

## THE ROLE OF FARM HOUSEHOLDS AND THE AGRO-FOOD SECTOR IN KOREAN RURAL ECONOMY\*

HEO JANG\*\*

KIM YONG-LYOUL\*\*\*

### Keywords

rural areas, agriculture, agro-food sector, farm household income, rural tourism, Korea

### Abstract

This paper aims to review the role of farm households and the agro-food sector in the economy of rural areas in Korea. It discusses definition of rural area, share of agricultural and agro-food sectors in Korean economy, the income situation of farm households and non-farming activities, and multiplier effects of agriculture in Korea. Rural areas mean *Eup* and *Myeon*, whereas *Dong* means urban area. Rural population in Korea has continued to decrease over the years. In 2005, 18.3% of total land area, or 1,824thousand ha, was used for paddy and dry fields. The share of GRDP of agricultural, forestry, and fishing sectors was about 10% in 1985, but dropped to slightly over 3% in 2005. Thirty seven percent of farmers have a second employment in the non-farm sector and 67.2% of part-time farmers are more devoted to their non-farm activities than farming for farm household income. Rural tourism provides diverse opportunities for rural and urban residents to exchange products, services, information, and culture. New demands are arising toward rural areas: leisure and relaxation spaces, rural tourism, nature and ecology, rural amenity, and safe and fresh local foods.

---

\* This document was originally prepared for the OECD. It is one of the country reviews prepared for the project on the role of farm households and the agro-food sector in the economy of rural areas undertaken under Output area 3.2.1: Agricultural policy reform (Item 3.2) in the programme of work and budget for 2007-08

\*\* Senior Fellow, Korea Rural Economic Institute, Seoul, Korea.

\*\*\* Fellow, Korea Rural Economic Institute, Seoul, Korea.

## I. Background

This paper contains a country review on the role of farm households and the agro-food sector in the economy of rural areas in Korea. Based on materials compiled from the available literature, it addresses all or most of the topics listed: 1) definition and underlying concept of “rural” as they exist at the national level, 2) the availability of data pertaining to the share of agriculture and the agro-food sector in the economies of Korea, at the national level and in rural areas, 3) the availability of data relating to the income situation of farm households and, in particular, the availability of information related to non-farming activities, 4) the extent to which non-farming income-earning activities of farm households are farm based (*i.e.* using farm resources as in the case of farm tourism) or rural based (located in rural areas), 5) the extent to which the industries upstream and downstream from primary agriculture are located in rural areas, 6) the strength of multiplier effects between farm/farm based and up/downstream industries and rural economies.

Section two of this paper explains definition and typology of rural areas. Section three discusses rural areas, agriculture, and agro-food sector in Korea. Section four describes diversification of farm household activities in rural areas. Finally, section five summarizes the main conclusion.

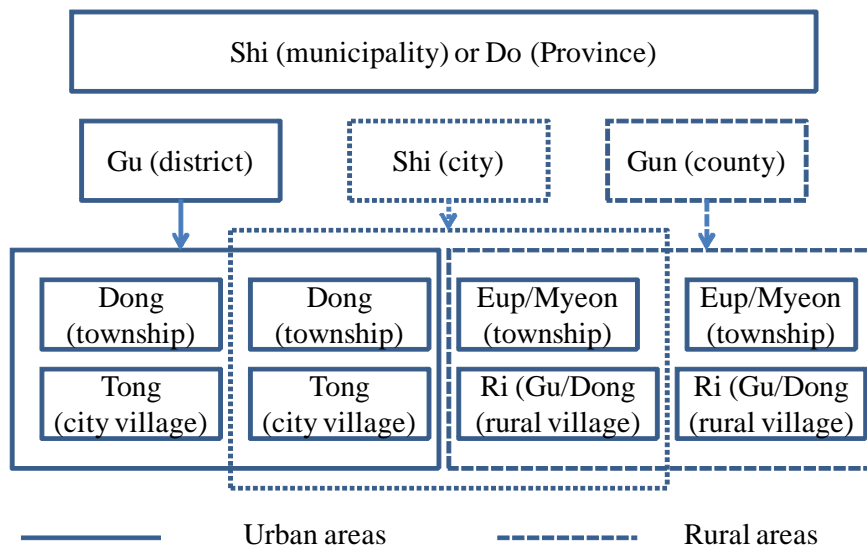
## II. Definition and typology of rural areas

In general, the urban and rural areas in Korea are categorized in one of the following four official administrative levels: *Shi/Do* (Municipality/Province), *Shi/Gun/Gu* (City/County/District), *Eup/Myeon/Dong* (Township), and *Ri* (Village). In some parts of the country, however, *Ri* is customarily called *Gu* or *Dong*.

Official statistics have used the opposing definitions of “urban” and “rural.” Therefore, *Shi* at the second level in Figure 1 was considered for a long time as an urban area as opposed to *Gun*, which represented a rural area. Prior to 1995, when the population of an *Eup* exceeded 50,000, it was promoted to the *Shi* level and thereby classified as an urban area. *Myeon* constituted an area

with a population of less than 20,000 residents and when its population surpassed this number, it became an *Eup*. Accordingly, *Eup* and *Myeon* were considered rural areas. In 1995, however, a new administrative classification system was adopted. Under this new system, *Shi* came to include not only *Shi* under the previous classification, but also *Eups* and/or *Myeons* in surrounding or neighboring *Shi*, making the size of the *Shi* much bigger (the newly classified *Shi* is called “Complex City” for classification purpose). The smallest unit under the former *Shi*, “*Dong*,” was placed at the same level as either an *Eup* or a *Myeon*.

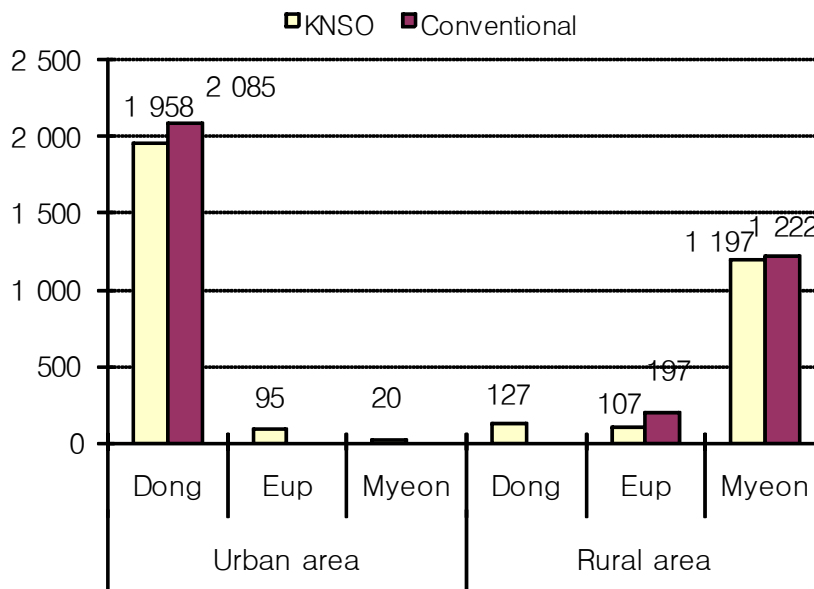
FIGURE 1. Classification of rural and urban areas



This change in classification has made it difficult to define rural areas and use time-series data. According to the definition of rural areas before 1995, *Shis* were urban areas and *Guns* were rural areas, while *Gu* was associated with municipalities or big cities such as Seoul. After 1995, rural areas came to mean *Eup* and *Myeon*, whereas *Dong* meant urban area. Figure 2 shows the number of administrative units in urban and rural areas in the conventional and the new classification systems in 2000. As of 2005, under the new classification of rural and urban areas, there are 1,417 *Eups* and *Myeons*, and 2,168 *Dongs* in Korea. In spite of the criterion that *Eup* requires a population of between 20,000 and 50,000, many of the current *Eups* have less than 20,000 people; this is a consequence of a provision in the Local Government

Act that stipulates a *Myeon* becomes an *Eup* when it is the site of a county office, or in the case where a *Myeon* is selected to be an *Eup* when a Complex City does not have any *Eup*.

