TRADE AND AGRICULTURE DIRECTORATE

THE ROLE OF AGRICULTURE AND FARM HOUSEHOLD DIVERSIFICATION

IN THE RURAL ECONOMY OF

KOREA

Foreword

This report reviews information on the role of agriculture and farm household diversification in the rural economy of Korea. It was prepared by consultants, Dr. Jang Heo and Dr. Yong-Lyoul Kim of the Korea Rural Economic Institute.

It is one of 13 country reviews prepared under Output area 3.2.1: Agricultural policy reform (Item 3.2) of the programme of work and budget of the Committee for Agriculture for 2007-08.

Based on material compiled from the available literature, these country reviews address all or most of the topics listed below:

- Definitions and underlying concepts of "rural" as they exist at the national level.
- The availability of data pertaining to the share of agriculture and the agro-food sector in the economies of OECD countries at the national level and in rural areas and trends therein.
- The availability of data relating to the income situation of farm households and in particular the availability of information related to non-farming activities.
- 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).
- The extent to which the industries upstream and downstream from primary agriculture are located in rural areas.
- The strength of multiplier effects between farm/farm based and up/downstream industries and rural economies.

The information in these country reviews was used as background to the report "The role of agriculture and farm household diversification in the rural economy: evidence and initial policy implications" [TAD/CA/APM/WP(2009)1/FINAL], which was declassified by the Working Party on Agricultural Policies and Markets in February 2009.

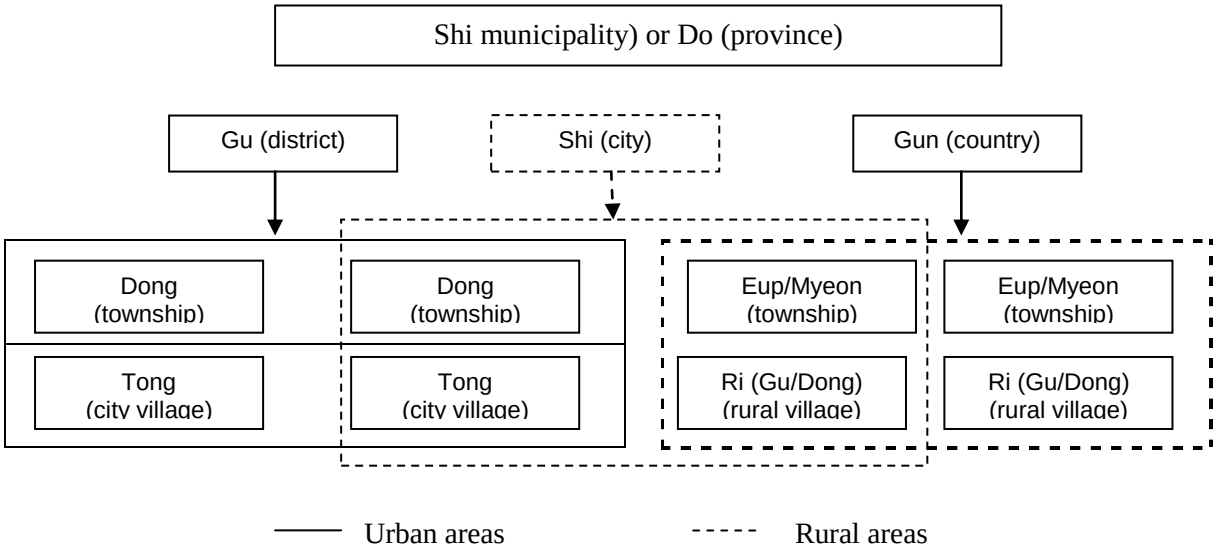
THE ROLE OF AGRICULTURE AND FARM HOUSEHOLD DIVERSIFICATION IN THE RURAL ECONOMY OF KOREA

Definition and typology of rural areas

Urban and rural areas in Korea are generally categorized in one of 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 opposing definitions of "urban" and "rural." As such, *Shi* at the second level in Figure 1 was for a long time considered as urban as opposed to *Gun*, which defined 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 urban. *Myeon* constituted an area with a population of under 20 000 resident and when its population surpassed this number, it became an *Eup*. As such, *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 *Eup*s and/or *Myeon*s 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*.

