentration resulted from the polarized industrial-urban development(Yang-Boo Choe, 1979).

In spite of these policy implications of the rural industrializati-

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on, rural industrial development is not such an easy task because of the unfavorable locational conditions of rural areas. Rural areas, in general, have inadequate infrastructure and facilities such as transportation, electricity, and telecommunications including market information system. Compared to the industries operating in urban or near-by urban areas, rural industries have disadvantages in terms of accessibility to the administrative agencies, related industries, raw materials and product markets. For the purpose of rural industrialization through overcoming of these problems, Korea has introduced various policies since the 1970s.

The Rural Industrial Park(RIP) program is one of the most dominant rural industrialization programs in Korea. Total of 264 RIPs are set up with the investment of 1,070 billion won which composed of; 27.3% of subsidy and 56.7% of loan during 1984-1994. All 138 target rural areas have at least 2 RIPs which are equivalent to 150 thousand $m^2$ of industrial land. It takes 75.4% of total number of industries and 48.2% of employment of all the industrial estates in rural areas. However, this program is faced with various difficulties such as the lack of entrepreneurs and skilled laborers. Due to these reasons, demand for the development of RIP has been decreased by criticism on the RIP program in recent years.

The purposes of this paper are; (i) to review the overall situations of the rural industrialization and the RIP development program, (ii) to review the current situations and performances of the RIP, and (iii) to identify implications of this RIP program and its further developmental strategies.

## II. Overview of the Rural Industrialization in Korea

### 1. Definition of the Rural Industry

What does "rural industry" mean and why is the word "rural industry" necessary? In the absence of a clear-cut definition of the word "rural industry", it may be senseless to talk about the development industries in rural areas because the definition of the words depends on the persons who use them and even brings about confusion. There are two kinds of definitions in Korea: one is "normative definition" and the

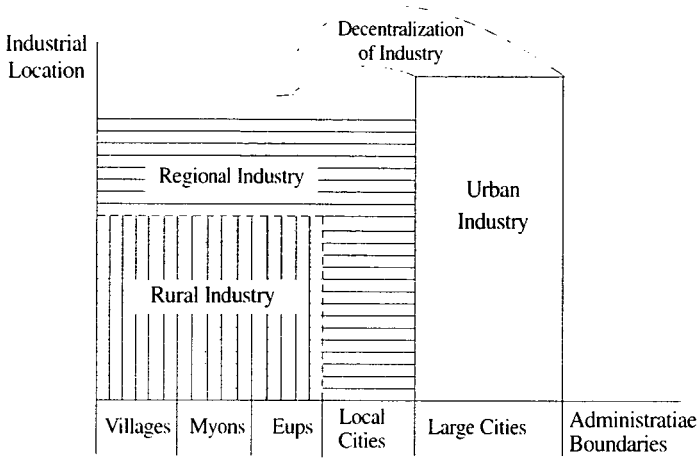
other is "factual definition" (Yang-Boo Choe, 1979).

Normative definition of rural industry is based on a preconception that rural industry should have a certain unique character, if it is to be called a rural industry. This means that rural industry should be located in rural areas and have forward and backward linkages with agriculture, natural resources and rural residents. This is the reason why rural industry is sometimes called "rural-based industry" or "agro-based industry". However, the normative definition of rural industry is more or less unrealistic because there are many manufacturing firms in rural areas which are not necessarily related with rural or agro-based industries.

The factual definition of rural industry is based on a general term encompassing all manufacturing activities and the manufacturing firms participating in production activities in rural region. In other words, factual concept simply defines the rural industry as the manufacture industry in rural areas. However, the factual definition faces two questions: The first one is how to identify the boundary of rural area, and the second is how to classify manufacturing firms. According to the general understandings, "Eup(rural town)" and smaller administrative units such as "Myon(rural center)" and "Ri(village)" are included as the boundary of rural areas, and all types of manufacturing firms which have more than 5 full-time employees are classified as rural industry in this study.

