Intergenerational Transfers and Old-Age Security in Korea

May 19, 2008

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Summary

This study investigates intergenerational transfers in Korea, focusing on children's financial assistance to their elderly parents. Even though it is not always sufficient, financial help from adult children has alleviated income deficiency of Korean elderly, showing at least 30 percent of elderly income in their 70s comes from their children's transfers. Using data from the Korean Longitudinal Study of Ageing (KLoSA) and the Korean Retirement and Income Study (KReIS), I find that altruism is the main motive of familial transfers in Korea and also find that positive expectations about public support decrease elderly parents' net transfer receipt in the family. The exchange motive, however, also appears to operate in the form of more transfers to the parents who look after their grandchildren. The family fixed-effect models using the KLoSA sibling sample show that the eldest son still undertakes the heaviest burden of supporting his elderly parents through financial help or coresidence with them. In addition, a child's additional one year of education only leads to an additional net transfer of 90,000 won (roughly 90 dollars) per year for the elderly parents, implying that child education can hardly be a retirement plan. Moreover, familial support mechanism has been deteriorating in Korea, and the burden of supporting the increasing number of the elderly has been shifting from families to government; and within a family, it has been shifting from the eldest son to the elderly parents themselves. Therefore, individuals need better planning for retirement and longevity risk. The government should put intensive efforts in reducing poverty that prevails among the elderly, promoting elderly employment, enhancing long-term saving incentives, and urgent pension reforms.

CHAPTER 1

Introduction

Korea entered an aging society as of 2000 when people aged over 65 made up 7.2 percent of the population. The ratio of the elderly population in Korea is projected to reach 14.3 percent by 2018 before it becomes a super-aged society in 2026 with the share reaching 20.8 percent. Consequently, the elderly dependency ratio, which is defined as people aged 65 and over per people aged 15-64 years, is projected to increase 3 times from 12.6 percent in 2005 to 37.7 percent in 2030 (Korea National Statistic Office).

In spite of its population ageing at an unprecedented pace in the world, Korea has been unsuccessful in building up a social safety net for the elderly. Instead, adult children (mostly eldest sons) have undertaken the responsibilities of supporting their elderly parents in Korea's extended family. For this reason, empirical analysis of the financial support given to elderly parents by adult children is important in preparing income guarantee policy that suits the current trend of the population aging and its subsequent social and economic changes.

Even though a substantial portion of Korean elderly have been living on financial assistance received from their children, studies on intergenerational transfers in Korea are rare and microeconomic empirical studies are even rarer. Part of the reason for this is there had been few micro data on intergenerational transfers until the 21st century. Now we have such data from at least three datasets: the Korean Labor and Income Panel Study (KLIPS), the Korean Longitudinal Study of Ageing (KLoSA), and the Korean Retirement and Income Study (KReIS). This study examines microeconomic behavior on intergenerational transfers using these datasets.

First of all, this paper directly looks into variables regarding intergenerational transfers in the three Korean datasets and compares them with those in the Health and Retirement Study (HRS), one of the elderly panel datasets that the KLoSA and the KReIS have tried to benchmark. Compared with the author's previous paper (Kim, 2006) that uses data from the KLIPS, this study has both similarity and complementarity. The previous study analyzes a broad range of issues on private transfers – such as the magnitude and frequency of transfers, the determinants of transfer receipts and gifts, the crowding out of private transfers by public transfers, and the dead zones and loopholes of public

assistance – and, therefore, some issues certainly overlap with this study. If we find similar results regarding the patterns and motivations of intergenerational transfers from these different datasets, we may get closer to stylized facts with the findings. Therefore, I cite or mention selected results from the previous study in some places of this paper.

At the same time, however, this study deals with some unexplored issues using new features of the KLoSA and the KReIS data. First, the KLoSA respondents report their transfer receipts and gifts with all adult children who do not live with them. This resultant sibling sample motivates family fixed-effect models to examine which child gives more transfers to elderly parents or lives with them.

Second, the KReIS data report intergenerational transfers between parents and coresident children as well as between parents and noncoresident children. Considering that intergenerational transfers are reported only for noncoresident adult children in other datasets, we can have an unusual opportunity to examine intergenerational transfers by children's coresidence status and conjecture the motivations of those transfers.

Third, the KReIS survey has explicit questions on the existence of grandchildren whom respondents and/or spouses are taking care of, the hours of caregiving, and the magnitude of pecuniary compensation if any. These data items enable us to directly test whether there exists an exchange motive in adult children's cash transfers to their parents who look after grandchildren.

Fourth, the KLoSA survey asks about the respondents' subjective expectation feelings to several issues: for instance, the financial situation in their future, the relative financial situation of their children's generation compared to their own generation, and potential support for their old age by government. I use these variables to examine how individuals' expectations on tomorrow's situations affect their transfer behavior today.

Finally, the KLoSA and the KReIS data contain information on inheritances and detailed items of assets and debts. Using these variables that have rarely been observed in other datasets, this study first documents some basic statistics on inheritance and wealth in Korea.

This paper proceeds as follows. Chapter 2 quantifies intergenerational transfers focusing on adult children's transfers given to their elderly parents. Chapter 3 examines the characteristics of the donor and the recipient of such transfers to uncover which parents benefit more from their children and which child in the family gives more to the parents. Chapter 4 documents ongoing changes in familial support mechanism and suggests policy implications for old-age income security, based on observed profiles of income and wealth by age and by income quintile. The last chapter concludes.

CHAPTER 2

Patterns of Intergenerational Transfers

In this chapter, I tabulate descriptive statistics on intergenerational transfers in Korea, and then those in the United States of America as well, for a cross-country comparison. First, I examine "inter-vivos" transfers, i.e., transfers made while both the donor and the recipient are alive. Then, I look at reported and expected inheritance as another way that intergenerational transfers are made.

1. Inter-Vivos Transfers

This section describes inter-vivos transfers in Korea, observed in the KLoSA, the KLIPS, and KLoSA datasets focusing on adult children's financial help given to their elderly parents. The HRS data show striking differences in intergenerational transfer patterns between the United States and Korea.

A. KLoSA Data

The Korean Longitudinal Study of Ageing (KLoSA) started in 2006 for the purpose of creating a basic dataset needed to devise and implement effective policies to population ageing.[1] The KLoSA survey interviews middle/old-aged population (aged 45 or older) nationwide excluding Jeju Island. The total number of samples is 10,254 in 2006. Topics under KLoSA are grouped into the following seven main categories: A. Demographics, B. Family, C. Health, D. Employment, E. Income, F. Assets, G. Subjective Expectations and Satisfaction.[2]

Specifically, rich information on intergenerational transfers in the Family section is extremely useful for this study. In the 2006 KLoSA data, financial transfers between the respondent and each child during the last calendar year (2005) are asked if the child does not live with the respondent. According to the KLoSA questionnaire, financial help (or transfer) means giving money, helping pay bills, or covering specific types of costs such as those for medical care or insurance, schooling, down payment for a home, rent, etc., but it does not count any shared housing or shared food.

[1] Basic survey for KLoSA will be conducted every even-numbered year starting from 2006, mostly using the same survey categories. The first KLoSA baseline survey was conducted over a 6-month period from July 2006. The surveys thereafter will also be held in the second half of the year.

[2] The data and questionnaires of the 2006 KLoSA are available online at the website of Korea Labor Institute (www.kli.re.kr).

Respondents are told that financial help can be considered as either a gift or a loan. The survey separately reports transfers made on a regular base and those made irregularly. Regular monetary transfer refers to the case in which respondents received monetary transfers regularly in a certain time interval (e.g., each month, every two months), such as monthly allowances. Occasional (or irregular) monetary transfer refers to the case in which respondents received monetary transfers without any regularity, such as paying for medical bills or schooling and occasional allowances. I calculate annual regular transfer amount by multiplying the average amount of regular transfer by the number of months such transfer is made.

<Table 1> Annual Intergenerational Transfers in Korea: KLoSA Data

(%, 10,000 won)

		Fraction %	Unconditional mean	Conditional on making each transfer mean	Conditional on making each transfer median
Later generation (6,496 families)					
From children (A)	Regular	10.6	65	615	360
	Irregular	35.3	39	111	60
	Total*	**40.1**	**104**	**260**	**100**
To children (B)	Regular	5.0	54	1079	720
	Irregular	7.4	31	419	50
	Total*	**11.4**	**85**	**749**	**315**
Net transfer receipt from children (A-B)	Regular**	15.1	11	71	240
	Irregular**	38.9	8	21	50
	Total**	**46.3**	**19**	**41**	**70**
Earlier generation (3,159 families)					
To parents (C)	Regular	10.2	42	413	240
	Irregular	31.7	19	59	40
	Total*	**41.5**	**61**	**147**	**50**
From parents (D)	Regular	0.7	1	82	12
	Irregular	5.4	14	267	30
	Total*	**6.1**	**15**	**247**	**30**
Net transfer gift to parents (C-D)	Regular***	10.8	41	383	234
	Irregular***	35.6	4	12	30
	Total***	**45.8**	**46**	**100**	**50**

Note: *Either regular or irregular, or both transfers are made. **Either from or to children, or both, some transfers are made. ***Either to or from parents, or both, some transfers are made. All numbers are calculated using weights assigned to family respondents.
Source: Calculated by the author using the 2006 KLoSA data.

Intergenerational transfers in the KLoSA survey are reported not only for survey respondents and their children but also for the respondents and their own parents. The later generation data on the respondents and their children will be used in the main analyses of this study. The average age of

parents (i.e., respondents) is 69.5 and that of their children is 41.5. In the earlier generation data on the respondents and their parents, the average age of respondents who have at least one living parent is 52.3, and their fathers and mothers are, on average, 79.1 and 78.8 years old, respectively.[3] I add up financial assistance given to and received from the father and the mother if they are both alive. We have observations on intergenerational transfers made in 6,496 families for the later generation and those made in 3,159 families for the earlier generation.

Table 1 reports descriptive statistics on annual intergenerational transfers for each generation. Forty percent of respondents received financial transfers from their children and 11.4 percent gave financial help to their children. Average receipt amount is 1,040,000 won and average gift amount is 850,000 won, which yields average net transfer receipt of 190,000 won (surplus) for parents.

Looking at the earlier generation, 41.5 percent of respondents gave financial help to their elderly parents and 6 percent received financial support from them. Mean amount (both conditional and unconditional one) of net transfer is larger – more than double – for the earlier generation than for the later generation. Note that the former measures average net transfer received only from respondents, excluding those from their siblings but the latter measures average net transfer received from all children of the respondents. Taking this different survey structure into account, the smaller amount of average net transfer receipt for the parents in the later generation may reflect a weakening role of children's financial support for their old parents. Otherwise, it may reflect the relative financial situation of parents to their children in the later generation is better than that in the earlier generation. Or, instead, it may reflect simply age difference between the parents in the two generations. At least the last conjecture seems to be supported by Table 2 below. Net transfer receipt from children increases with the respondents' age from their 50s to early 70s. As parents get older, they are more likely to receive a large net transfer.[4]

In addition, Table 2 shows that the direction of the net flow of intergenerational transfers is reversed from downward to upward around the parent's age 60, a common retirement age. Transfer receipt from children increases as respondents get older peaking at their mid-70s, while transfer gift to children decreases after their 50s. Although these profiles are constructed from cross-section data, they probably depict a lifecycle reallocation through intergenerational transfers within Korean

[3] Given that at least a parent is alive, the fraction of the father's being alive is 0.323 and that of the mother's is 0.932.

[4] Another possibility is a measurement error. In particular, we might need to account for potential under-reporting bias when the respondents are asked to report their transfer receipts as opposed to their transfer gifts (see Gale and Scholz (1994) and Brown and Weisbenner (2002) for this bias). If KLoSA respondents indeed underreported transfers from their children (A) and/or from their parents (D), net transfer receipt from their children (A-B) should be underestimated and/or net transfer gift to their parents (C-D) should be overestimated in Table 1.

families.

<Table 2> Mean Amount of Annual Intergenerational Transfer in Korea by Age: KLoSA Data

(10,000 won)

	Respondent age (# families)	45-49 (1128)	50-54 (840)	55-59 (789)	60-64 (809)	65-69 (953)	70-74 (785)	75- (1192)
From children (A)	Regular	5	18	49	67	134	162	115
	Irregular	7	13	30	57	70	71	65
	Total*	**12**	**31**	**79**	**124**	**204**	**233**	**180**
To children (B)	Regular	98	129	49	28	13	4	1
	Irregular	34	23	51	49	22	21	3
	Total*	**132**	**152**	**100**	**77**	**35**	**25**	**5**
Net transfer receipt from children (A-B)	Regular**	-93	-111	1	39	121	159	113
	Irregular**	-28	-10	-21	8	49	49	61
	Total**	**-120**	**-121**	**-20**	**47**	**170**	**208**	**175**

Note: *Either regular or irregular, or both transfers are made. **Either from or to children, or both, some transfers are made. All numbers are calculated using weights assigned to family respondents.
Source: Calculated by the author using the 2006 KLoSA data.

B. KLIPS Data

The Korean Labor and Income Panel Study (KLIPS) is an annual survey of 5,000 households and their members (aged 15 and over) from the 7 metropolitan cities and urban areas in 8 provinces (excluding Jeju Island).[5] Since its fourth-year survey in 2001, the KLIPS has been collecting data on intergenerational transfers given to and received from parents. Related questions are separately asked for the household head's parents and for the spouse's parents. Using these questions, we know financial transfers in the last year given to and received from parents and parents-in-law who do not live with respondents and spouses. The average age of the KLIPS household heads is 45.4 in 2005.

