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Valuation of Unpaid Care Work Through a Comparison of Economic Measures in Korea: Focus on Mean Earning Approach and a Generalist Approach

This paper examines the value of unpaid care work using the 2004 time use survey and compared them to economic measures such as GDP, tax revenue, value of paid work, government expenditure on care-related personnel expenditure and remuneration of paid care workers. It employs the mean earnings approach and generalist approach. It finds that the value of unpaid care work (compared to GDP) is between 18% and 29% using different approaches. The value of care of household members and for others in the community (person care) is between 5% and 8%. Furthermore, the value of unpaid care work is greater than that of direct tax regardless of the approach used. In addition, the value of person care is estimated at between 22% and 35% of the total value of the paid economy. The value of unpaid care work far exceeds the value of government expenditure on care-related personnel and the remuneration of paid care workers. This research suggests that unpaid care work (mostly conducted by women) should be recognized as part of production activities. This is because caring and household maintenance activities are necessary for individual well-being but also it contributes to the national economic competitiveness particularly through human resource development.

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The Beijing Platform for Action, which emerged from the 1995 Fourth United Nations World Conference on Women, called for the development of statistical means to recognize and make visible the full extent of women's work contributions to the national economy, including the unremunerated and domestic sectors. In 1997, the Korean government first examined the value of unpaid care work; these efforts were followed by subsequent research. With a time use survey (which the National Statistics Office first conducted in 1999) researches looked into the valuation of unpaid care work (Kim, 2001; Kwon, 2006; Ministry of Gender Equality, 2001; Ministry of Women and Family, 2005; Moon, Yoon & Kim, 2002). The Ministry of Women and Family (2005) estimated that 689,982 won per month is the monetary value of household maintenance performed by females 20 and over. Kwon (2006) also found that the value of unpaid care work performed by females aged 20 and over per month is 690,000 won and is equivalent to 17.5% of annual GDP.

Most studies focused on unpaid care work conducted by females, particularly full time housewives. In addition, most studies used a specialist approach and opportunity approach that provided a weak discussion on the merits and drawbacks of the approaches. The current research is in the similar line of the existing studies but is differentiated in several aspects. First, the effort to value unpaid care work includes not only those conducted by females

including housewives but also men. This allows a view of the gender differences of unpaid care work in economic measures. Second, this research compares the amount of unpaid care work not only to GDP but also to other economic measures including tax revenue, value of paid work, government expenditure on care-related personnel expenditure, and remuneration of paid care workers. Secondly, this research uses definitions of unpaid care work, informed by the System of National Accounts (SNA). The production boundary includes the production of all goods, services for the market, and production of goods for personal consumption. The SNA recognizes that the production boundary does not cover all forms of work or production. In particular, boundary excludes unpaid production of services. This research regards household maintenance, care of household members, and others in the community as the unpaid production of services (unpaid care work). The study further focuses on the care of household members and for others in the community (person care). Also included is time spent on travel for both unpaid care work and person care in the analysis. Finally, the advantages and disadvantages of the different approaches are discussed to provide a monetary value to the unpaid care work. Based on the results, this research avoids the frequently used specialist and opportunity cost approaches.

Section 2 discuses ways of valuing unpaid care work and discusses the approaches employed for the research. Section 3 discusses measures used in the research. It discusses activities included for unpaid care work and person care, the way in which the study calculated hours spent on unpaid care work and person care, along with which wages applied. Section 4 provides outcomes on valuation and compares the valuation to several economic measures.

APPROACHES TO VALUE THE UNPAID CARE WORK

The System of National Accounts 1993 (SNA93) provides the basis for calculations of gross domestic product (GDP), which is the traditional measure of the size of a national economy. SNA93 distinguishes three types of production that form part of the calculation of output, and therefore of the GDP: (a) market; (b) own final use; (c) non-market. GDP measures all of the transactions in the market. In respect of non-market production, the GDP calculations exclude the production of (unpaid) household services for personal consumption, but include the production of goods by households for final personal use (for example subsistence production), an imputed value for owner-occupied dwellings, and paid household services such as wages of domestic workers. The basic SNA93 rule for household production is that the production of goods is included, but the production of services is not. SNA documents explain the exclusion of services produced in households as follows:

