

# **Time Use and Gender Inequality in Korea: Differences in Paid, Unpaid and Non-productive Activities**

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## **Abstract**

This paper examines trends and gender differences in time use in Korea. The economic/bargaining approach suggests that changes in women's employment, the delay in marriage and decline in fertility have reduced demand for unpaid work. In addition, improvements in women's employment and wages have given women more bargaining power in relation to men consequently men spend more time on unpaid care work. As a result, the amount of time spent on paid and unpaid work between men and women is converging. At the same time, the gender perspective argues that due to changes in economics, demographics and norms the differentiated time use between men and women can be fine-tuned, but the gender inequality remains fundamental. This research examines the Korean case in light of these explanations. In traditional Korean society, gender roles were rigidly divided. In post industrial society, however, changes in women's role and in the family are evident. These changes have been facilitated by the decline in fertility, the increase in divorce, the increase in women's labor market participation, and the decrease in the number of extended families. This research uses the national representative time use survey data of 1999 and 2004 and examines how much time women and men spent on paid work, unpaid work and non-productive activities. This paper argues that women's increased involvement in paid work, changes in gender role, and in family forms may have increased the amount of time that men spend on unpaid care work. However, the increases are far from meaningful for gender relations in practice despite the significant social and economic changes.

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## **Key words**

time use, paid work, unpaid care work, non-productive activities, gender inequality

## Introduction

Two theoretical explanations of gender differences in time use predominate in the literature: the economic/bargaining perspective and the gender perspective. The economic/bargaining approach highlights the convergence in time use differences between men and women according to socio-economic changes, particularly with women's increased labour market participation. Robinson and Godbey (1999) pointed out that gender differences in time spent in paid and unpaid care work decrease as men perform more unpaid care work while women perform more paid work. On the other hand, the gender perspective explains that, despite potential changes that may occur, gender differences in time use persist. Coltrane (2000) and Risman (1998) argue that women's involvement in paid work has not led to a redistribution of household labour between men and women because women's performance and men's avoidance of unpaid work remain potent daily instances of unequal gender relations. Meanwhile, Berk (1985) and Shelton (1992) argue that women's time on unpaid care work has not changed significantly, although their time spent on paid work has substantially increased; as a result, women have less time for activities such as self-care, leisure, and study.

This paper examines the Korean case in light of these theories. Traditionally, Korean women are expected to provide skilled and devoted care to their family members. However, in the post-industrial Korea, noticeable changes have emerged in gender roles and family forms due to decreasing fertility rates, delays in marriage, increased divorce rates, and increases in women's labour market participation. Such a context might indicate that gender relations are in transition. Therefore, it is questionable if women spend more time on paid work and less time on unpaid care work and vice versa for men.

Using the nationally representative Time Use Survey (TUS) data, the current research examines gender differences in time use. It examines the extent to which time use between men and women differs according to socio-economic factors. This approach will lead to a determination of whether women's and men's time allocations are shifting or if women's behaviour is changing more than men's. Examining time allocations across all activities will also allow for a determination of whether changes in paid work time have been balanced by commensurate changes in unpaid work, how changes in paid and unpaid work time have affected

other non-productive activities, and what implications can be drawn for gender relations. The following section discusses the literature on time use and gender inequality and examines socio-economic changes in Korea. The subsequent sections will discuss the method used, including an explanation of the TUS and measures employed for the analysis, and results, followed by concluding remarks.

## **Time Use and Gender Inequality**

The economic/bargaining approach emphasizes rationality to suggest that changes in economic, demographic, and normative conditions affect individuals' time allocations. Improvements in women's education, delays in marriage, and declining fertility rates have reduced the need for unpaid work. Consequently, women should be spending less time on unpaid care work and more time on paid work. Furthermore, improvements in women's employment and wages have given women more bargaining power in relation to men. As a result, men spend more time on unpaid carework. This perspective is based on the economic theory of human capital investment and its new household economics variants that men and women allocate time to household or paid work in order to maximize overall utility or efficiency (Becker, 1981). This approach further views the gender division of labour as an outcome of negotiation between people who use valued resources to strike the best deal based on self-interest (Brines, 1993). This perspective is putatively gender neutral, emphasizes choice, and assumes that housework allocation is governed by the rules and principles of exchange relations.