Table 3 shows that at least 50 percent of KLIPS households make transfers to their parents or parents-in-law; however, the fraction of households who report transfer receipts from their parents or parents-in-law is at most 24 percent. Compared with the KLoSA data in Table 1, the KLIPS data report more prevalent, sizable transfers between parents and children. But it should be accounted for that the intergenerational transfers from the KLIPS data in Table 3 include financial help from/to the spouses' parents as well as the household heads' parents, whereas those from the KLoSA data in Table 1 do not include transfers from/to parents-in-law. In addition, unlike the KLoSA survey, the intergenerational transfers in the KLIPS survey include monetary value of in-kind transfers such as food or electronic appliances (evaluated at the purchase price).[6]

[5] The data and documentations of the KLIPS can be downloaded at the website of Korea Labor Institute (www.kli.re.kr).
[6] By contrast, the KLoSA survey asked about in-kind transfers using separate questions on "non-monetary"

<Table 3> Annual Intergenerational Transfers in Korea: KLIPS Data

(%, 10,000 won)

Data (Number of households)	To parents or parents-in-law				From parents or parents-in-law			
	Fraction %	Unconditional mean	Conditional mean	Conditional median	Fraction %	Unconditional mean	Conditional mean	Conditional median
KLIPS 2001 (N=2,771)	50.7	73.7	145.4	80	18.1	42.0	232.2	70
KLIPS 2002 (N=2,723)	56.1	97.1	173.1	100	18.8	47.3	251.4	80
KLIPS 2003 (N=2,979)	58.5	106.9	182.7	120	20.4	108.5	532.0	100
KLIPS 2004 (N=3,056)	65.5	140.6	214.7	120	23.7	54.9	231.5	80
KLIPS 2005 (N=3,112)	62.4	122.6	196.4	120	22.6	58.6	259.3	100

Note: All numbers are weighted using household weights of each wave.
Source: Calculated by the author using the 2001-2005 KLIPS data.

By its survey structure, the KLIPS provides an opportunity to investigate potential differences between transfers from/to the husband's parents and those from/to the wife's parents by separating them using information on the household head's gender.[7] Table 4 reveals that Korean households tend to give a larger amount of transfers (in terms of both average and median) to the husband's parents than to the wife's parents. As for the median amount of transfer gifts from parents, however, we do not observe such differences between the head's parents and the wife's parents. This gender difference might reflect asymmetric standings of the husband and the wife in their earnings and decision-making powers in the family. But it surely reflects traditional norms under which elderly parents have been supported mainly by their sons (especially their eldest sons) rather than their daughters.

transfer. Suggested types of non-monetary support in the questionnaire is leisure (e.g., travel), health-related products (e.g., vitamins, equipments, etc.), household items, electronics, dining out and foods, and other. But their monetary values are not reported.

[7] The proportion of females among the KLIPS household heads has increased gradually: 15.3% in 2001, 16.0% in 2002, 18.0% in 2003, 18.3% in 2004, and 19.6% in 2005.

<Table 4> Differential Intergenerational Transfers between Husband and Wife in Korea: KLIPS Data

(10,000 won)

Data	To husband's parents		To wife's parents		From husband's parents		From wife's parents	
	Fraction (Number of households)	Conditional mean (median)	Fraction (Number of households)	Conditional mean (median)	Fraction (Number of households)	Conditional mean (median)	Fraction (Number of households)	Conditional mean (median)
KLIPS 2001	53.1% (N=1,924)	115.0 (50)	40.0% (N=2,273)	72.2 (30)	16.6% (N=1,924)	161.5 (50)	13.5% (N=2,273)	103.5 (40)
KLIPS 2002	57.5% (N=1,898)	137.1 (70)	47.1% (N=2,224)	69.0 (40)	15.9% (N=1,898)	178.1 (50)	14.5% (N=2,224)	150.2 (50)
KLIPS 2003	59.8% (N=2,089)	139.5 (100)	49.8% (N=2,398)	86.6 (50)	18.3% (N=2,089)	513.0 (50)	15.5% (N=2,398)	93.2 (50)
KLIPS 2004	65.8% (N=2,168)	178.2 (100)	57.4% (N=2,439)	77.3 (50)	21.3% (N=2,168)	222.2 (50)	19.8% (N=2,439)	139.7 (50)
KLIPS 2005	64.4% (N=2,181)	149.7 (100)	55.9% (N=2,437)	84.5 (50)	19.5% (N=2,181)	208.3 (50)	18.3% (N=2,437)	144.2 (50)

Note: Mean (median) transfer amounts are conditional on making transfers. All numbers are weighted using household weights of each wave.
Source: Calculated by the author using the 2001-2005 KLIPS data.

C. KReIS Data

The Korean Retirement and Income Study (KReIS) started in 2005 to be conducted every odd-numbered year. The KReIS survey has the purpose of creating a basic dataset needed to devise policies for effective old-age income security. The sample consists of nationally representative 5,110 households that have at least a person aged 50 or older (an "age-eligible respondent"). In addition, the KReIS included the age-eligible respondent's spouse irrespective of his/her age, resulting in a total sample of 8,664 respondents.

In the 2005 KReIS data, private transfers received by and given by the respondent or the spouse during the last calendar year (2004) are asked. Unlike the KLoSA and the KLIPS data, the KReIS reports transfers between the respondent (or the spouse) and coresident family members as well as noncoresident family members. According to the KReIS questionnaire, transfers include financial help in the form of money or in-kind transfers for living, schooling, etc., but do not include occasional gifts such as a birthday gift or a holiday gift.

Since private transfers are reported for every age-eligible respondent or spouse in the household, some households have multiple observations of different amounts of transfers when there are multiple respondents or couples in the same household. Thus, I specify a "financial respondent" for each household by naming the household head first, and then the spouse if the head is not a respondent, and then the head's parent if both are not respondents, and so on following the frequency of the respondent's relationship with the head. The resulting age-eligible financial respondents, who

were aged 64.9 on average in 2005, provide 4,800-household observations on private transfers.

Table 5 tabulates annual transfer receipts and gifts by the relationship of donors and recipients. The proportion of those who received transfers from noncoresident children is 45.8 percent while that from coresident children is 16.5 percent. Because coresidence is another important way of supporting elderly parents, fewer coresident children tend to give transfers to their parents than their noncoresident siblings. The mean amount of transfer receipt from noncoresident children is 1,380,000 won and the conditional mean (median) amount is 3,010,000 (1,500,000) won.

The proportion of respondents who gave transfers to coresident children is 23.8 percent and the conditional mean (median) amount of transfer gift is 7,300,000 (6,000,000) won. This sizable amount may reflect parents' help for dependent children (e.g. college tuition help) who are relatively young compared to noncoresident children. In terms of mean amounts of transfer receipt and gift, coresident children tend to be "net receivers" whereas noncoresident children tend to be "net givers" from whom parents receive 950,000 (=1,380,000− 430,000) won on average a year.

<Table 5> Private Transfers in Korea: KReIS Data
(N=4,800 households)

(%, 10,000 won)

	Annual transfer receipt from:				Annual transfer gift to:			
Relationship	%	Mean	Mean>0	Median>0	%	Mean	Mean>0	Median>0
Coresident								
Parents	0.5	1	180	54	3.4	6	166	60
Children or grandchildren	16.5	68	410	200	23.8	174	730	600
Other family members	0.1	0	171	120	0.1	0	93	30
Noncoresident								
Parents	0.8	4	478	100	9.6	16	168	100
Spouse	0.3	4	1188	1200	0.2	0	145	40
Children or grandchildren	45.8	138	301	150	23.3	43	184	50
Siblings	2.3	4	195	80	1.9	2	90	50
Other relatives	1.7	2	125	36	1.6	1	81	30
Ex-spouse	0.0	0	515	100	0	0	32	24
Social/religious organizations	2.4	3	126	20	12.4	11	89	35
All others	1.9	1	53	20	0.3	1	195	100
Total	61.5	225	366	200	54.4	252	463	130

Note: All numbers are weighted using household weights.
Source: Calculated by the author using the 2005 KReIS data.

Time is also transferable between family members through informal caregivings. Given that family caregivings are substitutes for formal caregivings that can be purchased from the market in many cases, intergenerational caregivings often have similar effects on the recipient with intergenerational financial help. Specifically, the KReIS data report respondents' childcare for their grandchildren and caregivings for their sick parents. As Table 6 shows, about 15 percent of age-eligible financial respondents or their spouses are currently looking after their grandchildren almost

entirely and their average (median) childcare hours are 54 (49) hours a week – the equivalent of having a full-time job with no weekend and holiday. At the same time, 15 percent of grandparents said that they had an experience of quitting paid work or reducing the amount of time they worked in order to look after their grandchildren. Of those who provide childcare services, two thirds offer their services for free. The rest receive money with mean (median) amounts 360,000 (300,000) won a month, which suggests that some intergenerational transfers from adult children to elderly parents are motivated by an exchange motive – childcare service for money.

On the other hand, 7 percent of age-eligible financial respondents or their spouses are currently taking care of their sick parents and their average (median) caregiving hours are 37 (21) hours a week. About 26 percent had an experience of quitting paid work or reducing the amount of time they worked in order to care for their sick parents.

<Table 6> Family Caregivings in Korea: KReIS Data

Caregivings for:	**Grandchildren** (N=3,290 households that have grandchildren)	**Sick parents** (N=1,431 households whose parents are alive)
Proportion of caregiving households	14.7%	7.0%
Mean [median] caregiving hours per week	54 [49] hours	37 [21] hours
Proportion of caregivers who had to quit or reduce work for caregiving	15.2%	26.3%
Proportion of caregivers who receive money for caregiving	33.2%	-
Mean (median) amount of money received for caregiving per month	360,000 (300,000) won	-

Note: All numbers are weighted using household weights.
Source: Calculated by the author using the 2005 KReIS data.

D. Intergenerational Transfers in the United States: HRS Data

Now let's look at comparable U.S. data on intergenerational transfers. Among others, the Health and Retirement Study (HRS) provides useful information on financial transfers between parents and children. The HRS is a national panel study with an initial sample of 7,607 households (12,652 persons who were 51-61 years old in 1992).[8] To compare annual familial transfers between the U.S. and Korea, I use the first two waves of the HRS (1992, 1994) that report

[8] The baseline 1992 survey consisted of in-home, face-to-face interviews with the 1931-1941 birth cohort and their spouses, if married. Follow-up interviews were given by telephone in 1994, 1996, 1998, 2000, 2002, 2004, and 2006.

intergenerational transfers made in the past 12 months.[9] The 1992 wave of the HRS asked about financial assistance given to the parents and children of the respondent or spouse totaling 500 dollars or more in the past 12 months.[10] In the 1994 wave, the censoring amount was changed to 100 dollars and financial assistance received from their parents and children was also reported.

Panel A and panel B in Table 7 report the 1992/1994 HRS respondents' transfer gifts to their parents or parents-in-law and those to their children, respectively. Both waves of the HRS data show that the respondents make substantial transfers to their children, whereas transfers to their elderly parents are much fewer. Panel C and panel D report the 1994 HRS respondents' transfer receipts from their parents or parents-in-law and those from their children. Now the fraction of positive transfer receipts is very low from both directions.

<Table 7> Annual Intergenerational Transfers in the U.S.: HRS 1992/1994 Data

(U.S. dollar in each year)

Data	A. To parents or parents-in-law				B. To children			
(Censoring amount)	Fraction % (N)	Unconditional mean	Conditional mean	Conditional median	Fraction % (N)	Unconditional mean	Conditional mean	Conditional median
HRS 1992 ($500 or more)	10.8 (2,180)	208	1,929	1,000	34.8 (3,920)	1,604	4,609	2,000
HRS 1994 ($100 or more)	16.5 (1,985)	89	903	500	45.1 (3,462)	1,750	3,934	1,400
Data	C. From parents or parents-in-law				D. From children			
(Censoring amount)	Fraction % (N)	Unconditional mean	Conditional mean	Conditional median	Fraction % (N)	Unconditional mean	Conditional mean	Conditional median
HRS 1994 ($100 or more)	5.7 (1,984)	81	2,459	1,000	8.0 (3,465)	90	1,505	600

Note: All numbers are weighted using household weights of each wave.
Source: Calculated by the author using the 1992/1994 HRS data.

To compare Koreans' transfers to their elderly parents with Americans', we should pay attention to the 1994 HRS statistics in panel A, which are fairly comparable to the KLIPS statistics in Table 3. Remember that KLIPS respondents are on average younger than HRS respondents and take the 2005 KLIPS statistics from Table 3. About 62 percent of Korean households give some transfers to their parents or parents-in-law, and the average amount of transfers conditional on gift

[9] In waves 3 through 8 the questions on financial transfers asked about transfers exceeding $500 in the past two years.
[10] The financial help in the HRS data includes help with education but it does not include any shared housing or shared food, which is the same as the KLoSA data.

is 1,964,000 won (roughly $2,000 in 2005 dollars) a year. By contrast, only 16.5 percent of American households make transfers to their parents or parents-in-law, and the average transfer amount conditional on gift is just $117 (converted to 2005 dollars) a year.

Using later waves of the HRS, we can also see similar patterns of U.S. familial transfers, which are mostly headed for children and play only a limited role as a supplemental income for the elderly. Table 8 shows the fraction of U.S. households making intergenerational transfers exceeding 500 dollars in the last 2 years over 6 waves of the HRS survey fielded in 1996, 1998, 2000, 2002, 2004, and 2006.[11] The proportion of families who gave positive transfers to children is always over 30 percent, which is more than double the proportion of families who gave positive transfers to elderly parents.

