

# Analysis of Retired Women's Income Source and the Amount of Income in Korea

## : Focus on Comparing Voluntary Retirees to Involuntary Retirees

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### Abstract

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Using data collected from a survey of 'middle- and old-aged people' in the 6th year(2003) of Korea Labor and Income Panel Study(KLIPS), this study analyzed the characteristics of retired women who were compared voluntary retirees to involuntary retirees. In addition, this study analyzed factors influencing their main income source using the multinomial logit model and the amount of income using the censored normal regression. The results of this study are as follows.

Firstly, involuntarily retired women had higher income after retirement than voluntarily retired women and the difference was even bigger when only women with income sources were considered. This means that voluntarily retired women tend to depend on the income of the spouse or other family members after retirement. They are likely to be subject to public income transfer by the government if they do not have private transfer income from the spouse or other family members. Secondly, in the analysis of factors determining main income sources after retirement, only personal and family characteristics were found to be influential factors. This may be because retired women aged over 50 generally have a low employment status before retirement and, as a result, their experiences in the labor market are not much different. Thirdly, female retirees who had been specialists/office workers in the labor market before retirement had a higher income after retirement than those who had been other types of workers. This implies that stable employment and steady labor income before retirement can be the best alternative guaranteeing economic welfare for retired women.

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**Key words: retirement, retired women, income source, the amount of income**

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## I . Introduction

Korean society is an aging society as the percentage of old people aged over 65 in the overall population has reached 7.3% in 2000. The aged population will continue to expand and the expected life span will increase further in the future and, as a result, people will have a longer retirement life. In addition, the rapidly changing industrial structure and deregulation in the labor market are lowering the average age of retirement, increasing early retirement and arousing social concern over retirees and retired life.

Previous studies on retirement have pointed out that Korean society has not sufficiently prepared for the management of the expanding aged population and the support of the longer life expectancy of retirees, and has looked for methods of supplying retired elders with economic resources and social support. One notable fact is that these studies as well as discussions on retirement in Korean society have focused on males. That is, the main issues have been men's experiences in the labor market, their labor market condition and their age of retirement.

Why have women failed to draw attention in the discussion on retirement in Korean society? Retirement is a concept related to the labor market or to economic activities, and "retirees" mean those who have lost labor income and have to find income sources other than labor income to support their life. However, the Korean women's labor force participation rate is 48.9%(2004), which is far lower than the men's (74.6%) and their participation in the labor market is intermittent because of childbirth, child rearing, etc. Because their career in the labor market is short, women have been little considered in discussions on retirement related to economic activities. As a

consequence, it is hard to find relevant studies focusing on female retirees.

Why do we need to do research on female retirees? The answer may be found in the reasons for and the process of women's retirement. Different from men who retire involuntarily due to poor health, old age or the structural condition of the labor market, many women retire involuntarily in order to raise their children or to take care of family members. That is, in terms of voluntary retirement, both men and women have 'involuntary retirement' but the substantial meaning is quite different between men and women. Moreover, those who retire to take care of children or family members tend to quit their job at a relatively early age and this tendency suggests that the characteristics of retirees will vary with respect to gender. Furthermore, considering that women's economic activities are affected by the household economy such as the husband's income, there will be female workers who retire voluntarily in the middle of their career life and this makes it difficult to understand female retirees and explain their characteristics. Accordingly, in the discussion on income guarantee and social support system for retirees, it is important to analyze female retirees' labor market experiences, retirement process and income level after retirement, which has significant influences on their retired life.

Thus this study examines the personal and family characteristics of retired women and their labor market experience before retirement, and analyzes factors affecting their income sources and the amount of income after retirement using statistical models. In addition, this study compares voluntarily retired women with involuntarily retired ones to reflect the reasons of women's retirement, which has not been so far considered. Through these procedures, this study aim to provide useful information for making policies on coming to the ready for increasing

of aged women and social burden in Korean society.