FIGURE 2. Number of administrative units in urban and rural areas, 2000



Source: KNSO (2007a); <http://www.kosis.kr/>

Park *et al.* (2006) attempted to design a typology to understand the future of rural areas as spaces for industrial, living, environment and welfare activities. They defined counties and Complex Cities as rural areas and applied eighteen indicators relative to population and housing, topography, industrial status, amenities, public services, and tourism. Using factor and cluster analyses, four categories of rural areas were defined. Amongst 135 Complex Cities and counties, 44 (32.1%) were found to belong to semi-mountainous and mountainous areas, 27 (19.7%) to tertiary industry areas, 29 (21.2%) to urban-incorporated areas, and 37 (27.0%) to plain areas. The purpose of their analysis was to predict changes in these types; according to their Monte Carlo simulation-based analysis, the proportion of Complex Cities and counties of each type would account for 26.7%, 28.9%, 23.6%, and 19.7% in 2020 respectively. This implies more service activities and urban influences on the one hand, and decreasing traditional economic activities and social interactions on the other.

The Korean National Statistical Office (KNSO, [www.nso.go.kr](http://www.nso.go.kr)), a central governmental body producing and distributing economic and social statistics, recently declared that the current definition of urban and rural areas is only for administrative purpose, and accepted that communities in the same category have many heterogeneous aspects. In mid-2007, they provided a tentative new dichotomy using twelve variables from the sectors: population (population density, average yearly rate of population increase, and rate of support for the old people), household (rate of full-time farming households, and rate of household with main income coming from agriculture), industry (number of businesses in agriculture and forestry, number of businesses in fisheries, number of manufacture businesses, number of wholesale and retail businesses, and number of businesses in restaurants and hotels), land (share of land use for urban purposes), and cultivated land use (share of forest area). Each variable has its own indicator. For example, the rate of support for senior citizens is measured by the population aged 65 years and over divided by the population aged between 15 and 64 years. Data were collected for *Shis* and *Guns* from the 2000 Census survey, and the principal component analysis and the hierarchical cluster analysis were used for statistical processing (KNSO, 2007b).

Based on the analysis, the KNSO suggests that some *Eups* and *Myeons* need to be called “urban-like areas.” These differ from traditional rural areas because they are closer to urban areas in terms of indicators. The KNSO also proposed another term, “urbanized area,” to indicate urban and urban-like areas as opposed to rural area.

The KNSO (2007a) further proceeded to classify rural areas using a similar methodology. Twenty-three variables (each having a single indicator) in seven sectors (population, household, industry, topography, land use, accessibility, and living conditions) were analyzed to produce the following six types: residential area with high population density, agricultural plain area, semi-residential area with developed secondary sector, island area with high non-urban land use rates, mountainous area with low population density, and coastal area with developed tertiary sector.

### III. Rural areas, agriculture, and agro-food sector in Korean economy

#### 1. Demography of rural areas

The total population of Korea in 1985 was 40,419,652 and grew to 47,041,434 by 2005 (Figure 3). According to the census data showing the shift in the proportion of rural population (*Eups* and *Myeons*), the population of rural areas was 14,001,680 or 34.6% of the total in 1985, but dropped in 2005 to 8,703,735 or 18.5%. In 2000, there were 170 *Myeons* with a population of less than 2,000, a sharp contrast to the nine *Myeons* in 1985 (Song, Seong and Park, 2006). It is estimated that in 2020, the rural population will be 6,497,364, or 13.0% of the total Korean population (Park *et al.*, 2006).

It is noteworthy that in spite of the decrease in rural area population, the population of *Eups* has been increasing since 1995 (Table 1). This means that *Eups* are growing as centers in rural areas and that living conditions have improved with infrastructures and facilities such as roads, clinics, and social and public services, which attract population from sparsely populated *Myeon* areas. Consequent to this development, Song *et al.* (2006) propose to pursue a strategy to develop rural centers as complex living spaces.

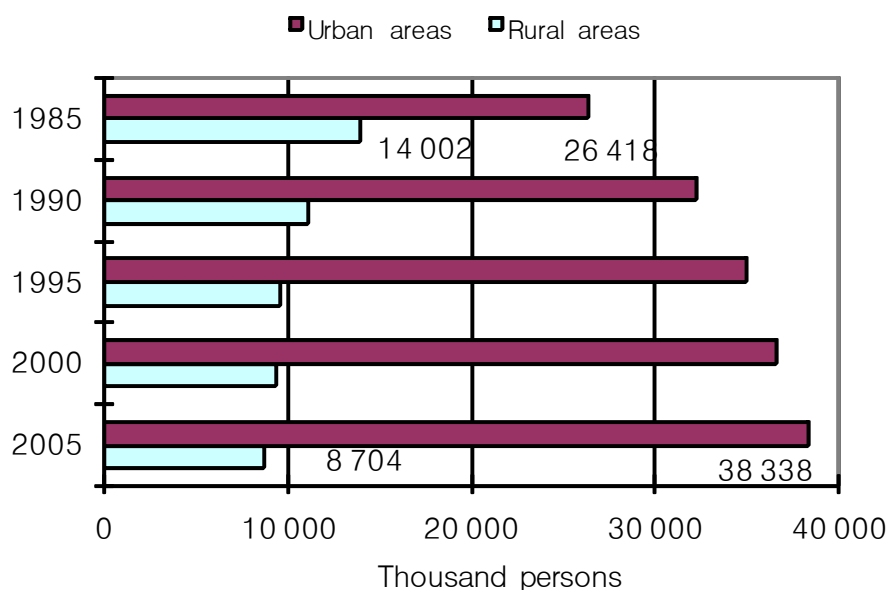
Out of Korea's total land area of 99,721.84 km<sup>2</sup>, rural areas including *Eups* and *Myeons* occupied 89,472.68 km<sup>2</sup> or 89.7% of the total land in 2005.

TABLE 1. Changes in population of *Eups* and *Myeons*, 1990-2005

	1990	1995	2000	2005
Total	11,100,319	9,561,746	9,342,841	8,703,735
<i>Eups</i>	3,602,462	3,480,784	3,742,053	3,922,597
<i>Myeons</i>	7,497,857	6,080,962	5,600,788	4,781,138

