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The Political and Social Economy of Care:

Republic of Korea Research Report 2

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Republic of Korea

Analysis of Time Use Survey on Work and Care

1. Introduction

This chapter analyses time use data to explore work and care regimes in the Republic of Korea (Korea thereafter). The National Statistics Office (NSO) has conducted time use surveys (TUS) every five years from 1999, with the intention to collect information on how people spend their time during a 24-hour period. Through the analysis of time use data, this report aims first to analyse how individuals from different socioeconomic backgrounds and different types of households allocate their time to paid and unpaid care work. Secondly, it aims to compare the monetary value of unpaid care work with various macro-economic indicators.

The instrument for the 1999 TUS consists 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 including gender, age, education, marital status, employment status, 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 and the instrument thus includes three parts: household questionnaire, the individual questionnaire for respondents 10 years of age and older, and the time-diary. In both surveys, all the household members aged 10 and older were asked to record their main and simultaneous activities in the time diary, which was structured in 10 minute slots for the designated two days.

The 1999 survey sample was generated from the multi-purpose household sample (HAF-MP), which was 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, and 20 households were selected in each enumerator district. The 1999 sample consists of 42,953 individuals aged 10 and older and 16,389 households from 850 enumerator districts. The 2004 TUS sample also was 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 consists 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 the population aged 10 years above of the country as a whole.

All the self-recorded activities in the time diary, in both the 1999 and 2004 data are coded into three-digit codes, which are divided into nine broad categories. The nine categories are 1) personal care activities; 2) employment; 3) study; 4) household maintenance ; 5) family care 6) voluntary service; 7) leisure; 8) travel; and 9) others. Personal care comprises activities such as sleeping, eating and drinking, personal hygiene and health care. Household maintenance comprises activities such as food preparation, clothes care, cleaning, purchasing goods for household care, and so forth. Family care comprises activities such as care for family members including infants, children, spouses, parents and other family members. Voluntary service comprises helping neighbours and volunteer activities. The 1999 data are

designed according to 137 activity categories, and the 2004 data according to 125 activity categories. Appendix 1 provides codes of all the activities in 1999 and 2004. The changes in codes between 1999 and 2004 included some that relate to paid work and unpaid care work and which thus affect our analysis.

2. Description of 1999 and 2004 TUS

This section describes the 1999 and 2004 TUS. The focus of the research is on gender differences, thus all the outcomes are disaggregated by sex. The gender differences by various socio-economic factors are also presented. The socio-economic factors considered include age, education, marital status, children status, work status, employment status, personal income and household type.

Table 1 Distribution of sample by sex 1999, 2004

	1999	2004
Male	50	49
Female	50	51
Total	100	100

Table 1 shows the distribution of the 1999 and 2004 data by sex. In 1999, the distribution of population between males and females was 50:50. In 2004, the ratio had changed to 49:51. This is a reliable outcome, compared to national statistics which show a 50:50 composition of the population between males and females.

Table 2 Distribution of sample by sex and age group 1999, 2004

		1999	2004
Male	10-14	9	9
	15-64	83	83
	65+	8	8
	Total	100	100
Female	10-14	8	8
	15-64	82	80
	65+	10	12
	Total	100	100

Table 2 disaggregated the data by sex and age group. The analysis divides the sample cases into three age groups. The first is 10-14, the second 15-64 and the final is 65 and over. In both 1999 and 2004, the second age group comprises the largest portion of the sample. The proportion of females aged 65 and over increased by two percent between 1999 and 2004, while the male proportion remained constant at 8 percent.

Table 3 Distribution sample by sex and settlement type 1999, 2004

	1999			2004		
	Urban	Rural	Total	Urban	Rural	Total
Male	90	10	100	92	8	100
Female	90	10	100	92	8	100

Table 3 gives the distribution of the sample by settlement type. It shows that in both surveys, the majority of the sample, 90 percent, lived in urban areas in 1999 and 92 percent in 2004.

The 1995 and 2000 population and housing census from which the TUS sample is drawn, shows 12 percent of population in rural settlement in 1995 and 10 percent in 2000.