<Table 8> Fraction of U.S. Households Making Intergenerational Transfers Exceeding 500 Dollars in the Last 2 Years

(% positive fraction (# households))

Data	To children or grandchildren	From children or grandchildren	To parents or parents-in-law	From parents or parents-in-law
HRS 1996	39.9 (6,208)	4.0 (6,224)	Husband's parents: 15.0 (1,930) Wife's parents: 13.9 (2,960)	Husband's parents: 4.4 (1,940) Wife's parents: 6.0 (2,961)
HRS 1998	35.6 (12,764)	5.2 (12,802)	13.5 (3,900)	7.2 (3,902)
HRS 2000	35.7 (11,859)	5.9 (11,878)	15.3 (3,374)	7.1 (3,372)
HRS 2002	31.3 (12,038)	6.2 (12,049)	14.3 (4,299)	5.6 (4,307)
HRS 2004	37.9 (12,281)	6.5 (12,315)	16.7 (5,859)	6.9 (5,856)
HRS 2006	36.3 (11,494)	6.4 (11,521)	17.0 (4,742)	6.6 (4,741)

Compared to Korean families in Tables 1, 3, and 5, among which at least 40 percent give transfers to elderly parents in the last 12 months, fewer American families make such transfers, at most 17 percent, even in the last 24 months. This may reflect a cultural difference between two countries in that Korea has a tradition of extended families and Confucian ethics that requires children's responsibility of supporting their elders. But it may also reflect that even without help from children,

[11] The HRS sample was expanded in 1998, and every two years thereafter, by adding the Study of Assets and Health Dynamics Among the Oldest Old (AHEAD) sample and the new sub-samples – War Babies (WB) and Children of the Depression (CODA) – to the original HRS sample interviewed previously in 1992, 1994, and 1996. Therefore, the number of households that responded to transfer questions increased substantially in 1998.

American elderly can have relatively sufficient income from their savings or Social Security benefits.[12]

Also, unlike Korean families who exhibit noticeable gender differences in transfer behavior toward the husband's parents and the wife's parents (Table 4), American families in the HRS data do not clearly show such differences. The 1996 wave of the HRS reports financial assistance from/to parents and parents-in-law separately. I identify the husband's parents and the wife's parents based on the family respondent's gender. The fraction of households who made transfers to the wife's parents is 14 percent, similar to the fraction of 15 percent for the husband's parents.[13]

2. Inheritances

A. Inheritances Ever Received

The 2006 KLoSA survey asks about money or property that the respondent has ever received in the form of an inheritance, a trust fund, or an insurance settlement. As shown in Table 9, the fraction of KLoSA households who have ever received any of these is only 2.4 percent.[14] However, the magnitude of inheritance is quite sizable. The mean and median amounts of inheritances conditional on receipt are about 151 million won ($158,000) and 50 million won ($52,000) respectively.

The 1992 HRS survey contains a similar question on inheritance receipt, which reads: "Have you [or your (husband/wife/partner)] ever received an inheritance, or been given substantial assets in the form of a trust?"[15] The fraction of HRS households who have ever received an inheritance is 28 percent. The mean and median amounts of inheritances conditional on receipt are about

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[12] For instance, the sources of American elderly household income as of 1984 for the highest and lowest income quintiles are as follows (Hurd, 1990, Table 12). The highest quintile households' average income of $34,061 consists of $9,450 earnings (27.2%), $13,289 property income (39.0%), $5,901 Social Security benefits (17.3%), and $5,421 other income (15.9%). And the lowest quintile households' average income of $3,986 consists of $73 earnings (1.8%), $168 property income (4.2%), $3,102 Social Security benefits (77.8%), and $643 other income (16.1%). These amounts are in 1982 dollars and adjusted for family size.

[13] The conditional mean (median) amount of positive transfer given to the husband's parents is $3,406 ($1,500) and that from the wife's parents is $2,639 ($1,000). The conditional mean (median) amount of positive transfer received from the husband's parents is $5,370 ($2,000) and that from the wife's parents is $6,334 ($3,000). So if I were to point out anything at all, the wife's parents appear to receive slightly less and give slightly more than the husband's parents in the United States.

[14] To compare with the HRS data that report inheritances that the respondent or spouse has ever received, I add up a couple's inheritance receipts if both are KLoSA respondents and therefore both report their inheritances. But if the spouse is not an eligible KLoSA respondent (probably because younger than 45 years old), her/his inheritance receipt cannot be counted in.

[15] The 1992 HRS data report the following three receipts separately: (1) an inheritance or a trust, (2) money or assets totaling $10,000 or more, and (3) a life insurance settlement $10,000 or more. I add up these three forms of receipts and find that among 7,538 respondents the number of people with zero, one, two, and three

$51,000 and $20,000, respectively.

Considering different age distributions of the 2006 KLoSA (age 45 or over) and the 1992 HRS (age 51-61) respondents, at the middle row of Table 9, I restrict the KLoSA sample to those who were aged between 51 and 61 at the time of survey. Compared to the whole KLoSA sample, this subsample reports a higher fraction of positive receipts and a larger conditional mean and median. Nevertheless, there still exists a sharp contrast between the HRS and the KLoSA in inheritance patterns.

According to the table, Korean parents tend to concentrate their bequests on a child (arguably the eldest son who has taken care of them in their old age), which limits the number of inheritors to a small fraction but increases the amount of inheritance. On the contrary, American parents are known to distribute their estates almost equally among their children.[16]

In light of this, we may infer that, together with traditional norms of filial piety, potential bequests could have been used as leverage for Korean parents to get old-age support from their children, or their eldest sons to be more specific. A cross-cultural study by Shin, Cho, and Walker (1997) also finds that Korean children and their parents (specifically, mothers and mothers-in-law in their study) are more likely to endorse distributing larger shares of inheritance to the child who care for her/his parents than American counterparts.

<Table 9> Inheritances Ever Received: KLoSA and HRS Data

Data Sample (# households)	Percentage of the households that have ever inherited	Mean amount conditional on receipt	Median amount conditional on receipt
KLoSA 2006 All households (N=6,171)	2.4	₩ 150,658,000 ($157,665 in 2006)	₩ 50,000,000 ($52,325 in 2006)
KLoSA 2006 Age 51-61 cohort (N=1,781)	3.3	₩ 201,659,000 ($211,038 in 2006)	₩ 80,000,000 ($83,721 in 2006)
HRS 1992 Age 51-61 cohort (N=7,538)	28.1	$50,818 ($73,021 in 2006)	$20,000 ($28,738 in 2006)

Note: The year-average exchange rate in 2006 ($1=₩955.56) is from the Economic Statistics System of the Bank of Korea. The 1992 dollar amounts are converted to the 2006 dollars using the Consumer Price Index.

forms of receipts is 5,420, 1,908, 203, and 7 respectively.

[16] For example, Wilhelm (1996) finds that 68.6 percent of decedents divide their estates exactly equally between their children, and 76.6 percent divide their estates so that each child receives within 2 percent of the average inheritance across all children. McGarry (1999) also finds that bequests are mostly shared equally, whereas inter-vivo transfers tend to be more compensatory.

The KLoSA data also report the form of the largest inheritance receipt and the relationship of its donor to the recipient. Table 10 shows that about 70 percent of donors are recipients' fathers, which may reflect that the household head has the ownership of major household properties like a house. The form of the largest amount of inheritance is real estates in most cases. This implies that the most common case of inheritance in Korea is the eldest son's inheriting his parents' house or land when they died finishing their coresidence with him. The eldest son is more likely to stay with his elderly parents after marriage than any other child in the family (see Table 18 in Chapter 4). Therefore, Korean parents have been able to provide a material incentive for the child who takes care of their old-age (mostly the eldest son) using their house as a promising inheritance.

<Table 10> Who Leaves What as an Inheritance in Korea?: KLoSA Data

Relationship of donor	# cases (%)	Form of inheritance	# cases (%)
Father	99 (67.8)	Real estate	137 (93.8)
Spouse	28 (19.2)	Cash or financial assets	5 (3.4)
Mother	12 (8.2)	Insurance settlement	2 (1.4)
Father-in-law or mother-in-law	4 (2.7)	Pension settlement	1 (0.7)
Other relative	3 (2.1)	Other	1 (0.7)
Total	146 (100.0)	Total	146 (100.0)

The KReIS data report inheritances that respondents and spouses have ever received and bequests that they have ever left. Table 11 shows that 28.6 percent of the age-eligible financial respondents' households received inheritances, which is a much larger proportion compared to the KLoSA households in Table 9 but quite similar to the HRS households. This discrepancy between the KReIS data and the KLoSA data in terms of the fraction of households receiving inheritances may arise at least in part from the fact that these two datasets use different wordings in their questions on inheritance. The KReIS asks about inheritances received by the spouse as well as the respondent, and explicitly refers to land or a house – the most common form of inheritances in Korea. Looking at bequests that the KReIS respondents and spouses have ever left, we can find that the tradition of primogeniture still prevails but different patterns also make an appearance. The proportion of the eldest son as the main recipient of bequests is 52.6, still more than half, but the proportion of equal distribution across children is now the second most frequent case.

<Table 11> Inheritances and Bequests in Korea: KReIS Data
(N=4,800 households)

(%)

Inheritances ever received		Bequests ever left	
Proportion of recipients	28.6	Proportion of donors	31.7
Donor	% donor*	Main recipient	% main recipient
Parents	79.3	Eldest son	52.6
Parents-in-law		Evenly to every child	17.6
Grandparents		Eldest daughter	15.5
Grandparents-in-law		Non-eldest son	9.3
		Non-eldest daughter	3.5
Spouse (deceased)	21.1	Social organization	0.6
		Sibling	0.1

Note: All numbers are weighted using household weights. *The sum of "% donor" is 100.4 because a few households received inheritances from both their parents and their spouses.
Source: Calculated by the author using the 2005 KReIS data.

B. Expectation about Inheritances

While having not yet received any inheritance, people may expect to receive inheritances in the future. They may also expect to leave bequests. The KLoSA and the HRS surveys have questions on subjective expectations about inheritances.[17] Table 12 reports such expectations. The sample mean of the subjective chances that the KLoSA respondents will receive inheritances exceeding 100,000,000 won is 0.17, which is way higher than the fraction of the KLoSA households that have ever inherited in Table 9. This subjective probability is quite comparable to the HRS respondents' expectations in Table 12, although the HRS questions did not give any censoring amount (herein a lower limit) to the respondents. Therefore, the KLoSA respondents appear to have more optimistic expectations about substantial amounts of inheritance receipts than the HRS respondents. As for the subjective probability of leaving an inheritance exceeding 100,000,000 won (roughly $100,000 in 2006), the KLoSA respondents report 0.36 on average and the corresponding HRS figures range from 0.42 to 0.48.

Considering substantial differences between the KLoSA and the HRS in terms of inheritance receipts, their expectations about inheritances seem fairly similar to each other. This probably suggests that Koreans' behaviors toward inheritances are getting closer to Americans'. That is, Koreans' bequests are being more equally distributed among children, as the eldest son's burden

[17] The related KLoSA questions read: "Including property and other valuables that you might own, what are the chances that you will leave an inheritance totaling 100,000,000 Korean won or more? And how about the chances that you will receive an inheritance totaling 100,000,000 Korean won or more?" The corresponding HRS questions read: "What are the chances that you [or your (husband/wife/partner)] will leave an inheritance totaling $10,000 [$100,000] or more? And how about the chances that you will receive an inheritance within the next 10 years? About how large do you expect that inheritance to be?"

of supporting elderly parents is being distributed to a broader range of supporters including other sons, daughters, and parents themselves (see Table 19 in Chapter 4). By the way, high chances that Koreans expect to leave sizable inheritances exceeding 100,000,000 won might reflect recent housing market boom in Korea, considering that most common form of their inheritances is real estates.

<Table 12> Subjective Expectations about Inheritances: KLoSA and HRS Data

Data	Chances of receiving an inheritance	Chances of leaving a bequest
KLoSA 2006	□100,000,000 or more: 0.17 (N=3,163)	□100,000,000 or more: 0.36 (N=10,254)
HRS 1994	0.21 (N=5,905) Mean (median) amount: $51,127 ($20,000)	$10,000 or more: 0.60 (N=5,901) $100,000 or more: 0.42 (N=5,139)
HRS 1996	0.20 (N=6,316) Mean (median) amount: $62,996 ($25,000)	$10,000 or more: 0.65 (N=6,309) $100,000 or more: 0.44 (N=4,885)
HRS 1998	0.18 (N=6,027) Mean (median) amount: $75,220 ($25,000)	$10,000 or more: 0.65 (N=6,000) $100,000 or more: 0.45 (N=4,778)
HRS 2000	0.17 (N=5,697) Mean (median) amount: $172,661 ($20,000)	$10,000 or more: 0.66 (N=5,660) $100,000 or more: 0.48 (N=4,563)

CHAPTER 3

Characteristics of Donor and Recipient

Intergenerational transfers given by adult children to their elderly parents have played a crucial role in the old-age income security in Korea. As seen in the previous chapter, Korean elderly parents are more likely to be net beneficiaries in financial exchanges with their children. This chapter investigates the characteristics of the donor and the recipient to better understand the motivation and other realities of familial transfers in Korea.