Source: <http://www.kosis.kr/>

FIGURE 3. Changes in population of urban and rural areas, 1985-2005



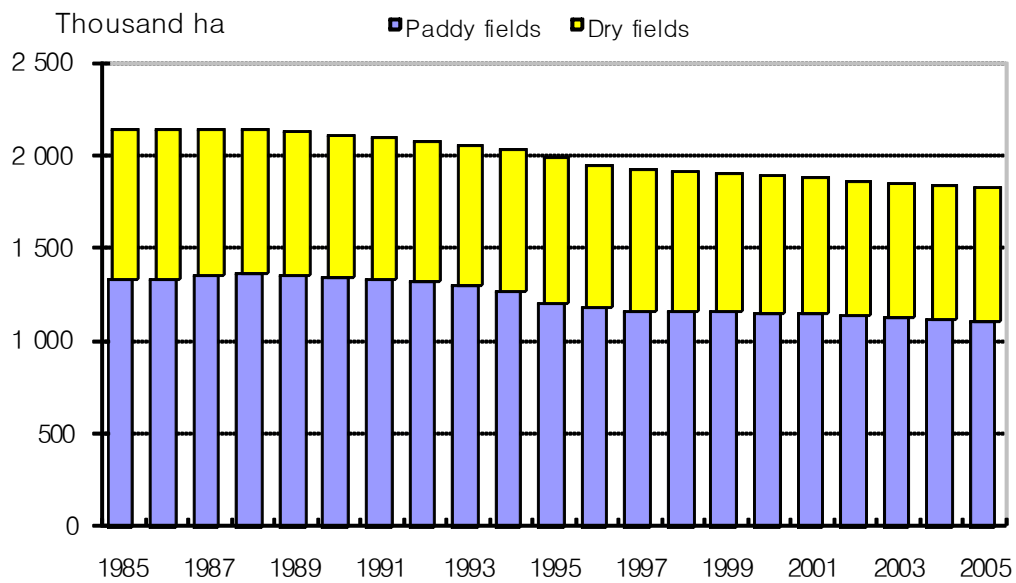
Source: <http://www.kosis.kr/>

## 2. The role of agriculture in the national economy

The share of agriculture in land use is represented by the area used as agricultural land. In 1985, 21.6% of the total land area, or 2,144 thousand ha out of 9,914 thousand ha, was used for agriculture. In 2005, 18.3% of total land area, or 1,824 thousand ha, was used for paddy (1,105 thousand ha) and dry fields (719 thousand ha). In general, the total land area devoted to agricultural purposes has been decreasing over the last twenty years; for example, the land area covered by paddy fields, which reached a peak of 1,358 ha in 1988, has since decreased steadily (Figure 4).

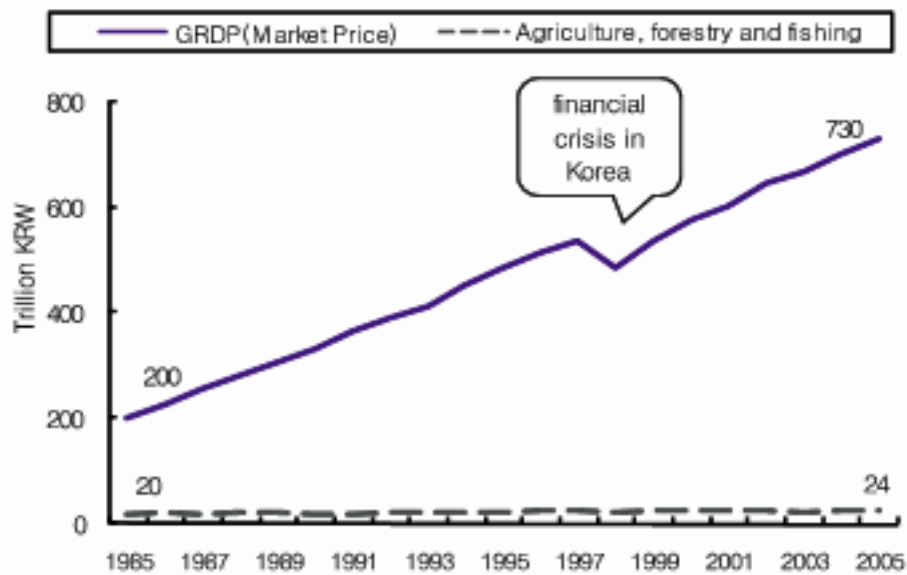
The gross regional domestic product (GRDP) in 1985 was about KRW 200 trillion for the entire country and expanded to KRW 730 trillion in 20 years (prices are adjusted for the year 2000, for which the exchange rate was KRW 1,260 per dollar) (Figure 5). The GRDP of agriculture, forestry and fishing industries, however, has remained almost unchanged for this same period: KRW 20 trillion in 1985 and KRW 24 trillion in 2005. The share of GRDP of agricultural, forestry, and fishing sectors was about 10% in 1985, but dropped to slightly over 3% in 2005.

FIGURE 4. Changes in the size of agricultural land, 1985-2005



Source: <http://www.kosis.kr/>

FIGURE 5. Changes in GRDP, 1985-2005

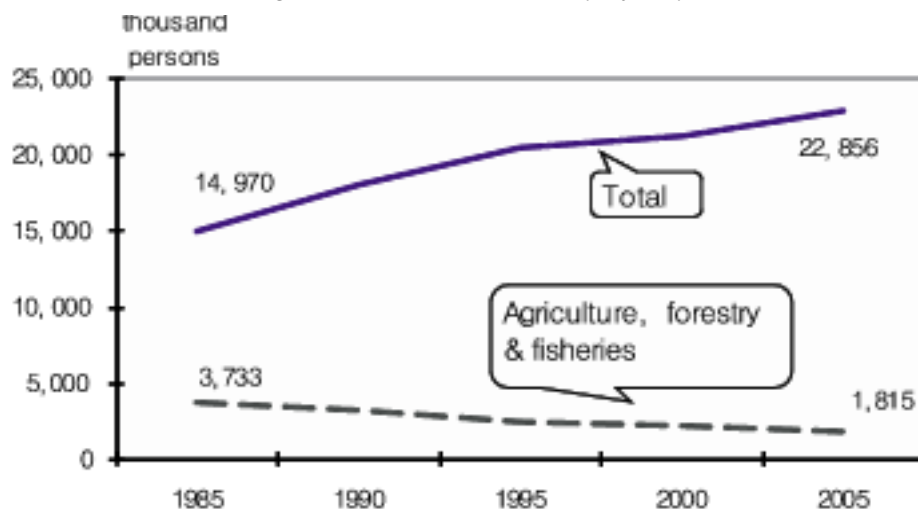


Source: <http://www.kosis.kr/>



Data on GRDP are available at the provincial level, but have never been collected at the *Eup/Myeon/Dong* levels. In 1985, 3,733 thousand persons (24.9%) were employed in the agriculture, forestry and fishing sectors (Figure 6). While the total number of people working in Korea increased to 22,856 thousand persons in 2005, the number of people working in the above sectors decreased to 1,815 thousand persons (7.9%).

FIGURE 6. Changes in the number of employed persons, 1985-2005



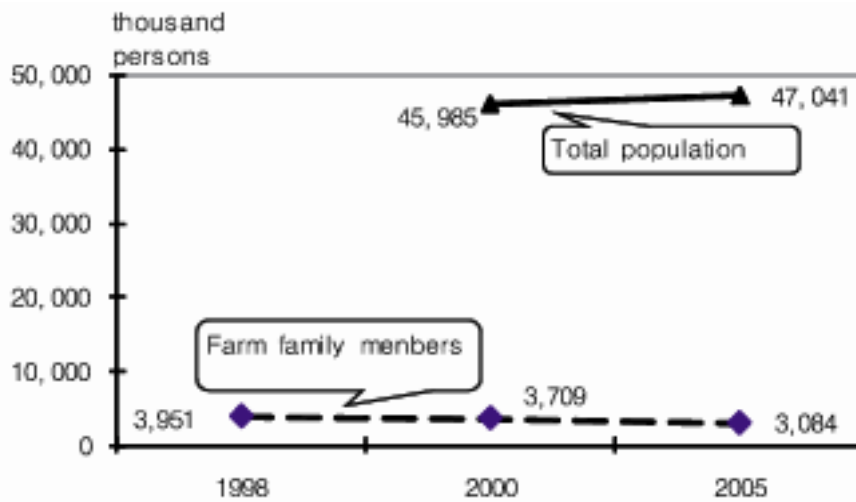
Source: <http://www.kosis.kr/>

Statistical data on the number of persons employed in agriculture in rural areas are not available; however, the Korean National Statistical Office conducted social surveys in which respondents gave information on their jobs (KNSO, 2005). Survey respondents were persons over 15 years of age and came from more than 30,000 households selected from 1,629 sample districts. According to this survey, 31.9% of the people living in *Eups* and *Myeons* worked in the agriculture and forestry sectors in 1996; this percentage was 33.2% in 1998, 27.5% in 2000, 30.2% in 2002, and 21.4% in 2004. The proportions have been inevitably fluctuating because the surveys did not use panel data. The 2004 data were collected from a sample of county residents. The survey results imply that about three out of ten rural residents were working in the agricultural and forestry sectors in late 1990s and early 2000s.