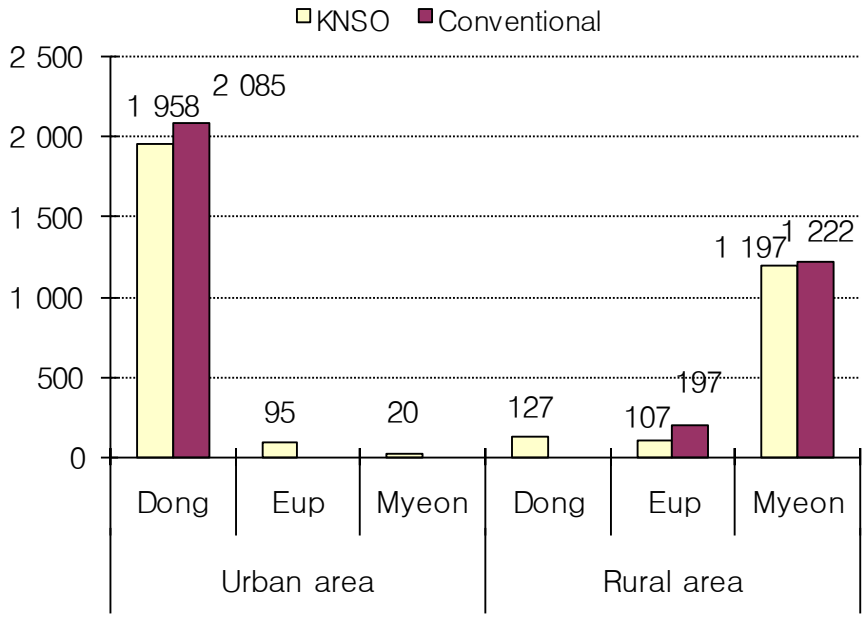
Figure 1. Diagram on the classification of rural and urban areas



This change in classification has made it difficult to define rural areas and to use time-series data. According to the definition of rural areas before 1995, *Shi*s were urban areas and *Gun*s 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 *Eup*s and *Myeon*s, and 2 168 *Dong*s in Korea. In spite of the criterion that the *Eup* requires a population of between 20 000 and 50 000, many of the current *Eup*s 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 whre a Complex City does not have any *Eup*, one of its *Myeon*s is selected to be an *Eup*.

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



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

Park *et al*. (2006), in their efforts to understand the future of rural areas as spaces for industrial, living, environment and welfare activities, attempted to design a typology. 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, and 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), 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 whole-sale 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 *Shi*s and *Gun*s 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 *Eup*s and *Myeon*s 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 analysed in order 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.

Rural areas in the national economy

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 (*Eup*s and *Myeon*s), 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 *Myeon*s with a population of less than 2 000, a sharp contrast to the nine *Myeon*s 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 the *Eup*s has been increasing since 1995 (Table 1). This means that *Eup*s 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.