> *A large volume of household services including the imputed values derived from production would distort the usefulness of the accounts for policy purposes and for the analysis of markets and market disequilibria - the analysis of inflation, unemployment*", etc. (quoted in Varjonen *et al.*, 1999: 12)

The documents argue that household production "is relatively isolated from, and independent of, market activities" (quoted in Varjonen et al., 1999: 14). Other arguments against inclusion of household services are the lack of data, difficulty of measurement, and inability to make historical comparisons because services had not previously been included. However, Chadeau (1992: 87-8) notes that the, "arguments for excluding domestic and personal services from the production boundary in the System are not all equally convincing."

Most studies use the costs of the inputs to production to value household production. In theory, measuring outputs are preferred to inputs. One advantage of output-based valuation is that it adjusts for different productivity levels. Instead the means by which a good or service is produced, the focus is on what is actually produced. For example, two households may spend the same number of hours cooking similarly nutritious meals. However, because one household has an electric stove or

microwave, while the other relies on wood fuel, the first household will expend far less time in meal preparation. With the input-based approach, the meal of the second household would be assigned a higher value than the meal of the first household because the estimate is based on time. With the output-based approach, the two meals would be assigned the same value. Other reasons are that the output valuation measures the nature of activity rather than the purpose or level of enjoyment. For example, unpaid care work activities may be done because someone enjoys doing them. In this case, the person may take more time than necessary to complete the task (Australian Bureau of Statistics, 1990).

Despite the theoretical preference for the output measures, input measures are used in practice. In order to conduct output based valuation, there is a need for (a) household output, measured in physical units; (b) intermediate consumption, measured in either physical or monetary terms, and (c) market prices for the physically-measured items in (a) and (b) in order to convert them into a monetary measure. However, unavailability of data forces the study to conduct the input based valuation. In household production, the input costs of production are labor, taxes less subsidies on production, consumption of household durables, and the goods and services used in production (intermediate consumption). The taxes that should be taken into account in the calculation are taxes on ownership of dwellings and cars, and taxes on the use of vehicles. Subsidies on production include home care and housing allowances. The input approach either does not take net operating surplus into account or treats it as zero.

To perform the full input-based calculations described above, the study needs to decide which goods purchased by the household are used for final consumption, which goods are for intermediate consumption, and which are fixed assets. Some European countries are attempting to use the Classification of Individual Consumption by Purpose (COICOP) to help with this decision. Varjonen et al. (1999: 38) provide a table depicting how the different categories of goods could be allocated. Schafer and Schwarz (1992) include a chart of 'Goods and services for intermediate consumption and consumer durables used in household production which they allocate either completely or partly to different types of household production.

In the absence of data, many analysts have used the estimated value of labor as a rough indication of the value added by household production. This paper takes this approach and converts the time-based values obtained from the time use study into a monetary equivalent. Labor-only estimates are a good start when it is remembered that household production is more labor-intensive than production in most other economic sectors. However, there exists the caution by Brathaug (1990) that the resulting calculations underestimate the full value added in household production.

Time use surveys estimate the number of hours spent on unpaid care work. These hours and minutes then need to be converted into a monetary value. This is done by assigning an hourly earnings to the time spent. There are four general approaches to apply earnings into time on unpaid care work: average earnings approach, opportunity cost approach, generalist approach, and specialist approach. An underlying question in both the average earnings approach and the opportunity cost approach is how much the person doing the unpaid care work would have earned in the market if they had been paid for the work. The first approach uses the average earnings for all people (or all people of a particular sex) in the economy, while the second approach uses the actual earnings of the person who did the unpaid care work. The first approach is usually sex-disaggregated, because of the underlying question (what would the person earn in the labor market?) and because the average female earnings are usually markedly lower than male ones even where they have equal educational qualifications. This tends to result in a lower overall estimate of the value of unpaid care work because the larger number of hours worked by females is multiplied by a lower value, lowering the overall estimate. The disadvantage of the average earnings approach is the basis on only employed people who are not representative of the total population. It assigns values to unemployed and not economically active people; this is appropriate

for the employed, but perhaps not for everyone.