## II. Methodology

### 1. Data and Samples

This study analyzed 487 retired women surveyed in the 6<sup>th</sup> year (2003) of the Korean Labor and Income Panel Study(KLIPS). KLIPS divided the retirement status of individuals aged over 50 into four types - ‘①retired, ②retired from the main occupation but continue a minor job, ③not retired and ④never been employed’ - based on their subjective evaluation of retirement, participation in major economic activities and labor market experiences.

In this study, the number of female retirees who replied with ① or ② was 487. In an additional survey of ‘middle- and old-aged people’ in the 6th year of KLIPS, reasons for retirement were classified into ‘(1) wanted to continue to work but had to retire’ and ‘(2) retired voluntarily’ In this research, the 487 retired women were grouped into ‘involuntary retirees’ who replied with (1) and ‘voluntary retirees’ who replied with (2).

### 2. Statistical Model and Variables

To compare retired women’s personal income, household income and the characteristics of their main occupation during their career with respect to their voluntary retirement, this study examined their income source and income level after retirement through descriptive statistics. In addition, this study analyzed factors determining main income source after retirement using the Multinomial Logit model

because the main income source as a dependent variable was divided into five categories(①labor, ②asset, ③public transfer, ④private transfer, ⑤do not have) and factors affecting the amount of income after retirement using the Censored Normal Regression Model because of left-censoring data(0).

The dependent variable (Y) of Multinomial Logit is income source. Here, taking those without income source ( $j=5$ ) as the reference group, we divided the subjects into those who have as their main income source after retirement labor income ( $j=1$ ), asset income ( $j=2$ ), public transfer income ( $j=3$ ) and private transfer income ( $j=4$ ). For example, if the value of the independent variable is  $i$ , the possibility for a retired woman to have labor income from her or her spouse's minor job as her main income source can be expressed as follows:

$$\text{Logit}_{i1} = \log [\pi_{i1}/\pi_{i5}]$$

The possibility for asset income to be the main income source is:

$$\text{Logit}_{i2} = \log [\pi_{i2}/\pi_{i5}]$$

The possibility for public transfer income to be the main income source is:

$$\text{Logit}_{i3} = \log [\pi_{i3}/\pi_{i5}]$$

The possibility for private transfer income to be the main income source is:

$$\text{Logit}_{i4} = \log [\pi_{i4}/\pi_{i5}]$$

The Multinomial Logit model was:

$$\text{Logit}_{ik} = \beta_0 + \beta_1 \text{RTYPE} + \beta_2 \text{FTYPE} + \beta_3 \text{MJOB} + \beta_4 \text{MJST}$$

$$\begin{aligned}
& +\beta_5AGE + \beta_6RAGE + \beta_7EDU + \beta_8\ln(INCOME) \\
& +\beta_9\ln(MWAGE) + \beta_{10}MJDU + \varepsilon
\end{aligned}$$

Among independent variables of the Multinomial Logit that takes main income source after retirement as its dependent variable, RTYPE (retirement type: voluntary retirement ‘1’, involuntary retirement ‘0’), FTYPE (family type: couple retirement family ‘1’, others ‘0’), MJOB (major lifetime job: specialist/office worker ‘1’, others ‘0’) and MJST (job status in the major lifetime job: permanent waged worker ‘1’, others ‘0’) were analyzed as dummy variables. In addition, age (AGE), age at retirement (RAGE), academic qualification (EDU), household income except retired women’s income (INCOME), labor income from major lifetime job (MWAGE) and length of service (MJDU) were analyzed as continuous variables. These independent variables were used in the same way in the Censored Normal Regression Model that takes the natural log of the monthly average income (Ln(RIncome)) as the dependent variable (Y).