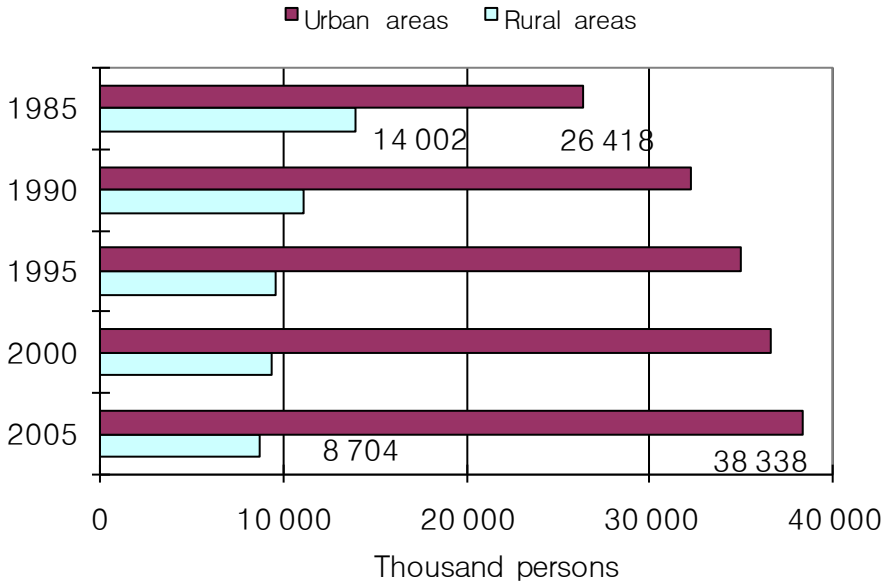
In 2005, the total land area of Korea is 99 721.84 km^2, of which rural areas, including the land of *Eup*s and *Myeon*s, occupied 89 472.68 km^2 or 89.7%.

Table 1. Changes in population of *Eup*s and *Myeon*s, 1990-2005

	1990	1995	2000	2005
Total	11 100 319	9 561 746	9 342 841	8 703 735
*Eup*s	3 602 462	3 480 784	3 742 053	3 922 597
*Myeon*s	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/

The role of agriculture in the national economy

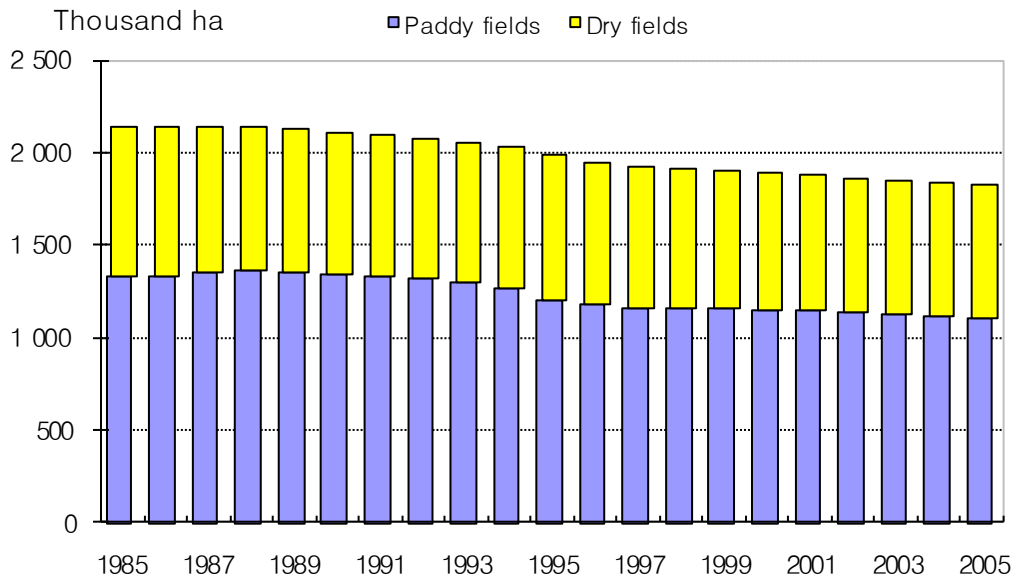
The share of agriculture in land use is represented by the area occupied by of agricultural land. In 1985, 21.6% of the total land area, or 2 144 thousand ha out of 9 914 thousand ha, was used for agriculture. In 2005, 18.3% of total land area, or 1 824 thousand ha, was used for paddy (1 105 thousand 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 areas 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: in 1985, KRW 20 trillion 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.

Data on GRDP are available at the provincial level, but have never been collected at the *Eup/Myeon/Dong* levels.