The data on the number of farm family members in rural areas

-Complex Cities and counties- are available since 1998. In 1998, this number was 3,951,337 persons; but, in 2005, it fell to 3,083,883, a net decrease of around 870 thousand persons (Figure 7). As a result of national population growth, the share of family farm members in rural areas dropped from 8.1% in 2000 to 6.6% in 2005. The national population information is taken from the census surveys conducted every five years (<http://www.kosis.kr/>).

FIGURE 7. Changes in the number of farm family members in rural areas, 1998-2005



Source: <http://www.kosis.kr/>

### 3. Multiplier effects of agriculture

Table 8 shows that the output multiplier of agriculture, forestry and fisheries in 2000 was 1.642. This means that when the final demand for agricultural, forestry and fishery products increases by one unit, the total indirect and direct output effect on the whole industry, including agriculture, forestry and fisheries, is 1.642 units. While the output multipliers of agriculture, forestry and fisheries, mining and quarrying, and services are small, those of manufacturing, electricity, gas, water supply and construction are large.

TABLE 8. Output multiplier by industry, 1990, 1995, 2000

	1990	1995	2000
Agriculture, forestry and fisheries	1.591	1.58	1.642
Mining and quarrying	1.58	1.542	1.588
Manufacturing	2.056	1.946	1.959
Electricity, gas, water supply and construction	1.905	1.973	1.872
Services	1.558	1.542	1.581
Whole industry	1.765	1.671	1.659

Source: Bank of Korea (2003); [http://ecos.bok.or.kr/ebook/html/bok\\_02/VIEW.HTM](http://ecos.bok.or.kr/ebook/html/bok_02/VIEW.HTM).

As for the value added multiplier, that of agriculture, forestry and fisheries in 2000 was 0.892 (Table 9). This means that when the final demand for agricultural, forestry and fishery products increases by one unit, the total indirect and direct value added multiplier becomes 0.892 units. While industries such as agriculture, forestry and fisheries, and mining and quarrying using raw materials or raw resources have higher value added multipliers, manufacturing depending largely on imported natural resources has a slightly lower value added multiplier.

TABLE 9. Value added multiplier by industry, 1990, 1995, 2000

	1990	1995	2000
Agriculture, forestry and fisheries	0.920	0.913	0.892
Mining and quarrying	0.915	0.924	0.899
Manufacturing	0.670	0.686	0.627
Electricity, gas, water supply and construction	0.835	0.835	0.797
Services	0.903	0.908	0.886
Whole industry	0.755	0.746	0.714

Source: Bank of Korea (2003); [http://ecos.bok.or.kr/ebook/html/bok\\_02/VIEW.HTM](http://ecos.bok.or.kr/ebook/html/bok_02/VIEW.HTM).

With respect to the ratio of employment to output value, *i.e.* employment needed to produce one KWR billion output, 16,676,556 employees participated in production activities and generated a total of KRW 1,363 trillion in Korea in 2000 (Table 10). The ratio of employment to output value in 2000 was 12.2 persons per KRW billion. The agriculture, forestry and fisheries sector

had the largest ratio, or 58.2, whereas the employment to output ratio of the labour intensive service sector was 18.2. Yet, in the same year, the ratio of employment to output value in the manufacturing sector was the second lowest at 4.9. This means that the manufacturing sector had a higher labour productivity than the agriculture, forestry and fisheries sector. The employment multiplier of agriculture, forestry and fisheries, as calculated from the input-output table of the Bank of Korea, was 1.29 in 2000.

TABLE 10. Employment to output value ratio by industry, 1990, 1995, 2000

	1990	1995	2000		
			Employment (A)	Output value (B)	Employment to output ratio (A/B)
Unit	Person per billion won	Person per billion won	Person	billion won	Person per billion won
Agriculture, forestry and fisheries	81.9	61.3	2,228,849	38,286	58.2
Mining and quarrying	22.5	12.1	19,010	2,648	7.2
Manufacturing	15.2	8.6	3,195,100	647,344	4.9
Electricity, gas, water supply and construction	5.4	3.4	71,944	31,488	2.3
Services	32.7	25.7	9,912,879	543,909	18.2
Whole industry	24.4	16.9	16,676,556	1,362,945	12.2

Source: Bank of Korea (2003); [http://ecos.bok.or.kr/ebook/html/bok\\_02/VIEW.HTM](http://ecos.bok.or.kr/ebook/html/bok_02/VIEW.HTM).

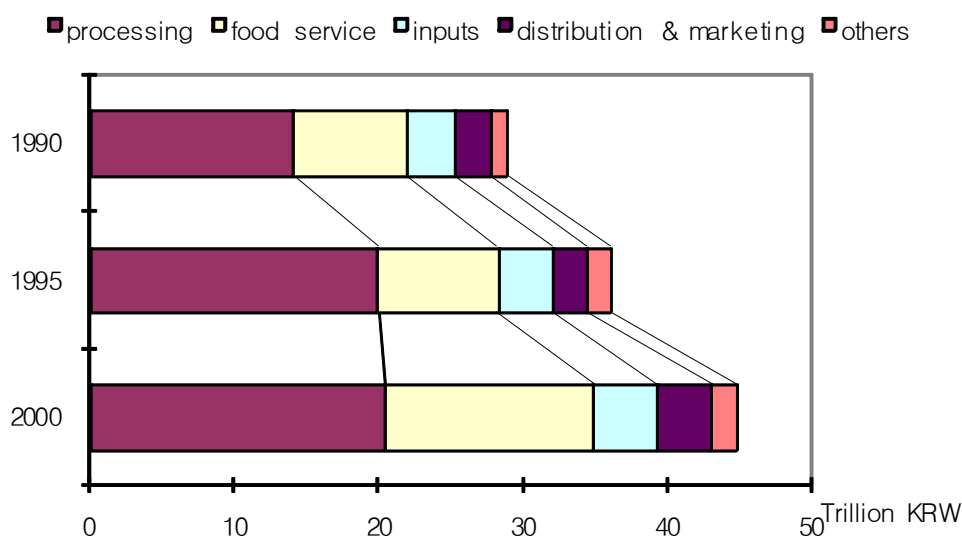
#### 4. The role of agro-food industries in rural areas

In general, agro-food industry includes such diverse economic activities as collecting, processing, packing, distributing and selling agricultural produce. More specifically, however, it may be referred to as food-processing industry. Kim (2004, 2007) uses the term of agriculture-related industry to include sectors related to i) inputs such as seed, fertilizer, pesticide, and agricultural machinery; ii) processing and manufacturing, such as milk production and bakery; iii) transportation, storage, and sales at supermarkets or restaurants; and iv) service and information such as finance, administration, and R&D. As new industrial areas using agricultural produce continue to emerge and evolve, the definition of agri-

culture-related industry will be adjusted accordingly.

With the above definition, Kim (2004) attempted to estimate the size of the contribution of agriculture-related industries to the GDP by using inter-industry relation tables sourced from the Bank of Korea. The contribution to the GDP of these industries in 1990 was calculated at KRW 2,963 billion by applying the 2000 price. It increased to KRW 36,077 billion in 1995 and to KRW 44,786 billion in 2000. The largest share comes from the processing industry (Figure 8).

