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OFF-FARM EMPLOYMENT OF FARM HOUSEHOLDS IN KOREA: ISSUES AND POLICY IMPLICATIONS¹

SUH JIN-KYO²

Key words: off-farm income, non-farm employment, rural development

ABSTRACT

Based on an examination of the structural aspects of rural labor forces in Korea, this study intends to identify the reasons why the recent trend in both non-farm employment and off-farm incomes of farm households shows a sluggish step in its growth. It is emphasized that in the upper-developing countries, like Korea, policy makers wishing to promote growth in the rural non-farm economy must look to the long-term trend in rural or farm labor forces—the selection of unbalanced growth strategies is apt to cause a shortage of labor in rural areas in the long run.

I. Introduction

During the past three decades, the Korean government has continuously activated various programs for increasing non-farm

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² Fellow, Korea Rural Economic Institute, Seoul, Korea.
Corresponding author. Tel. : +82-2-3299-4308; fax : +82-2-965-4395,
e-mail: jksuh@krei.re.kr.

incomes of farm households through the creation and/or extension of off-farm job opportunities in rural areas. The Side-job Promotion in the late 1960s, the so-called Saemaul Industry Program³ in the 1970s, the Rural Industrial Complex Project (RIC) pursued since the mid of 1980s and still being implemented today, and the Green Tourism Program of the late 1990s are typical programs that are aimed to promote off-farm employment in rural Korea.

It was often said, at least till the mid-1990s, that these policies or programs were somewhat successful in the light of increasing off-farm incomes of farm households and generating non-farm employment opportunities for farm households. The real annual off-farm income per farm household increased to 8,132,000 won in 1997 from 1,463,000 won in 1983, implying signifying an almost six-fold growth. The off-farm employment rate of farm households also increased from 13.8 percent in 1981 to 20.3 percent in 1997⁴.

However, the recent trend in off-farm employment for farm households reveals a different feature from the trends; both non-farm employment and off-farm incomes of farm households recently show sluggish steps in their growth, even though the period of the recent economic crisis (from 1998 to 2000) is excluded due to the exceptional circumstances. Moreover, a recent study of non-farm incomes (See Oh 2001) shows that there is very little prospect of increasing non-farm incomes significantly in future. Why does such a gloomy picture emerge for non-farm incomes and non-farm employment of farm households happen, even there are many kinds of off-farm jobs

³ The Saemaul Industry Program is one component of the New Community Movement, (the Saemaul Movement) which is better known as the Korean Model of Integrated Rural Development. By 1983, a total of 1,357 saemaul factories had been constructed in rural areas with the financial supports of the government.

⁴ The rate of off-farm employment in farm households is calculated as the ratio of the number of off-farm employment to the number of economically active population in farm households and data come from the employment data of KNSO (Korea National Statistic Organization)

provided to rural areas?

Based on an examination of the structural aspects of rural labor forces in Korea, this paper intends to identify the reasons why such a dismal prospect is now forecast. The objective of the paper are to (i) review the historical trend and current situation of non-farm employment for farm households in Korea; (ii) identify problems that Korea is currently confronting by in relation to promoting off-farm job opportunities and to increasing non-farm incomes of farm households; (iii) suggest future directions for Korea's rural non-farm employment programs. Through the above mentioned process I hope to highlight some useful policy implications for policy makers in current developing countries.

The outline of the paper is as follows: In the next chapter I set out briefly outline some key features of the trend of non-farm employment in farm households. Then, chapter 3 describes the current problems currently confronting Korea-structural problems of farm labor forces. Several alternatives are provided in chapter 4. The final chapter draws conclusions, including several policy implications.

II. Historical profiles of non-farm activities of farm household

1. Overall features of population

Let's first review the agricultural census data on economic activities and occupations in order to picture an overall feature of non-farm employments in farm households of Korea. Table 1 represents how the total population, farm household population, and the entire economically active populations have been changed over the past four decades. As can be expected, the population of farm household in Korea declined rapidly from the mid-1960s, in the period from when the comprehensive economic development plan commenced. The proportion of farm household population out of total population, declining sharply from 57 percent in 1960

to 28.4 percent by 1980, reaches to 8.5 percent in 2000. The decline in farm household population rose steadily over the past 40 years to 4.9 percent during 1990-2000 from 0.1 percent during 1960-1970. Consequently, this had led to a reduction in the size of farm households; the size of farm households was reduced to 2.9 persons in 2000, compared with 6.1 persons in 1960.