Figure 4. Changes in the size of agricultural land

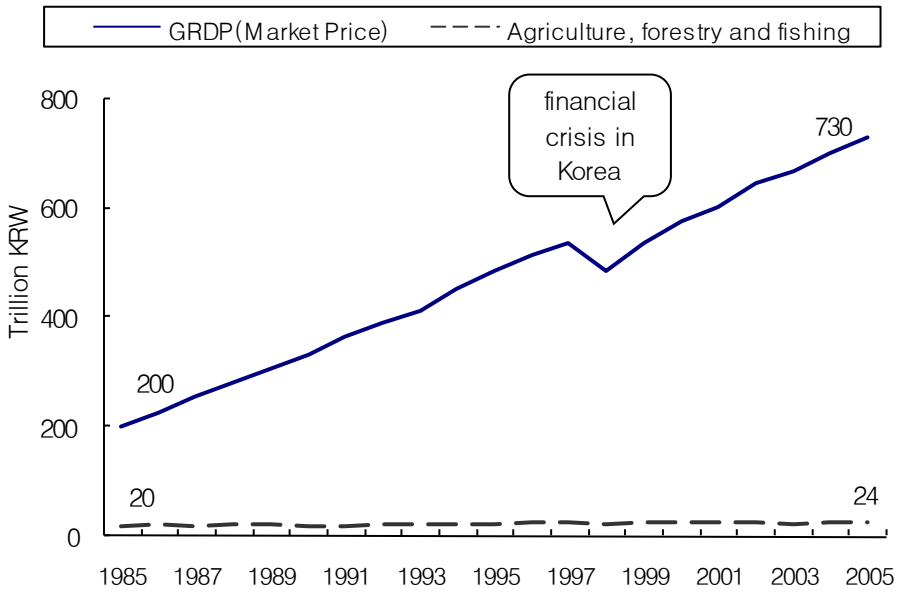
1985-2005



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

Figure 5. Changes in GRDP

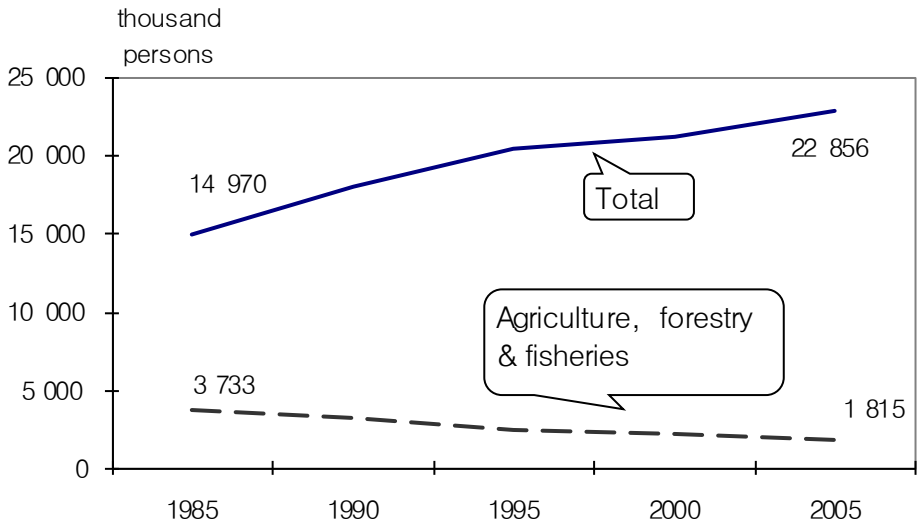
1985-2005



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

In 1985, 3 733 000persons (24.9%) were employed in the agriculture, forestry and fishing sectors (Figure 6). While the total number of people working in Korea increased to 22 856 000 persons in 2005, the number of people working in the above sectors decreased to 1 815 thousand persons (7.9%).