FIGURE 8. Changes in the share of GDP of agriculture-related industries, 1990-2000

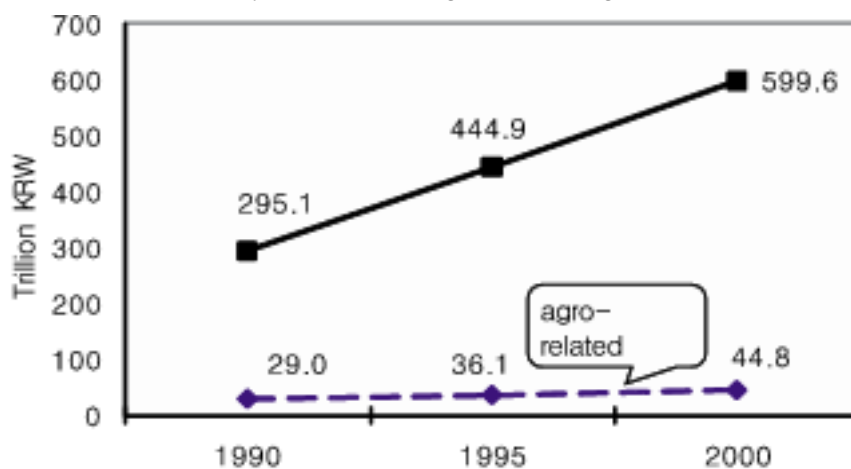


Source: Kim (2004).

If we adopt a narrow definition of agro-food industry as food processing industry, its contribution to GDP has increased slowly from KRW 14,099 billion in 1990 to KRW 19,957 billion in 1995, and to KRW 20,442 billion in 2000, although its share of the total GDP has decreased from 4.78% in 1990 to 4.49% in 1995 and 3.41% in 2000. The food service (eating out) sector has grown rapidly, increasing its GDP share from 1.87% in 1995 to 2.41% in 2000.

Considering that the GDP of all Korean industries has doubled during this time period, the growth of agriculture-related industries at 154% is not impressive. Indeed, the share of agriculture-related industries has fallen from 9.8% in 1990 to 8.1% in 1995 and to 7.5% in 2000 (Figure 9).

FIGURE 9. Comparison of changes in GDP growth, 1990-2000



Source: Kim (2004).

Kim's (2007) more recent research estimates the number of persons employed in agriculture-related industries. In 2005, 1,950 thousand persons were employed in these industries, without any significant fluctuation over the seven previous years; nevertheless, the share in the total number of employed has decreased (Table 2). Unlike his previous analysis, the fishing industry was excluded and, therefore, only agricultural and forestry industries were taken into account.

TABLE 2. Changes in the number of employed persons, 1998-2005

	Thousand persons			
	1998	2003	2004	2005
National total	19,938	22,139	22,557	22,856
Agro-related industries	1,906	2,102	2,057	1,950
Food processing industries	267	256	259	254

Source: Kim (2007).

## IV. Diversification of farm household activities in rural areas

### 1. Farm household activities and farm income

Cash and in-kind non-farm income contributes substantially to total household income. In rural economies, rural non-farm income is considered a key to rural development policies aimed at increasing the incomes of small farmers in addition to creating more employment opportunities in Korea. The creation of off-farm jobs also narrows the income gap between rural and urban households, as well as among farm households in rural areas.

None-farm income has positive impacts on farmers' well being. These positive impacts are to tighten the labour market that the poor depend on; to help manage risks by providing employment during the off-season, making full use of agricultural assets, or providing part-time, home-based work which fits well with women's other domestic work; to add value to farm activities (processing, trade, storage, etc.); and to provide opportunities to learn new skills.

Farm household income is defined as gross income earned from all economic activities of a family living in the same household and has four components: agricultural income, off-agricultural/farm income, transferred income, and irregular income. Agricultural income is defined as the value a farm household has earned by selling, transferring or consuming their own agricultural products. Off-farm income consists of outside income, wage, salary, rent, interest, etc., while transferred income consists of gifts, donations, subsidies, etc (Table 3). The category of transferred income was created in 1983 when it was separated from off-farm income and the category of irregular income (income from family congratulations and condolences, retirement payments, etc.) from the transferred income in 2003.

Increasing farm household income by elevating agricultural income is limited. Since Korean farm households have a small arable land area (1.43 ha on average), there is only limited room to increase agricultural productivity given the large number of older, less educated farmers in Korean agriculture and limits on the level of price support for agricultural products in an international context. Therefore, the Korean government emphasized the promotion of non-farm income.

Unfortunately, there are no data on the number and members of farm households engaged in non-agricultural and off-farm activities related to, for example, forestry products, fishery products, farm products processing, trade, manufacturing and mining, and other services. Instead, we will introduce data on full and part-time farm households because farm work on a part-time basis is strongly related to non-agricultural and off-farm activities.

TABLE 3. Farm economic activities and farm income

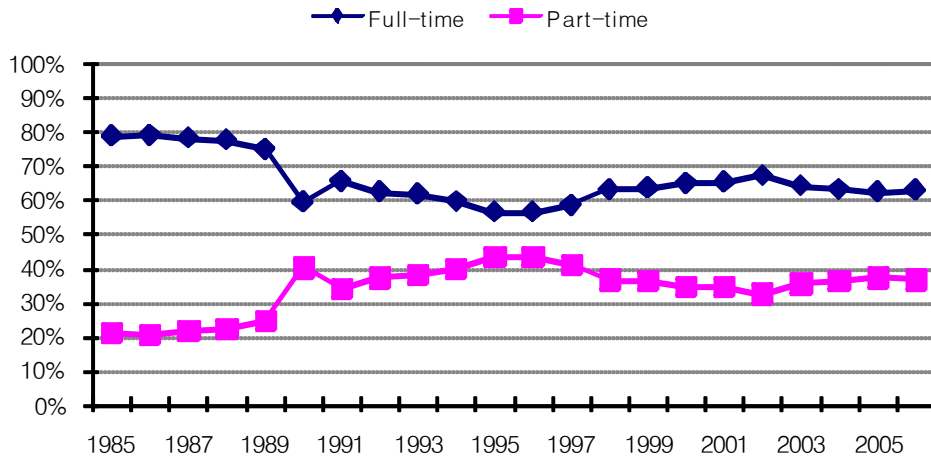
Farm Economic Activities	Farm Household Income	Income Type
Agricultural activities at farms	Income excluding farm expenses from gross farm receipts	Agricultural income
Off-farm activities Forestry products, fishery products, farm products processing, trade, manufacturing and mining, and other services	Income excluding expenses from off-farm receipts	Non-farm income (non-farm business income)
Off-farm employment - wages, salaries, rent from land	Income excluding expenses from employment receipts	Non-farm income (non-business income)
Subsidy from government or donation of other family members	Remittance by family, gifts and donation, retirement payments	Transferred income & irregular income

The Korea National Statistical Office (KNSO, 2006) survey contains data on full and part-time farm households. The survey result shows that in 1985 approximately 1.5 million farmers (78.8%) stated that farming was their sole occupation. The KNSO data for 2006 indicates that approximately 784,900 farmers (63%) were full-time farmers and the remaining 460,165 farmers (37%) had another occupation which was either major or secondary (Figure 10).