The opportunity cost approach uses the economic concept of opportunity cost. This concept refers to the benefit foregone by making one choice over another. In this case, it refers to the earnings that the person could have earned in paid work if they had not performed unpaid care work. There are some theoretical problems with this approach. Because the opportunity cost approach applies the earnings that the person would earn if they had a paid job, it applies different rates for the same task (and a similar output) when the work is performed by different people. This implies (for example) that the time that a university graduate spends cooking a meal has more value than time that someone with no formal education spends cooking a meal by someone without formal schooling, even if both cooks use the same ingredients.

Another problem with this approach is the difficulty in finding the opportunity cost for many respondents in a situation of high unemployment. The Time Use survey targeted respondents aged ten years or above and found that 45% of the respondents were either not economically active or unemployed. It would be difficult to assign an occupation and associated opportunity cost wage because many of these people would never have been employed. A third weakness of the opportunity cost method is that it assumes that people can always choose to spend an extra hour on paid work or another activity. In practice (especially with formal work) this flexibility is not possible. For these and other reasons, Varjonen et al. (1999: 31) reports that the opportunity cost method is "widely rejected by researchers."

The generalist and specialist approaches have the underlying question of how much a household would need to pay someone else to do unpaid care work. The generalist approach uses the average earnings paid to a worker, such as a domestic worker or housekeeper, who would do virtually all the tasks. The specialist approach assumes that the household employs a specialist to do each type of work. For example, the household might employ a cook, a nanny, a maid, and a nurse. For this approach the calculations are not sex-disaggregated as in theory, the household concern should be the work itself, not the gender of the worker. In practice for the domestic worker approach, the overwhelming majority of workers in most countries are female.

The generalist approach assigns the average earnings of workers performing similar work to the unpaid care work. For housework, the workers concerned would include paid domestic workers. For child care work it would include preschool teachers. Where the generalist approach uses domestic worker earnings, it may underestimate the true value of housework to the extent that it does not consider the possible managerial tasks associated with household maintenance.

The specialist approach assigns different earnings to different activities, regardless of who performs them. In each case, the paid worker whose functions and circumstances are a closest match the unpaid care work concerned is chosen. This approach requires data of sufficient detail and quantity on both time use and earnings. It is sometimes applied in a broad way, for example it is possible to assign one earning to the household maintenance work, another earning to the care work, and a third earning to the community services work. The difference in total value resulting from the specialist and generalist approaches varies according to the mix of occupations and wage levels. Chadeau (1992: 95) notes that, across all countries that have done the calculations, the opportunity cost approach always gives the highest values and the generalist approach almost always gives the lowest.

This paper uses the average earnings approach and the generalist approach. The opportunity cost approach is not pursued because of theoretical and practical limitations. The theoretical side for example, assumes that a meal prepared by a university professor has more value than one prepared by an unskilled worker even if the same ingredients are used. On the practical side, there are difficulties in assigning a value to someone who is not employed. The specialist approach is avoided because of the complexity, and because of the difficulty of finding the appropriate paid workers for all tasks. Both these choices do tend to result in lower estimates of the value of unpaid care work.

Two variants are possible for both the average earnings and generalist approaches. For average earnings the first and preferred variant was based on average earnings of all employed people with non-zero earnings, whether they were employees or self-employed. The second variant used only employee earnings. For the generalist approach, the first variant involved inclusion of all occupations involving work similar to housework, such as cleaning and cooking, whether performed in institutions or in the home. Technically, this included a range of occupations in Major Category 5 of the International Standard Classification of Occupations or an equivalent. Teachers were excluded from the measures reported below because although some teaching requires a large measure of care the relatively large number of teachers in most countries and the fact that earnings are generally higher than those of the average domestic worker, would have skewed the value upwards. The second variant focused only on wages of domestic workers more narrowly defined. Actual earnings of domestic workers tend to be lower than those of these other workers because hours worked tend to be less and there are usually no added benefits.

METHODS

The reason for assigning a monetary value to unpaid care work is to estimate the number of hours worked and multiply this by some measure of hourly earnings. To calculate the value of unpaid care work, the total number of hours spent on unpaid care work and person care by gender is determined for each year. This number is multiplied by the population over ten years old. This is then multiplied by the appropriate earnings for a particular method, which results in the total hours spent on unpaid care work and person care per year. This result is then compared to several economic measures. This section discusses measures used in the research, including activities included in unpaid care work and person care, earnings, hours spent on unpaid care work, and person care.