According to the above definition, rural industries take about 24.0% of the total number of firms, 28.2% of employment, and 19.3% of total sales amounts in 1991 as shown in (Table 2). Although the share of the rural sector out of the total industry is not big enough, the annual growth rate for the number of firms and employment of rural industry are higher than that of national average for the last 10 years. Since the rural industry includes all the size, types, and items of manufacturing industries, it has strong relations with the policy program for the small & medium industry promotion, the spatial policy for the industry reallocation, and the agricultural structural reformation in view of non-farm activities.

**FIGURE 1** Definition Related to the Rural Industry




## 2. Historical Review of the Rural Industrialization

Since rural industry is identified as all the manufacturing industries located in the rural areas, it can be enhanced through rural industry development programs and industrial decentralization policies. Industrial decentralization implies dispersion of industrial facilities concentrated in and around the big urban areas to provincial regions. However, because the concept of this "region" includes all the provincial cities(excluding major big cities) and rural areas, rural industry can also be categorized as parts of the regional industry(Figure 1).

Economic development in Korea is heavily indebted by the industrial development. For example, the 1st and 2nd Five-Year Economic Plans(1962-1971) were based on the export-oriented labor intensive industrialization. The Export Industrial Estate Development Law(1964) and the Free Export Zone Establishment Law(1970) were legislated to support export-oriented industrialization. Industrialization in those times resulted in economic development in certain areas which have locational advantages to pursue efficiency of investment. The 3rd and 4th Five-Year Economic Plans(1972-81) emphasized the

development of the heavy petrol-chemical industries to accomplish national economic development. The Industrial Estate Development Law(1973) and the Industrial Estate Management Law(1975) were also legislated to support heavy petrol-chemical industry development during those periods.

Although developmental strategies based on the export-oriented and heavy petrol-chemical industries enabled the accomplishment of rapid economic growth in Korea, it also resulted in inequality in development status among regions. For the purpose of removing the population-attractive factors from large cities and obtaining balanced development between urban and rural sectors, the 1st Comprehensive National Land Development Plan(1970) was introduced. In addition, the Local Industrial Development Law(1970) and the Industry Reallocation Law(1977) were enacted for the promotion of the regional industrialization and industry decentralization. Industrialization in rural areas has been strictly restricted by the land development plan, and regional industrialization is encouraged by the local industrial estates and industry decentralization(Table 1).

**TABLE 1** Legislations and Policy Programs for Rural Industrialization

| Year | Major Legislations and Policy Programs |
|---|---|
| 1968 | - Farm Household Side-business Promotion Program(MAFF) |
| 1970 | - Local Industry Development Law(Act No. 2187) : Regional Industrial Estate Development Program<br>- Saemaul Factory Promotion Program(MTC) |
| 1983 | - Rural Income Source Development Law(Act No. 3689) : Rural Industrial Park Development Program |
| 1990 | - Rural Development Special Treatment Law(Act No. 4228) : Enforcement Rural Income Source Development Law with Rural Income Source Development Law |
| 1993 | - Agri-product processing Promotion and Quality Control Law(Act No. 4553) : Agricultural Product Processing Promotion Program(MAFF) |
| 1994 | - Balanced Regional Development and Local Small & Medium Industry Promotion Law(Act No. 4722) |

The Balanced Regional Development and Local Small & Medium Industry Promotion Law (1994) was enacted to promote non-agricultural sectors in the less favored rural area. According to this law, the Korean government supports the expansion of infrastructure in remote rural areas and the construction of "industrial complex" which includes not only industrial estate but also storage and market facilities at the same sites.

Besides these land development and decentalization policies, rural industrialization programs were also introduced as shown in (Table 1). The Farm Household Side-business Program(FHSP: 1968) and the Saemaul Factory Promotion Program(SFPP: 1970) were introduced to increase non-farm income of farm households. The FHSP focused on the promotion of side-businesses of farm households rather than modern business operations for further development. However, the title of this program changed to the Regional Specific Product Promotion Program in 1990. The SFPP was designed to create non-farm opportunities in the rural areas with establishment of modern factories in the remote rural areas under the slogan, "one factory for one Myon". Although the Saemaul Factory was able to receive financial supports, there were strict limitations for the promotion because of unfavorable industrial location in rural areas.