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



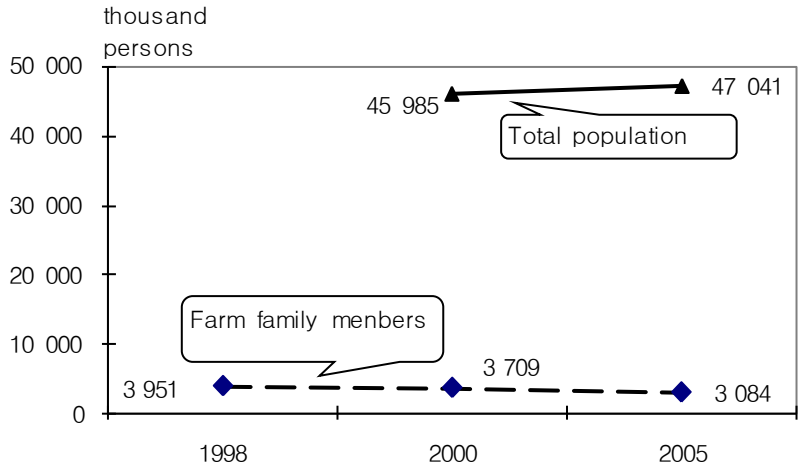
Source: http://www.kosis.kr/

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 people living in *Eup*s and *Myeon*s 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 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, 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 census surveys conducted every five years.

Figure 7. Changes in number of farm family members in rural areas

1998-2005



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

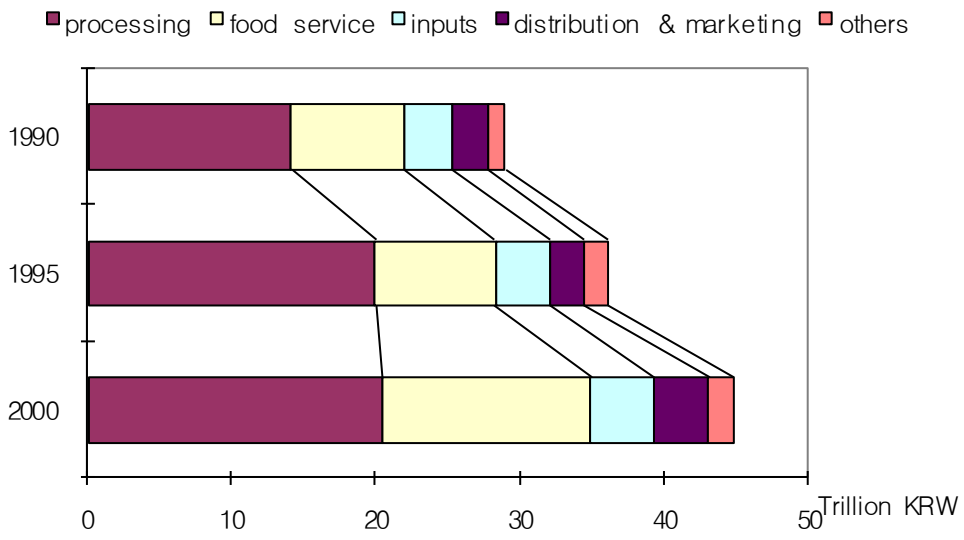
The role of agri-food industries in the national economy

In general, agri-food industries include such diverse economic activities as collecting, processing, packing, distributing and selling agricultural produce. More specifically, however, it may be referred to as the 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 agriculture-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 28 963 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 share of GDP of agriculture-related industries, 1990-2000

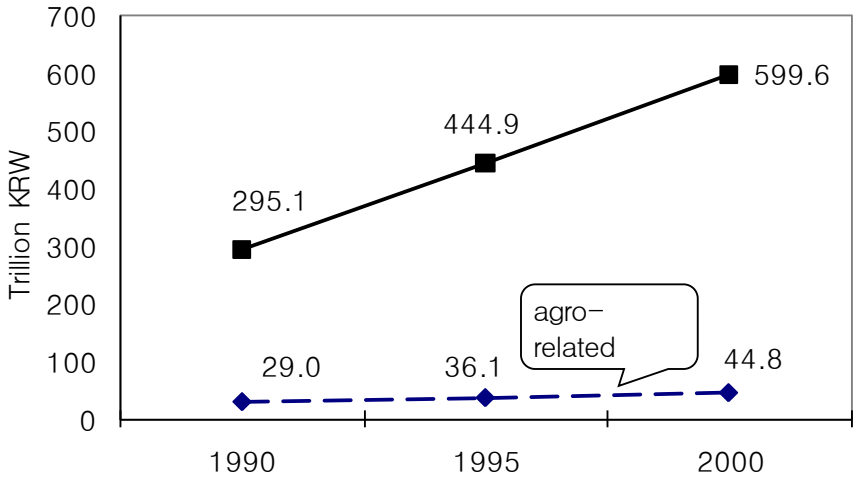


Source: Kim (2004).