First, I introduce a simple model of intergenerational transfers for setting up a basic specification of empirical models and review existing empirical results. Based on these backgrounds, I examine parents' characteristics as the explanatory variables in the regressions of the parents' net transfer receipt from their children. Then, I examine children's characteristics using family fixed-effect models to figure out which child will provide the largest financial help, which is what many parents are probably curious about.

1. Background

The theoretical framework in this section is adopted from Cox et al. (2004). Consider a family in which financial transfers are made between two family members. For simplicity, I assume that the "net giver" whose transfer gift is bigger than transfer receipt has an altruistic preference, while the "net receiver" does not. So the two family members are assumed to consist of an altruistic donor and a non-altruistic recipient.

Suppose the utility of the donor, U_d, is given by:

$$U_d = U(C_d, s, V(C_r, s)), \tag{1}$$

where, V is the well-being of the recipient; C_d and C_r are consumption levels for the donor and the recipient, respectively; and s denotes "services" that the recipient might provide to the donor.[18] The donor's altruistic motive is indicated by $\partial U / \partial V > 0$. Exchange motives may be present as

[18] Cox et al. (2004) consider "services" as a catchall term standing for anything provided by the recipient in return for the money received from the donor. It can be, for example, help with home production, babysitting, visiting, caregiving, behaving in a way the donor prefers, or future financial transfers as the discounted value

well if the donor values services from the recipient, $\partial U / \partial s > 0$ and the recipient's utility falls with provision of services, $\partial V / \partial s < 0$.

The budget constraints for donor and recipient can be written:

$$C_d = I_d - T \text{ and } C_r = I_r + T, \tag{2}$$

where, T denotes financial transfers given by the donor to the recipient; and I_d and I_r are pre-transfer incomes of the donor and the recipient, respectively. Since C_r is a normal good for the donor, transfers are increasing in the donor's pre-transfer income, $\partial T / \partial I_d > 0$.

If transfers are altruistically motivated, we expect $\partial T / \partial I_r < 0$ because the donor believes that the recipient with higher [lower] pre-transfer income requires smaller [larger] transfers to attain the optimal level of consumption. Instead, if transfers are exchange-motivated, the relationship between T and I_r will be ambiguous. Suppose transfers are payments for services that the donor purchases from the recipient at an implicit price, p, so that $T = ps$. Cox (1987) shows $\partial s / \partial I_r < 0$ and $\partial p / \partial I_r > 0$, i.e., a richer recipient will provide smaller services to the donor, and the donor has to pay a higher price for the services provided by a richer recipient. Therefore, transfers can rise or fall with I_r depending on whether the price effect dominates the quantity effect. In this case, the functional form of transfers in the recipient's pre-transfer income will be non-linear.

As seen in the previous chapter, the dominant direction of private transfers in the U.S. is downward; therefore, most empirical studies using U.S. data focus on the motivation of parental transfers to their children rather than adult children's transfers to their elderly parents. The extensive empirical literature comes to mixed conclusions on whether inter-vivos transfers are compensatory or not. McGarry and Schoeni (1995, 1997), Dunn and Phillips (1997), McGarry (1999, 2000), and Hochguertel and Ohlsson (2000), for example, report that parental transfers compensate worse-off children. But Laferrère and Wolff (2004) discuss some empirical studies providing evidence against compensatory transfers and rejecting altruism. Cox (1987), Cox and Rank (1992), and Cox, Eser, and Jimenez (1998) also suggest that transfers may represent payment to the recipient for the provision of services rather than altruism. Cox and Jakubson (1995) even argue that the anti-poverty effectiveness of public transfers can be magnified by private-transfer responses that are basically exchange-motivated.

By contrast, the direction of familial transfers observed in Korean datasets is more likely to be

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of repayments if the money received from the donor is a loan.

upward; as a result, this study has a different angle. In the remaining parts of this chapter, I estimate the familial transfer model in which adult children are net givers and their elderly parents are net receivers. If children's transfers are made in a compensatory fashion from their altruistic motive, an increase in their parents' pre-transfer income, for example, by public assistance leads to a decrease in their transfers to the parents. This altruism story and resultant crowding-out of private transfers by public transfers are supported in Korean empirical studies by Kang and Jeon (2005) and Kim (2006). But Jin (1999) and Sung (2006) do not find such evidence.

2. Which Parents Benefit More from Children?

This section examines parental characteristics as explanatory variables for net transfer receipt from children. The regression results using data from the KLoSA and the KReIS are provided in turn.

A. KLoSA Regression Results

In the 2006 KLoSA data, financial transfers received from and given to each child in 2005 are reported by the respondent of the Children section in the survey. Regular transfers and irregular (or occasional) transfers are added up to construct total transfers. I calculate net total annual transfer receipt from each child by subtracting total annual transfer gift to the child from total annual transfer receipt from the child. Then I sum up net total annual transfer receipt from every child of the respondent to generate the sum of net total annual transfer receipt of the respondent as the dependent variable.

The simple model discussed in the previous section provides some guidance to the empirical specifications of transfer functions. First, as long as we do not know the motivation of transfers *ex ante*, the functional form of transfers needs to be non-linear in the recipient's pre-transfer income. After trying polynomials of the third and the fourth order that turned out inappropriate in criteria of statistical significance, I choose a quadratic function. Second, considering heterogeneous budget constraints depending on household characteristics given pre-transfer incomes, I control for the recipient's age, gender, family size, education level, wealth, heath status, work status, and region of residence. Third, in order to account for differential numbers of donors in a family, we need to control for the number of children of the respondent; I further control for the number of daughters and sons separately to address potential gender differences in supporting elderly parents. Finally, I attempt to address other observed characteristics that might affect transfer behavior, such as religious preference, the number of grandchildren, expectations about financial situation of recipients and their children, and expectations about pubic support for their old age.

Baseline regression results are reported in columns (a) and (b) of Table 13. First, transfer surplus (i.e., the sum of net total annual transfer receipt from every adult child in the family) increases with the recipient's age until late 70s, and then decreases. Remember that a similar pattern is also found in the transfer in/out profiles by parent age in Table 2. Female respondents report more transfer surplus from their children conditioned on their marital status.

Second, transfer surplus is negatively correlated with the recipient's income for almost entire range of their income distribution. The recipient's net worth also reduces transfer surplus. These results clearly show the main motivation of familial transfers in Korea – an altruistic motive to alleviate the recipient's financial difficulties.[19]

Third, the son provides bigger financial help to the parents than the daughter. The parameter estimates for the number of sons and the number of daughters in column (a) suggest that one more son gives his parents additional transfer surplus of 346,000 won while one more daughter gives her parents additional transfer surplus of 143,000 won. When the number of the recipient's grandchildren is included in the set of explanatory variables as in column (b), the magnitudes of the coefficients for the number of sons and the number of daughters are reduced significantly so that one more daughter, in particular, does not increase transfer surplus anymore. Therefore, one may imagine that the motivation of daughters' financial transfers to their elderly parents is closely related to their children (e.g., in return for grandparents' babysitting service).

Fourth, parental education level increases transfer surplus until 9 years of completed schooling (high school entrance level) but further parental education decreases transfer surplus. This nonlinear relationship between parental education and net transfers from children probably reflects the fact that parental education delivers indirect information on their children's economic standings. If undereducated parents tend to have low-income children, parents' additional education implies their children's higher income that can increase net transfers from the children to some levels of parental education. But highly educated parents may not need financial help from their children or they are even able to give net transfers to their children, so parental education eventually decreases transfer surplus from a certain level of their education.[20]

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[19] As mentioned earlier, using the KLIPS data, Kim (2006) also concludes that private transfers are altruistically motivated in Korea, from findings that private transfer receipts are negatively correlated with the recipient income and they are crowded out by public assistance. Moreover, Kim (2006) finds qualitatively similar results when both the donor's and the recipient's characteristics including their incomes are controlled for using a split-off children sample.

[20] The KLoSA data contain detailed information on the respondents' formal education – the highest level of school they attended and whether they got the diploma, just completed course of study, dropped out, or passed an equivalency test. Using these variables, I construct a variable of imputed years of education that is used in the regressions. According to this variable, the KLoSA respondents have 8.2 years of schooling on average, and 62.5 percent have education levels of 9 years or below.

Fifth, those who live in the Metropolitan area (Seoul, Incheon, and Gyeonggi province) report a larger transfer surplus than those in other provinces, which probably reflects the recipient's higher living cost and/or the donor's higher income in that area. More transfer surplus seems to go to divorced parents and those who reported their health status as poor. Other parental characteristics such as work status and religious preference do not affect transfer surplus to a degree that has statistical significance.

Furthermore, the KLoSA data contain survey results on respondents' subjective expectation feelings to several issues. Among others, I select their expectations about the financial situation in their future, the relative financial situation of their children's generation compared to theirs, and potential support of their old age by government. These expectations are rescaled between 0 and 1 with an interval of 0.1 and additionally included in the set of explanatory variables in columns (c) and (d) to see how they are correlated with familial transfer behavior.

The results show that expectations on tomorrow's situations affect today's transfer behavior. Those who expect children's generation will be better off than their generation tend to have more transfer surplus than those not. They probably make fewer transfers to their children or receive more transfers from their children who may have similar expectations. A pessimistic expectation about their future financial situation might also yield transfer surplus, but the relationship is not statistically significant. So an expectation about the relative financial situation of the respondents to their children seems more important than an expectation about the absolute level of their own financial situation in determining transfer balance between them.

The most interesting part would be the effect of an expectation about public support on private transfer behavior. The result suggests that those who expect that government will provide old-age support have smaller transfer surplus within their families. They probably make more transfers to their children or receive fewer transfers from their children who may have similar expectations. As long as familial transfers are not observed by government in general and public transfers are made in a compensatory fashion, this can be regarded as a "moral hazard" behavior. The crowding-out effect of realized public transfers on private transfers has been documented in the literature (see Kang and Jeon (2005), Kim (2006) for example), but this potential crowding-out effect of a positive expectation about public transfers on private transfers is first suggested in this paper.

<Table 13> Which Parents Benefit More from Children?: KLoSA Data

(10,000 won)

Dependent variable:	(a)		(b)		(c)		(d)	
Net transfer from noncoresident children	parameter	t-value	parameter	t-value	parameter	t-value	parameter	t-value
Intercept	-1353.6	-5.05***	-1342.4	-5.00***	-1420.5	-5.29***	-1408.3	-5.23***
Age	31.7	3.91***	32.6	3.99***	32.1	3.95***	32.9	4.03***
Age squared	-0.2	-2.84***	-0.2	-3.04***	-0.2	-2.88***	-0.2	-3.06***
Female	40.5	1.93*	38.2	1.81*	40.1	1.91*	37.8	1.80*
Annual income/10^3	-15.6	-2.83***	-15.3	-2.79***	-15.1	-2.75***	-14.9	-2.72***
Annual income squared/10^6	0.1	2.22**	0.1	2.18**	0.1	2.18**	0.1	2.15**
Net worth/10^6	-644.2	-3.10***	-637.2	-3.06***	-653.2	-3.14***	-646.8	-3.11***
Number of daughters	14.3	1.82*	2.9	0.28	14.5	1.84*	3.8	0.37
Number of sons	34.6	3.47***	23.4	1.96**	34.2	3.43***	23.7	1.99**
Number of household members	0.4	0.07	1.1	0.17	0.0	0.00	0.6	0.09
Marital status (omitted: Currently married)								
Separated	33.7	0.49	36.5	0.53	30.2	0.44	32.8	0.47
Divorced	73.8	1.47	75.6	1.49	80.3	1.60	82.1	1.62*
Widowed	-28.6	-1.13	-30.7	-1.20	-24.5	-0.97	-26.4	-1.03
Health status (omitted: Fair)								
Very good	-54.6	-1.29	-53.7	-1.27	-55.6	-1.32	-54.8	-1.30
Good	13.9	0.67	13.8	0.67	14.8	0.71	14.7	0.71
Poor	42.1	1.79*	43.5	1.85*	44.2	1.88*	45.6	1.93*
Very poor	-0.6	-0.01	2.0	0.05	1.9	0.05	4.3	0.11
Years of education	20.1	2.92***	20.6	2.99***	20.3	2.95***	20.8	3.02***
Years of education squared	-1.1	-3.02***	-1.1	-3.06***	-1.1	-3.09***	-1.1	-3.12***
Not working	2.2	0.11	2.3	0.11	4.7	0.23	4.8	0.23
Province (omitted: Metropolitan area)								
Gangwon	-142.6	-3.08***	-143.6	-3.10***	-148.3	-3.18***	-149.3	-3.20***
Gyeongsang	-58.2	-2.84***	-59.1	-2.87***	-56.0	-2.71***	-57.0	-2.75***
Jeolla	-81.1	-2.92***	-82.1	-2.95***	-85.7	-3.06***	-86.4	-3.08***
Chungcheong	-7.1	-0.24	-8.5	-0.29	-5.1	-0.17	-6.5	-0.22
Religious preference (omitted: No preference)								
Protestant	31.5	1.38	32.0	1.40	32.4	1.42	32.9	1.44
Catholic	10.6	0.35	11.7	0.38	11.4	0.38	12.5	0.41
Buddhist	15.2	0.71	15.8	0.74	16.2	0.76	16.8	0.79
Won Buddhist	110.4	0.59	112.1	0.59	111.6	0.59	113.1	0.60
Other	42.0	0.48	43.5	0.49	35.0	0.40	36.4	0.41
Number of grandchildren			7.6	1.78*			7.2	1.68*
Subjective expectation feeling (chances: 0-1)								
Financial situation will be worse					25.0	0.76	26.0	0.79
Children's generation will be better off					94.6	2.55**	91.8	2.47**
Government will provide old age support					-67.0	-1.89*	-67.0	-1.89*
Number of families	6,488		6,474		6,488		6,474	
F	10.94		10.69		10.24		10.02	
Adjusted R-squared	.0412		.0416		.0423		.0427	

Note: ***, **, and * indicate statistical significance at the 1, 5, and 10 percent level, respectively.