The Censored Normal Regression was:

$$\begin{aligned}
Ln(RIncome) = & \beta_0 + \beta_1RTYPE + \beta_2FTYPE + \beta_3MJOB + \beta_4MJST \\
& + \beta_5AGE + \beta_6RAGE + \beta_7EDU + \beta_8\ln(INCOME) \\
& + \beta_9\ln(MWAGE) + \beta_{10}MJDU + \varepsilon
\end{aligned}$$

### III. Results and Discussion

#### 1. Descriptive analysis of retired women’s income

Table1 shows the characteristics of female retirees divided into voluntary retirees and involuntary ones. In comparison of characteristics with respect to those in voluntary retirement, statistically significant

differences were observed in age at retirement, family type, household income, major lifetime job, and job status in the major lifetime job.

By characteristic, the average age on retirement was similar but the percentages of those who retired before 50 and after 60 were 7.8%p and 6.3%p higher respectively in involuntarily retired women than in voluntarily retired ones. On the contrary, the percentage of those who retired in their 50s was 14.1% higher in the voluntary retiree group than in the involuntary retiree group.

With regard to family type, the percentages of families composed of husband and wife and husband and wife with unmarried children were relatively higher in the voluntary retiree group, but the percentages of singles and non-nuclear families were higher in the involuntary retiree group. With regard to household income, the monthly average household income of the involuntary retiree group was 468,000 won higher than that of the voluntary retiree group. This is probably because the percentage of those who earned 2,000,000 won or more a month on the average was two times higher in the involuntary retiree group than in the voluntary retiree group.

With regard to major lifetime job, the percentages of specialists/office workers, sales and service workers and agricultural/fishery workers were higher in the involuntary retiree group, and the percentages of manufacturing workers and simple laborers were higher in the voluntary retiree group. In addition, with regard to job status in the major lifetime job, the percentage of the permanent waged workers was highest in both of the two groups. However, the percentage of temporary/daily waged workers was relatively higher in the voluntary retiree group while the percentage of employers/the self-employed was relatively higher in the involuntary retiree group.

〈Table1〉 The characteristics of the sample

(Unit: n, %)

Characteristics		Categories	Total	Voluntary Retirees	Involuntary Retirees	$\chi^2/t$ -test
			487(100.0)	141( 29.0)	346( 71.0)	
Total			487(100.0)	141(100.0)	346(100.0)	
socio-demography	Age	50~59	130( 26.7)	37( 26.2)	93( 26.9)	4.01
		60~69	180( 37.0)	61( 43.3)	119( 34.4)	
		Over 70	177( 37.3)	43( 30.5)	134( 38.7)	
		Average(year)	66.3	65.5		-1.34
	Age at retirement	Below 50	103( 21.2)	22( 15.6)	81( 23.4)	8.92*
		50~59	193( 39.6)	70( 49.6)	123( 35.5)	
		Over 60	191( 39.2)	49( 34.8)	142( 41.1)	
		Average(year)	55.1	55.5	55.0	0.43
	Academic qualification	Unschoolled	179( 36.8)	50( 35.5)	129(37.3)	3.35
		Elementary school or lower	175( 35.9)	58( 41.1)	117(33.8)	
		lower then high school	64( 13.1)	18( 12.8)	46(13.3)	
		high school or higher	69( 14.2)	15( 10.6)	54(15.6)	
		Average(year)	5.0	4.8	5.1	-0.78
	Household	Family type	Husband&wife	82( 16.8)	31( 22.0)	51(14.7)
Husband&wife+unmarried children			139( 28.5)	51( 36.2)	88(25.4)	
Single			96( 19.7)	23( 16.3)	73(21.1)	
Non-nuclear family			170( 34.9)	36( 25.5)	134(38.7)	
Monthly average Income		less than 50	151( 31.0)	51( 36.2)	100(28.9)	14.36**
		50~99	84( 17.3)	32( 22.7)	52(15.0)	
		100~199	109( 22.4)	33( 23.4)	76(22.0)	
		Over 200	143( 29.4)	25( 17.7)	118(34.1)	
		Average(1,000KW)	172.6	139.4	186.2	-1.69