The changes in the economical active population exhibit a similar trend to that of total population, except the relatively low decreasing rates, as indicated at Table 2. The economical active population in farm households decreased with an average annual growth rate of 3.9 percent between 1980 and 1990, while it declined by 3.2 percent over the last decade.

TABLE 1. Trends in Population of Total and Farm Household in Korea:
1960~2000

Unit: Thousand persons					
Year		Total Population (A)	Farm Household Population (B)	Family Number Per Farm Household	(B/A) (%)
1960		24,989	14,242	6.1 person	57.0
1970		31,466	14,422	5.8	45.8
1980		38,124	10,827	5.0	28.4
1990		42,869	6,661	3.8	15.5
1995		45,093	4,851	3.2	10.8
2000		47,275	4,032	2.9	8.5
Annual	1960-70	2.3	0.1	0.5	
Avg.	1970-80	1.9	2.8	1.5	
Growth	1980-90	1.2	4.7	2.8	
Rate (%)	1990-00	1.0	4.9	2.6	

Source: *Agricultural Census*, annual year, KNSO (Korea National Statistical Office), www.nso.go.kr

It is noted that this rapid decrease in the economical active population of farm household, as I will mention later, leads to a certain type of constraints on increasing off-farm incomes of farm households in Korea, which the Korean government has almost overlooked attention to it.

The overall picture is clear. The shares of farm household populations in total population dropped sharply over the last three or four decades in terms of both total and economically active population. Such a decrease can be considered as a general phenomenon that occurs in the process of economic growth. What I want to draw attention to, however, is its speed. The reduction in farm household population in Korea happened fairly

TABLE 2. Trends in EAP (Economically Active Population) in Korea:
1980~2000

Unit: Thousand persons

Year	EAP in Farm Household						
	Total E.A.P	The Number of Employment					
		Total	(A=B+C)	Farm (B)	Off-Farm (C)	(C/A)	(C/B)
1980	14,431	5,163	5,108	4,306	802	15.7	18.6
1984	14,997	4,007	3,975	3,496	479	12.1	13.7
1985	15,592	3,847	3,806	3,309	497	13.1	15.0
1990	18,539	3,476	3,456	2,904	552	16.0	19.0
1992	19,499	3,299	3,273	2,698	575	17.6	21.3
1995	20,853	2,795	2,780	2,250	531	19.1	23.6
1996	21,243	2,696	2,684	2,148	535	19.9	24.9
1997	21,662	2,644	2,627	2,092	534	20.3	25.5
1998	21,456	2,688	2,647	2,233	415	15.7	18.6
1999	21,634	2,556	2,519	2,065	454	18.0	22.0
2000	21,950	2,502	2,502	2,004	474	19.1	23.7
Avg. growth Rate (%)	1980-90	0.1	3.9	3.8	3.9	3.7	
	1990-00	1.7	3.2	3.3	3.6	1.5	

Source: Employment Data, Statistical Data Base(KOSIS), KNSO

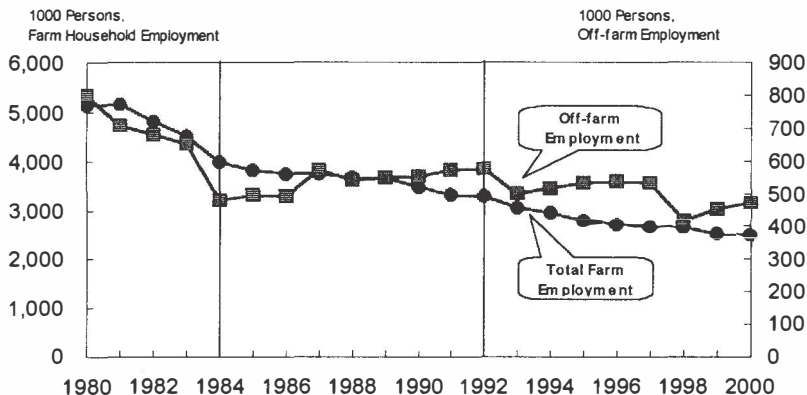
rapidly; within only 25 years, the population of farm household was reduced by 30 percent, compared with 1975s; the share of farm households in the total population dropped less than 10 percent in 2000 from over 50 percent in 1975.