Table 4 Distribution of sample by sex and education 1999, 2004

		1999	2004
Male	Low	16	13
	Middle	56	50
	High	28	36
	Total	100	100
Female	Low	29	25
	Middle	53	49
	High	18	26
	Total	100	100

Table 4 disaggregated the sample by sex and education. The survey used seven categories for education. They are: no education, primary school, middle school, high school, 2 years of college, four years of university and graduate school. Furthermore, TUS collects further details on educational background in relation to educational 'status', i.e. whether he/she finished his/her study, is still in school, dropped out of school, or is taking a break. To simplify matters, the descriptive analysis here focuses on the level of education and groups the respondents into three categories. For low education, we include those with no education and those with primary school education; for middle level of education, we include those with middle and high school education; and we include those with college education and above under high level of education. Around 50 percent of the sample had middle level of education. Between 1999 and 2004, the percentage with college and above education increased for both men and women. In both years more men than women had high education.

Table 5 Distribution of sample by sex and marital status 1999, 2004

		1999	2004
Male	Single	36	36
	Married	61	61
	Divorced/widowed	3	3
	Total	100	100
Female	Single	29	29
	Married	57	57
	Divorced/widowed	14	14
	Total	100	100

Table 5 disaggregated the sample by marital status. Around 60 percent of the individuals are married. Divorced and widowed men constituted three percent in 1999 and 2004. For women the equivalent figures were 14 percent both in 1999 and 2004. This is similar to the national statistics, but for a slightly different age group. According to the NSO (NSO, 2000, 2005), in 2000, among those aged 15 and over, married men were 61 percent, single men 35 percent and divorced/widowed men four percent. In 2005, the corresponding figures were 35 percent, 60 percent, and five percent. Among women, in 2000, 25 percent were single, 60 percent were married, and 15 percent were divorced/ widowed. In 2005, the equivalent figures were 25 percent, 58 percent, and 16 percent.

Table 6 Distribution of sample by sex and children status 1999, 2004

		1999	2004
Male	With children	20	15
	No children	80	85
	Total	100	100
Female	With children	21	14
	No children	79	86
	Total	100	100

Table 6 disaggregated the sample by children status. The category 'with children' covers those who have preschool children who are 8 years old or younger. Around 20 percent of men and women reported that they had children in this age group in 1999, while the figures decreased to 15 percent for men and 14 percent for women in 2004. This may in part reflect the fall in the fertility rate, which dropped from 1.42 to 1.16 between 1999 and 2004.

Table 7 Distribution of sample by sex and work status 1999, 2004

		1999	2004
Male	Working	65	67
	Not working	35	33
	Total	100	100
Female	Working	45	47
	Not working	55	53
	Total	100	100

Table 7 disaggregates the sample by work status. The TUS asks respondent if he/she has worked during last week for pay. The TUS considers those answering yes as working and others not working. Among men, 65 percent responded to work for pay in 1999, and 35 percent not. On the other hand, 45 percent of women reported that they were working for pay, while 55 percent reported that they were not.

Table 8 Distribution of sample by sex and employment status among workers 1999, 2004

		1999	2004
Male	Salary worker	62	65
	Employers	6	10
	Self-employed	28	23
	Unpaid family worker	3	2
	Total	100	100
Female	Salary worker	58	66
	Employers	2	3
	Self-employed	16	15
	Unpaid family worker	23	16
	Total	100	100

Table 8 shows the distribution of the sample by employment status for those who responded they were working for pay during last week. In 1999, 62 percent of men reported being salary workers and the proportion increased by three percentage points in 2004. On the other hand, 58 percent of female workers reported being salary workers in 1999, and the figure increased by 8 percentage points in 2004. As a result, the proportion of women who were had become very similar to that of men. More women in the paid economy in 2004 suggests possible changes in the way women configured time between paid work and unpaid care between 1999 and 2004, as we shall see later, when we look at the time being allocated to unpaid care. According to the NSO, in 2000 salary workers were 60 percent of the total female work

force, while for males, the equivalent figure was 64 percent. It increased to 65 percent for men and 64 percent for women in 2005.