Characteristics		Categories	Total	Voluntary Retirees	Involuntary Retirees	χ <sup>2</sup> /t-test
			487(100.0)	141( 29.0)	346( 71.0)	
Total			487(100.0)	141(100.0)	346(100.0)	
Major life time job before retirement	Occupation	Specialist/office worker	64( 13.1)	16( 11.3)	48( 13.9)	14.80**
		Sales/Service worker	138( 28.3)	33( 23.4)	105( 30.3)	
		Agricultural/fishery worker	144( 29.6)	34( 24.1)	110( 31.8)	
		Manufacturing worker	58( 11.9)	22( 15.6)	36( 10.4)	
		Simple labor/Others	83( 17.0)	36( 25.5)	47( 13.6)	
	job status	Permanent waged worker	158( 32.4)	47( 33.3)	111( 32.1)	15.11**
		Temporary/daily worker	88( 18.1)	39( 27.7)	49( 14.2)	
		Employer/the self-employed	112( 23.0)	23( 16.3)	89( 25.7)	
		Unpaid family worker	129( 26.5)	32( 22.7)	97( 28.0)	
	Length of service	less than 5	102( 20.9)	30( 21.3)	72( 20.8)	5.78
		5~9	87( 17.9)	26( 18.4)	61( 17.6)	
		10~19	122( 25.1)	44( 31.2)	78( 22.5)	
		Over 20	176( 36.1)	41( 29.1)	135( 39.0)	
		Average(year)	17.8	15.2	18.8	-2.35*
	Monthly Labor Income	less than 50	253( 52.0)	74( 52.5)	179( 51.7)	1.01
50~99		151( 31.0)	46( 32.6)	105( 30.3)		
100~199		43( 8.8)	12( 8.5)	31( 9.0)		
Over 200		40( 8.2)	9( 6.4)	31( 9.0)		
Average(1,000KW)		91.5	62.5	103.4	-1.55	

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

〈Table2〉 The main income source

(unit: n, %)

Retired women Income Source	Total	Voluntary Retirees	Involuntary Retirees	X <sup>2</sup> -test
Labor income	87( 17.8)	21( 14.9)	66( 19.1)	0.15
Asset Income	29( 6.0)	8( 5.7)	21( 6.1)	
Public transfer income	88( 18.1)	31( 22.0)	53( 15.3)	
Private transfer income	118( 24.2)	30( 21.3)	88( 25.4)	
Do not have income source	165( 33.9)	47( 33.3)	118( 34.1)	
Total	487(100.0)	141(100.0)	346(100.0)	

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table2 shows the distribution of main income sources after retirement with respect to the voluntary of retirement. On the whole retired women, 33.9% did not have an income source, 24.2% had family transfer income and 17.8% had labor income. When the subjects were divided into two among the voluntarily retired with the exception of those without income source, 24.8% of the voluntary retiree group had public transfer income, 21.3% private transfer income and 14.9% labor income, while 25.4% of the involuntary retiree group had private transfer income, 19.1% labor income and 15.3% public transfer income. What is notable is the big difference between the two groups in the percentage of those with public transfer income. This may result from the fact that many involuntary retirees were employers/the self-employed and unpaid family workers.

Table3 shows retired women's monthly average income after retirement with respect to on the whole voluntary retirement. The monthly average income of the whole retired women was 401,000 won, and that of retired women excluding those without income source was 607,000 won. In the comparison of income between the voluntary and

involuntary retirees, the monthly average income of the involuntary retiree group was 177,000 won higher than that of the voluntary retiree group. Particularly when only those with income source were considered, the difference was even bigger (273,000 won higher in the involuntary retiree group) and it was statistically significant.