In contrast, the gender perspective points out the persistence of gender inequality in time use. Thompson and Walker (1995) argue that unpaid work is not gender neutral; rather, it is integral to the perpetuation of unequal power relations between women and men. This perspective argues that, due to changes in economics, demographics, and norms, the differentiated time use between men and women can be fine-tuned while gender inequality remains the fundamental product of gendered allocations of time. Riggs (1997) points out that women's performance of domestic labour is still considered to be part and parcel of being a good mother and wife. The devaluation of unpaidcare work has generated an assumption that it is more acceptable for women to do paid work

than it is for men to do unpaid care work. As a result, women should be doing domestic labour while men should not. Moreover, the gender perspective implies that women should have less free time than men because women are responsible for ensuring that all unpaid work gets done—regardless of how much time they spend on paid work.

In recent history, Korea has experienced several changes in demographics that may affect the time men and women spend on different kinds of work. For example, Korea's fertility rate fell from 1.6 in 1990 to 1.1 in 2005 (Korean Institute of Social Affairs (KIHASA), 2006). For every 1,000 females, there were 142 births in the 25-29 age group in 1996 but only 94 in 2005 (KIHASA, 2006). In addition, significant changes in the family formation and dissolution have been observed. Crude marriage rates decreased from 9.4 in 1996 to 6.5 in 2005. The notion of marriage as a lifetime contract has also been diminishing; the crude divorce rate rose from 1.7 to 2.6. Furthermore, according to the National Statistics Office (NSO), female labour market participation increased from 48.9 percent to 50.3 percent while men's decreased from 76.2 percent to 74 percent between 1996 and 2006. In particular, labour market participation rates among those aged 25 to 29 has shown a dramatic increase—from 50.9 percent to 67.3 percent; rates among women aged 30 to 34 increased by 4 percent point during the same period. Women's hourly wages also increased from 3,006 won in 1995 to 6,320 won in 2004, although gender differences in wages remain. According to the NSO, 43.9 percent of married households were dual earner households while the male was the sole breadwinner in 56.1 percent of households in 2006.

Table 1. Distribution of Households by Number of Generations in Korea (%)

	One generation*	Two	Three & four	Total
1960	7.5	64.3	28.2	100
1970	6.8	70.0	23.2	100
1980	9.0	73.2	17.8	100
1990	12.0	74.1	13.9	100
1995	14.7	73.7	11.6	100
2000	17.1	72.9	10.1	100
2005	20.6	70.5	8.9	100

Source: National Statistics Office (Korean Statistical Information Service, KOSIS, <http://www.kosis.kr>)

Note:\* One-member households were not included in one-generational households

Table 2. Distribution of Households by Number of Household Members in Korea (%)

	One	Two	Three/four	Five & over	Total	Average household size
1960	2.3	7.1	26.5	64.1	100	5.6
1970	3.7	9.4	27.8	59.1	100	5.2
1980	4.8	10.5	34.8	49.9	100	4.5
1990	9.0	13.8	48.6	28.6	100	3.7
1995	12.7	17.3	52.1	17.9	100	3.3
2000	15.5	19.1	52.0	13.4	100	3.1
2005	20.0	22.2	47.9	9.9	100	2.9

Source: National Statistics Office (Korean Statistical Information Service, KOSIS, <http://www.kosis.kr>)

Table 3. Distribution of Households by Number of Households among Elderly aged 65 and over (%)

	Single	One generation	Two	Three& over	Total
1985	17.1	22.0	35.5	25.4	100
1990	20.2	25.0	31.8	23.0	100
1995	10.3	39.2	32.8	17.7	100
2000	31.5	34.0	24.4	10.0	100

Source: National Statistics Office (Korean Statistical Information Service, KOSIS, <http://www.kosis.kr>)

In addition, change in family structure is obvious structural change. The majority of Korean households have been nuclear, mostly two generation households (See Table 1). The proportion of two generation households was 64.2 percent in 1960 and 70.5 percent in 2005. By 1970, the three and four generation households were 23.2 percent of all households. However, the proportion has dropped by more than half; by 2005 they accounted for fewer than 10 percent for all Korean households. In addition, the average household size has also declined from 5.6 persons in 1960 to 2.9 in 2005 (see Table 2). The proportion of households with one member has increased from 2.3 percent to 20 percent during the period. Table 3 shows that the proportion of single and couple households among the elderly increased while two or more generation households decreased. Single households increased from 17.1 percent to 31.5 percent between 1985 and 2000, while the proportion

of three or more generation households decreased from 25.4 percent to 10 percent. In 2000, 65.5 percent of elderly people were either living alone (31.5 percent) or only with their spouses (34 percent).