2. Off-farm employment and farm household income

The historical trend of off-farm employment in farm households of Korea shows that the situation of non-farm employment is likely to be closely related to associated programs or policies. The total number of off-farm employees in farm households, rising from 479,000 persons in 1984, which was the commencement year of the RIC project, reached a plateau of 575,000 persons in 1992, and then it declined slowly to 534,000 persons in 1997.

Figure 1 shows both the reversing trend in the number of off-farm employees (we may consider the year of 1984 as a turning point, at Figure 1) and the decreasing trend in the number of total employees in a farm household. Such an increasing trend in non-farm employees during 1984-1992 can be interpreted as the result of associated non-farm employment policies. Under the RIC project, 219 of rural industrial complex estates have been constructed from 1984 to 1990. This figure is almost 74 percent

FIGURE 1. Trends in the number of off-farm employees in Korea: 1980-2000



of the total rural industrial complex estates built as of the last year.

The ratio of off-farm employment to total employment in farm households provides further proof of the existence of a positive relationship between policies and non-farm employment (the seventh column in Table 2). It started to rise continuously from 12.1 percent in 1984, reaching a record peak of 20.3 percent in 1997.

Let us now turn to the trend in off-farm incomes of farm households. In general, the extension of off-farm employment opportunities leads to an increase in off-farm incomes. Table 3 indicates changes of farm and off-farm incomes per farm household during the last two decades.

TABLE 3. Trends in Real Farm and Off-farm Income of a Farm Household: 1983~2000

		Unit: Thousand won, 1995=100			
		Farm Household Income			
Year		Total (A) (A = B+C)	Farm income (B)	off-farm income9C)	(C/A)
1983		6,801	5,338	1,463	0.22
1984		7,796	6,196	1,600	0.21
1985		8,163	6,345	1,818	0.22
1986		8,429	6,351	2,088	0.25
1988		10,572	7,723	2,849	0.27
1990		12,076	8,308	3,768	0.31
1991		12,674	8,335	4,339	0.34
1992		13,059	8,155	4,904	0.38
1993		14,815	9,271	5,545	0.37
1994		17,488	10,938	6,551	0.37
1995		17,400	10,469	6,931	0.40
1996		17,569	10,390	7,178	0.41
1997		17,695	9,563	8,132	0.46
1998		13,501	7,590	5,911	0.44
1999		14,521	8,718	5,804	0.40
2000		14,376	8,547	5,829	0.41
Annual average growth rate(%)	1983-00	4.5	2.8	8.5	
	1983-97	7.1	4.3	13.0	
	1985-95	7.9	5.1	14.3	
	1995-97	0.8	- 4.4	8.3	

* The off-farm income of farm households does not include transferred income and is deflated by farm household purchasing price index.

Source: Farm Household Economy Survey Report 2000, KNSO

The annual growth rate of real non-farm incomes per farm household is about 8.5 percent, which is higher than that of farm income or agricultural income (2.8 percent), during the entire period under consideration. Of much greater interest and importance is the difference in the growth rates. From 1985 to 1995 (the RIC project was strongly expanded during the period), the growth rate of non-farm income is almost twice as high as that of any other period. This comparison may support an assessment that the government's programs for extending non-farm employments are rather successful.⁵

It is also interesting that the periods of high growth in off-farm and farm incomes overlap each other, and roughly speaking, the latter is 1987-1994 and the former is 1985-1995. This may reflect the linkages between farm and non-farm activities, even though the direction of the linkage is not clear.⁶

III. Then, what is the problem in Korea?

It seems that Korea has a small problem with regard to non-farm employments issues. However, a closer review on the recent trend in a farm household income leads us to our destination. The annual average growth rate of farm household income was merely

⁵ Although the direct relationship between the RIC projects and non-farm income or non-farm employment is not provided, it is obvious that there are at least certain positive relationships between them. Other scholars argue that major reasons for the increase in non-farm income during the period was general growth of regional economies rather than the policy effect of the RIC projects.

⁶ Readon (1999) mentioned that *낯꿍*. The concept of farm/non-farm linkages is most commonly used to describe the relation between the farm and non-farm sectors. These sectors can be linked directly via production linkages, in which case the linkage occurs either upstream or downstream. When growth in the farm sector induces the non-farm sector to increase its activities by investing in productivity or additional capacity for supplying inputs and services to the former, the linkage is upstream. It is downstream (and is often referred to as a value-added activity) in case where the non-farm sector is induced to invest in capacity to supply agro-processing and distribution services, using farm products as inputs. The farm and non-farm sectors can be linked directly via production linkages, which occur either upstream or downstream.