〈Table3〉 The amount of income

(Unit: 1,000KW)

	Total	Voluntary Retirees	Involuntary Retirees	t-test
General	40.1	27.5	45.2	-2.96***
Retiree with income source	60.7	41.3	68.6	3.31***

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table4 shows income level after retirement with respect to the voluntarily retired. Differences in average income with respect to each characteristic appeared all to be statistically significant. Specifically, the monthly average income of those in their 50s was 3.3 times higher than that of those in their 60s or older, and income after retirement was 3 times higher in those who had retired at the age of 50 or younger than in those who had done so at the age of 60 or older. In addition, income level was higher among those with high academic qualifications. Income after retirement was 5.6 times higher among graduates of high school or higher academic institution. With regard to family type, retirees in family composed of husband and wife with unmarried children showed the highest income level. In addition, female retirees' income level after retirement was higher when their household income was high. Income after retirement was 3.3 times higher in those with a household income over 2,000,000 won than in those with a household

income less than 500,000. With regard to the characteristic of major lifetime job, retirees who had been specialists/office workers showed the highest income after retirement, which was 2.5~5 times higher than that of retirees who had other types of major lifetime job. With regard to job status in the major lifetime job, women who had been permanent waged workers had a two times higher income level than those with other types of employment status. On the other hand, with regard to the length of service, income after retirement was much higher in those who had worked less than 5 years than those who had worked for a longer period. In addition, income level was higher when labor income from the major lifetime job had been high. Women who had earned a monthly labor income of over 2,000,000 won on a average had an income 2 times higher after retirement than those who had earned a labor income of less than 500,000 won.

〈Table 4〉 The amount of income with respect to characteristics

(Unit: 1,000KW)

Characteristics		Categories	Monthly average income of Whole retirees	Monthly average income of retirees with income source	F-test
General			40.1	60.7	
socio-demography	Age	50~59	82.1	124.1	31.45***
		60~69	27.2	45.7	
		Over 70	22.4	30.7	
	Age at retirement	Below 50	66.7	110.8	12.71***
		50~59	43.7	66.9	
		Over 60	22.2	31.6	
	Academic qualification	Unschooling	15.9	23.5	19.71***
		Elementary school or lower	39.3	58.7	
		lower than high school	55.1	86.0	
high school or higher		91.1	146.2		

Characteristics		Categories	Monthly average income of Whole retirees	Monthly average income of retirees with income source	F-test
General			40.1	60.7	
Household	Family type	Husband&wife	47.0	75.5	6.52***
		Husband&wife+un married children	60.6	97.9	
		Single	29.3	32.4	
		Non-nuclear family	26.1	45.3	
	Monthly average Income	less than 50	21.1	27.9	13.43***
		50~99	23.8	36.3	
		100~199	39.0	64.4	
		Over 200	70.6	116.1	
Major life time job before retirement	Occupation	Specialist/office worker	102.3	167.8	15.74***
		Sales/Service worker	38.1	59.1	
		Agricultural/ fishery worker	18.9	26.8	
		Manufacturing worker	38.6	58.9	
		Simple labor/ Others	33.2	52.0	
	job status	Permanent waged worker	63.7	97.7	8.21***
		Temporary/ daily worker	31.4	48.5	
		Employer/ the self-employed	30.7	45.8	
		Unpaid family worker	25.3	37.5	
	Length of service	less than 5	63.5	91.3	5.86***
		5~9	45.6	73.5	
		10~19	37.4	63.4	
		Over 20	25.7	36.2	
	Monthly Labor Income	less than 50	30.7	46.4	4.14**
		50~99	43.2	62.7	
		100~199	63.8	109.7	
Over 200		62.8	96.5		

## 2. The Determinants of retired women's income

Table 5 is the result of analyzing factors affecting retired women's income sources using the Multinomial Logit model. The result shows that factors found to affect retired women's income sources were voluntary retirement, age, academic qualifications, family type and household income.

According to the result of this analysis, people who have voluntarily retired was found to have a negative (-) influence on the possibility of having public transfer income as their main income source. This suggests that, compared to involuntary retirees, voluntary retirees are less likely to have government transfer income such as pension and social insurance as their main income source. Considering that there are few retired women who receive a public pension, if other conditions are the same, involuntarily retired women are more likely to receive public transfer income such as government subsidies and social insurance than voluntarily retired women.

