An Overview on the Rural Industrialization in Korea

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I. Introduction

Rural industrialization has attracted widespread concerns from both developed and developing countries. Although the conditions surrounding rural industry are quite different among countries, the common motive lies in enhancing rural income through more off-farm employment opportunity. But one thing slightly different between developed and developing countries is that whereas developed countries aim to reduce regional differential through regional development program, developing countries intend to improve rural employment situation by giving off-farm job opportunity. Moreover, the level of rural industry development and its contribution to the overall economy are widely different by the location factor for rural industrialization and the growth pattern of economy.

Since the outset of post-war economic development, industrialization in Korea has proceeded mainly in metropolitan and coastal regions. This type of geographical distribution of industrialization was a consequence of both the resource endowment and development strategy of the nation. As the result, the outflow of rural population proceeded very rapidly, and excessive population concentration into the large city areas has incurred various social costs. It is

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paradoxical to find that despite the lack of location factors for rural industrialization, the necessity of deconcentrating urban industry was frequently argued in recent years. As will be shown later, the revision of farm price policy should be enumerated as one of the reasons for accelerating rural industrialization too.

The purpose of this paper is to examine conditions for rural industrialization in Korea and to draw some policy implications. In Section II, we briefly overview the characteristics of industrialization process in relation to rural industry. Section III devotes to make clear structural situation of rural industry and thereby points out basic problems rural industry is facing. Section IV deals with impacts of rural industrialization on the agriculture. Because the introduction of rural industry raises various changes in agrarian society, the possibility for the coexistence of agriculture and industry should be carefully examined. In Section V, we summarize our discussions and draw some policy implications.

II. Brief Survey on the Industrialization Process in Korea

Before the Japanese colonial period, the Korean economy was predominantly led by the agricultural activity, and the meagre traditional industries were largely run by domestic handicrafts located near the raw material-producing districts. Under the colonial economic structure, most of economic, social and cultural facilities were established in the newly expanding urban areas. The center of the industrial location, accordingly, moved from the raw material-producing districts to the urban areas induced by the market factors. This trend was accelerated in the later period of the Japanese control when the military industry was rapidly expanding.

After the two wars, namely, World War II and Korean War, the Korean economy could not but depend heavily upon the foreign aid under the conditions of devastated industrial facilities and the extremely high population density which was aggravated by the refugee inflow of vast size from the North. Under these circumstances, the industrialization in the immediate post-war period was

characterized by the concentrated construction of mostly consumption goods industries such as flour, textile, sugar, etc. The greater part of the needed raw materials for these industries were at first imported under the concessional base. This line of industrialization induced further concentration of manufacturing industries into a few large city areas and coastal regions. In fact, almost all of the industrial facilities were exclusively concentrated in the Seoul metropolitan area and Pusan, the second largest city and the largest port in the country, in the pre-1960 period.

The First Five Year Economic Development Plan launched in 1962 neglected regional allocation program of industry, by pursuing only high rate of economic growth. Because of the increasing regional differentials arising from the lack of control of industrial location, the necessity of decentralizing industrial location and establishing industrial complexes were gradually perceived by the policy makers. Since the late 1960s, some local industrial complexes including textile, iron, petro-chemical, electronic, etc., and two free trade zones were newly established to promote outward-looking industrialization strategy. But the main objective of this policy was not to promote rural industrialization but to attain economies of scale and merits of specialization.

It was not until 1973 that the government started to pay attention to rural industry under the *Saemaeul* (New Village) factory program(1) which aims to set up at least one establishment in each *Myon* (an rural administrative unit with around 10 to 15 thousand residents). Regarding location of industry, the government enacted two major laws in 1970s, that is, Local Industry Development Act of 1970 and Industry Reallocation Act of 1977, both of them aiming at the decentralization of urban industry.

Another important interest for fostering rural industry arised from the point of view of farm income policy. Entering late 1970s, the government began to feel the fiscal burden from the two-price policy of rice which has been

(1) *Saemaeul* factory program was initiated under the Regulation for Development of Farm Household Industrial Products of March 1973.

adopted to support farm household income since around 1968.

It seems that the government understands the acceleration of rural industrialization as the best alternative to farm price support policy. As a concrete expression of this policy, the government plans to eliminate all fiscal deficit from food grain management account and to enhance the share of off-farm income in total farm household income to 50 per cent. level by 1986, the goal year of the Fifth Five Year Economic Development Plan.