For the purpose of overcoming locational problems for the Saemaul Factory Program, the Rural Industrial Park(RIP) Development Program was introduced in 1984. According to the Rural Income Source Development Law(1983), the government supports the construction of small industrial estates in rural areas and provides various incentive packages for the firms operating at the RIP. This law reformed the Rural Development Special Treatment Law(1990) to expand coverage of the law to the various rural non-farm activities including rural tourism and agri-products processing businesses, etc.

Based on these government efforts, rural industry developed as shown in (Table 2). Number of rural firms which had more than 5 full time employees increased from 7,839 in 1970 to 17,348 in 1991, while employment of the rural industry increased from 148 thousand persons to 822 thousand persons for the same period. The annual growth rate of rural industries was 3.9% for the number of businesses and 8.5% for employment which were lower than that of total

**TABLE 2** Share and Growth of the Rural Industries in Korea

Unit: thousand persons, 100 million won

| Year | Total Industry | | | Rural Industry | | |
|---|---|---|---|---|---|---|
| | No. of Firms | Employment | Sales Amounts | No. of Firms | Employment | Sales Amounts |
| 1970 | 24,114 | 861 | 1,355 | 7,839(32.5) | 148(17.2) | 188(13.9) |
| 1975 | 22,787 | 1,420 | 8,170 | 6,078(26.7) | 229(16.1) | 1,380(16.9) |
| 1980 | 30,823 | 2,015 | 36,279 | 8,833(28.7) | 420(20.8) | 8,484(23.4) |
| 1985 | 44,037 | 2,438 | 77,033 | 9,343(20.4) | 497(20.4) | 14,547(18.8) |
| 1990 | 68,690 | 3,013 | 176,440 | 15,334(22.3) | 656(21.8) | 33,263(18.9) |
| 1991 | 72,213 | 2,918 | 205,699 | 17,348(24.0) | 822(28.2) | 39,699(19.3) |
| Growth Rate(%) | | | | | | |
| 1970~91 | 5.22 | 5.98 | 21.22 | 3.86 | 8.51 | 23.01 |
| 1970~85 | 4.10 | 7.19 | 30.91 | 1.18 | 8.41 | 33.63 |
| 1985~91 | 8.59 | 3.04 | 17.79 | 10.86 | 8.75 | 18.21 |

Note : Industry includes only the manufacturing industries which have more than 5 full time employment.
Source : Board of Statistics, Mining & Manufacturing Census, each year.

industries during 1970~91. However, the annual growth rate of the number of business and employment of rural industries during 1985~91 were higher than that of the total industries. This rapid growth of rural industries in recent years is due to the introduction of the Rural Industrial Park Development Program.

## III. Developmental Situations of the Rural Industrial Park Program

### 1. Program Design for the Rural Industrial Park Development

The Rural Industrial Park Development Program is one of the representative rural industrialization strategies in Korea. This program includes; (i) providing cheap and well prepared industrial estates which is called "Rural Industrial Park(RIP)", (ii) supporting with financial assistance for the firms which are operating at the RIP, and (iii) simplifying all the

administrative procedures to get approval from the start of the business to the various operational activities. The objective of this program is to facilitate rural industrialization with favorable incentive packages. The ultimate goals of this RIP development are to raise non-farm income for farm households, to vitalize rural economy, and to narrow down the gap in development between urban and rural areas.

Since the RIP development program was basically designed to overcome locational disadvantages, integrated incentive packages are provided. The summary of the RIP development program are as follows: First of all, rural areas(towns and counties) which have less than 100 thousand people(excluding industrialized areas such as Kyunggi province and suburbs of large cities, etc.) are selected as target areas to establish the RIP. Second, all manufacturing firms can be located at the RIP after passing environmental evaluation. Third, favorable loans and subsidies are provided for the construction of the RIP and the operation of the businesses. In addition, the government provides various kinds of tax reduction for the firms working at the RIP, and simplicity of the regulatory administrative procedures are as shown in (Table 3) and (Table 4).