Retirees' age appeared to have a negative (-) influence on the possibility of having labor income as their main income source after retirement, and a positive (+) influence on the possibility of having public transfer income. That is, when they are old, retirees are more likely to have their or their husband's labor income as their main income source but less likely to have public transfer income provided by the government. This is understood that female retirees at an old age tend to have lost abilities to labor and to be bereaved of their husband. In addition, retired women's academic qualifications appeared to have a positive (+) influence on the possibility of having asset income as the main income source after retirement. That is, those with high academic qualifications are more likely to have asset income as their main income

source after retirement. This may be because those with high academic qualifications tend to enjoy stable employment and high wage in the labor market and have more opportunities for accumulating asset with high labor income that they earn for a long time before retirement.

On the other hand, with regard to family type, the family type composed of husband and wife appeared to have a negative (-) influence on the possibility of having labor income as their main income source after retirement and a positive (+) influence on the possibility of having private transfer income. This means that husband-wife families are less likely to have labor income but likely to have private transfer income. In addition, the household income appeared to have a different influence on income source. It appeared to have a positive (+) influence on the possibility of having labor income as the main income source, and a negative (-) influence on the possibility of having public transfer income or private transfer income. That is, female retirees in families with high household income are likely to have their or their husband's labor income as their main income source after retirement but less likely to have public and private transfer income. This may be because the payment of public transfer income is decided according to retirees' economic activities and their household income. Furthermore, private transfer income from families and relatives seem to happen when retirees do not have any particular income. In general, private transfer income among family member or relatives has been explained with the motive theory. The motive theory explains transfer in two ways. One is the altruism theory and the other is the exchange theory. In the altruism theory, less rich recipients receive relatively more resources, so recipients' income is in the negative (-) correlation with the amount of transferred income. In the exchange theory, income transfer is explained as payments for

services provided by family members. That is, income transfer is rewards for services provided by the recipients or the purchase of services by the donors. Based on the motive theory, since household income has a negative influence on the private transfer income in the result of this study, it seems that the results is reflected in the altruism theory.

**<Table5> Determinants of retired women's income source:  
Multinomial Logit**

Independent Variables	Labor income/Don't have income source	Asset income/Don't have income source	Public transfer/Don't have income source	Private transfer/Don't have income source
	P·E(S·E)	P·E(S·E)	P·E(S·E)	P·E(S·E)
Intercept	6.48 (2.68)*	-4.81(2.96)	-4.97 (2.19)*	-1.72 (2.02)
Voluntary retirement(Involuntary)	0.03 (0.21)	0.05(0.29)	-0.58 (0.17)**	-0.09 (0.17)
Age	-0.17 (0.04)***	0.02(0.04)	0.06 (0.03)*	0.04 (0.03)
Age of retirement	-0.01 (0.02)	0.04(0.03)	0.02 (0.02)	-0.003(0.02)
Length of Education	0.001(0.06)	0.16(0.07)*	0.04 (0.05)	-0.03 (0.05)
Husband-Wife type family(others)	-0.83 (0.24)***	0.44(0.37)	0.47 (0.25)	0.95 (0.33)**
Log of monthly average household income	0.85 (0.23)***	-0.33(0.20)	-0.31 (0.14)*	-0.47 (0.01)***
Specialist/Office worker(others)	0.28 (0.31)	-0.37(0.38)	0.01 (0.31)	0.61 (0.43)
Permanent waged worker(others)	-0.27 (0.21)	0.01(0.31)	0.01 (0.20)	0.09 (0.18)
Length of service	-0.04 (0.03)	0.01(0.02)	0.002(0.01)	-0.01 (0.01)
Log of monthly average labor income	-0.13 (0.21)	0.01(0.24)	0.07 (0.19)	0.01 (0.18)
N	487			
LR chi <sup>2</sup>	220.34**			
Pseudo R <sup>2</sup>	0.205			
Log Likelihood	-427.08			