However, these changes in gender relations and family structure do not suggest that women do not take the main responsibility of unpaid work. Research on time use by Korean scholars has found that married women are responsible for most of household maintenance (Choi et al, 2006; Song-hee Hong, 1993; Hyang-sook Hong & Soo-kyung Park, 1994; Jong-hee Kim, 1993; Sook-jae Moon, 1991; Soo-mi Park, 2007). Such studies have either focused on married women or the elderly. However, few studies have examined gender differences for the whole population. Further, gender differences in time use by socio-economic factors have been rarely explored. Few efforts have been made to examine trends in women's and men's use of time, drawing implications for gender relations in light of structural changes in gender relations and family changes.

## Methods

### Data

Korea's NSO has conducted a TUS every five years since 1999, with the intention of collecting information on how people spend their time during a 24-hour period. The instrument for the 1999 TUS consisted of two parts: the household characteristics questionnaire and the time-diary survey. The first part collected data on household characteristics—including composition of the household, nature of dwelling, car ownership, care for preschool children, and individual characteristics (gender, age, education, marital status, employment status, and occupation)—weekly working time, status of workers, and subjective evaluation of time pressure and tiredness. In the 2004 survey, the household and individual questionnaires were separated, resulting in the instrument consisting of three parts: household questionnaire, the individual questionnaire for respondents 10 years of age and older, and the time-diary. In both surveys, all household members aged 10 and older recorded their primary and simultaneous activities in the time diary, structured in 10-minute increments for the designated 2 days.

The 1999 survey sample was generated from the multi-purpose household sample (HAF-MP), which was itself derived from the 1995 population and housing census, using three-stage stratified sampling methods. The 850 enumerator districts were selected from the multipurpose household sample, using systematic sampling; 20 households were selected in each enumerator district. The 1999 sample consisted of 42,953 individuals aged 10 and older and 16,389 households from 850 enumerator districts. The 2004 TUS sample was also generated from the multipurpose household sample, which this time was derived from the 2000 population and housing census, using three-stage stratified sampling methods. The 850 enumerator districts were selected from the multipurpose household sample using systematic sampling, and 15 households were selected in each enumerator district. The 2004 sample consisted of 31,634 individuals aged 10 years and older and 12,651 households from 850 enumerator districts. The data from both surveys were subsequently weighted to be representative of Korea's population aged 10 years and older.

All the self-recorded activities in the time diary, in both the 1999 and 2004 data, were converted into three-digit codes, which were then divided into nine broad categories: 1) self-care; 2) employment; 3) study; 4) household maintenance; 5) family care; 6) voluntary service; 7) leisure; 8) travel; and 9) others. Self-care comprises activities such as sleeping, eating, and drinking as well as personal hygiene and healthcare. Household maintenance comprises food preparation, clothes care, cleaning, household goods purchases, and the like. Family care comprises attending to infants, children, spouses, parents, and other family members. Voluntary service includes helping neighbours and the community. The 1999 data were designed according to 137 activity categories, while the 2004 data included 125 activity categories. The changes in codes between 1999 and 2004 included several related to paid work and unpaid care work, consequently affecting the current analysis.

## **Measures**

This research uses definitions for paid and unpaid work informed by the System of National Accounts (SNA). The SNA has established rules that countries must use in calculating Gross Domestic Product (GDP). More specifically, only those activities that fall within the production boundary of

the SNA should be included when calculating GDP. This production boundary includes all production of goods and services for the market as well as the production of goods for personal consumption. As such, the boundary includes subsistence production, unpaid work in the family business, and even the collection of fuel and water. The SNA recognizes that the production boundary does not cover all forms of work or production. In particular, the boundary excludes unpaid production of services, which is normally referred to as household maintenance and family care.

The current analysis focuses on paid work (herein referred to as “SNA work”), unpaid care work (herein referred to as “extended SNA work”), and other activities (herein referred to as “non-productive activities”). SNA work includes all activities classified under the employment category, including time spent for work-related travel. The 2004 survey includes the activity “helping for gainful activities” in the voluntary service category. As this can be considered a production activity, it is included in the SNA work for 2004 in the current analysis (An, 2007). Extended SNA work includes activities related to household maintenance, family care, and voluntary service (e.g., help for others in the community). In addition, family care and help for others in the community has been combined into “personal care”. Therefore, extended SNA work includes household maintenance and personal care. All other activities are considered to be non-productive activities.