The RIP development program was carried out under the cooperation of various government efforts: Ministry of Trade, Industry and Energy(MTIE), Ministry of Agriculture and

**TABLE 3** Supports for the Construction of RIP by Types of Target Area

| | General Assistance Area | Additional Assistance Area | Special Assistance Area |
|---|---|---|---|
| Cite Preparation. etc. | (1,000 Won /3.3m²) | (1,000 Won /3.3m²) | (1,000 Won /3.3m²) |
| - Central Gov't Subsidy | 15( - ) | 30(15) | 45(15) |
| - Central Gov't Loan | 10( - ) | 20(10) | 20(10) |
| - Local Gov't Subsidy | 5( - ) | 5(5) | 5(5) |
| Waste Facilities | (% of total cost) | (% of total cost) | (% of total cost) |
| - Proportion of Subsidy | 30 | 50 | 70 |
| - Proportion of Loan | 70 | 50 | 30 |

Note:1. Inside of the ( ) are the incentives for large size businesses.
2. Terms of loans for Preparation of sites is 8.5% per year, for waste control facilities is 7% per year.

**TABLE 4** Incentives for the Firms Working at the RIP

| | Incentives for the Firms Working at RIP |
|---|---|
| Financial Supports | - capital loan for machineries and facilities(700 million won) and operation(200 million won) with 7% of interest rate per year |
| Tax Reduction | - national tax(income tax etc.) exemption for 4 years and 50% reduction for 2 more years<br>- 10% special depreciation<br>- local tax exemption for 1 year and 50% reduction for 5 more years, etc. |
| Simplicity of the Administration | - simplify various administrative approvals & permissions related to the business(deregulation) |

Forestry(MAF), Ministry of Construction and Transportation(MCT), and Ministry of Environment(MOE). MCT helps to identify the location of the park sites, and MAF provides financial supports to construct industrial park while MTIE provides financial supports for the firms of the RIP. Local governments also share certain parts of the responsibilities for the construction and recruiting firms for the RIP which are located in her own administrative territories. When the nominated RIP gets more than 3 appropriate(i.e. pass the environmental evaluation) firms, the local governments can request supports for construction of the industrial parks to the central government.

Target areas for the RIP development are classified into 3 different types by the level of industrialization of the areas, and set up with maximum size of the RIP development by the types of the areas as shown in (Table 5). All 138 target areas are classified by; 31 general assistance areas, 57 additional assistance areas, and 50 special assistance areas. Based on this classification, the maximum size of the RIP development was determined by; 330 thousand sq. meters for the general area, 660 thousand sq. meters for the additional area, and 990 thousand sq. meters for the special area, respectively.

**TABLE 5** Classification for the RIP Areas by Level of Industrialization

| | General Assistance Area | Additional Assistance Area | Special Assistance Area |
|---|---|---|---|
| Classification Criteria | Industrial Density 0.08 and more | Industrial Density 0.01-0.08 | Industrial Density less than 0.01 |
| Maximum Size(1,000m²) | 330 | 660 | 990 |
| No. of Target Area(A) | 31 | 57 | 50 |
| No. of RIPs(B) | 79(29.9) | 114(43.2) | 71(40.5) |
| Total Sites for Sales(C) | 11,560(29.1) | 18,609(46.9) | 9,494(23.9) |
| B/A(%) | 2.55 | 2 | 1.42 |
| C/B(1,000 m²) | 146.2 | 163.4 | 133.4 |

Note : The industrial density is obtained by employment of manufacturing industry divided by the total employment of a certain area.
Source: Ministry of Agriculture, 1995 .

The amount of government supports for the preparation of industrial estates and waste management facilities also differed from the types of classified areas as shown in (Table 3). That is, government subsidy per pyung(equivalent to 3.3m²) of the RIP ranged from 20 thousand won for the general area to 50 thousand won for the special area while loan per pyung ranged from 10 thousand won for the general area to 20 thousand won for the special area. The RIP established only for the large scale industry can receive relatively small amounts of government supports while the specialized RIP for the agricultural product processing industry can get as much supports as possible for the special area.

## 2. Current Situations of the Rural Industrial Park Development

By the end of 1994, a total of 236 RIPs were developed out of 264 nominated RIPs. Total areas which have been nominated as industrial estate was 39,725 thousand sq. meters. About 29,578 thousand sq. meters or 92% of total sites for sales (32,201 thousand m²) were sold by the end of 1994. Since time requirement for the development of the RIP takes more than 3 years in average, rate of sales for the

recently nominated RIPs are relatively low. Most of them are still under the construction or recruiting firms for the RIP development.