\*:  $p < .05$ , \*\*:  $p < .01$ , \*\*\*:  $p < .001$

Table 6 show the result of analyzing factors influencing income after retirement using the Censored Normal Regression model. In the analysis of the whole retired women, factors having a significant influence on retirees' income were the voluntary of retirement, age, age on retirement and job status in the major lifetime job. As for each factor's influence, voluntary retirement had a more negative (-) influence on income after retirement than involuntary retirement and, as a result, voluntarily retired women had lower income after retirement than involuntarily retired ones. In addition, age and age on retirement appeared to have a negative (-) influence on income level after retirement. Thus, those who were currently old and who retired at an old age appeared to have lower income after retirement.

On the other hand, those who had worked as a permanent waged worker in their major lifetime job had higher income after retirement than those who had been other types of workers. This shows that employment status in the labor market before retirement has a positive(+) influence on income after retirement. This means that stable employment and steady labor income before retirement contribute to women's income security after retirement. Thus, it suggests the necessity to improve women's employment status in the labor market.

〈Table 6〉 Determinants of retired women's the amount of income:  
Censored Normal Regression

변수	Total	Voluntary Retirees	Involuntary Retirees
	P·E(S·E)	P·E(S·E)	P·E(S·E)
Intercept	6.99(1.20) <sup>***</sup>	8.99(2.67) <sup>***</sup>	5.69(1.27) <sup>***</sup>
Scale	1.43(0.07)	1.59(0.15)	1.31(0.08)
Voluntary retirement (Involuntary)	-0.72(0.21) <sup>***</sup>	-	-
Age	-0.03(0.02) <sup>*</sup>	-0.05(0.03)	-0.02(0.01)
Age of retirement	-0.03(0.01) <sup>*</sup>	-0.02(0.02)	-0.03(0.01) <sup>*</sup>
Length of Education	0.05(0.03)	0.13(0.06) <sup>*</sup>	0.02(0.03)
Husband-Wife type family(others)	0.27(0.28)	0.55(0.51)	0.15(0.35)
Log of monthly average household income	-0.11(0.07)	-0.39(0.16) <sup>*</sup>	0.02(0.09)
Specialist/Office worker(others)	0.27(0.35)	-0.45(0.75)	0.63(0.39) <sup>*</sup>
Permanent waged worker(others)	0.49(0.23) <sup>*</sup>	0.68(0.42)	0.41(0.27)
Length of service	0.01(0.01)	0.02(0.02)	-0.01(0.01)
Log of monthly average labor income	0.08(0.11)	-0.28(0.25)	0.15(0.11)
N	487	141	346
Left Censored	165	45	118
LR chi <sup>2</sup>	42.86 <sup>***</sup>	22.75 <sup>**</sup>	20.11 <sup>*</sup>
Pseudo R <sup>2</sup>	0.157	0.192	0.133
Log Likelihood	-419.11	-133.68	-272.00

\* :  $p < .05$ , \*\* :  $p < .01$ , \*\*\* :  $p < .001$

According to the result of analyzing factors influencing income after retirement according to the voluntary retirement, voluntary retirees' income after retirement was significantly affected by academic qualification and household income, and involuntary retirees' income

by age at retirement and whether to have been a specialist/office worker. First, in the voluntary retiree group, income after retirement was higher when academic qualifications was high. However, household income had a negative (-) influence. That is, retired women's income after retirement was lower when the household income was high. This means that voluntarily retired women live by other family members' income rather than their own income after retirement. In the involuntary retiree group, age at retirement had a negative (-) influence. That is, retired women's income after retirement was lower when they had retired at an old age. This is probably because old women are rather unpaid family workers than waged workers in the labor market and, as a result, their long-term career in the labor market is not reflected in their income. In addition, having been a specialist/office worker appeared to have a positive (+) influence on income after retirement even if the retirement was involuntary. Summing up the results, voluntary retirees' income after retirement was influenced more by personal and family characteristics, and voluntary retirees' income after retirement was influenced more by age on retirement and career in the labor market.