B. KReIS Regression Results

Since the KReIS survey asked about transfers that respondents or spouses received from and given to coresident children as well as noncoresident children, Table 13 reports regression results on net annual transfer receipts by children's coresidence status.[21] Column (a) uses net transfer receipts

[21] The unit of analysis here is an individual (or a respondent), not a family. Therefore, I estimate the model with clustered error terms to control for correlation within families and calculate the White-Huber robust

from all children irrespective of coresident status as the dependent variable, and columns (b) and (c) use net transfer receipts from coresident children and from noncoresident children respectively. Therefore, column (c) results are most comparable to the KLoSA regression results in Table 12.

In every specification, net transfers are negatively correlated with the recipient's income for almost entire range of their income distribution, which confirms that Korean familial transfers operate in a compensatory fashion. The crowding-out of noncoresident children's transfers by transfers from coresident children and others listed in Table 5 also supports the altruism theory. Net worth is also negatively correlated with net transfers although the relationship is not significant for net transfers from noncoresident children. Parental education level exhibits a nonlinear relationship with net transfer receipts from their children, which is also found in Table 13 of the KLoSA results.

On the other hand, net transfers from coresident children show different relationships with some parental characteristics compared to those from noncoresident children. First, female respondents, household heads, or those who live with their spouses tend to have larger transfer deficits from their coresident children whereas they tend to have larger transfer surpluses from their noncoresident children.

Second, the age structure of household members has different effects on parents' net transfer receipts by children's coresidence status. The number of household members aged 0-4 is positively correlated with net transfers from coresident children but it is negatively correlated with those from noncoresident children. This may reflect coresident children's transfers in return for their parents' babysitting service because coresident infants are probably coresident children's children, not noncoresident children's. The number of household members aged 10-19 (and aged 20-39) in the household is negatively correlated with net transfers from coresident children, reflecting parents' substantial expenditure on teenagers (and probably single children in their 20s or 30s) for schooling, private tutoring, clothing, and so on. The number of household members aged 40-64 is negatively correlated with net transfers from noncoresident children, which may suggest that the existence of potential supporters for elderly parents in the household reduces transfers from noncoresident children.[22]

Third, noncoresident sons give more transfers than noncoresident daughters. One more son gives his parents additional transfer surplus of 250,000 won while one more daughter gives her parents additional transfer surplus of 150,000 won. But coresident children ("net receivers" on average) show no significant difference by gender.

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standard errors. A household level analysis using the age-eligible financial respondents' observations yields qualitatively similar results.

[22] Those aged 40-64 may include parents themselves, but the KReIS data do not provide more detailed

<Table 14> Which Parents Benefit More from Children?: KReIS Data

(1,000 won)

Dependent variable: Net transfer from	(a) All children			(b) Coresident children			(c) Noncoresident children		
	parameter	t-value		parameter	t-value		parameter	t-value	
Annual income	-.06375	-7.14	***	-.03338	-4.71	***	-.03341	-6.42	***
Annual income squared/10^3	.00011	5.32	***	.00007	5.00	***	.00004	3.59	***
Net transfer from coresident children							-.04079	-4.95	***
Net transfer from noncoresident children				-.05471	-5.20	***			
Net transfer from others	.01395	0.18		.07711	1.05		-.06352	-1.95	**
Annual saving	-.02392	-1.19		-.03064	-1.92	*	.00585	0.66	
Net worth	-.00142	-2.85	***	-.00146	-3.49	***	-.00002	-0.06	
Age	1234.4	13.82	***	1130.1	15.04	***	156.3	2.83	***
Age squared	-8.2	-12.87	***	-7.8	-14.87	***	-0.8	-1.91	*
Female	-245.3	-1.71	*	-757.9	-6.33	***	510.1	5.93	***
Household head	-942.7	-5.87	***	-1620.7	-11.51	***	649.5	7.83	***
Education level (omitted: No schooling)									
Primary school	1059.0	6.88	***	428.9	3.94	***	682.6	6.05	***
Middle school	1701.6	7.87	***	867.3	5.14	***	916.0	6.40	***
High school	1046.8	3.91	***	22.0	0.11		1082.6	5.67	***
College	303.5	0.68		-416.6	-1.21		743.0	2.48	**
Graduate school	-2206.6	-1.73	*	-2168.1	-2.07	**	-129.1	-0.16	*
Married	146.5	0.26		405.2	0.86		-256.5	-0.75	
Living with spouse	-453.6	-0.79		-1370.7	-2.80	***	912.1	2.62	***
Number of household members									
Age 0-4	365.2	1.12		1089.9	3.74	***	-720.4	-4.13	***
Age 5-9	-24.0	-0.09		320.6	1.48		-350.7	-1.97	**
Age 10-19	-1489.6	-7.65	***	-1466.2	-7.95	***	-84.5	-1.02	
Age 20-39	-495.1	-3.59	***	-416.4	-3.45	***	-100.0	-1.33	
Age 40-64	-680.5	-4.23	***	26.5	0.20		-745.1	-7.76	***
Age 65 or older	-597.6	-2.75	***	-345.5	-1.76	*	-280.1	-2.60	***
Number of sons	220.1	2.98	***	-17.7	-0.35		250.3	4.46	***
Number of daughters	114.2	1.85	*	-31.2	-0.65		152.2	3.71	***
Caring for grandchild	2762.6	9.56	***	920.8	4.75	***	1981.6	8.95	***
Province (omitted: Metropolitan area)									
Gangwon	-1134.9	-3.41	***	-390.0	-1.72	*	-802.2	-3.30	***
Gyeongsang	-481.4	-2.30	**	-277.5	-1.68	*	-226.6	-1.63	
Jeolla	-545.8	-1.93	*	-657.9	-3.28	***	91.5	0.45	
Chungcheong	-757.0	-2.93	***	-466.3	-2.22	**	-325.9	-2.01	**
Jeju	-1246.8	-2.54	**	-706.2	-1.72	*	-599.4	-2.32	**
Intercept	-42086.3	-13.18	***	-37142.7	-13.63	***	-6733.2	-3.51	***
Number of observations		8629			8629			8629	
F		35.10			23.61			20.16	
R-squared		0.233			0.204			0.107	

Note: ***, **, and * indicate statistical significance at the 1, 5, and 10 percent level, respectively.

Finally, more net transfer receipts are reported by those who are caring for their grandchildren (regardless of whether they live together or not) almost entirely. Grandparents who provide extensive

information on the age structure other than these age categories.

caregiving to their grandchildren get more transfer surplus of 1,981,000 won from noncoresident children (probably the grandchildren's parents) than grandparents who do not. This result provides evidence to the existence of exchange motive in familial transfers.

3. Which Child Gives More to Parents?

Now I turn to the child's side to examine the donor's characteristics. We can also control for the donor's and the recipient's observed characteristics simultaneously in a cross-section model with a parent-child pair being the unit of analysis. But familial transfer behavior can be affected by unobserved family-specific characteristics, which are arguably common across children within a family. Thus, to investigate which child gives more to her/his parents in a family, the best empirical strategy would be a family fixed-effect specification using a sibling sample that consists of multiple parent-child pairs in the family. I confine children to adults (aged 19 or over) and those who do not live with their parents and are not students at the time of survey. Considering potential differences in the effects of donor's characteristics depending on whether the transfer is regular financial support or occasional irregular transfer, I use three different dependent variables: the amounts of net total/regular/irregular transfer receipts from each adult child in the family.

The main interest is how net transfer receipt is affected by the child's demographic characteristics such as age, birth order, gender, marital status, number of children, and financial status. Since the KLoSA data do not have information on children's income or wealth, I use years of education, home ownership, and work status as proxies for their financial status. In addition, I use variables related to intimacy in the relationship between the respondent and each child. These variables are the child's residential distance from the respondent, frequency of contact in person and by phone, mail, or e-mail, receipts and gifts of various in-kind transfers. One may have interest in how in-kind transfer variables are related to financial transfers.

Table 15 reports regression results from these within-family estimations. To account for the potential relationship of in-kind transfers with net financial transfers, I include dummies for in-kind transfer gift and receipt in specification (a), and then dummies for detailed items of in-kind transfer gift and receipt in specification (b).

Children's demographic variables exhibit some interesting relationships with net transfers given to their parents. First, the eldest child in the family gives more net regular financial support to the parents by 230,000 won per year. Similarly, the son gives more by 230,000 won per year than the daughter. Thus, both estimates imply that the eldest son makes more transfers than his siblings on a regular base by 460,000 won per year. This reflects an old tradition that the eldest son usually

undertakes the responsibility to support his elderly parents and inherits their property (and also the duty of celebrating annual Confucian memorial services for his ancestors) afterwards.

Second, a more educated child gives more total transfer surplus to the parent by 90,000 won per additional one year of education. Looking at regular transfer only, additional transfer surplus from the child's one more year of education is 65,000 won per year. Irregular transfer surplus from child education does not have any statistical significance in every specification.[23] In addition, when a college graduate dummy is included instead of years of education, total (regular) transfer surplus from the child's college graduation is 430,000 won (260,000 won) per year. Therefore, a college-graduate child gives more net regular transfers than her/his siblings who have not graduated from college by only 20,000 won (roughly 20 dollars) per month. If children's education has been funded mainly by their parents, this "repayment" looks too small.[24] In light of this, child education can hardly be a retirement plan for the parents.

Third, a child who has her/his own home makes a larger amount of regular transfer by 340,000 won per year than her/his siblings who do not have home ownership. Since the 2006 KLoSA data have no information on children's income or assets other than home, homeownership can be used as a reliable proxy for the economic standing of the child. This result seems trivial but consistent with the theory that transfers are increasing in the donor's pre-transfer income.

Fourth, when we look at total transfers, the child's work status does not seem to be related with transfer behavior. However, looking at regular transfers and irregular transfers separately, we can find an interesting pattern of transfer behavior by the child's work status. A child who has a job makes more regular transfers by 310,000 won per year than her/his sibling who has no job. But the latter makes more irregular transfers than the former by the similar amount, which leads to roughly the same amount of resultant total transfers regardless of the child's work status.

Fifth, a child who is currently married makes more regular transfers than a child who is still single. A child with other marital status does not show any significant difference compared with an unmarried child.

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[23] Although not provided in this paper, the specification that includes the square term of years of education is estimated with statistical significance only for the model of net regular transfer. The estimated quadratic function of net regular transfer is increasing in the years of education higher than 11.5 years. But 83.5 percent of the children in the regression sample have at least 12 years of education, so in most cases net transfers from children are positively correlated with their education levels.

[24] According to OECD's *Education at a Glance 2007*, annual expenditure per student on public education in Korea as of 2004 was estimated as 4,490 dollars for primary education, 6,761 dollars for secondary education, and 7,068 dollars for tertiary education. Furthermore, it is well-known that Korean parents spend too much money on the private tutoring for their children. As of 2007, average monthly spending per student on private tutoring is estimated by 276 dollars for primary school, 338 dollars for middle school, and 386 dollars for high school (Korea National Statistics Office, February 2008).

<Table 15> Which Child Gives More to Parents?: Family Fixed-Effect Models, KLoSA Data