If we adopt a narrow definition of agri-food industry as the 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% to 4.49% and 3.41% during the same period. 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 industry 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 number of the 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).

Statistical data on agriculture-related industries or agri-food industries are only available from research like Kim's works; official authorities have not produced data with regard to those industries in rural areas.

Diversification of farm household activities in rural areas and factors promoting/limiting diversification to non-agricultural activities

Cash and in-kind non-farm income contributes substantially to total household income. In rural economies, rural non-farm income is considered key to rural development policies aimed at increasing the 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 a positive impact on farmers' well being. These positive impacts are to tighten the labor market that the poor depend on; to help manage risks by providing employment in 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 is composed of 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 (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 emphasised 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.

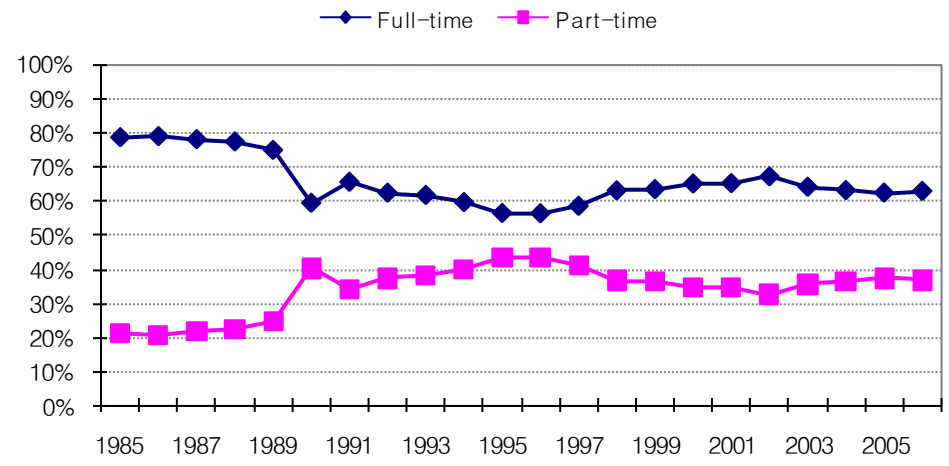
Table 3 Farm economic activities and farm income

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 and 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).

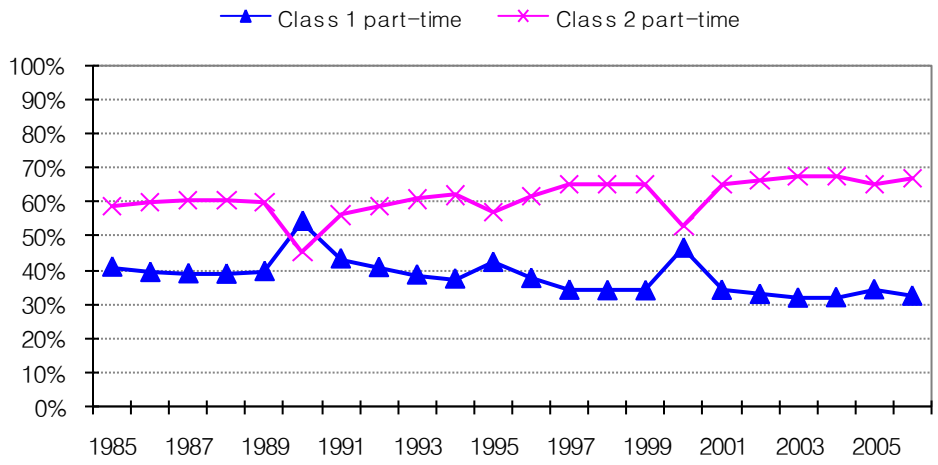
Part-time farm households are divided into Class 1 part-time and Class 2 part-time. Class 1 part-time derives 50% or more of the annual household income from farming. Class 2 part-time earns less than 50% of annual household income from farming. In 1985, the number of Class 1 part-time farm households 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, increasing by 2006 to 309 457 (67.2%), or by 8.4% (Figure 11).