This analysis concerns the entire population in the TUS, aged 10 years and older. The TUS collects information on time spent on main activities and simultaneous activities, which comprises full minutes. The 24-hour approach means the total amount of time spent on activities totals 1,440 minutes. In general, it considers main activities only. On the other hand, people do several activities at the same time (e.g., cooking while listening to music, where cooking is the main activity and listening to music is the simultaneous activity). The total time spent on both main and simultaneous activities can go beyond the 1,440 minutes.

Although it would be ideal to use full minutes, the current analysis uses a 24-hour approach for two reasons (An, 2007). The first reason is the non-availability of data on simultaneous activities, despite the fact that the NSO collected data on both main and simultaneous activities in 1999. Second, no significant differences are evident between time spent on main and all activities. For example, in 2004, the time differences amounted to 0.09 minutes for production activities, 0.45 for household maintenance,



and 0.01 for personal care for males. For females, the average time difference between main activities and main with simultaneous activities is 0.75, 1.17, and 0.01 minutes, respectively. Thus, the current analysis focuses on the main activities, with the total amount of time spent on these activities equalling 24 hours. It provides two different measures for time spent: Mean Population Time (MPT) and Participation Rate (PR). MPT is time spent on activities for the entire population while PR is the proportion of respondents who participated in the activities.

## Results

### Characteristics of Samples in 1999 and 2004 TUS

Table 4 shows socio-demographic characteristics of the 1999 and 2004 samples based on sex, age group, education, marital status, and work status as well as whether the respondent has preschool children. In 1999, the distribution of population between males and females was 50:50; by 2004, the ratio had changed to 49:51. The analysis divides the sample cases into three age groups: 10-14, 15-64, and 65 and older. In both 1999 and 2004, the second age group (15-64) comprised the largest portion of the sample. The proportion of females aged 65 and over increased by 2 percent between 1999 and 2004, while the male proportion remained constant at 8 percent.

Table 4. Characteristics of Sample in 1999 and 2004 (%)

(1999; males 20,147 females 22,806, 2004; males 14,899 females 16,735)

		1999		2004	
		Male	Female	Male	Female
Sex		50	50	49	51
Age group	10-14	9	8	9	8
	15-64	83	82	83	80
	65+	8	10	8	12
	Total	100	100	100	100
Education	Low	16	29	13	25
	Middle	56	53	50	49

		1999		2004	
		Male	Female	Male	Female
	High	28	18	36	26
	Total	100	100	100	100
Marital status	Single	36	29	36	29
	Married	61	57	61	57
	Divorced/widowed	3	14	3	14
	Total	100	100	100	100
Work status	Working	65	45	67	47
	Not working	35	55	33	53
	Total	100	100	100	100
Children status	With children	20	21	15	14
	Without children	80	79	85	86
	Total	100	100	100	100

Meanwhile, the TUS survey used seven categories for education: no education, primary school, middle school, high school, two years of college, four years of university, and graduate school. The current analysis groups the respondents into three categories. Low education includes those with no education and those with primary school education; middle education includes those with middle and high school education. Those with a college education and above are included within the high level of education. Approximately 50 percent of the sample had a middle level of education. Between 1999 and 2004, the percentage with at least college education increased for both men and women. In both years, more men than women had a high level of education.

In addition, approximately 60 percent of the individuals were married. Divorced and widowed men constituted three percent of respondents in 1999 and 2004. For women, the equivalent figures were 14 percent in both 1999 and 2004. The TUS also collected information on work status according to two categories: working and not working. Working people worked at least an hour per week for pay, while not working individuals were unemployed and economically inactive. In 1999, among men, 65 percent were working and 35 percent were not working. Forty-five percent of women reported that they were working, while 55 percent reported that they were not. In 2004, 47 percent of women reported that

they were working while 53 percent were not. Finally, the category "with children" covers those who have children who are 8 years old or younger. Approximately 20 percent of both men and women reported that they had children in this age group in 1999; in 2004, the figures decreased to 15 percent for men and 14 percent for women.

