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A very feasible cause for high participation is the large share of self-employment in the urban area, especially among the elderly, which is very high in Korea. Its employment share is 29.8 percent among men and 43.6 percent among men aged sixty to sixty-four. And the elderly self-employment does not show a long-term downward trend. Self-employment in the urban area acts like a bridge between employment and retirement in the Korean labor market. I think the self-employment structure in the urban sector of Korea needs to be analyzed to answer the question, "Why is the LFPR of older males so high in Korea?"

## References

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## Comment Fumio Ohtake

The purposes of Lee's study were twofold: (a) to analyze the long-term trend in the labor force participation rate (LFPR) of older males in Korea, and (b) to examine the determinants of the labor force participation of the elderly through regression analysis of Census data. In his research conducted toward the first objective, the author used the following two data sources: the Population and Housing Census (Census) and the Economically Active Population Survey (EAP). He especially concentrated on the differences of the LFPR between rural and urban older males. The key variables in his analysis toward the second objective were family size and the percentage of males over the age of sixty in the area.

The major findings of the study were as follows. The LFPR of older men increased substantially from the mid-1960s to the late 1990s in Korea. The rise in the LFPR of older males in Korea between 1965 and 1995 is largely explained by the dramatic increase in the labor market activity of the rural elderly population. The estimation results showed that the labor force participation rate of the elderly increased in direct proportion to the decrease in family size and the increase in the percentage of males over the age of sixty in the local area. The acceleration of population aging in rural areas due to the selective out-migration of the younger workforce was the major cause of the sharp increase in the LFPR of older males. When younger workers

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of a rural area out-migrate to an urban area, the elderly males in the rural area are left bereft of economic support, and thus forced to work.

I agree with the author's interpretation of the causality between the out-migration of younger workers from the rural area and the increase of the labor participation rate of the rural older males. However, there might be a reverse causality or omitted variable bias in the estimation. One possible explanation is the technological progress in the farm sector. If the technological progress in the farm sector increased the productivity of the elderly, it would lead to hitherto redundant labor being resurrected in rural areas. The out-migration of the younger workers from rural areas might be the result of this resurrection of redundant labor in rural areas that was caused by the technological progress in the farm sector. In this case, the reduction of the family size would not be the cause of the increased participation rate. A similar argument can be applied to the effects on the LFPR of the percentage of people over the age of sixty and the percentage of agricultural sector workers in the area. This is because these variables would also be affected by the technological progress in the farm sector. A possible way to avoid this bias would be to use instrumental variables for the percentage of people over the age of sixty and the percentage of agricultural sector workers. In section 8.7 of the final version of this chapter, the author added a discussion on this possibility. He found that there was technological progress in the rural areas and that the introduction of the new technology had increased the LFPR of elderly males.

The author has attributed the population aging resulting from the mass migration of the younger workforce to urban areas as a major explanation for the increase in the LFPR of the rural elderly population. However, apart from the abovementioned factor of technological progress, there are several other possible explanations to this phenomenon.

First, changes in the social security systems have been known to affect the LFPR of the elderly population in many advanced countries. For example, a reduction in social security benefits or an increase in the minimum age for pension payment eligibility increases the LFPR of the elderly. Thus, it might have proved informative if the author had added a discussion on the changes in the social security system in Korea and its effect on the LFPR of elderly males.

Second, the improvement in the general health conditions of the elderly increases their LFPR. And third, the unexpected increase in the life expectancy of the elderly causes an increase in their LFPR because the amount of money that they may have saved toward their retirement period proves inadequate.

Additionally, the author points out that Korea experienced a relative decline in its rural economy from the late 1980s onward. Using table 8.7, he shows that the ratio of the income of rural households to the income of urban households showed a long-term decreasing trend. However, if we

examine the change in the ratio of per capita income of rural households to that of urban households, the decline becomes smaller since the difference in the relative family size between rural and urban areas also declined around the same period.

The findings of the study related to the increase of LFPR in Korea are very unique as compared to similar studies in other developed countries. The LFPR of the elderly Japanese decreased in the 1970s and the 1980s. The decline of the LFPR of Japanese males is caused due to the following two reasons: (a) the decrease in the number of younger workers in self-employed and agricultural sectors in which the elderly are capable of working, and (b) the increase in social security benefits during this period. However, the LFPR of the Japanese males in their sixties increased twice; once in the 1990s, and subsequently in the 2000s. First, in the early 1990s, the LFPR of males above the age of sixty increased. This increase was caused by the rise in labor demand during the bubble economy. Even after the collapse of bubble economy, the LFPR continued to stay at a high level almost throughout the 1990s. The LFPR of elderly males started to decline toward the end of the 1990s, and the trend continued till 2005. This LFPR rose again in the years 2006 and 2007. This increase was caused by the introduction of the "Law for the stabilization of the employment of the aged," which required companies to gradually raise the retirement age from sixty to sixty-five in 2007. Japanese experience shows that the LFPR of the elderly is affected by the share in the labor force of the self-employed and the agricultural sector, and by changes in the social security system, labor demand, and the labor law. The comparative economic analysis between the LFPR of the elderly in Korea and Japan would be an interesting research topic.