0.8 percent during 1995-1997,⁷ although the recent situation in farm-incomes indicates a more severe case. The rate of annual average growth in farm income during 1995-1997 is 4.4 percent. Furthermore, according to the recent baseline projections⁸ for Korean agriculture, farm- income is forecast to be stagnant and unstable during the next decade, partly because of both the declining trend and the fluctuation of agricultural prices by extending agricultural market opening in Korea.

From the end of the 1990s, the Korean government turned its eyes to off-farm incomes, including the diversification of income sources for farm households. The government is currently planning new programs and policies in order to increase non-farm incomes or diversify income sources, in particular, to encourage non-farm activities. In my opinion, however, the implementation of programs or policies without a careful consideration of the following issues may be merely ineffective attempts.

First, there *is the shortage of man-power in farm household and rural areas*. This is also a fundamental problem in rural Korea. As already indicated in Table 1 and 2, the population of farm households is still declining, in particular, in remote or hilly areas. As indicated in Table 1 (the fourth column), the size of a farm household was 6.1 persons in 1960 but it reduced to 2.9 persons in 2000. No matter how many non-farm jobs are given to them, farm households (or rural households) cannot afford to participate in the job market.

The survey report is further good evidence of the above argument. More than 90 percent of managers of firms which are located in the Rural Industrial Complex estates, point out the shortage of labor, in particular, the shortage of skilled workers, as one of the most significant obstacles hindering expansion of their businesses.⁹

The second problem, which is even more urgent, is *the*

⁷ As I mentioned, the last three years (1998-2000) is excluded from my considerations, since the economic crisis exists over the period.

⁸ See Agricultural Outlook 2001, 2001, KREI

⁹ See The Business Survey of Small and medium sized Enterprise: 2000, MOCIE(Ministry of Commerce, Industrial and Energy)

fact that the number of aged farm households has rapidly increased. These aged farm households fundamentally inhibit farmers from physically entering non-farm job markets, as well as farming itself. Figure 2 and Table 4 clearly illustrate this situation.

FIGURE 2. The Aging Trend of Farm Households: 1970–1999

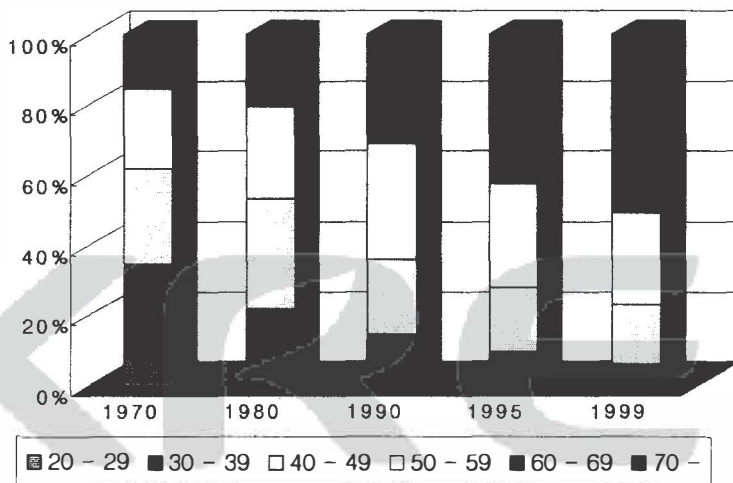


FIGURE 4. The Composition of Farm Households By Age: 1970–1999

Ages		1970	1980	1990	1995	1999
20	29	192,371	88,188	36,268	12,217	6,502
30	39	657,922	367,123	221,177	134,201	78,097
40	49	662,953	664,794	372,508	272,494	229,973
50	59	569,564	555,907	583,964	447,256	362,562
60	69	295,752	327,123	402,633	444,563	487,383
70-		81,315	110,453	150,032	189,920	217,089
Total		2,459,877	2,113,588	1,766,582	1,500,651	1,381,606
Share (%)	> 50	38.5	47.0	64.3	72.1	77.2
	> 60	15.3	20.7	31.3	42.3	51.0
	> 70	3.3	5.2	8.5	12.7	15.7

Source: Agricultural and Forest Major Statistics 2001, MAF (<http://www.maf.go.kr>)

The share of farm households with manager's age over 60 years, was 51.0 percent in 1999. It is expected that this trend will accelerate during the next decade, and the Korean government should therefore pay more attention to the rapid aging trend of farm household operators. All medicines may prove useless in Korea if policy makers do not consider these fundamental problems.