### Identification of Key Determinants of Time Spent on Activities

A Tobit estimation was conducted to test the strength of the factors affecting the time spent on paid work, household maintenance, personal care, and non-productive activities. The estimation was run for both 1999 and 2004, considering variables such as education, marital status, presence of preschool children in the home, and work status for both years.

Table 5. Regression Results on Duration of Time Spent on SNA Work in 1999 and 2004

	Male (1999)			Female (1999)		
	Coef.	Std. Err	t	Coef.	Std. Err	t
Married	61.02***	4.09	14.89	-5.18	3.72	-1.39
Employed	820.0***	5.38	152.2	797.2***	4.60	173.2
Childed	18.3***	4.04	4.53	-45.02***	4.61	-9.76
LowEd	-45.48***	4.74	-9.58	44.58***	3.84	11.59
HighEd	-23.34***	3.84	-6.07	-25.85***	4.97	-5.20
_cons	-403.0***	5.30	-76.04	-415.3***	5.04	-82.37
Log-likelihood	-177927.74			-146625.37		
$r(\rho)^2$	.5527			.5438		
	Male (2004)			Female (2004)		
	Coef.	Std. Err	t	Coef.	Std. Err	t
Married	68.00***	5.10	13.31	-13.63**	4.56	-2.99
Employed	777.92***	6.55	118.64	755.34***	5.50	137.28
Childed	8.60	5.57	1.54	-46.35***	6.93	-6.69
LowEd	-34.60***	6.21	-5.57	43.38***	4.88	8.87
HighEd	-10.55	4.46	-2.36	-30.62***	5.41	-5.66
_cons	-419.09***	6.49	-64.56	-416.43***	6.13	-67.86
Log-likelihood	-128220.43			-106193.05		
$r(\rho)^2$	.4966			.4927		

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

Of the discrete variables, in both 1999 and 2004, being employed had the strongest effects for males and females, increasing the time spent on SNA work. All variables together explained 55.27 percent of the variance in the time spent on the SNA work in 1999 and 49.66 percent in 2004 for males. For females, the factors explained 54.38 percent of the variance in 1999 and 49.27 percent in 2004.

Table 6. Regression Results on Duration of Time Spent on Household Maintenance in 1999 and 2004

	Male (1999)			Female (1999)		
	Coef.	Std. Err	t	Coef.	Std. Err	t
Married	34.64***	1.54	22.47	202.2***	1.42	141.6
Employed	-17.85***	1.53	-11.60	-56.96***	1.35	-42.20
Childed	-19.93**	1.69	-11.75	-4.91***	1.68	-2.92
LowEd	14.52***	1.70	8.54	28.60***	1.50	19.04
HighEd	8.07***	1.51	5.34	-9.41***	1.88	-4.99
_cons	-47.93***	1.39	-34.27	63.94***	1.38	46.04
Log-likelihood	-108906.95			-252066.84		
$r(\rho)^2$	.1298			.1488		

  

	Male (2004)			Female (2004)		
	Coef.	Std. Err	t	Coef.	Std. Err	t
Married	41.44***	1.79	23.09	185.77***	1.64	112.79
Employed	-19.13***	1.81	-10.57	-47.32***	1.50	-31.35
Childed	-14.58***	2.25	-6.47	.13	2.32	0.06
LowEd	10.90***	2.04	5.34	29.67***	1.76	16.82
HighEd	7.90***	1.66	4.76	-9.09***	1.93	-4.70
_cons	-46.00***	1.64	-27.95	58.7***	1.61	36.40
Log-likelihood	-84613.24			-182900.21		
$r(\rho)^2$	.1444			.1383		

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

In both years, for males and females, being married had the strongest effect, increasing the time spent on household maintenance. Among males in 1999, all the variables together explained 12.98 percent of the variance; for females, they explained 14.88 percent of the variance. In 2004, all factors taken together explained 14.44 percent for males and 13.83 percent for females.