Figure 10. Changes in 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

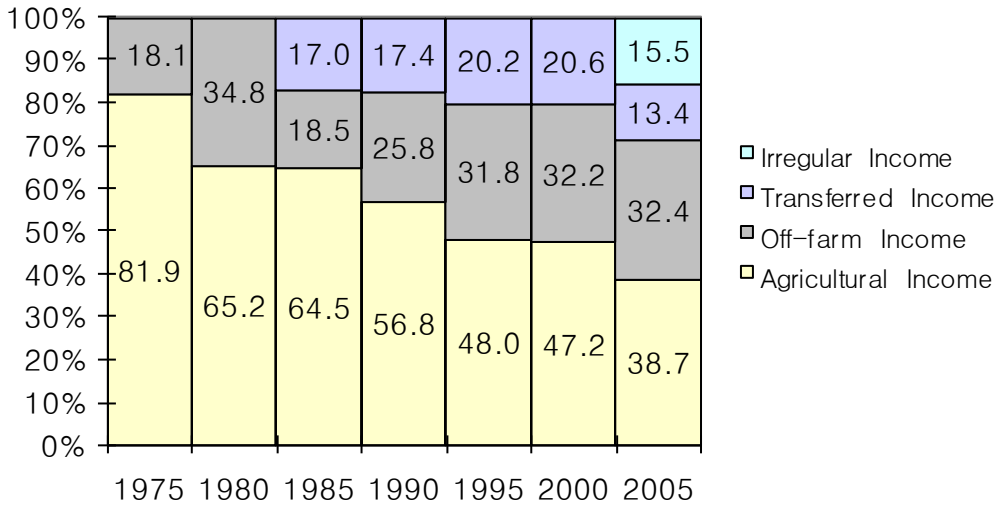


Source: Annex Table 1; http://www.kosis.kr/

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 to 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 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 from 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/

Focus on farm 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 structures.

Leisure complexes in rural areas were launched in 1989 to promote rural tourism in a clean rural natural environment, as well as promoting 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 board to visitors. As of 2005, 11 669 rural homes were participating in this programme.

The National Agricultural Cooperative Federation (NACF) or local government oversee the work of weekend farmers. The NACF reports that the number of weekend farms located in suburban areas are 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) respectively.

The MGAHA designated 9 rural villages in 2001 and 14 rural villages in 2002 as *Arum Maul*s (meaning beautiful village), 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 villages, 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 Villages. The Ministry of Culture and Tourism (MCT) has designated 12 villages as Culture and History Village.

Table 4. Rural tourism villages

2006

Project		*Arum Maul* ('01-'02)	Green rural experience villages ('02-'06)	Rural traditional theme villages ('02-'06)	Experiencing green tourism in fishing villages ('02-'06)	Culture and historical villages (-'06)
Ministry		MGAH	MAF	RDA	MMAF	MCT
Number of villages	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 is also growing with 172 000 visitors in 2001 and 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
Arum Maul	44 555	208 192	227 130	260 582	316 444
Farm-Stay Village	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 interchange with visitors, products, services, information, and culture.

A good model of urban-rural exchange is the "One Institute and One Rural Village" programme 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 programme 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 programme (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 Economy Institute (KREI) survey of 78 rural tourism villages and 79 home-stay farms in 2006, on average 5 117 visitors per year pay a visit to each rural tourism village and total earnings were KRW 86 378 thousand (Table 7). 251 urban dwellers visited each home-stay farm per year, and the total earnings were KRW 5 507 thousand. Sales of agricultural products in rural tourism villages and lodging in home-stay farm are the most important source 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 exchange between urban and rural residents, provision for urban people with recreation and relaxation spaces and new experience activities, and offering for rural residents opportunities to make income though sale of agricultural products, foods, crafts, and lodging services. The second concept defines rural tourism more narrowly: paying a visit to rural villages and having various experiences.