#### **IV. Conclusion**

This study analyzed the characteristics of retired women aged over 50, their main income source after retirement, and factors influencing the amount of income after retirement using data collected from a survey of 'middle- and old-aged people' in the 6<sup>th</sup> year (2003) of the Korean Labor and Income Panel Study (KLIPS). The results of this study and their implications are as follows.

Firstly, involuntarily retired women had higher income after retirement than voluntarily retired women and the difference was even bigger when only women with income sources were considered. This means that voluntarily retired women tend to depend on the income of the spouse or other family members after retirement. They are likely to be subject to public income transfer by the government if they do not have private transfer income from the spouse or other family members. Accordingly, the increase of voluntary retirements by women at an early age should be monitored closely because it may imply the possibility of an increase in the amount of the government's public transfer.

Second, in the analysis of factors determining main income sources after retirement, variables related to the characteristics of major lifetime job before retirement did not have statistically significant influences, and only personal and family characteristics were found to be influential factors. This may be because retired women aged over 50 generally have a low employment status before retirement and, as a result, their experiences in the labor market are not much different. Among personal characteristics, high academic qualification increased the possibility of having asset income as the main income source after retirement. This implies that, in the Korean society where women with academic qualifications are increasing, if women can steadily maintain a stable employment status in the labor market, they may be able to prepare for their old age after retirement by themselves. Accordingly it is considered necessary to provide future retirees with education and support for preparing for their retirement life.

Thirdly, female retirees who had been specialists/office workers in the labor market before retirement had a higher income after

retirement than those who had been other types of workers. This implies that stable employment and steady labor income before retirement can be the best alternative guaranteeing economic welfare for retired women. Thus, women's employment status in the labor market must be improved in order to lessen the government's burden of supporting retirees in the future.

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## 한국 은퇴여성의 소득원천과 소득액 분석

: 자발적 은퇴자와 비자발적 은퇴자의 비교를 중심으로

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본 연구는 한국노동패널(KLIPS) 6차년도(2003) '중·고령자' 부가조사 자료를 분석 자료로 하여, 만50세 이상 은퇴여성의 특성을 자발적 은퇴여성으로 비자발적 은퇴여성으로 나누어 살펴보고, 이들의 은퇴 후 주된 소득원천과 은퇴 후 소득액에 영향을 미치는 요인을 multinomial logit과 censored normal regression 모델을 이용하여 분석하였다. 본 연구결과의 주된 내용은 다음과 같다.

첫째, 자발적 은퇴여성보다 비자발적 은퇴여성의 은퇴 후 소득수준이 더 높고, 소득원천이 있는 여성만을 고려했을 경우 그 차이가 더 많은 것으로 밝혀졌다. 이는 자발적으로 은퇴한 여성의 경우, 은퇴 후 배우자나 다른 가족원의 소득에 의존하는 경향이 있음을 의미한다. 이들은 배우자의 소득이 없거나 다른 가족원으로부터 사적이전소득이 없다면 정부의 공적소득이전 대상이 될 가능성이 높다. 둘째, 은퇴 후 주된 소득원천을 결정하는 요인분석에 있어서 개인 및 가구 특성만이 영향을 미치는 요인으로 분석되었다. 이와 같은 결과는 현재 만50세 이상의 은퇴여성들이 은퇴 전에 전반적으로 낮은 취업지위에 있었기 때문에 이들의 노동시장 경험에 있어서의 차이가 나타나지 않은 것으로 짐작된다. 셋째, 은퇴 전 노동시장에서 전문/사무직에 일했던 여성은퇴자가 그렇지 않은 은퇴자에 비해 은퇴 후 소득액이 많다는 결과는, 은퇴 전 안정된 고용과 적정수준의 근로소득은 은퇴 후 여성의 경제적 복지를 보장하는 최선의 대안이 될 수 있음을 시사한다.

**주제어:** 은퇴, 은퇴여성, 소득원천, 소득액

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