Table 7. Regression Results on Duration of Time Spent on Personal Care in 1999 and 2004

	Male (1999)			Female (1999)		
	Coef.	Std. Err	t	Coef.	Std. Err	t
Married	100.9***	4.01	25.15	152.0***	2.01	75.50
Employed	-45.10***	3.74	-12.05	-60.00***	1.69	-35.33
Childed	141.0***	3.48	40.48	178.8***	1.88	94.68
LowEd	-18.04***	4.19	-4.30	-25.66***	1.95	-13.11
HighEd	16.36***	3.34	4.89	6.50**	2.34	2.77
_cons	-272.8***	4.57	-59.68	-146.7***	2.16	-67.85
Log-likelihood	-53103.835			-124219.17		
r(rho)^2	.1840			.1780		

  

	Male (2004)			Female (2004)		
	Coef.	Std. Err	t	Coef.	Std. Err	t
Married	93.15***	4.44	20.97	125.32***	2.32	53.93
Employed	-47.10***	4.25	-11.06	-64.68***	1.92	-33.63
Childed	147.88***	4.31	34.24	203.30***	2.59	78.47
LowEd	-22.27***	4.90	-4.54	-20.98***	2.36	-8.88
HighEd	21.84***	3.53	6.19	10.47***	2.37	4.41
_cons	-238.85***	4.78	-49.92	-116.25***	2.42	-48.03
Log-likelihood	-44265.776			-91380.664		
r(rho)^2	.1955			.1981		

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

For males and females in both years, having preschool children had the strongest effect on the time spent on personal care. All of these factors explained 18.40 percent of the variance for males and 17.80 percent for females in 1999. In 2004, all factors taken together explained 19.55 percent of the variance among males and 19.81 percent among females.

Table 8. Regression Results on Duration of Time Spent on Non-productive Activities in 1999 and 2004

	Male (1999)			Female (1999)		
	Coef.	Std. Err	t	Coef.	Std. Err	t
Married	-44.30***	2.43	-18.19	-210.7***	1.87	-112.7
Employed	-422.2***	2.45	-171.7	-298.7***	1.78	-166.9
Childed	-32.69***	2.61	-12.51	-79.31***	2.24	-35.35
LowEd	29.46***	2.71	10.85	-16.50***	1.98	-8.29
HighEd	11.97***	2.35	5.08	11.18***	2.47	4.52
_cons	1387.7***	2.01	689.6	1308.3***	1.78	733.8
Log-likelihood	-270374.5			-302854.4		
r(rho)^2	.4337			.4713		

  

	Male (2004)			Female (2004)		
	Coef.	Std. Err	t	Coef.	Std. Err	t
Married	-43.77***	2.90	-15.07	-174.59***	2.22	-78.58
Employed	-377.27***	2.97	-126.92	-263.61***	2.06	-127.62
Childed	-39.39***	3.60	-10.92	-124.97***	3.23	-38.60
LowEd	28.60***	3.31	8.62	-12.42***	2.40	-5.17
HighEd	2.72	2.65	1.02	11.64***	2.62	4.43
_cons	1382.51***	2.41	571.36	1299.22***	2.12	611.66
Log-likelihood	-200180.6			-221809.92		
r(rho)^2	.3937			.4293		

\*\*\*  $p < .001$

It appears that being employed most strongly affects the time spent on non-productive activities in both years for males and females. Taken together, the variables explained 43.37 percent of the variance in time spent among males in 1999 and 47.13 percent among females. In 2004, the variables explain 39.37 percent of the variance among males and 42.93 percent among females.

### **Paid Work, Unpaid Care Work, Personal Care, and Non-productive Activities**

This section discusses time spent on the SNA work, household maintenance, personal care, and non-productive activities in terms of socio-economic factors found to be significant influencing time use. Table

9 shows the time spent on paid work, the extended SNA work, and non-productive activities between 1999 and 2004 by gender.

Table 9. Time spent on SNA, Household Maintenance, Personal Care, and Non-productive Activities by Gender in 1999 and 2004 (minutes/%)

		1999		2004	
		MPT	PR	MPT	PR
Male	SNA work	329	61	314	61
	Household maintenance	23	13	25	14
	Personal care	15	16	17	19
	Non-productive activities	1073	100	1083	100
Female	SNA work	191	42	181	42
	Household maintenance	170	84	160	83
	Personal care	49	40	49	39
	Non-productive activities	1030	100	1050	100

Note: MPT stands for mean population time and PR is participation rate

Source: Author's calculation

Several changes between 1999 and 2004 were particularly interesting. Men spent 15 minutes less time on paid work, 4 minutes more on extended SNA work, and 10 minutes more on non-productive activities in 2004. Men's participation rates remained the same between the years, while those in the extended SNA work increased, particularly for personal care. Women spent 10 minutes less time on paid work and household maintenance in 2004 but spent 20 minutes more on non-productive activities.