Based on a ten-year forecast, the authors provide a broad estimate on the demand for rural tourism: in 2007 the number of rural tourists was 45 187 thousand persons, or 16.8% of total national tourism, 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 national tourism, and will increase to 9 749 thousand persons or 3.4% in 2012, and to 15 915 thousand persons or 5.3% in 2017.

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

Multiplier Effects of Agriculture and Other Rural Activities

Table 8 shows that the output multiplier of agriculture, forestry and fisheries in 2000 was 1.642. This means that when final demand for an agricultural, forestry and fishery product 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 output multipliers of agriculture, forestry and fisheries, mining and quarrying, and services are small, those of manufacturing and 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.

As for the value added multiplier, that of agriculture, forestry and fisheries in 2000 was 0.892 (Table 9). This means that when final demand for an agricultural, forestry and fishery product increases by one unit, the total indirect and direct value added 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.

With respect to the ratio 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 employment to output value in 2000 is 12.2 persons per KRW billion. The agriculture, forestry and fisheries sector had the largest ratio, or 58.2, meaning labour intensive industry and that of the service sector was 18.2. Yet, in the same year, the ratio 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

			2000		
	1990	1995	Employment (A)	Output value (B)	Employment to output ratio (A/B)
Unit	**Person per billion KRW**	**Person per billion KRW**	**Person**	**billion KRW**	**Person per billion KRW**
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.

Once again, as data on output, value added, employment and many others are only produced by sectors within administrative boundaries, it is not possible to calculate multiplier the effects on the rural economy.

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/

REFERENCES

Bank of Korea (2003), *Korea Input-Output Guide*, Seoul.

Kim, Chul-Min (2007), "Estimating the Value-added and the Employed in Agriculture-related Industries in 2005," Unpublished manuscript.

Kim, Chul-Min (2004), *Estimating the GDP of the Korean Agribusiness Sector*, Korea Rural Economic Institute, P72, Seoul.

Kim, Chul-Min (2003), *An Input-Output Analysis of Output Growth and Structural Change in the Korean Food Industry*, Korea Rural Economic Institute, R459, Seoul.

Korea Rural Economic Institute (KREI) (2007), *Outlook for Korean Agriculture 2007*, Korea Rural Economic Institute. Seoul, M81.

Korea Rural Economic Institute (KREI) (2006), *Outlook for Korean Agriculture 2006*, Korea Rural Economic Institute. Seoul.

Korean National Statistical Office (2007a), *Document for Review of a Trial Typology of Rural Areas*. Unpublished Document. August. KNSO, Taejeon.

Korean National Statistical Office (2007b), *Document for Meeting for Developing Indicators of Classification of Urban and Rural Areas*. Unpublished Document. May. KNSO, Taejeon.

Korean National Statistical Office (2006), *Korean Social Statistical Survey*. KNSO, Taejeon.

Korean National Statistical Office (2005), *Korean Social Statistical Survey*. KNSO, Taejeon.

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," Korea Rural Economic Institute, *Outlook for Korean Agriculture 2007*, Korea Rural Economic Institute, M81, Seoul.

Park, Shi-Hyun, D. Park, M. Song, J. Kim, J. Park, S. Lee, and K. Han (2006), *Our Rural Futures 2020*, Korea Rural Economic Institute, C2006-59, Seoul.

Park, Shi-Hyun et al. (2003), *Directions and Strategies for the Development of Rural Tourism in Korea*. Korea Rural Economic Institute, C2003-6, Seoul.

Song, Mi-Ryung, J. Seong and K. Park (2006), *Making a Livable Rural Areas*, Korea Rural Economic Institute, P86, Seoul.

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).