Dependent variable: Net annual transfer from each child to parents (unit: 10,000 won)	(a) Total	(a) Regular	(a) Irregular	(b) Total	(b) Regular	(b) Irregular
Intercept	-167.9	-133.0	-34.9	-184.0	-142.1	-41.9
Age	-0.8	-1.0	0.2	-0.9	-0.9	0.1
Eldest child	20.6	22.9***	-2.2	22.2	22.5***	-0.3
Son	31.3**	22.7***	8.5	30.1*	23.0***	7.0
Years of education	9.1***	6.5***	2.6	9.0***	6.7***	2.3
Home ownership	33.3**	34.0***	-0.7	34.5**	33.4***	1.1
Working	-2.8	31.2***	-34.0**	-1.2	30.9***	-32.1**
Marital status (omitted: Single)						
Currently married	15.1	30.3**	-15.2	19.3	29.8*	-10.5
Separated	-49.9	-48.6	-1.2	-45.4	-48.4	3.0
Divorced	24.1	35.0	-10.9	22.2	28.4	-6.3
Widowed	116.4	66.8	49.6	120.7	64.6	56.0
Number of children	0.5	-3.5	4.0	0.9	-3.3	4.2
Distance from parents (omitted: More than a 2-hour distance by public transportation)						
Within a 30-minute distance	6.6	-12.5	19.1	4.4	-12.4	16.8
Within a 1-hour distance	-39.8*	-0.5	-39.3**	-39.8*	-0.2	-39.7**
Within a 2-hour distance	-8.6	-2.3	-6.2	-10.6	-2.5	-8.1
Frequency of face-to-face contact (omitted: Never)						
More than 4 times a week	226.5	119.7	106.9	217.7	116.4	101.3
2-3 times a week	158.1	139.8	18.4	150.5	136.5	14.0
Once a week	153.1	152.2	0.9	144.8	150.4	-5.6
Twice a month	160.6	128.0	32.6	151.9	125.5	26.4
Once a month	142.5	115.4	27.1	134.1	112.3	21.7
5-6 times a year	149.1	110.7	38.4	142.2	107.9	34.3
3-4 times a year	143.4	110.7	32.6	133.7	106.3	27.4
1-2 times a year	149.1	116.2	32.9	138.0	113.1	24.9
Almost never a year	130.6	88.2	42.4	123.1	87.9	35.2
Frequency of phone/(e-)mail contact (omitted: Never)						
More than 4 times a week	33.8	15.5	18.4	60.1	19.8	40.3
2-3 times a week	-19.2	-28.1	8.9	9.6	-22.0	31.6
Once a week	-44.4	-38.7	-5.7	-14.6	-33.1	18.4
Twice a month	-54.3	-51.1	-3.1	-29.5	-45.7	16.2
Once a month	-52.1	-50.6	-1.5	-22.8	-45.2	22.5
5-6 times a year	-68.3	-63.3	-5.1	-49.0	-59.1	10.1
3-4 times a year	-90.7	-89.6	-1.1	-61.5	-83.5	22.0
1-2 times a year	-138.1	-138.2	0.1	-107.3	-133.2	25.9
Almost never a year	-72.2	-40.3	-32.0	-51.0	-37.5	-13.5
Giving in-kind transfer to parents	-11.5	-10.2	-1.3			
Leisure (e.g., travel)				145.2*	149.2***	-4.0
Health-related products (e.g., vitamins, equipments, etc.)				-5.3	-2.2	-3.1
Household items				11.3	5.9	5.4
Electronics				-25.3	-55.4*	30.1
Dining out and foods				-12.5	-13.3	0.8
Other				0.4	15.3	-14.9
Receiving in-kind transfer from parents	82.2***	-2.4	84.6***			
Leisure (e.g., travel)				-106.9	-22.4	-84.5
Health-related products (e.g., vitamins, equipments, etc.)				367.8***	-7.8	375.6***
Household items				-122.1*	-57.4	-64.7
Electronics				-2.9	39.0	-41.9
Dining out and foods				48.9	12.1	36.8
Other				43.0	-10.7	53.7
Observations: 6,299 (2,052 families)						
R-squared (within families)	.020	.044	.012	.024	.048	.016

Note: ***, **, and * indicate statistical significance at the 1, 5, and 10 percent level, respectively.

Sixth, parents seem to have the least financial gain from a child who lives within a 1-hour

distance (by public transportation) than other children living closer or farther. The frequency of a child's face-to-face contact or phone/mail/e-mail contact with the respondent does not show any significant relationship with transfer behavior.[25]

Finally, parents receive a larger amount of net irregular transfer from a child whom they gave some in-kind transfers than from other child whom they did not. If this is because parents gave a smaller amount of irregular financial help to the child who received some in-kind transfers, the relationship implies that in-kind transfer and irregular financial transfer are substitutes. Instead, if this is because the child gave a greater amount of irregular financial help to the parents, the relationship implies that children's occasional financial transfers are made in return for the in-kind transfers received from their parents. Specification (b) examines what kind of in-kind transfers are related to financial transfers. The results show that a child who provides parents with a leisure gift such as travel gift certificates is probably a regular financial helper to the parents. In addition, a child's occasional financial transfer is made probably in return for parental gift of health-related products.

The KReIS data do not have any information on the respondents' children except the number of sons and daughters. But the KReIS survey contains a useful question for this study, which reads: "Which child is providing the biggest financial help to you with nothing in return?" To this question, the respondent reports the birth order and gender of the child. So we can identify the major financial supporter's birth order and gender. Table 16 summarizes the best information that can be drawn from the data. We find again a dominant role of the eldest son in supporting elderly parents. At least 42 percent of KReIS households point out their eldest sons as major financial supporters.

<Table 16> Major Financial Supporter among Children: KReIS Data

(%)

Eldest son	42.4 (53.6)	Other children	46.4
Firstborn and only son	9.8	Other son	10.8
Non-firstborn but only son	5.5	Daughter with no brother	6.7
Non-only son but eldest son	27.2	Daughter with 1 brother	15.6
Non-only son but can be eldest son	(11.2)	Daughter with 2 or more brothers	13.3

Note: All numbers are weighted using household weights.
Source: Calculated by the author using the 2005 KReIS data.

[25] At the beginning of my estimation, a regression using the entire KLoSA children sample showed that a child who had never contacted the respondent in person made a significantly larger transfer than other children who had been in some contact. But this result was driven by an extreme outlier who made a huge amount of net transfer (43,200,000 won a year), which I have dropped from the sample.

CHAPTER 4

Deteriorating Familial Support and Policies for Old-Age Security

The tradition of familial support for the elderly in Korea is on a decreasing turn due to broadly documented socioeconomic factors such as nuclear family, individualism, population ageing, and changing preferences for multigenerational coresidence. In this regard, the demand and expectation that the government should start programs to guarantee the income of the elderly are growing. This chapter describes changes in familial support mechanism and discusses potential income sources of the elderly as a meaningful step toward policies for old-age income security.

1. Changes in Familial Support Mechanism

A. Decreasing Role of Familial Support as Main Source of Elderly Income

Familial transfer has been losing importance as a private safety net for Korean elderly. As shown in Table 17, the proportion of Korean elderly aged 60 or older who report that their main source of income is financial assistance from their children has been decreased from 72 percent in 1980 to 56 percent in 1995, and 31 percent in 2003. Instead, the proportion of public transfers as the main income has been increased because of welfare expansion after financial crisis in the late 1990s. As a result, a quarter of the elderly aged 60 or older was living mainly on public transfers as of 2003. Considering that public transfers tend to crowd out private transfers, private demand for welfare programs for the elderly is likely to further increase.

<Table 17> Changing Patterns of Main Source of the Elderly (Aged 60 or Older) Income in Korea

(%)

Income source	Items	1980	1995	2003
Labor	Wage, own business, etc	16.2	26.6	30.4
Property	Rent, interest, dividend, deposit withdrawal, private pension, etc	5.5	9.9	9.9
Private transfers	Subtotal	75.6	56.6	31.4
	From children	72.4	56.3	31.1
	From other persons	3.2	0.3	0.3
Public transfers	Subtotal	2.0	6.6	25.6
	Public pension, social insurance	0.8	2.9	10.6
	Public assistance	1.2	3.7	15.0

Source: Kim (2006), Table 2-13, p. 58. The 1980 and 1995 figures are from Seok and Kim (2000) who cited Japanese government's cross-country survey, and the 2003 figures are calculated by Kim (2006) using the additional survey for the aged cohort in the 2003 KLIPS data.

B. Changing Patterns of Children's Coresidence with and Support for Elderly Parents

This study focuses on intergenerational transfer as a pillar of familial support mechanism. But another pillar should be intergenerational coresidence. Relatively high prevalence of coresidence between elderly parents and adult children in Korea is generally interpreted as a structural manifestation of traditional family norms.

Although fewer parents are expecting to live with their adult children in these days, some parents are probably curious about which child will live with them in their old age.[26] Table 18 provides an answer to this question. Using KLoSA data, I investigate adult children's characteristics as the determinants of their status of coresidence with their parents. Again, I confine children sample to those who were aged 19 or older and were not students at the time of survey. To control for unobserved familial heterogeneity and also to see the results from a parent's point of view, I compare the likelihoods of coresidence with elderly parents between siblings within a family using fixed-effect logit estimation (Chamberlain logit model).

Column (a) reports the likelihood of coresidence increases when the child is the eldest and a son, which reflects a traditional norm of the eldest son's coresidence with his parents. The positive effect of the years of education of a child on the coresidence likelihood implies that more investment in a child's education and resultant higher earning potential of the child would place more responsibility of supporting elderly parents on the child. The positive effect of a child's home ownership and having a job also indicates that elderly parents tend to live with children with better economic standings. The positive correlation of coresidence with the number of children of the child suggests that there is another motivation of coresidence with parents – taking care of grandchildren. This instrumental concern of exchanging the adult child's old-age support with the elderly parents' childcare service motivates the formation of three-generation households. Looking at marital status, married children are less likely to live with their parents than unmarried children. However, if they get separated, divorced, or widowed, the probability of their coresidence with their parents increases again.

In columns (b) and (c), I examine the effects of home ownership and work status interacted by marital status. Home ownership and employment raise the likelihood of married children's

[26] According to a survey of Korean Baby-Boomers (born between 1955 and 1963), conducted in 2007, 69.7 percent believe that children should leave parental home after marriage (The Korea Economic Daily (*Han-Gook-Gyeong-Je-Sin-Moon*), June 18, 2007).

coresidence with their parents, which shows again that the abler children are more likely to support their elderly parents. Unmarried children, however, are more likely to leave their parents if they have a necessary condition for independence – jobs.

<Table 18> Which Child Lives with Elderly Parents?: Fixed-Effect Logit Models, KLoSA Data

Dependent variable:	(a)		(b)		(c)	
Whether living with parents	parameter	z-value	parameter	z-value	Parameter	z-value
Age	0.016	1.69*	0.019	1.98**	0.019	2.05**
Eldest child	0.190	2.33**	0.186	2.26**	0.177	2.16**
Son	1.020	12.39***	0.872	10.19***	1.200	15.82***
Years of education	0.066	3.55***	0.063	3.39***	0.088	4.80***
Number of children	0.190	3.83***	0.199	3.98***	0.195	3.97***
Home ownership	0.264	2.81***				
Working	0.323	3.72***				
Married	-3.009	-23.02***	-3.609	-22.24***		
Married & own home			0.276	2.74***		
Married & working			0.762	6.35***		
Separated	-0.712	-1.65*	-1.843	-3.00***	1.149	1.84*
Separated & own home			-0.138	-0.10	0.204	0.14
Separated & working			2.368	2.58***	2.365	2.51**
Divorced	-0.519	-2.55**	-0.863	-2.75***	2.164	6.93***
Divorced & own home			-0.229	-0.50	-0.264	-0.57
Divorced & working			0.600	1.61	0.567	1.48
Widowed	-1.328	-4.77***	-1.556	-3.89***	1.580	4.10***
Widowed & own home			-0.369	-0.73	-0.448	-0.87
Widowed & working			0.544	1.12	0.482	0.97
Single					3.366	19.20***
Single & own home					-0.244	-0.86
Single & working					-0.529	-3.44***
Number of observations	7,164		7,164		7,164	
Log likelihood	-1631.7		-1609.0		-1632.1	
Pseudo R-squared	0.343		0.352		0.342	

In traditional extended families, the eldest sons undertake the most responsibility to support their elderly parents. The regression results in Table 18 show that there still remains a tendency of the eldest son's supporting elderly parents by intergenerational coresidence as well. However, recent socioeconomic changes in Korea are raising doubts about the sustainability of the tradition of familial support.

The 2003 KLIPS contains an additional survey for the aged (the KLIPS respondents who are aged 50 or older at the time of survey), in which the respondents were asked who undertook the responsibility of supporting their elderly parents. As shown in Table 19, 71 percent of aged respondents report that the eldest sons lived with or supported their deceased parents while they

were alive (question (a)), whereas only 45 percent report that the eldest sons are currently undertaking the responsibility of supporting their elderly parents (question (b)). Meanwhile, the proportion of the elderly taking care of themselves without children's support has increased from 19 percent to 35 percent. Considering the average age of the respondents whose parents are still alive must be lower than that of the respondents whose parents have died, we can infer that traditional norms of the eldest son's responsibility to support his elderly parents have been deteriorating and the responsibility has been shifting to the elderly themselves.[27]

<Table 19> Changing Patterns of Undertaking Responsibility to Support the Elderly: KLIPS Data

Coresident or supporter for the elderly parents	(a) Who lived with or supported your deceased parents while they were alive? (%, n=2,597)	(b) Who lives with or supports your elderly parents now? (%, n=799)	Changes (% point)
Alone by themselves	18.6	34.5	15.9
The eldest son/daughter-in-law	70.6	45.2	-25.4
Other sons/daughters-in-law	6.5	13.8	7.2
Daughters/sons-in-law	2.8	4.1	1.4
All children together	1.5	2.5	1.0

Source: The additional survey for the old cohort (aged 50 or older) in the 2003 KLIPS.

2. Policies for Old-Age Income Security

The previous section suggests that Korean elderly have been undertaking more responsibilities for their income security. Then, do they have adequate means to do that? This section briefly describes their incomes and wealth by age and by income quintile to have a basic idea about potential ways to old-age security.

The 2005 KReIS and the 2006 KLoSA have a fairly comprehensive set of data items on the respondent's assets and debts as well as detailed components of annual income. In particular, the availability of household wealth data is good news for researchers given the rarity of official wealth data.[28] Tables 20 and 21 respectively report mean amounts of annual income, assets, and debts by the KReIS and the KLoSA respondents' ages. Table 22A reports the same items for the KLoSA

[27] Although this study deals with financial aspects of the elderly life, emotional difficulties suffered by the lonely elderly also cause serious social problems such as elderly suicide. As of 2004, 4,118 elderly people aged 60 or older committed suicide in Korea, 11 persons a day. The elderly suicide rate has increased 4 times for a decade in Korea, ranked top among OECD countries. The suicide rate of the elderly living alone is three times higher than that of the average elderly. According to the 2006 elderly statistics reported by Korea National Statistical Office, 18 percent of people aged 65 or older live alone without any family members.