But until recent years, it can hardly be denied that the progress of rural industrialization has been very lagging. The analysis based on the result of a survey conducted jointly by the Ministry of Commerce and Industry (MCI) and National Small & Medium Industry Cooperatives Federation (NSMICF) shows that, as of the end of 1977, the number of establishments which are located in rural area (3,486) accounts for only 20.4 per cent. of total number of small and medium size enterprises (17,099). On the other hand, 41.4 per cent. (7,076) of total is located in the two largest cities, Seoul and Pusan and 38.2 per cent. (6,537) in other 34 local cities, respectively.[2] Due to the lack of various location factors viewed from the part of enterprises, the greater part of urban enterprises do not like to move their location to rural districts. One of the important problems the Korean economy should tackle in the 1980s is how to reallocate smoothly the enormously uneven geographical distribution of industrial activities, thereby alleviating the concentration of population into a few large cities.

III. Some Characteristics of Rural Industry and Its Problems

Let us now examine some aspects of rural industries and thus understand closely the problems to be solved in order to advance further rural industrialization in the future. Before entering into the analysis on the actual state of affairs,

(2) Korea Rural Economics Institute, *Off-farm Income and Rural Industry Development*, Dec. 1979, p. 56.

we need to mention a few words on the definition of rural industry. Two kinds of concept can be thought regarding rural industry, that is, "rural-based" or "agro-related" and "rural-located." We can easily imagine that the latter concept is probably wider than the former. In that sense, the latter may well be called broader definition, the former narrower one. "Rural-based" or "agro-related" industry will comprise those industries such as suppliers of technical inputs needed to agricultural production, agricultural product processing, and supplies of rural household consumption goods. Even though these industries are desirable, such strict concept cannot be easily applied in reality. As is usual, we cannot but be satisfied with using the concept "rural-located" in most empirical studies. But we should have in mind that, even if it is broadly defined, the development of rural industry necessarily brings about important reallocation of resources (including labor and land) previously used in the agricultural activities.

Now we proceed to examine major aspects of rural industry in Korea. Let us quote once again the above mentioned data analysis on the joint survey by MCI and NSMICF.[3] Classifying the location of rural industry by province (*Do*), we can find out nearly half (47.8 per cent.) of the small and medium size establishments are located in two (Kyunggi and Kyungbug) of nine provinces. Dividing the distribution of rural industry by farming zone, almost half (47.6 per cent.) of total establishments are concentrated in suburb zone which accounts for only 39 of 138 counties (*Gun*). And 10.7 per cent. of total are located in plain zone (15 counties), 34.9 per cent. in semi-mountainous zone (64 counties), and 6.8 per cent. in mountainous zone (20 counties), respectively. From these two observations we can interpret that an important location factor in rural industrialization may not be the availability of farm-produced raw material or its processing technology but the availability of social overhead capital.

Next, as major organizational characteristics, we can point out that majority of rural industry is run on individual proprietorship, has relatively short history,

(3) Korea Rural Economics Institute, *Present Situation of Rural Industry and Its Problem*, Dec. 1978, p. 15.

and falls in small-scale enterprise. According to the same data source, 79.6 per cent. of total is established and run by an individual and his family. 64.5 per cent. of total number of rural establishments has been established after 1971, and those which have history over 17 years account for only 9.7 per cent. Average number of employees per establishment is 46 persons, of which those with less than 19 persons account for 46.2 per cent.

Classifying rural industry by the kind of products, the same data shows that 44.0 per cent. of total establishments are producing textile, 16.1 per cent. non-metallic mining products, 12.1 per cent. food and beverage, etc. One of the striking features we find from the survey data is that the majority of rural industry using locally acquired raw materials is facing very difficult situation for securing them and has pessimistic view on the future prospect for the stable supply of raw materials. Replying the questionnaire on the prospects for acquiring main raw materials in the region, only 9.8 per cent. of enterprises have bright prospect, on the other hand 48.8 per cent. dark one.

Regarding product market, 82 per cent. of rural industry finds their principal markets in urban and foreign markets, only 18 per cent. of it in rural markets. Being seen by firm size, large firms are much more urban and export market-oriented. If we take both the supply of raw material and the provision of market as the most important location factor, it is evident that the "rural-based" or "agro-related" character of rural industry is not very basic in the Korean context.

Although above survey data gives us many kinds of information about current state of rural industry in general, it will be much beneficial for us to get some additional comprehensive data including various informations in the past. Fortunately, there is a survey data by the Bank of Korea (BOK) as of the end of 1963 which is considerably comparable with the above quoted MCI-NSMICF survey.[4]

Like MCI-NSMICF survey, the object of BOK survey is defined as all

(4) The Bank of Korea, Research Department, *Rural Industry in Korea* (mimeo.), 1964.

manufacturing establishments with employees over 5 persons which are located in rural areas (administrative unit county (*Gun*)). According to the data, the number of rural establishments accounts for 10.5 per cent. of the total number of manufacturing enterprises, the number of employees 5.2 per cent., and the value of product only 0.6 per cent., respectively. Judging from these data, we can easily imagine that rural industry in the early 1960s was very small scale, mainly specializing in local products such as clothing, fuel (briquet), brick, Korean paper, ceramics, native wine, farm implements, etc.