All nominated RIPs are classified by the types of areas into; general assistance area 79(29.9%), additional assistance area

**TABLE 6** Developmental Situations of the RIP by Year

Unit: 1,000㎡

| | 1984-89 | 1990 | 1991 | 1992 | 1993 | 1994 | Total |
|---|---|---|---|---|---|---|---|
| No. of Nominated RIP | 169 | 48 | 26 | 7 | 13 | 1 | 264 |
| No. of Developed RIP | 167 | 47 | 20 | 2 | - | - | 236 |
| Site for Sales(A) | 20,493 | 6,026 | 3,039 | 964 | 152 | 135 | 32,201 |
| Site Already Sold(B) | 19,840 | 5,336 | 2,465 | 677 | 106 | 135 | 29,578 |
| B/A(%) | 96.8 | 88.5 | 81.0 | 70.2 | 73.0 | 100.0 | 92.0 |
| Contract Firms | 2,225 | 558 | 290 | 68 | 118 | 3 | 3,362 |
| Entered Firms(C) | 1,890 | 354 | 59 | - | - | - | 2,303 |
| Operating firms(D) | 1,570 | 330 | 57 | - | - | - | 1,957 |
| D/C(%) | 83.1 | 93.2 | 96.6 | - | - | - | 85.0 |

Note: "Contract firm", here, implies the firm which has agreed to buy parts of the estate and operates businesses at RIP before the start of construction of the industrial estate, while the "entered firm" implies firm that actually moved into RIP after construction of the RIP. Operating firm refers to firms which is currently on the business at the RIP.

114(43.2%), and special assistance area 71(26.9%) . Since the RIP program is designed to absorb surplus or unemployed labor in rural areas, the size of the RIP is relatively small in comparison with other industrial estates. The average size of the RIP is about 150 thousand sq. meters, and each of the RIP has 12.7 contract firms and 318 employees on average.

2,303 firms had actually entered into the RIP out of the 3,362 contract firms(provisional agreement between the businesses and local government to buy and sell the industrial sites of RIP) by the end of 1994. Since some of the contract firms were not moved into the RIP and some of the entered firms had stopped operation,

currently 1,957 firms are operating at the RIP in 1995. Because of these business shutdown, some people argue that the RIP development program has failed.

### 3. Share of the Rural Industrial Park from the National & Rural Industrialization

Total number of non-farm businesses was 298,993 units, and 4,231 thousand persons were working at the businesses in 1991. About 20.2% of firms and 18.3% of employment of this total businesses belong to rural areas. However, the number of manufacturing industries which have more than 5 full-time workers are 72,213. About 70% of the total business employment comes from this manufacturing industries. Share of the rural industry takes 24.0%, 28.2%, and 46.5% of the number of firms, employment, and industrial land of total manufacturing industries, respectively.

There are three types of industrial estates such as National Industrial Park, Local Industrial Park, and Rural Industrial Park in Korea. All nominated number of industrial estates is 434 which are

TABLE 7 Share of the RIP from National and Rural Industries

Unit: 1,000 persons, 1,000 $m^2$

| Lactional Types of Businesses | Number of Business | | Number of Employee | | Industrial Area | |
|---|---|---|---|---|---|---|
| | Total | Rural Area | Total | Rural Area | Total | Rural Area |
| Total Non-farm Businesses | 298.993 | 60.472(20.2) | 4.231 | 776(18.3) | n.a | n.a |
| Manufacture Industries | 72.213 | 17.348(24.0) | 2.918 | 822(28.2) | 380.707 | 177.033(46.5) |
| Firms Operating at Estate(A) | 11.106 | 2.094(18.9) | 983 | 139(14.1) | 336.657 | 101.363(30.1) |
| Firms Operating at RIP(B) | 1.957 | 1.579(80.7) | 84 | 67(79.8) | 32.256 | 22.617(70.1) |
| B/A(%) | 17.6 | 75.4 | 8.5 | 48.2 | 9.6 | 22.3 |

Note: Total non-farm businesses include not only manufacturing industry but also marketing and service sectors which are registered as businesses while manufacturing industries imply industrial businesses having more than 5 full time workers.