Part-time farm households are divided into Class 1 part-time and Class 2 part-time. Class 1 part-time derives 50% or more of the annual household income from farming. Class 2 part-time earns less than 50% of annual household income from farming. In 1985, the number of Class 1 part-time farm households was 167,799 (41.2%) and in 2006 this number had dropped to 150,708 (32.8%). The number of Class 2 part-time farm households was 239,796 (58.8%) in 1985, and it increased by 8.4% to 309,457 (67.2%) in 2006 (Figure 11).

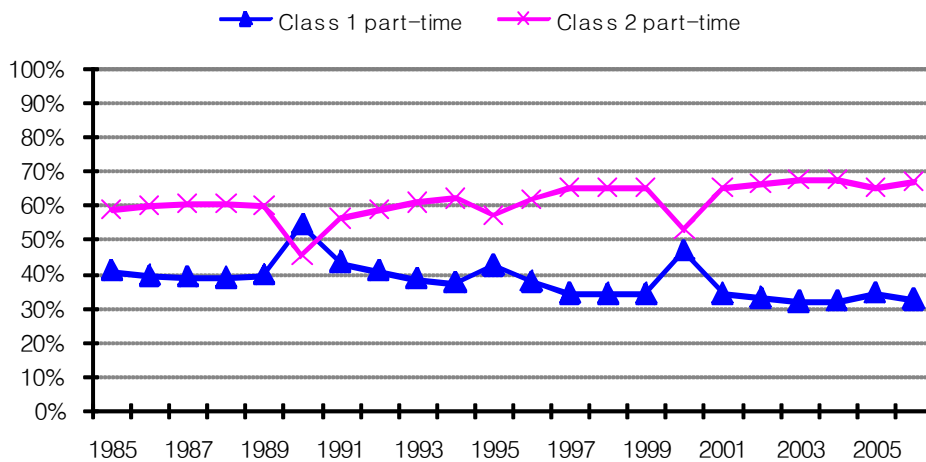


FIGURE 10. Changes in the proportion of full- and part-time farm households, 1985-2005



Source: Annex Table 1; <http://www.kosis.kr/>

FIGURE 11. Changes in part-time farm households by class, 1985-2005

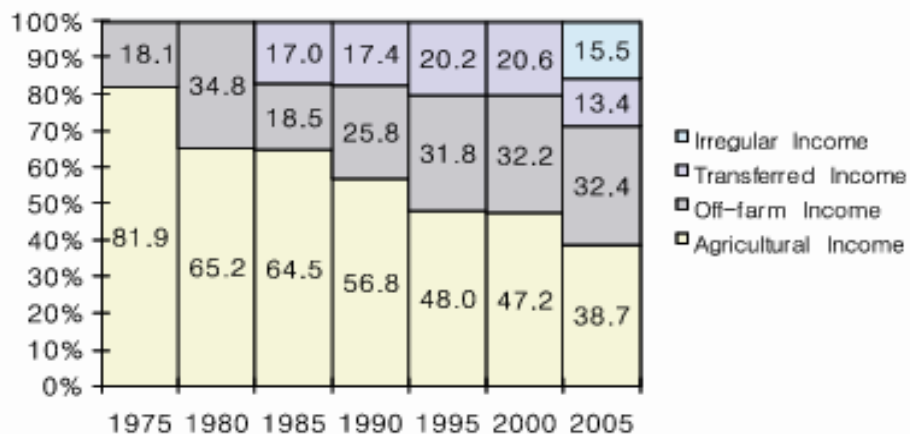


Source: Annex Table 1; <http://www.kosis.kr/>

The results indicate that 37% of farmers have a second employment in the non-farm sector and 67.2% of part-time farmers are more devoted to their non-farm activities than farming for farm household income. Farm household

income was 873 thousand KRW in 1975, 11,026 thousand KRW in 1990, and 30,503 thousand KRW in 2005 (<http://www.kosis.kr/>). Non-farm income increased from 158 thousand KRW in 1975 to 4,762 thousand KRW in 1990 and 18,687 thousand KRW in 2005 (one USD is equivalent to 1,013 Korean KRW in 2005). Therefore, the share of non-farm income has expanded to 61.3% of total income in 2005, compared to 18.1% in 1975 and 43.2% in 1990 (Figure 12).

FIGURE 12. Changes in the composition of farm household income, 1975-2005



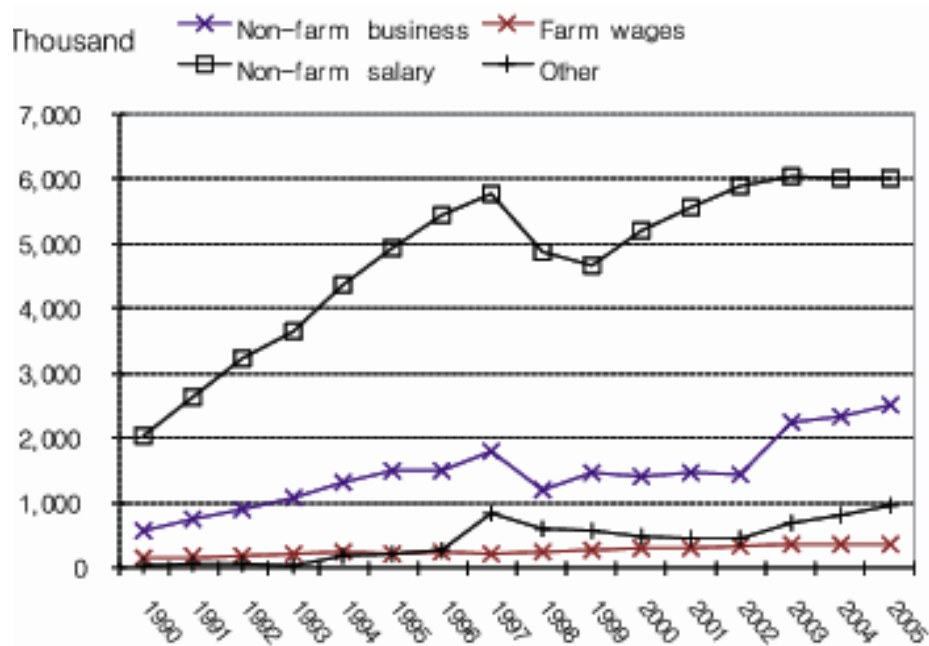
Source: Korea National Statistical Office (2006); <http://www.kosis.kr/>

In 2004, the major components of non-farm income consisted of salary (62.9%), non-farm business income (24.5%), farm wage (3.8%) and others (9.8%). Salary comes from small and medium industries in rural areas. These include industries in the Rural Industry Park and agricultural product processing, etc. Other wages come from irregular temporary jobs in the fields of construction, housing, and service sector.

The share of salary in non-farm income sharply increased after the Asian financial crisis in 1998 (Figure 13). Most non-farm business income comes from running small village stores, restaurants, beauty salons, rice mills, etc. by farmers or farm household members. The share of non-farm business income has risen mostly since 2002. When income is compared by sector, trade, manufacturing and mining accounted for the largest share with 51.2%, followed by commerce and manufacturing (28.1%), service sector (11.5%), fishery products (6.5%), and others (26.2%). The rapid increase in the rate of other

wages in 1990-1997 dramatically expanded the share of non-farm income in 1997. The level of non-farm income decreased sharply in 1998 due to the Asian financial crisis, and the 1997 level was not recovered until 2003.

FIGURE 13. Changes in the composition of off-farm income, 1990-2005



Source: Korea National Statistical Office (2006); <http://www.kosis.kr/>

## 2. Rural tourism

Rural tourism has become an important rural policy issue in Korea. Regarding the development of rural tourism, major concerns include non-farm income promotion, balanced regional development, harmonizing rural areas with the natural environment (natural scenery or landscape), rural traditions and culture, rural amenity, and rurality.