One important contrast can be pointed out between the results of both surveys regarding geographical distribution of rural industry. According to BOK survey the greater part of the rural establishments were located in purely rural areas where transportation network was less developed and distance from urban areas was far away. This result is very contrasting to the recent survey results by MCI-NSMICF.

Considering the results of geographical distribution of rural industry in both surveys together, we can interpret that the traditional handicraft type rural industry has given way to the modern labor intensive type industry in the course of industrialization since 1960s. In other words, the most important location factor in rural industry has been shifted from the supply of raw material to the availability of labor and needed social overhead capital. The core problem here is that rural industry is losing "rural-based" or "agro-related" character, leaving only "rural-located" character.

We can easily confirm this fact through the questionnaire on the firm motivation to choose location in rural area. According to MCI-NSMICF sruvey, the most important location factor for rural establishments is availability of labor, and the next factor is availability of less expensive site. Regarding the change in location factor since the opening of the establishment, over half (51.1 per cent.) of rural industry evaluates that labor availability has been much worsening. On the other hand, those who answered improvement of labor availability account for only 15.3 per cent.

Disadvantage viewed by firms arising from moving to rural area can also be found, as shown below, in the attitudes of urban establishments toward their changing locations. That is, 77.3 per cent. of the establishments being ordered to move their present locations by the government still want to remain in urban area, and especially nearly half (49.3 per cent.) of them are in the Seoul metropolitan and Pusan districts.

All of these facts reveal that location factors for rural industrialization are not very favorable for the part of enterprises.

IV. Impacts of Rural Industrialization on Agrarian Structure

The introduction of manufacturing industry into rural area brings about widespread impacts on agrarian society, either favorable or unfavorable. Above all, rural industrialization gives farm household members non-farm employment opportunity, thereby getting off-farm income. Finding job in rural area will contribute to restrict out-migration and save social cost arising from population concentration in large cities.

For the local government rural industrialization deserves favorable conditions for collecting more taxes. All of these aspects exert both positive influences on the rural development and favorable effects on the balanced growth between urban and rural regions.

On the other hand, it should not be neglected that rural industrialization also accompanies some negative effects on the agrarian society. First of all, rural industrialization calls for wide area of arable land for factory site, road construction, etc. In general, industrial site is competing with farm land, because both of them need plain area. Especially in the case of land shortage as in Korea, transfer of land from agricultural to industrial use should be treated carefully under long-term land utilization planning.

Next, expanding off-farm employment opportunity may result in the acceleration of farm labor shortage and rapid rise in farm wage. Unless appropriate labor

saving devices are accompanied, farm management may become more and more difficult. Similar situation can also be imagined regarding farm land. Too high rise in land price exerts negative effect on the agriculture. It is also well known that both land and capital productivity in part-time farmer is usually much lower than those of full-time farmer.

Rural industrialization may raise pollution problems in rural area, which is very harmful for both farm production and human life. Taking consideration into the fact that the majority of rural enterprises are small size, investment for preventing pollution should be very heavy burden for them.

If rural industrialization could be successfully developed, careful examination should be done for every potential effect. Otherwise negative impacts may exceed positive effects arising from the introduction of manufacturing industries into rural area.

Let us now examine major potential negative impacts closely. First, the most important aspect is the transfer of labor and land from agricultural use to industrial one. Of course, when an unlimited supply of labor is available, labor shortage does not matter at all. But it is well recognized that the Korean economy has passed the Lewisian turning point in the early 1970s. Since then real wage in all sectors of the economy began to rise and the absolute size of agricultural labor also began to decrease sharply. As is usually observed in the process of out-migration, the share of women and old persons in total agricultural labor force is also rising. Needless to say, industrial labor requires a certain age group, level of education, skill, etc., and thus competing with agricultural labor. In reality, the main reason why rural labor cannot get jobs in off-farm occupations is not external (to farm) but internal. According to a survey by Korea Rural Economics Institute (KREI) at rural area near Gumi industrial complex, the main reason why farmers do not join off-farm employment were the lack of working time due to his own farming (37.3 per cent. of total answers) and age restriction (28.5 per cent.).[5] Judging from this information,

(5) KREI, *Off-farm Income and Rural Industry Development*, p. 112.

further rural industrialization cannot smoothly proceed without some appropriate measures for supplying industrial labor force in the rural region. Farm mechanization should be an essential condition for promoting rural industrialization.