Source: Lee, Dong-Phil , et. al., pp. 138, 1995

composed of; 32(7.4%) National Industrial Parks, 120(27.6%) Local Industrial Parks, and 264(60.8%) RIPs. Although the number of the RIP takes more than 60% of total number of estates, industrial lands and the number of firms take only 10-20% of industrial land and firms of the total estates.

The number of firms operating at industrial estates is 11,106 which are equivalent to 15.4% of the manufacturing industries. About 33.7% of employment and 88.4% of industrial lands of the manufacturing industries are provided by the estates. However, most industrial estates(except RIP) are located in urban areas. Share of the industries working at rural industrial estates takes 18.9% and 14.1% of total number of firms and employment which are operating at the industrial estate.

Although share of the RIP from the total industrial estates is not big enough, the proportion of the RIP from the rural industrial estates is dominant. About 69.1% of the total number of industrial estates are provided by the RIP. Furthermore, the RIP takes 75.4% of firms and 48.2% of employment from that of the industrial estates which are

**TABLE 8** Industry Development by Types of Industrial Estates

Unit: 1,000㎡, persons

| | National Industrial Park | Local Industrial Park | Rural Industrial Park | Others | Total |
|---|---|---|---|---|---|
| No. of Estates(A) | 32(7.4) | 120(27.6) | 264(60.8) | 18( 4.1) | 434 |
| Site for Sales(B) | 176,954(52.6) | 114,079(33.9) | 32,259( 9.6) | 13,365( 4.0) | 336,657 |
| B/A(1,000 ㎡) | 5,519 | 951 | 122 | 743 | 776 |
| Site Already Sold(C) | 125,488(54.7) | 63,974(27.9) | 29,630(12.9) | 10,403( 4.5) | 229,495 |
| C/B( %) | 70.9 | 56.1 | 91.9 | 77.8 | 68.2 |
| No. of Firms(D) | 6,371(40.3) | 5,609(35.5) | 3,044(19.3) | 788( 5.0) | 15.812 |
| Firms per Park | 199 | 47 | 12 | 44 | 36 |
| Operating Firms(E) | 4,244(38.2) | 4,283(38.6) | 1,957(17.6) | 622( 5.6) | 11,106 |
| E/D( %) | 66.6 | 76.4 | 64.3 | 78.9 | 70.2 |
| No. of Employees | 533,383(54.2) | 323,458(32.9) | 83,859( 8.5) | 42,457( 4.3) | 983,287 |
| Employment per Firm | 126 | 76 | 43 | 68 | 89 |

Source: Dong-Phil Lee, et. al., pp. 154, 1995.

located in the rural areas. This statistics show that the RIP is one of the most important instruments for the promotion of rural industrialization in Korea.

## IV. Evaluation for the Performance of the RIP Program

### 1. Implications of the RIP Program as an Industrial Policy

Although the share of the RIP does not take large proportion from the national industry, it has particular roles for the rural industrialization. For example, the RIP provides collective industrial land which is important for rational land use in rural areas. Furthermore, the RIP program has advantages in the sense of not only economic efficiency in the construction and operation of business, but also environmental sustainability of industrial development through collaborating in pollution management rather than individual treatments. In addition, the RIP development program supports the promotion of rural industrialization with favorable incentive packages to compensate disadvantages of rural locations.

The RIP construction cost per 3.3 sq. meters was estimated to be about 89 thousand won. However, industrial land of the RIP was sold at 86 thousand won per 3.3 sq. meters, because there are governmental financial supports such as subsidies(20 -50 thousand won per 3.3$m^2$) and favorable loans(10-20 thousand won per 3.3$m^2$) for construction of industrial estates. Price for the industrial land of RIP has recently increased to 112 thousand won, however, it is still quite lower than that of other industrial estate's price; about 226 thousand won per 3.3 sq. meter in rural areas in Korea.