The government has promoted rural tourism businesses such as tourism farms, rural leisure complexes, home-stay villages and weekend farms since 1984 under the Special Act on Farm and Fishery Villages Development. Since 1984, a total of 568 tourism farms have been designated. However, many of them have closed with only 392 continuing to operate as of 2005. The closure

of many of these farms was largely due to over-investment in facilities not strongly affiliated to the local culture, traditions and natural environment, as well as offering facilities which were not that different from hotels and condominiums.

Leisure complexes in rural areas were launched in 1989 to promote rural tourism in a clean rural natural environment, as well as to promote agricultural products, leisure facilities, local foods, etc. As of 2005, 11 rural leisure complexes were in operation. Many experts, however, feel these complexes do not offer a unique tourist experience as what they offer closely resembles any other typical tourist complex. The home-stay village program began in 1991 and offers food and accommodation to visitors. As of 2005, 11,669 rural homes were participating in this program.

The National Agricultural Cooperative Federation (NACF) or local governments oversee the work of weekend farmers. The NACF reports that the number of weekend farms located in suburban areas is increasing: from 192 in 2004 to 334 in 2006; weekend orchards, from 66 in 2004 to 145 in 2006; and weekend ranches, from 22 in 2004 to 33 in 2006. As of 2006, there were 512 weekend farms in operation.

During the period from the launch of the Rural Tourism Village Program in 2002 to 2006, 380 rural tourism villages were designated by the Ministry of Agriculture and Forestry (MAF), the Ministry of Government Administration and Home Affairs (MGAHA), the Rural Development Administration (RDA), the Ministry of Culture and Tourism (MCT), and the Ministry of Marine Affairs and Fisheries (MMAF).

The MGAHA designated 9 rural villages in 2001 and 14 rural villages in 2002 as *Arum Mauls* (meaning beautiful villages), a project which seeks to develop the visual appearance of such designated villages. In addition, through the Green Rural Experiencing Village Project, the Ministry of Agriculture and Forestry supported 18 villages in 2002, 26 villages in 2003, 32 villages in 2004, 47 villages in 2005, and 67 villages in 2006. At present, there are 190 Green Rural Experiencing Villages (Table 4).

Through the Rural Traditional Theme Village Program, the Rural Development Administration (RDA) selected nine villages in 2002, 18 villages in 2003, 18 villages in 2004, 21 villages in 2005, and 21 villages in 2006. To date, there are a total of 97 Rural Traditional Theme Villages. The Ministry of Marine Affairs and Fisheries (MMAF) have chosen 58 villages for the

Experiencing Green Tourism in Fishing Village. The Ministry of Culture and Tourism (MCT) has designated 12 villages as Culture and History Villages.

TABLE 4. Rural tourism villages, 2006

Project	<i>Arum Maul</i> (’01-’02)	Green Rural Experience Villages (’02-’06)	Rural Traditional Theme Villages (’02-’06)	Experiencing Green Tourism in Fishing Villages (’02-’06)	Culture and History Villages (-’06)	
Ministry	MGAH	MAF	RDA	MMAF	MCT	
Village #	380	23	190	97	58	12

Source: KREI (2006, 2007).

Rural tourism is expanding in Korea, with demand sharply increasing since 2000. Concerning visitors to rural tourism villages, Table 5 shows the number of visitors to rural tourism villages between 2001 and 2005. Visitors to the Green Rural Experiencing Villages increased sharply from 157,500 in 2002 to 1,037,700 in 2005. The number of tourists visiting the Rural Traditional Theme Villages increased from 12,581 in 2002 to 259,796 in 2005. With respect to the Experiencing Green Tourism in Fishing Villages, the number of visitors also increased from 172,000 visitors in 2001 to 5,445,100 visitors in 2005. For *Arum Maul*, there were only 44,555 visitors in 2001, but this figure increased to 316,444 visitors in 2005. The number of visitors to the Farm-Stay Villages supported by the NACF also increased from 101,795 in 2001 to 938,743 in 2005.

TABLE 5. Visitors to rural tourism villages, 2001-2005

Village	2001	2002	2003	2004	2005
Green Rural Experiencing Villages	-	157,500	295,400	626,500	1,037,700
Rural Traditional Theme Villages	-	12,581	55,780	133,091	259,796
Experiencing Green Tourism in Fishing Villages	172,000	414,000	2,528,000	5,030,000	5,445,000
<i>Arum Mauls</i>	44,555	208,192	227,130	260,582	316,444
Farm-Stay Villages	101,795	250,000	360,067	620,000	938,743

Many Farm-Stay Villages overlap other villages supported by the government.

Source: KREI (2006, 2007).

At present, the promotion of rural tourism is recognized as an important policy tool for the revitalization of the rural economy. Rural tourism also provides diverse opportunities for rural and urban residents to exchange products, services, information, and culture.

A good model of urban-rural exchange is the “One Institute and One Rural Village” program in Korea, under which an institute in an urban area forms an alliance with a rural village, a sister institute or a village affiliation. This program was launched in 2004 and 2,404 exchanges were made in the first year. The number of exchanges has continuously grown from 8,677 in 2005 to 14,498 in 2006, and approximately 12,000 institutes are currently participating in this program (Table 6).

Table 6. ‘One Institute and One Rural Village’ campaign, 2006

Total	Company	Consumer Association	Social/Religious Institute	Government and Public office	NACF	School	Others
14,498	6,316	1,082	820	1,967	1,523	860	1,937

Source: KREI (2006, 2007).

With respect to non-farm income earned through rural tourism, rural tourism villages (or farms) receive earnings from lodging, food sales, and the sale of agricultural products. According to a Korea Rural Economic Institute (KREI) survey of 78 rural tourism villages and 79 home-stay farms in 2006, the average number of visitors to a rural tourism village was 5,117 visitors and the average total earnings were KRW 86,378 thousand (Table 7). A total of 251 urban dwellers visited a home-stay farm on average and the total earnings were KRW 5,507 thousand. Sales of agricultural products in rural tourism villages and lodging in home-stay farms are the most important sources of income.

TABLE 7. Visitors and earnings of rural tourism per village and per farm, 2006

	Visitors (persons)	Earnings ('000 KRW)	Composition of earnings (%)				
			Lodging	Food	Agricultural Product	Farm Experience	Others
Rural tourism villages	5,117	86,378	29	19	36	16	0
Home-stay farm	251	4,853	53	22	24	0	1

Source: KREI (2006, 2007).

Park, Kim and Choi (2007) offer two concepts of rural tourism, both of which have been adopted in Korea. The Ministry of Agriculture and Forestry adopts a broad concept of rural tourism: regional activities including diverse exchanges between urban and rural residents, provision of recreation and relaxation spaces and new experience activities for urban people, and offering rural residents opportunities to make income through the sale of agricultural products, foods, crafts, and lodging services. The second concept defines rural tourism narrowly: paying a visit to rural villages and having various experiences.

Based on a ten-year forecast, the authors provide broad estimates on the demand for rural tourism: in 2007, the number of rural tourists was 45,187 thousand persons, or 16.8% of total tourists nationwide, and will increase to 66,702 thousand persons, or 23.4%, in 2012 and to 98,461 thousand persons, or 32.8%, in 2017. From the point of the narrower sense of rural tourism, the demand for rural tourism in 2007 was 5,971 thousand persons or 2.2% of total tourists nationwide, and will increase to 9,749 thousand persons or 3.4% in 2012, and to 15,915 thousand persons or 5.3% in 2017.

Park *et al.* (2003) estimated that the market value of rural tourism in Korea would increase from 4,611 billion KRW to 6,491 billion KRW in 2008, or from 21.0% of the total agricultural value added to 29.6%, and from 6,020 billion KRW to 9,463 billion KRW in 2011, or from 27.6% of total agricultural value added to 43.5%.