In both 1999 and 2004, gender inequality in time use was evident. In 1999, men spent 329 minutes on SNA work, 23 minutes on household maintenance, 15 minutes on personal care, and 1,073 minutes on non-productive activities. Women spent 191 minutes on paid work, 170 minutes on household maintenance, 46 minutes on personal care, and 1,030 minutes on non-productive activities. In 2004, men spent 46 percent more time on paid work, 85 percent less on household maintenance, and 66 percent less on personal care. Men continued to spend more time on non-productive activities than women did. Women's increased involvement in paid work, changes in social norms toward gender role, and changes in family forms may have resulted in increased time of men's unpaid care work. Nonetheless, strong gender inequalities in time use remain.

Table 10. Time spent on SNA, Household Maintenance, Personal Care, and Non-productive Activities by Gender and Marital Status in 1999 and 2004 (minutes/%)

			1999		2004	
			MPT	PR	MPT	PR
Male	Single	SNA work	166	31	168	32
		Household maintenance	14	32	15	30
		Personal care	8	7	12	6
		Non-productive activities	1251	100	1245	100
	Married	SNA work	429	79	405	78
		Household maintenance	27	39	29	41
		Personal care	18	22	21	25
		Non-productive activities	965	100	986	100
	Divorced/ widowed	SNA work	276	56	258	57
		Household maintenance	58	63	70	71
		Personal care	13	14	13	14
		Non-productive activities	1092	100	1099	100
Female	Single	SNA work	146	29	160	32
		Household maintenance	38	53	35	49
		Personal care	6	8	6	7
		Non-productive activities	1250	100	1239	100
	Married	SNA work	214	49	194	47
		Household maintenance	241	98	223	98
		Personal care	76	61	78	60
		Non-productive activities	908	100	944	100
	Divorced/ widowed	SNA work	195	46	175	44
		Household maintenance	162	91	163	93
		Personal care	27	26	23	24
		Non-productive activities	1056	100	1078	100

Note: MPT stands for mean population time and PR is participation rate

Source: Author's calculation

It appears that marital status makes a significant difference in the use of time for both men and women. In 1999, married men and women spent more time on paid work, household maintenance, and personal care



but less time on non-productive activities than single men and women did. Being divorced or widowed meant spending less time on paid work, more time on household maintenance, and less time on personal care and non-productive activities than being married did. In 2004, the patterns in men's and women's time use according to marital status remained similar.

Regardless of marital status, men spent more time on extended SNA work in 2004 than in 1999; the gap in time spent on non-productive activities between men and women diminished during the five intervening years. Nonetheless, women have not shifted the time that they spend on unpaid care work to paid work. For example, in 1999, single men spent 166 minutes on SNA work while single women spent 146 minutes. Single men spent 14 minutes on household maintenance and 8 minutes on personal care while women spent 38 minutes on household maintenance and 6 minutes on personal care. Gender differences remained in 2004. Although single women spent more time on SNA work in 2004 than in 1999, the increase in paid work time has not been balanced by commensurate changes in unpaid work. Instead, the increase appears to have been made by squeezing time from non-productive activities.

Table 11. Time Spent on SNA, Household Maintenance, Personal Care, and Non-productive Activities by Gender and Preschool Children in 1999 and 2004 (minutes/%)

			1999		2004	
			MPT	PR	MPT	PR
Male	With preschool children	SNA work	451	80	469	85
		Household maintenance	19	32	23	36
		Personal care	32	39	40	52
		Non-productive activities	938	100	908	100
	Without preschool children	SNA work	298	56	287	57
		Household maintenance	25	38	26	39
		Personal care	10	10	13	12
		Non-productive activities	1107	100	1114	100
Female	With preschool children	SNA work	140	34	136	34
		Household maintenance	210	92	215	98

		1999		2004		
		MPT	PR	MPT	PR	
		Personal care	150	84	198	98
		Non-productive activities	940	100	890	100
Without preschool children		SNA work	205	44	189	44
		Household maintenance	160	82	150	81
		Personal care	22	29	25	30
		Non-productive activities	1053	100	1076	100

Note: MPT stands for mean population time and PR is participation rate

Source: Author's calculation

It is evident that, in both 1999 and 2004, the variable of preschool children significantly affected the way in which both men and women spent their time. Men with preschool children spent more time on extended SNA work than those without them. On the one hand, men with preschool children were less likely to participate in household maintenance than those without them and, as a result, spent less time on it. On the other hand, they spent more time on personal care. In addition, having preschool children took time away from non-productive activities. For women, having preschool children meant that they had less time for SNA work, more time for extended SNA work, and considerably less time for non-productive activities.