The size of the contract firms for the RIP consists of; 1.2% of large industries and 98.8% small & medium industries. This means that the RIP development program works as one of the programs for the promotion of small & medium industries. In addition, this RIP program has motives of creating new businesses because 45.2% of RIP's contract firms belongs to the strategy for the development of new business entries.

The RIP also acts as an instrument for the balanced regional development strategy because 40.7% of the RIP's contract firms

belongs to the category of transferred businesses in view of industry reallocation. Previous location of these transferred firms consists of; suburbs of the capital city 23.2%, large city 32.0%, and other regions (including local cities and illegal location in terms of land use plan, etc.) 44.7%.

Based on these understandings, the RIP development program has policy implications not only for the promotion of rural industrialization, but also for the promotion of the small & medium industries and industry reallocation.

## 2. Performance of the RIP Program in Terms of Economics

If we assume that rural economy is organized by the agricultural and the non-agricultural sectors, the rural industrialization indicates the development of the non-agricultural sector, or the diversification of rural economy. Development of non-agricultural sector and, in particular, the manufacturing sector of a rural economy further implies that redistribution of rural resources from the agricultural sector to the non-agricultural sector. The reallocation between these two sectors in the rural economy will eventually change the rural economic structure as a whole.

83,859 jobs in total were created in the rural areas through this RIP program from 1984 to 1994. Share of the local employment (residents) takes 67.2% of the total employment of RIP, and 42.9% of the regional employment comes from the farm households in rural areas. These employment effects of the RIP program occur at all areas where the RIPs are located including; rural cities, rural centers, and villages as shown in (Table 9).

Occupational status of the RIP employment is categorized into; 16.3% of office workers, 9.0% of engineers, 53.5% of semi-engineers, and 21.2% of physical laborers as a whole. However, 55.8% and 25.3% of local employment are working as semi-engineers and physical laborers while those of outside employment are 44.6% and 5.6%, respectively. In other words, many of the local residents work as simple and physical laborers with low level of salaries and wages. This might be caused by the lack of technology and the lower educational background of local workers.

The RIP has more direct economic impact on the rural areas

**TABLE 9** Economic Performance of the RIP by Site Locations

| Classification | Rural Cities | Rural Counties | | Total |
|---|---|---|---|---|
| | | Rural Centers | Villages | |
| No. of RIPs | 34(12.9) | 47(17.8) | 183(69.3) | 264 |
| Operating firms | 378 | 329 | 1250 | 1,957 |
| No. of Employee(persons: A) | 16,472 | 13197 | 54190 | 83,859 |
| - Local Employee(persons: B) | 13,987 | 8435 | 33931 | 56,353 |
| - Farmers & Their Families(persons: C) | 4,711 | 5794 | 20383 | 30,888 |
| B/A(%) | 84.9 | 63.9 | 62.6 | 67.2 |
| C/B(%) | 43.6 | 40.1 | 43.4 | 42.9 |

Source: Dong-Phil Lee, et, al., p.145, 1995

through not only construction procedures for the estates and factories but also operation procedures such as expenditures for payment of wage & salary, purchasing raw materials, etc. For example, about 44.1% of industrial estate construction costs(average 89 thousand won per 3.3㎡) and 36.2% of factory construction costs(average 247 million won per factory) go to the areas where the RIP has been constructed. In addition, about 70-80% of total wage & salary also belonged in the areas where the RIPs are located.

Furthermore, many areas which have the RIP are experiencing: (i) vitalization of trade and merchandise sectors at the local level, (ii) increase in sales amounts of service industries including restaurants, hotels, and transportation, etc., (iii) increase in amounts of deposit of the local bank, (iv) raise in rental rates for housing, and (v) construction of new apartments, etc. Although these phenomena occur in most RIP areas, it is unclear whether all these changes come from the RIP development or not.

## 3. Problems and Tasks of the RIP Program

In spite of the performances of the RIP, some people point out the problems of the RIP development program as follows: (i) rate of sales for the developed industrial sites of the RIP is low, (ii) large portions

of the firms in the RIP are businesses that are being suspended, (iii) economic performance of the RIP development on the regions are lower than what is expected. Parts of these criticisms are true. However, some of them are based on the misconceptions or misunderstanding on the performance of the RIP program.