## V. Summary and conclusion

This paper discusses the role of farms, agriculture, and agro-food sector in Korea. According to the definition of rural areas, *Shis* were urban areas and *Guns* were rural areas before 1995, while *Gu* was associated with municipalities or big cities such as Seoul. After 1995, rural areas came to mean *Eup* and *Myeon*, whereas *Dong* meant urban area. According to the census data showing the shift in the proportion of rural population (*Eups* and *Myeons*), the population of rural areas was 14,001,680 or 34.6% of the total in 1985, but dropped in 2005 to 8,703,735 or 18.5%. Rural population in Korea has continued to decrease over the years. However, its rate in decline has started to slow down and the size of rural population has reached a marginal level.

The share of agriculture in land use is represented by the area used as agricultural land. In 2005, 18.3% of total land area, or 1,824 thousand ha, was used for paddy and dry fields. The gross regional domestic product (GRDP) in 1985 was about KRW 200 trillion for the entire country and expanded to KRW 730 trillion in 2005. The GRDP of agriculture, forestry and fishing industries, however, has remained almost unchanged. The share of GRDP of agricultural, forestry, and fishing sectors was about 10% in 1985, but dropped to slightly over 3% in 2005. The share of agriculture-related industries has fallen from 9.8% in 1990 to 8.1% in 1995 and to 7.5% in 2000. Utilizing diverse opportunities, 37% of farmers have a second employment in the non-farm sector and 67.2% of part-time farmers are more devoted to their non-farm activities than farming for farm household income. The promotion of rural tourism is recognized as an important policy tool for revitalizing the rural economy. Rural tourism also provides diverse opportunities for rural and urban residents to exchange products, services, information, and culture.

Rural Korea has dilemmas such as decrease of farm population, increase of rural silver population, lack of labor force, and relative decrease of the importance of agriculture in gross domestic product (GDP). However, there are also positive aspects, such as the new demands for leisure in rural areas as a result of Korea's economic growth and increased income. The demands for leisure and relaxation spaces, rural tourism, improved recognition of the nature and ecology, rural amenity with tradition and culture, and the enhanced demand for safe and fresh local foods are arising in Korea.

## REFERENCES

- Bank of Korea. 2003. *Korea Input-Output Guide*.
- Kim, Chul-Min. 2007. "Estimating the Value-added and the Employed in Agriculture-related Industries in 2005." Unpublished manuscript.
- \_\_\_\_\_. 2004. *Estimating the GDP of the Korean Agribusiness Sector*. P72. Seoul: Korea Rural Economic Institute.
- \_\_\_\_\_. 2003. *An Input-Output Analysis of Output Growth and Structural Change in the Korean Food Industry*. R459. Seoul: Korea Rural Economic Institute.
- Korea Rural Economic Institute (KREI). (2007), *Outlook for Korean Agriculture 2007*, Korea Rural Economic Institute. Seoul, M81.
- \_\_\_\_\_. 2006. *Outlook for Korean Agriculture 2006*. Seoul: Korea Rural Economic



- Institute.
- Korean National Statistical Office. 2007a. *Document for Review of a Trial Typology of Rural Areas*. Unpublished Document. August. Taejeon: KNSO.
- \_\_\_\_\_. 2007b. *Document for Meeting for Developing Indicators of Classification of Urban and Rural Areas*. Unpublished Document. May. Taejeon: KNSO.
- \_\_\_\_\_. 2006. *Korean Social Statistical Survey*. Taejeon: KNSO.
- \_\_\_\_\_. 2005. *Korean Social Statistical Survey*. Taejeon: KNSO.
- Ministry of Government Administration and Home Affairs. 2005. *Korean Urban Yearbook*. Gwacheon.
- Park, Shi-Hyun, Y. Kim, and K. Choi. 2007. "Rural Tourism: Tasks for the Industry." *Outlook for Korean Agriculture 2007*. M81. Seoul: Korea Rural Economic Institute.
- Park, Shi-Hyun, D. Park, M. Song, J. Kim, J. Park, S. Lee, and K. Han. 2006. *Our Rural Futures 2020*. C2006-59. Seoul: Korea Rural Economic Institute.
- Park, Shi-Hyun et al. 2003. *Directions and Strategies for the Development of Rural Tourism in Korea*. C2003-6. Seoul: Korea Rural Economic Institute.
- Song, Mi-Ryung, J. Seong and K. Park. 2006. *Making Livable Rural Areas*. P86. Seoul: Korea Rural Economic Institute.
- <[http://ecos.bok.or.kr/ebook/html/bok\\_02/VIEW.HTM](http://ecos.bok.or.kr/ebook/html/bok_02/VIEW.HTM)>.
- <<http://www.kosis.kr/>>. (Korean Statistical Information Service, KOSIS. Portal service site of the Korean Statistical Office).

Annex Table 1. Full- and part-time farm households

Number and %share

Year	Total(A)	Full-time (B)	% (B/A)	Part-time (C)	% (C/A)	Class 1 part-time (D)	% (D/C)	Class 2 part-time (E)	% (E/C)
1985	1,925,869	1,518,274	78.8%	407,595	21.2%	167,799	41.2%	239,796	58.8%
1986	1,905,984	1,508,657	79.2%	397,327	20.8%	157,397	39.6%	239,930	60.4%
1987	1,871,455	1,464,726	78.3%	406,729	21.7%	159,582	39.2%	247,147	60.8%
1988	1,826,344	1,416,960	77.6%	409,384	22.4%	160,146	39.1%	249,238	60.9%
1989	1,771,856	1,330,563	75.1%	441,293	24.9%	176,017	39.9%	265,276	60.1%
1990	1,767,033	1,052,315	59.6%	714,718	40.4%	389,097	54.4%	325,621	45.6%
1991	1,702,307	1,118,750	65.7%	583,557	34.3%	254,135	43.5%	329,422	56.5%
1992	1,640,853	1,025,850	62.5%	615,003	37.5%	252,405	41.0%	362,599	59.0%
1993	1,592,478	985,115	61.9%	607,363	38.1%	236,151	38.9%	371,212	61.1%
1994	1,557,989	930,920	59.8%	627,069	40.2%	236,525	37.7%	390,544	62.3%
1995	1,500,745	849,053	56.6%	651,692	43.4%	277,214	42.5%	374,478	57.5%
1996	1,479,602	835,717	56.5%	643,885	43.5%	243,894	37.9%	399,991	62.1%
1997	1,439,676	844,390	58.7%	595,286	41.3%	205,238	34.5%	390,048	65.5%
1998	1,413,017	893,017	63.2%	520,000	36.8%	178,514	34.3%	341,485	65.7%
1999	1,381,637	878,410	63.6%	503,228	36.4%	172,636	34.3%	330,592	65.7%
2000	1,383,468	902,149	65.2%	481,319	34.8%	224,642	46.7%	256,677	53.3%
2001	1,353,687	884,452	65.3%	469,236	34.7%	161,660	34.5%	307,576	65.5%
2002	1,280,462	861,994	67.3%	418,468	32.7%	139,182	33.3%	279,286	66.7%
2003	1,264,431	812,557	64.3%	451,874	35.7%	145,434	32.2%	306,440	67.8%
2004	1,240,406	784,963	63.3%	455,442	36.7%	147,120	32.3%	308,323	67.7%
2005	1,272,908	796,220	62.6%	476,688	37.4%	164,976	34.6%	311,712	65.4%
2006	1,245,083	784,918	63.0%	460,165	37.0%	150,708	32.8%	309,457	67.2%

Source: Korea National Statistical Office (2006); <http://www.kosis.kr/>