Next problem is how to solve the competitive use of land between agriculture and industry. Since rural land once transfered from farm to industrial site is irreversible, land utilization program should be carefully made. In order to prevent excessive transfer of farm land into other uses, the government already enacted Law for the Maintenance and Utilization of Farm Land in 1975. Although this law has very strict regulations for the land transfer, it does not include any provisions for promoting smooth introduction of rural industry. If rural industrialization is to proceed successfully, additional factors should be introduced in the rural land development program. At least two aspects should be included in the program: one is physical, the other is economic. In physical plan, space allocation of land between agricultural and industrial uses in the same rural region is the most important problem. Seen from the economic point of view, the crucial factor is land price. How to handle land price in the process of rural industrialization may be a key factor for determining the possibility of the coexistence of agriculture and industry. In order to stabilize land price, consistency in both policy making and execution should be preserved.

The most important impact of rural industrialization on the agrarian society is perhaps decline in agricultural productivity in the part-time farming. We can see the typical example in the Japanese experience. As many researchers pointed out, increase in off-farm employment opportunity create vast size of type II part-time farmers (their income from off-farm job exceeds agricultural income), thus their main economic interest shifts from self-farming to salary or wage earnings, and as the result their efforts to improve farming technology are usually weak. Tendency of relative decline in land productivity on part-time farmer compared with full-time farmer reveals this aspect.[6] In order to evade

(6) T. Ishibashi and Y. Misono, *Structure of Part-time Farming*, 1975, pp. 114-5.

inefficiency in agricultural resource utilization, some policy measures for enhancing liquidity in land utilization are essential. Because the objective of this policy lies basically in raising overall utilization rate of farm land, it does not necessarily include adjustment of land ownership. In reality, however, it is unavoidable that not only facilitating land lease but also supporting ownership transfer is included in the policy measure. Seen from the long term perspective, such measures exert critical influences on the agrarian structure of the society.

It should be in mind that how to deal with part-time farmer arising in the process of rural industrialization is core element in policy on agricultural structure. It cannot be denied that in the long run full-time farming should be substituted for part-time farming. But it is very complicated and difficult problem that such a transformation could proceed with less conflict between farmers and without trial and error. In order to set up agrarian structure policy, classification of farmers' group by their capability and characteristics is above all essential. Even though rural industrialization in Korea do not reach full scale as yet, needs for classifying farmers' group are already raised in accordance to too rapid out-migration of rural population. But discriminative policy on farmers' group should be taken in parallel with complementary measures such as job training, subsidy for livelihood, etc.

Finally we should be careful for conservation of natural circumstances in the introduction of rural industry. Because the basic economic activity in rural area is agricultural production, newly settling industry should be compatible with the main industry in the region. Otherwise farm production may be severely damaged by pollution. In this respect, the selection of the kinds of industry is particularly important in rural industrialization.

V. Summary and Conclusion

Let us summarize our discussion. First, industrialization in Korea has proceeded mainly in the metropolitan and coastal areas under the periods of colonial

control, post-war reconstruction, and economic growth since the 1960s. As the result, the share of rural industry in the overall economy was very small and their products were mainly confined to local and traditional handicraft goods. Owing to the restriction of raw material supply and the change in consumption pattern, predominant position in rural industry shifted from traditional raw material-processing type to labor intensive type industry. But most of the rural-located industries do not have sound base for their development due to the lack of advantageous location factor such as raw material, product market, availability of skilled labor, transportation, power, market information, etc. In short, location factors for rural industrialization for the part of enterprise are as yet disadvantageous. Results of field surveys on farmers and rural enterprises reveal that the situation of labor supply, the most important factor for rural enterprises, is rather worsening.

Second, necessary conditions for locating rural industry should be built up in the future. Because rural development programs so far proceeded mainly under the framework of pure agricultural zone, the idea of the coexistence of agriculture and industry was not called for as an essential factor. For promoting the development of rural industry, several kinds of preconditions including man power development and rural infrastructure construction should be satisfied under the government leadership. But because either of these requires vast financial resource, careful economic considerations should be taken and trial and error should be evaded through deliberate planning.

Let us mention a few words on some policy implications. First, at present the government's target of enhancing off-farm income to half of total farm household income by 1986 seems too ambitious. Considering that at present nearly half of off-farm income accounts for donation and subsidy sent from family members and relatives living in urban area, and location factors for rural industry are as yet unfavorable, it is very difficult to expect so rapid a change in the farm household income in the near future.

Second, seen in short or mid term, policy for increasing off-farm income of

farm household cannot be an effective substitute for agricultural income. If we recognize a close relationship between the level of rural income and the change in the size of rural population, an appropriate support of rural income level is prerequisite for preserving rural labor force available to rural industry. In the present situation, a unique way to support rural income in general cannot be found except one especially by price support of rice and other agricultural products. In this sense, policy for increasing off-farm income should not be taken as a substitute for agricultural income in the short run. In short, changes in rural income policy should be introduced very gradually.

Finally, considering very disadvantageous location factors for the rural industrialization in Korea, policy efforts for developing rural industry should be paid very deliberately. It may be a more efficient approach that several selective pilot programs are examined in advance before the nationwide overall program is executed.