First of all, the rate of sales for the developed industrial land of the RIP is as high as 91.9% while those of the National Industrial Estate and Local Industrial Estate are 70.9% and 56.1%, respectively. Of course, there are some RIPs which have low rate of sales in less favored areas. Since construction of the RIP begins after getting more than 3 contract firms, or 50% of the sites sales in advance, it is wrong to say that the rate of lots sales of the RIP is low in general.

The point that large numbers of firms in the RIP are closing businesses or idle facilities is partly true. 15% of the total firms in the RIP have shutdown their businesses by 1994. But this problem was caused by the unfavorable industrial locations of the rural areas and recession of the national economy rather than weakness of the RIP development program itself. It can be verified through the fact that operating rate for the local industrial estate is 54.8% while that of the RIP is 63.7% in rural areas.

The problem that the RIP has limited impact on the rural economy is also not always true. Although the RIP program has limited economic performance on the rural areas compared to the agribusinesses or other regional resources-base industries, there are no policy programs having 67.2% of high local employees as what the RIP development program records.

Based on these discussions, it is difficult to categorize the RIP development program as one of the failed policies. However, demand for the construction of the RIP has been decreased from 30-40 units per year in the latter part of the 1980' s to 7-10 units per year in recent days. This might be caused by the changed socio-economic environments. For example, the merits of the RIP location have largely disappeared because of increasing wages and land price in rural areas. In addition, easiness of obtaining industrial land around capital and large cities' boundaries by the recently introduced deregulation policy for land development also hinders the relative advantages of the RIP program.

However, the RIP program has following tasks to be solved for

further development: First of all, location and size of the RIP should be revised in terms of scale economy and balanced regional development. Although most counties have 2-3 RIPs, it is unclear wheather the location and size of the RIPs are optimal or not. Second, time requirement from the nomination to the construction and operation of the RIP should be reduced. Current time requirement, 2-3 years, is too long to follow changes in business environment. Third, types and facilities of the RIP should be diversified. All the RIPs have similar sizes and characteristics in terms of facilities, businsee items, and management. Furthermore, all the RIPs have the same name "Nong Gong Dan Ji(RIP in Korean term)" except the geographical indication. Fourth, administrative procedures from the nomination and development of the sites to the recruitment and management of the business should be simplified. In addition, roles of the local government should be expanded to provide higher quality of services for the businesses. Finally, policy program should be modified to enhance linkages between the RIP development and the rural economy vitalization. Especially, training and job mediation for rural residents are critical factors to enhancing rural employment for the RIP.

## IV. End Remarks

Although there is a group of people who are hesitating to agree on the success of the RIP development program, there is no doubt that the RIP program provides a foundation for the promotion of rural industrialization in Korea. Every county has almost one or two industrial estates(RIP) in their own administrative boundaries with well furnished infrastructures. What is the clue to get these kinds of success in a short period? This might be explained by the following reasons:

First of all, the planned rural industrialization strategies support the success of the RIP development. All the local governments have to make proposals to develop RIP based on the guideline which is provided by the central government, and variously related with administrative organizations work together to develop the RIP. This planning-base integrated approach allows close relationships among

land development, industrial development, and rural industrialization.

Second, comprehensive supporting programs including provisions of industrial estates, favorable subsidies and loans, tax reduction, and simplicity of the regulatory administrative procedures have also worked as crucial factors of the success. Especially, providing small industrial estates for the collective industrial location was proved as one of the most important tools to overcome various locational obstacles of rural industrialization.

Third, differential incentive system which is based on the regional socio-economic characteristics and conditions is also operated through success of the RIP program. For example, amounts of government supports for construction of the RIP are different from the types of target areas which depend on the level of difficulties for industrialization. The worst area in terms of industry development conditions, the special assistance area, gets more than twice of subsidies and loans compared to the general assistance area.

Finally, initiative of the local government from the nomination of the potential RIP, recruiting firms, and construction of industrial estate to the management of the RIP took important roles to facilitate the RIP development. The local government serves various roles for the RIP development such as lobby for nomination, advertise to sell the industrial estate, and recruit firms in the manner of "good-will competition" by regions.

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