Gender inequalities in time use were evident both in 1999 and 2004. Among respondents with preschool children in 1999, women spent six hours on extended SNA work compared to less than one hour spent by men. In 2004, men spent only slightly more time on the extended SNA work than in 1999. Women, however, increased the amount of time they dedicated to extended SNA work, reducing the amount of time they spent on non-productive activities per day by four percent. Most of the increase in the time on the extended SNA work by women during this period stemmed from the increase in time spent on personal care, indicating that—despite some changes in the allocation of time between men and women—time spent by men on extended SNA work remained negligible while women still allocated a significant amount of time to extended SNA work, particularly on personal care, by taking time away from their non-productive activities.

Table 12. Time Spent on SNA, Household Maintenance, Personal Care, and Non-productive Activities by Gender and Work in 1999 and 2004 (minutes/%)

			1999		2004	
			MPT	PR	MPT	PR
Male	Working	SNA work	496	89	462	87
		Household maintenance	22	36	24	38
		Personal care	14	17	16	21
		Non-productive activities	907	100	937	100
	Not working	SNA work	16	7	15	8
		Household maintenance	26	38	29	39
		Personal care	15	11	19	12
		Non-productive activities	1382	100	1376	100
Female	Working	SNA work	416	87	379	84
		Household maintenance	150	89	138	87
		Personal care	30	37	30	36
		Non-productive activities	844	100	893	100
	Not working	SNA work	10	6	9	6
		Household maintenance	187	79	178	79
		Personal care	63	42	66	42
		Non-productive activities	1179	100	1186	100

Note: MPT stands for mean population time and PR is participation rate  
Source: Author's calculation

In addition, work status had a significant effect on the way that men and women spent their time. Working men allocated 33 percent of their day to SNA work and three percent to extended SNA work; non-working men spent 96 percent of the day on non-productive activities. Working women spent 28 percent of the day on SNA work, 13 percent on extended SNA work, and 59 percent on non-productive activities. Non-working women spent two percent on SNA work, 17 percent on extended SNA work, and 81 percent on non-productive activities.

Between 1999 and 2004, working men spent only slightly more time on extended SNA work. During the same period, women's allocation of time on extended SNA work also decreased; however, women still assumed the lion's share of responsibility for domestic tasks and personal

care. Gender inequalities in time allocated to non-productive activities also remained significant.

## Conclusion

This research examined gender inequalities in time use and changes between 1999 and 2004. Examining the gender differences by marital status, whether they had preschool children, and work status highlighted two significant features in time use in Korea. First, socio-economic factors make significant differences in regards to time use. For example, married men spent more time on household maintenance and personal care but less time on non-productive activities than single men. Being either divorced or widowed meant less time on paid work, more time on household maintenance, and less time on personal care and non-productive activities compared than being married. Married women spent more time on paid work, household maintenance, and personal care, but less time on non-productive activities compared to being single, divorced, or widowed. Furthermore, men with preschool children spent more time on extended SNA work than those without them while men with preschool children were less likely to participate into household maintenance than those without them, consequently spending less time on it. On the other hand, they spent more time on personal care. In addition, having preschool children meant spending less time on non-productive activities. Work status also resulted in significant differences in time use.

Second, significant gender differences in time use emerged. Between the years under study, changes have occurred in men's and women's time use. Men have spent more time while women less time on extended SNA work. However, it is important to point out that the amounts of changes are residual. Women spent more time on SNA work by squeezing time from that which they spent for themselves rather than reallocating the time on extended SNA work to paid work.

It is also important to point out that five years may be too short a time for determining gender differences in time use in Korea, which is experiencing ongoing social and economic changes. It remains to be seen how men's and women's time allocation in Korea will continue to evolve. As it stands now, the significant gender inequalities in time use have social and political implications. Since the new millennium, the Korean

government has actively paid attention to the issue of reconciling work and care as it attempted to bring more women into the labour market in order to boost industrial competition and economic growth. For example, in 2006, the state introduced care-related policies. However, it remains to be seen how such efforts will change gender relations in Korean society.

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