[28] The 2006 Household Wealth Survey conducted by Korea National Statistic Office can be regarded as a starting point of collecting wealth data although the raw data of the survey are not available to the public. I reorganize the items of asset and debts in the 2006 KLoSA wealth data following the classification of the

respondents aged 60 or older by their income quintiles. When constructing income quintiles, I exclude those who do not have any income from the sample. Of 4,159 KLoSA respondents aged 60 or older, 25.6 percent are reported to have no income.[29] Table 22B repeats Table 22A for those aged 65 or older. In reading Tables 21, 22A and 22B, it should be noted that real estates and related security deposits could have been counted redundantly for multiple respondents in the same family, probably a couple, because KLoSA data report assets and debts at the respondent's individual level, not at the household level. In Table 20, however, assets and debts are reported in the unit of a couple (the KReIS respondent and his/her spouse if exists).

The 2005 KReIS survey classifies annual income items and private transfer income into the same section, so I add up these variables to construct a variable of total annual income in 2004. Missing and/or refused answers in some income items are imputed with zeros. Using the 2006 KLoSA data, I construct a variable of total annual income in 2005 by summing up income items in the Income section, rent and interest in the Asset section, and private transfers in the Family section.[30] Table 20 and Table 21 show that total annual income decreases monotonously with the respondent's age. A sharp decline of earnings is not sufficiently compensated by supplementary incomes such as pension benefits and public or private transfers. As a result, the average total annual income of those in their 70s is below a half of that of those in their 50s. In the followings, I briefly discuss how to make up for the elderly income deficiency by examining each source of income.

A. Earnings

Tables 17 and 19 in the previous section imply that an increasing number of elderly people now have to make ends meet by themselves. In this regard, one of the most promising income sources would be their labor. Table 22A shows that the main income source of the highest quintile among those aged 60 or older is their jobs (66 percent of total annual income) such as employment, own businesses, or farms. For the highest income quintile among those aged 65 or older in Table 22B, the proportion of wage gets lower because of retirement between age 60 and 65, but still 53 percent of their total annual income comes from their jobs, specifically farms. Therefore, job opportunity seems crucial to the income security of the elderly as of yet.

Retirement age has been virtually shortened since the financial crisis in the late 1990s that has made layoffs easier and pushed early retirement. As a result, the employment of those aged between

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2006 Household Wealth Survey.

[29] This proportion of the elderly living without income does not seem to be overestimated. According to the whole population statistics based on the 2007 National Health Insurance data, 30 percent of 4,178,946 elderly households in which at least one person are aged 65 or older are reported not to have any income.

[30] Of course, private transfer receipts reported in the Family section are not included in the annual income

55 and 64 has been declining in Korea while that in major advanced countries was on the uphill. In Korea, people generally exit from their main career at an average age of 54 and work for another 13 to 14 years at new workplaces with substantially worsened working conditions until they permanently stop working at the age of 68.

Now to postpone retirement in a rapidly ageing society like Korea, systematic efforts would be needed. For example, we may consider a wider adoption of the Wage Peak System to address employers' concern about an increase in labor cost by retaining the aged under seniority based payment scheme. And we may also consider a deferred pension and annuity system to give employees an incentive to delay their retirement.

Given that Korea's economically active population aged between 25 and 54 declines from 2009, promoting employment of the aged is important not just for securing elderly income but also for addressing a possible labor shortage. Therefore, firms should change the stereotype perception of employing the elders, and at the same time, workers should invest in their own human capitals persistently. Government needs to expand opportunities for the aged to develop their vocational capability by facilitating employers' investment on developing the aged friendly training program and by strengthening self-motivated capability development by the aged workers. Elderly employment projects pursued by government also need to be advanced to more competitive programs by tailoring job opportunities to each elderly individual's need, ability, and willingness to work, departing from one of beneficent welfare programs.

B. Property Incomes

As shown in Tables 20 through 22B, most properties of Korean elderly are real estates (more than 80 percent of total assets), and the majority of elderly has virtually nothing other than their residential home. In this regard, the Reverse Mortgage Loan has been introduced in 2007 to let those who are "house-rich but cash-poor" have regular income by liquidation of their residential home with staying their home until they die. In addition, even though few elderly have stocks, mutual funds, or bonds right now, the proportion of financial assets in elderly nest eggs will rise as capital markets are rapidly growing. Therefore, government should keep an eye on financial markets so that they are operated with prudence and stability.[31]

C. Pensions

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that is used as an explanatory variable in the regression models of Table 13.

[31] An and Jun (2006) suggest that household savings for retirement are positively associated with household head's education, job security, income stability, and housing security, implying the need of comprehensive

Public and private pension systems have a relatively short history in Korea compared to advanced western economies. Hence, the coverage and sufficiency of benefits are not yet up to the level of a major source of retirement income as seen in Tables 20 and 21. Compared to the National Pension that started in 1988 and has not yet matured, occupational pensions have longer histories and higher replacement rates. Tables 22A and 22B show that the beneficiaries of occupational pensions are likely to occupy the highest income quintile among Korean elderly. Occupational pensions, however, cover very limited occupations such as public employees, teachers, or soldiers in spite of requiring substantial inflow of government budget. Moreover, the National Pension system is likely to face fiscal drain in several decades if the current scheme will not be drastically reformed soon. A corporate pension scheme that has been recently introduced is a good step toward a multi-pillar old-age security system based on public-private pension linkage.[32] However, more efforts on institutional rearrangements should be made to make private pensions or annuities more attractive means of securing retirement income. Tables 20 and 21 suggest that private pension/annuity (insurance) application of the elderly has been negligible although those in their 40s and 50s now seem to have more interest in that.

D. Public Transfers

Elderly households are far more prone to poverty. Using KLIPS data, Cho (2007) finds that as of 2005, 45.6 percent of households in absolute poverty are elderly households. Table 15 also suggests that the dependency on public assistance increases with age. Tables 22A and 22B show that those who do not take up the National Basic Livelihood Security benefits find themselves in the lowest income quintile among the elderly. It is not clear whether they are indeed not eligible for the benefits or they are unfairly excluded from them; however, according to Kim (2006) who uses the 2003 KLIPS data on aged respondents, at least 11.3 percent of elderly households whose heads are aged 60 or older are estimated to have been unfairly excluded from the National Basic Livelihood Security benefits despite they live in absolute poverty. Therefore, it is highly important to solve institutional problems and enhance the efficiency of delivery system to save the neediest people who are still remained in the dead zone of social welfare.

The Basic Old-Age Pension benefits supposedly cover a broader range of Korean elderly aged 65 or older – 60 percent in 2008 and the maximum benefit is 84,000 won per month. The growing role of governmental efforts in assisting elderly income may indicate the overall improvement of Korea's

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policy packages to facilitate retirement savings.

[32] To establish a multi-pillar model of old-age income security in Korea, Moon et al. (2005, 2007) provides policy suggestions focusing on pension reforms and the development of pension systems.

social welfare. However, given the urgent need to alleviate the level of absolute poverty among the elderly, it would be desirable to put intensive support for the disadvantaged group rather than expanding universal benefits.

E. Private Transfers

Financial assistance from adult children still occupies a substantial portion of elderly incomes. Table 21 reports that the proportion of familial transfer receipts in the KLoSA respondents' total annual income increases after retirement to reach as much as 30 percent in their 70s. Tables 22A and 22B, however, show that the average amount of children's financial transfers received by the highest income quintile elderly is far larger than that of the lowest income quintile elderly.[33] For the elderly below the middle income quintile, the average amount of familial transfer receipts is at most 660,000 won (roughly 600 dollars) a year, despite familial transfers occupy more than half the total annual income. This surely reflects a positive income correlation between parents and children. But it also shows the limitation of private transfers in their role of anti-poverty through income redistribution within families.

At least for a while, familial support will play a transient role as a private safety net for the elderly until a comprehensive system for old-age income security will have been full-fledged and stabilized. As shown in the previous section, however, familial support for the elderly is deteriorating in terms of both financial transfers and coresidence with elderly parents.[34] Moreover, the expansion of elderly welfare will further decrease the role of families in old-age security. But, as Ogawa and Retherford (1997) point out, government seems unable to reverse the trend of a weakening role of familial support.[35] Instead, encouraging retirement savings through enhancement of long-term saving incentives and promoting elderly employment will be more promising ways for the government not to undertake an overwhelmingly heavy burden of supporting a growing elderly population.

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[33] Since affluent elderly parents tend to make substantial transfers to their children, their net transfer receipts from their children are probably much smaller than their gross transfer receipts.

[34] A survey (conducted by Chosun Ilbo Co. and Mirae Asset Securities Co. in August 2005) of 1,001 Korean adults suggests that current generation has an asymmetric view about the responsibility of supporting their elders and the expectation of being supported by their children. According to the survey, 47.4 percent feel they should support their elderly parents. But only 26.9 percent expect their children will support them after retirement.

[35] On the factors that make Japanese government's efforts to shift some burden of supporting the elderly back to families unsuccessful, Ogawa and Retherford list rapid population ageing, decreases in intergenerational coresidence, increases in women's labor market participation and resultant decreases in available caregivers for impaired elderly, and depreciating values of filial piety.

<Table 20> Average Income and Wealth of Koreans by Age: KReIS Data

(10,000 won)

Respondent age (Number of respondents)	All (8664)	50-54 (1296)	55-59 (1468)	60-64 (1569)	65-69 (1567)	70-74 (1103)	75- (1227)
Total annual income (in 2004)	**1384**	**2169**	**1733**	**1564**	**1023**	**799**	**498**
1 Wage	381	849	575	286	147	52	7
2 Own business	211	420	316	164	112	25	5
3 Agricultural and fisheries	97	117	105	143	105	110	28
4 Side job	14	20	15	22	9	7	3
(1-4) Earnings (%)	50.8	64.8	58.3	39.4	36.4	24.3	8.8
5 Rent	145	241	155	175	121	97	49
6 Interest	76	156	46	162	32	27	15
(5-6) Property incomes (%)	16.0	18.3	11.6	21.6	15.0	15.6	13.0
7 National pension benefit	23	2	11	65	50	24	4
8 Occupational pension benefit	45	10	37	77	62	80	48
9 Private pension benefit	3	1	8	7	2	1	1
(7-9) Pensions (%)	5.1	0.6	3.3	9.6	11.1	13.1	10.6
10 Unemployment compensation	1	5	0	0	0	0	0
11 Workers' compensation	3	9	4	0	0	0	0
12 National Basic Livelihood Security	9	5	4	4	8	22	23
13 Veteran benefit	7	0	8	1	2	25	16
14 Other welfare benefit	4	0	1	0	8	13	14
(10-14) Public transfers (%)	1.7	0.9	1.0	0.3	1.7	7.6	10.6
15 Private transfers from children	209	145	201	230	275	281	254
16 Private transfers from others	17	30	25	10	7	12	8
(15-16) Private transfers (%)	16.3	8.1	13.0	15.3	27.6	36.6	52.6
17 Other income	141	159	221	216	83	23	22
Annual savings	**199**	**360**	**269**	**145**	**87**	**69**	**29**
Saving rate (%)	14.3	16.6	15.5	9.3	8.5	8.6	5.9
Total assets (A)	**17317**	**23487**	**20855**	**18647**	**12457**	**10610**	**7160**
1 Deposits	1078	1338	1271	1142	933	923	499
2 Savings-type insurance ever paid	286	570	400	193	85	31	9
3 Private pension ever paid	94	200	124	48	19	2	0
4 Installment-type fund ever paid	17	35	25	4	0	0	0
5 Stocks	121	175	84	185	248	12	0
6 Bonds	3	4	5	2	2	0	0
7 Personal loans made to others	66	128	82	48	25	43	3
8 Other financial assets	0	0	0	0	0	0	0
9 Home	9390	12396	10800	9916	7188	5753	4836
10 Business	1136	2178	1898	759	410	126	107
11 Real estate other than home	4782	5957	5716	5999	3341	3630	1660
12 Other assets	344	506	451	351	205	87	45
Total debts (B)	**2454**	**3603**	**2813**	**3144**	**1648**	**890**	**654**
Net worth (A-B)	**14863**	**19884**	**18042**	**15503**	**10809**	**9720**	**6506**

<Table 21> Average Income and Wealth of Koreans by Age: KLoSA Data

(10,000 won)