IV. Is There Any Way to Solve These Problems?

As I mentioned above, the current problem in Korea, is I believe, basically the structural problems in farm labor forces, due to the unbalanced growth strategies pursued by the Korean government in the process of rapid economic growth. Through concentrating on industrialization in the urban sector, Korea has accomplished high performance of economic growth, while rural areas in Korea are seen as poor, uncomfortable places among most Korean people, and there has been a rapid outflow of population from the rural areas.

In order to resolve this problem in Korea, therefore, it is important to reduce the speed of migration out of the rural to the urban sectors. In particular, it is an urgent task to nurture young farmers who continue farming in rural areas. It is no exaggeration to say that the future of Korean agriculture depends on the young farmers.

It is therefore natural that there should be special policies for nurturing young farmers. It is also important to consider why young farmers leave the rural areas. Differences in (expected) income or wage rate between rural and urban areas can be one reason for their leaving but quality of life is also one of the major reasons for their migration. It is widely recognized that all determinants of migration are not necessary economic.¹⁰ In

¹⁰ If the urban sector has more amenities, people may want to migrate even when the expected income or wage rate in the urban area is lower.

conclusion, the following ideas may be candidates for policies of non-farm income or employment in Korea.

1. Modernization of the farm sector

Strange as it may sound, modernization of the farm sector is one of most urgent tasks. Modern agriculture is intensive in terms of inputs, service and commercial linkages. The more modern and competitive the agricultural sector is, the larger the contribution of secondary and tertiary activities to rural GDP. In a broad sense, it will require improved linkages with input supply systems, agricultural processing chains, and systems for the distribution of fresh and processed products. Modern agriculture also requires cooperation with the agro-industry in order to successfully meet the demanding quality and safety norms and standards of domestic and international markets. We have already seen some positive relationships between farm and non-farm incomes.

2. Improvement of quality of life for rural residents, including farm households

The term 'rural' should not mean backwardness or under-development any longer. The rural spaces should offer the inhabitants not only better economic opportunities but also options for narrowing the quality of life gap between the rural and urban environments. Then, rural life should be attractive for urban people as well as rural younger people. For example, easy access to modern health care and health services in rural areas can be a major index of the rural life; it is needed to correct this for urban bias in the provision of health care, good education systems and make sure that the services are accessible to, and appropriate for, the rural people. Infrastructure (particularly roads, telecommunications and electricity) is also an important factor, affecting residence intension of rural young people. It helps make an area-attractive to them, whilst also helping people access opportunities (by traveling to nearby towns, or facilitating access to self-employment in sectors dependent on electricity).

3. Improvement of quality of non-farm labor forces

Another obstacle for increasing non-farm employment opportunities of farm households is quality of non-farm labor force, which is related to the aged situation of farm operators. Proper employment education opportunities should be provided to farm households for meeting quality level of labor forces which non-farm activities in rural area demand.

V. Conclusion Remarks: Policy Implications

Rural development is about more than just the expansion of agricultural output and growth in real per capita farm income. In many developing countries, agriculture is not the sole sector of employment and source of income for households in the rural areas. Non-farm activities in many developing countries often account for as much as 50 percent of rural employment and a similar percentage share of household incomes. The degree to which this is the case varies across countries and regions. However, even within the same regions there are considerable variations over time or stages of economic development.

The one safe generalization which can be made about the non-farm sector is that it is heterogeneous. This component of the rural economy comprises a very wide spectrum of activities and institutional forms, and is also often linked in complex ways to country specific agricultural settings. It is thus difficult to prove broader policy prescriptions for promoting the sector as a whole, or even to make a case that such a policy stance would be desirable.

In this paper I would like to add another special feature to heterogeneity regarding non-farm employment in rural areas. In the upper-developing countries, like Korea, policy makers wishing to promote growth in the rural non-farm economy must thus look to the long-term trend in rural or farm labor forces. The selection of unbalanced growth strategies is apt to cause a shortage of labor in rural areas in the long run. (Korea's case is a typical one).

Of course, the current problem of Korea in relation to non-farm employment may be different from those of current Asian developing countries. In many developing countries a large proportion of the population lives in rural areas, and this population continues to grow at a substantial rate. However, most developing countries may ultimately face similar problems to Korea if they emphasize the modernization of only their urban sector and neglect their rural sector, and thus generate great outflows of population from the rural sector. Korea's experiences suggest that such imbalances are never desirable in the long run.

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