Table 9 Distribution of sample by sex and personal income group 2004

	Male	Female	Total
No income	34	61	48
1-999	12	23	18
1000-1999	30	13	22
2000-2999	15	3	9
3000-3999	6	0.7	3
4000+	3	0.3	2
Total	100	100	100

Table 9 presents the distribution of the sample by personal income. We cannot provide the analysis by income group for 1999 as data on income are not available for this year. The 2004 TUS collects personal income data in terms of 10 income groups. The first group has income less than $500 per month (what currency are you using? This also needs to be specified in the table), the second between $500 and $999, the third $1,000-1,499, the fourth $1,500-1,999, the fifth $2,000-2,499, sixth $2,500-2,999, seventh $3,000-3,499, eighth $3,500-3,999, ninth $4,000-4999 and tenth $5,000 and over. We provide the income distribution of the sample, re-grouping these into five groups. Thirty-four percent of men and 61 percent of women had no-personal income. Twelve percent of men and 23 percent of women had an income less than $1,000 per month; three percent of men and 0.3 percent of women had an income more than $ 4,000 per month. 99 percent of women and 91 percent of men had either no income or an income that was less than $2,999 per month.

Table 10 shows the disaggregation of data based on household composition by age group. Three age group categories of household members are defined: children (Ch) (10-19 years), adult (Ad) (20-59 years) and older adults (Old) (60 years and above). From this, we formulate 6 household types. They are 'Ch+Ad', 'Ch+Ad+Old', 'Ad', 'Ad+Old', 'Old' and 'Ch+Old'. The number of 'Ch' is too small to report.

Table 10 Distribution of sample by household composition by age group

		1999	2004
Male	Ch+Ad	35	33
	Ch+Ad+Old	8	5
	Ad	38	41
	Ad+Old	14	14
	Old	5	6
	Ch+Old	1	1
	Total	100	100
Female	Ch+Ad	35	32
	Ch+Ad+Old	9	6
	Ad	35	38
	Ad+Old	14	14
	Old	7	9
	Ch+Old	1	1
	Total	100	100

As Table 10 shows, household types classified as "Ch & Ad", and "Ad" only account for more than 70 percent of all household types in both 1999 and 2004. The proportion of three generation households (i.e. "Ch+Ad+Old" decreased between 1999 and 2004, while the proportion of older households increased. The proportion of female in Old households is bigger than that of males, and the proportion of Old households increased between 1999 and 2004, particularly for women.

Finally, table 11 shows care needs and capacity for care. We devise the notion of "care dependency ratio" and calculate it as follows. Those aged between 0 and 12 years and those 75 years and older (whom we assume to need varying degrees of care) are divided by those who fall in the 15 to 75 age group (whom we assume to be potential care givers). For the group of potential carees, children 0-6 years are given a full weight, as are the adults aged 85 years and above; children in the 7-12 year age group and adults between the ages of 75 and 84 years are given a half-weight.

The population and housing census produced by the NSO was used for the calculation of the care dependency ratio. The census is conducted every five years staring from 1970, in this analysis we use the 2000 and 2005 censuses. Table 11 shows that the care dependency ratio is 0.15 in 2000 and 0.18 in 2005. In 2005, the number of children under 12 years increased by 27 percent and the Old aged 65 and over by 37 percent and the number of carers by 18 percent which translates into an increase in the care the dependency ratio in 2005.

Table 11 Care dependency ratio in 2000 and 2005

	2000		2005	
Carees	Unweighted	Weighted	Unweighted	Weighted
Children 0-6	2,043,342	2,043,342	3,595,765	3,595,765
Children 7-12	3,919,188	1,959,594	4,030,013	2,015,007
Adults 75-84	904,357	452,179	1,199,129	599,565
Adults 85+	143,206	143,206	233,288	233,288
Total	7,010,066	4,598,321	9,058,195	6,443,625
Carers	31,032,127	32,032,127	36,622,889	36,622,889
Dependency ratio	0.15		0.18	

3. Defining paid and unpaid work

According to the System of National Accounts (SNA), the production boundary includes all production of goods and services for the market, as well as all production of goods for own use. Extended SNA work includes activities that are recognized as work or production, but