	Respondent age (Number of respondents)	45-49 (1796)	50-54 (1513)	55-59 (1400)	60-64 (1390)	65-69 (1505)	70-74 (1171)	75- (1479)
Total annual income (in 2005)		**1578**	**1460**	**1139**	**966**	**783**	**510**	**452**
1	Wage	863	733	503	312	106	27	15
2	Own business	402	316	246	139	53	24	26
3	Agricultural and fisheries	43	82	89	198	257	98	109
4	Side job	8	16	8	10	5	3	1
	(1-4) Earnings (%)	83.4	78.6	74.3	68.2	53.8	29.8	33.4
5	Rent	15	20	28	11	6	12	6
6	Interest	109	85	68	42	57	31	32
	(5-6) Property incomes (%)	7.8	7.2	8.4	5.5	8.1	8.4	8.5
7	National pension benefit	1	2	14	46	44	22	9
8	Occupational pension benefit	1	4	31	60	54	44	28
9	Private pension benefit	0	0	1	11	4	2	3
	(7-9) Pensions (%)	0.1	0.4	4.0	12.1	13.0	13.3	8.8
10	Unemployment compensation	1	1	2	0	0	0	0
11	Workers' compensation	1	3	0	1	1	4	0
12	National Basic Livelihood Security	7	5	4	5	9	13	20
13	Veteran benefit	0	1	7	5	1	7	13
14	Other welfare benefit	1	1	1	1	6	10	8
	(10-14) Public transfers (%)	0.6	0.8	1.2	1.2	2.2	6.7	9.1
15	Financial help received from children	8	17	45	73	128	155	144
16	Financial help received from parents	17	2	1	0	0	0	0
	(15-16) Private transfers (%)	1.6	1.3	4.0	7.5	16.4	30.4	31.8
17	Other income	102	172	91	52	51	58	38
Total assets (A)		**16461**	**16484**	**16495**	**16911**	**12195**	**12037**	**10943**
1	Cash and checking account balance	396	460	421	312	301	217	159
2	Saving account balance	352	256	739	1040	59	896	44
	(1-2) Deposits (%)	4.5	4.3	7.0	8.0	3.0	9.2	1.9
3	Term life insurance ever paid	172	150	82	36	28	2	1
4	Whole life insurance ever paid	133	69	37	11	2	0	0
5	Annuity insurance ever paid	236	54	23	9	1	1	1
	(3-4) Insurances (%)	3.3	1.7	0.9	0.3	0.3	0.0	0.0
6	Stocks and mutual funds	115	145	79	7	11	81	4
7	Bonds	6	0	1	1	0	0	0
8	GYE money owed by others	14	8	4	1	3	0	0
9	Personal loans made to others	71	59	45	20	11	31	1
10	Other financial assets	4	3	1	7	0	0	0
11	JEON-SE security deposit paid	875	553	537	423	409	487	1098
12	WOL-SE security deposit paid	78	90	86	77	67	51	31
13	Home	10705	11151	11307	11792	9588	8966	8651
14	Real estate other than home	2924	3139	2878	2870	1595	1257	909
15	Farm	40	31	12	112	27	12	31
	(13-15) Real estates	83.0	86.9	86.1	87.4	91.9	85.0	87.6
16	Vehicles	299	288	238	179	87	37	11
17	Other assets	41	27	5	15	6	0	1
Total debts (B)		**1489**	**1394**	**1609**	**2135**	**884**	**663**	**392**
1	Loans from financial institutions	803	675	674	488	337	245	78
2	Loans from relatives and friends	134	130	58	33	40	71	12
3	Other debts	9	2	13	1	3	4	1
4	GYE money owing others	6	7	3	3	0	0	0
5	JEON-SE security deposit received	200	341	521	1268	336	202	230
6	WOL-SE security deposit received	54	98	131	105	73	60	24
7	Other security deposit received	281	143	208	238	96	82	46
Net worth (A-B)		**14972**	**15090**	**14886**	**14776**	**11311**	**11373**	**10551**

<Table 22A> Average Income and Wealth of Korean Elderly **Aged 60 or Older** and Having Some Income by Income Quintile: KLoSA Data (10,000 won)

	Income quintile [Income range]	All (N=4159)	Lowest [1, 60)	Second fifth [60, 196)	Middle fifth [196, 456)	Fourth fifth [456, 1062)	Highest 1062&over
Total annual income (in 2005)		**924**	**24**	**116**	**309**	**704**	**3161**
1	Wage	199	0	2	15	152	751
2	Own business	99	0	1	4	35	417
3	Agricultural and fisheries	234	0	4	32	141	906
4	Side job	7	0	1	7	9	18
	(1-4) Earnings (%)	58.3	2.6	6.4	18.7	47.9	66.2
5	Rent	12	0	1	2	13	41
6	Interest	56	1	12	13	43	190
	(5-6) Property incomes (%)	7.3	3.6	10.7	4.8	7.9	7.3
7	National pension benefit	44	0	17	52	51	91
8	Occupational pension benefit	65	0	1	3	10	286
9	Private pension benefit	8	0	2	6	5	23
	(7-9) Pensions (%)	12.7	1.4	17.2	19.5	9.3	12.7
10	Unemployment compensation	0	0	0	0	0	0
11	Workers' compensation	1	0	0	0	1	5
12	National Basic Livelihood Security	14	0	2	39	27	3
13	Veteran benefit	8	0	1	4	11	24
14	Other welfare benefit	7	7	7	9	9	3
	(10-14) Public transfers (%)	3.4	30.8	8.9	16.8	6.9	1.1
15	Financial help received from children	156	14	66	123	192	348
	(15) Private transfers (%)	16.9	61.4	56.8	40.0	27.2	11.0
16	Other income	13	0	0	0	5	54
Total assets (A)		**13886**	**8593**	**11193**	**12035**	**12301**	**23689**
1	Cash and checking account balance	290	97	178	226	287	608
2	Saving account balance	566	9	71	86	118	2329
	(1-2) Deposits (%)	6.2	1.2	2.2	2.6	3.3	12.4
3	Term life insurance ever paid	22	3	7	19	19	56
4	Whole life insurance ever paid	4	0	1	0	3	16
5	Annuity insurance ever paid	4	0	0	9	0	9
	(3-4) Insurances (%)	0.2	0.0	0.1	0.2	0.2	0.3
6	Stocks and mutual funds	27	0	1	1	100	29
7	Bonds	0	0	0	0	0	2
8	GYE money owed by others	1	0	1	0	1	3
9	Personal loans made to others	19	1	5	30	9	47
10	Other financial assets	3	0	0	11	6	0
11	JEON-SE security deposit paid	622	445	1431	511	423	248
12	WOL-SE security deposit paid	53	62	60	43	52	51
	(11-12) Housing security deposit paid	4.9	5.9	13.3	4.6	3.9	1.3
13	Home	9930	7310	8157	9327	9686	14427
14	Real estate other than home	2157	627	1133	1668	1410	5461
15	Farm	73	13	93	36	131	79
	(13-15) Real estates	87.6	92.5	83.8	91.7	91.3	84.3
16	Vehicles	104	24	56	60	55	298
17	Other assets	8	1	0	8	1	27
Total debts (B)		**1007**	**862**	**851**	**762**	**1046**	**1455**
1	Loans from financial institutions	348	373	209	295	362	503
2	Loans from relatives and friends	41	48	87	31	21	19
3	Other debts	3	0	0	3	9	0
4	GYE money owing others	1	0	0	3	0	3
5	JEON-SE security deposit received	367	295	299	254	412	547
6	WOL-SE security deposit received	76	53	68	71	81	103
7	Other security deposit received	171	94	188	105	161	279
Net worth (A-B)		**12879**	**7730**	**10343**	**11272**	**11254**	**22235**

<Table 22B> Average Income and Wealth of Korean Elderly **Aged 65 or Older** and Having Some Income by Income Quintile: KLoSA Data (10,000 won)

	Income quintile [Income range]	All (N=3212)	Lowest [1, 52)	Second fifth [52, 160)	Middle fifth [160, 372)	Fourth fifth [372, 870)	Highest 870&over
Total annual income (in 2005)		**712**	**21**	**99**	**259**	**573**	**2661**
1	Wage	67	0	1	7	58	274
2	Own business	46	0	0	2	21	211
3	Agricultural and fisheries	207	0	4	25	99	926
4	Side job	4	0	1	5	5	7
	(1-4) Earnings (%)	45.4	2.1	5.9	15.2	32.0	53.3
5	Rent	10	0	1	2	8	40
6	Interest	53	1	9	13	29	217
	(5-6) Property incomes (%)	8.9	2.8	10.4	5.9	6.6	9.7
7	National pension benefit	33	0	7	32	44	82
8	Occupational pension benefit	54	0	1	2	7	267
9	Private pension benefit	4	0	1	3	2	13
	(7-9) Pensions (%)	12.7	0.8	9.2	14.1	9.3	13.6
10	Unemployment compensation	0	0	0	0	1	0
11	Workers' compensation	2	0	0	0	0	8
12	National Basic Livelihood Security	18	0	1	30	52	4
13	Veteran benefit	9	0	1	4	5	35
14	Other welfare benefit	10	8	10	12	11	7
	(10-14) Public transfers (%)	5.3	39.7	11.8	17.8	12.1	2.0
15	Financial help received from children	183	11	62	120	225	502
	(15) Private transfers (%)	25.7	53.9	62.6	46.6	39.3	18.8
16	Other income	14	0	0	1	4	69
Total assets (A)		**11584**	**8297**	**9729**	**9982**	**10505**	**19618**
1	Cash and checking account balance	258	88	119	178	239	678
2	Saving account balance	82	6	61	69	76	198
	(1-2) Deposits (%)	2.9	1.1	1.8	2.5	3.0	4.5
3	Term life insurance ever paid	14	1	0	4	18	46
4	Whole life insurance ever paid	1	0	0	0	0	4
5	Annuity insurance ever paid	1	0	0	3	0	0
	(3-4) Insurances (%)	0.1	0.0	0.0	0.1	0.2	0.3
6	Stocks and mutual funds	36	0	0	0	143	37
7	Bonds	0	0	0	0	0	0
8	GYE money owed by others	1	0	0	0	1	6
9	Personal loans made to others	17	2	7	25	25	23
10	Other financial assets	0	0	0	0	0	0
11	JEON-SE security deposit paid	738	466	2038	410	437	331
12	WOL-SE security deposit paid	48	54	38	43	48	55
	(11-12) Housing security deposit paid	6.8	6.3	21.3	4.5	4.6	2.0
13	Home	8764	7129	6866	7993	7811	14170
14	Real estate other than home	1540	518	550	1170	1641	3877
15	Farm	31	17	26	53	21	41
	(13-15) Real estates	89.2	92.4	76.5	92.3	90.2	92.2
16	Vehicles	51	16	24	22	43	151
17	Other assets	3	1	0	11	0	1
Total debts (B)		**668**	**679**	**487**	**431**	**837**	**914**
1	Loans from financial institutions	247	223	111	169	372	361
2	Loans from relatives and friends	44	40	107	38	12	22
3	Other debts	3	0	0	0	16	0
4	GYE money owing others	0	0	0	0	0	0
5	JEON-SE security deposit received	235	265	213	145	279	278
6	WOL-SE security deposit received	50	65	20	45	44	76
7	Other security deposit received	89	86	36	34	113	177
Net worth (A-B)		**10916**	**7618**	**9241**	**9551**	**9668**	**18704**

CHAPTER 5

Conclusion

This study investigates intergenerational transfers in Korea, focusing on children's financial assistance to their elderly parents. According to KLoSA and KLIPS data, two or three out of five households provided some type of financial support for their aged parents. Average amount of net annual transfers from children is approaching 2 million won after retirement age. Even though it is not always sufficient, financial help from adult children has alleviated income deficiency of Korean elderly.

Among many findings from this study, I select four as key stylized facts. First, the negative effect of the recipient's income (and net worth) on net transfer receipt suggests that altruism is the main motive of familial transfers in Korea. This is consistent with the existing literature that concludes altruism prevails as the motivation of private transfers until public transfer programs are well established (see Cox et al. (2004) for example). The exchange motive, however, also appears to operate in the form of more transfers to the parents who look after their grandchildren.

Second, as the theory predicts, as long as private transfers are made in a compensatory fashion, they are crowded out by public transfers made in the same fashion. The KLIPS data show that there exists almost a dollar-for-dollar crowding-out of private transfers by public assistance benefits (Kim, 2006), and the KLoSA data even suggest that positive expectations about public support also decrease elderly parents' net transfer receipt in the family.

Third, intergenerational transfers in Korean families have been under the influence of traditional norms, specifically Confucian ethics that has institutionalized the eldest son's responsibility of taking care of elderly parents. Therefore, even as of 2005, among other children the eldest son undertakes the heaviest burden of supporting his elderly parents through financial help or coresidence with them.

Fourth, I find that child education can hardly be a retirement plan. A child's additional one year of education compared to his siblings only leads to an additional net transfer of 90,000 won per year for the elderly parents. Therefore, parental spending on children's education can be an investment but cannot be the one for the old-age income security of the parents.

Moreover, familial support mechanism has been deteriorating in Korea. Seven out of ten Korean elderly people lived mainly on transfers from their children in 1980, but the proportion is only three out of ten in 2003. This gap has been filled with expansions of public assistance programs and an

increased role of self-support. So the burden of supporting the increasing number of the elderly has shifted from families to government; and within a family, it has shifted from the eldest son to the elderly parents themselves.

In light of these findings and ongoing changes, this study leaves some messages for households and government. For households, the message is simple: "Prepare yourself for retirement." In the face of rapid population ageing and prevailing individualism, the social norm for supporting the elderly is changing from transfers to self-responsibilities. Therefore, individuals need better planning for retirement and longevity risk. In particular, they should keep a balance between savings for their old age and spending on their children. They also need to keep investing in their own human capital, not just in their children's one, to stay at work for longer years.

For the government, the message may seem rather confusing: "Be aggressive and also be cautious." In fact, finding an optimal role in the old-age security is a big challenge to the government coping with rapid population aging due to unprecedented low fertility rates, increasing life expectancy, and cohort effect of the Baby Boomers' retirement. The government should be more aggressive in making more job opportunities for the elderly, enhancing long-term saving incentives, and urgent pension reforms. But in expanding public transfer programs and introducing new welfare programs, it is necessary for the government to think about priorities, fiscal prudence and behavioral responses such as changes in work incentives and crowding-out of private transfers, adjust the speed, and tailor details to the beneficiaries' needs to enhance effectiveness. In front of an increasing number of the elderly population, political settlements tend to introduce universal welfare that covers most elderly people and generous benefits. However, considering the reality that roughly a half of households living in poverty are elderly households, the first priority should be to put intensive effort in poverty reduction for the elderly. In addition, before introducing new welfare programs, the existence and magnitude of latent demands for the service and potential crowding-out effect of the program on private sectors should be accounted for and measured in a reasonable way.

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