Measures

Activities included in unpaid care work and person care The Korean NSO has conducted time use surveys (TUS) every five years since 1999, with the intention of collecting information on how people spend time during a 24-hour period. This analysis uses the 2004 data only. The 2004 TUS sample was generated from the multipurpose household sample, which was derived from the year 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, with 15 households selected in each enumerator district. The 2004 sample consisted of 31,634 individuals aged ten years and older and 12,651 households from 850 enumerator districts. The data were subsequently weighted to be representative of the Korean population aged ten years and older.

All the self-recorded activities in the time diary are converted into three-digit codes, which are divided into nine categories: 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, drinking, personal hygiene and health care. The household maintenance consists of food preparation, laundry, cleaning, and grocery shopping. The family care includes attending to infants, children, spouses, parents and other family members. The voluntary service is through helping neighbors and the community. In this research, unpaid care work includes activities classified under household maintenance, family care and voluntary service and time spent on travel for activities related to unpaid care work see Table 1. The person care includes activities classified under family care, voluntary service and time spent on travel for related activities.

Earnings This research uses average earnings for valuation. The choice of the average may inflate the value as the use of an average than median tends to over-state the true 'middle.' Three national datasets are designed to collect information on earnings: the Wage Structure Survey (WS) by the Ministry of

TABLE 1. ACTIVITIES IN UNPAID CARE WORK AND PERSON CARE

			Activities
Unpaid care work	Household maintenance		Food preparation, clothes care, cleaning and arrangement House upkeep, purchasing food for household care Household management, other household care activities
	Person care	Family care	Care of preschool child, care of school-age child, care of spouse, care for parents, other family care
		Voluntary service	Helping neighbors, participation, volunteer activities
		Travel	Household care, family care, voluntary services

Labor (ML), the Economically Active Population Survey (EAP) by NSO, and the Korean Labor and Income Panel Survey (KLIP) by the Korean Labor Institute (KLI). The WS collects earnings information for, regular employees in workplaces with five or more employees, excludes the domestic service and other industries, and does not collect detailed earnings information by occupation; these are all disadvantages in light of the current discussion. Meanwhile, EAP does not collect earnings data for self-employed and personal accounts or wage information by occupation in detail that is also disadvantages given the purpose of the current analysis.

Meanwhile, the KLIP seems to be the most advantageous to the current discussion. KLIP is a longitudinal study of representative samples of Korean households and residents of urban areas; it is conducted annually to track the characteristics of households as well as economic activities, labor movement, income, expenditure, job training, education, and social activities. Initiated by KLI in 1998, the ninth wave was conducted for 2006. The original sample in 1998 included 5,000 households. KLIP collects earnings information for employees, the self-employed, and personal account in addition it collects earnings data by occupation. However, it collects data on occupation detailed to three digits. In addition, the KLIP does not have any data for females in domestic service-related work in 1999. The current analysis on valuation and comparison of unpaid care work provides discussions for 2004 only. For the generalist approach, occupations included for the calculation of average earnings and the codes are as follows. Code 411 workers include childcare workers, institution and home based personal care workers, and related workers. Code 421 includes cooks, who are head cooks, restaurant cooks, and fast-food restaurant cooks. Code 911 includes cleaners, launderers, cleaning workers, building cleaners, cleaners in hotels and restaurants, vehicle and related cleaners, hand launderers and pressures. For the average domestic earnings approach, code 911 is considered.

In most cases the earnings data were sourced from household surveys. It is known that respondents tend to under-report earnings in such surveys. No correction was made for this under-reporting as the extent of the under-reporting is not known either for the employed population as a whole or in terms of how under-reporting differs across groups. Lack of correction for under-reporting will result in lower estimates of the value of unpaid care work.

Hours spent on unpaid care work The KTUS collects information on the number of minutes spent on main and simultaneous activities. The time spent on main activities is 24hours while time spent on both main and simultaneous activities is over 1440 minutes. It would be ideal to use full minutes, but this 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 are 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. This analysis focuses on the main activities, with the total number of minutes spent on these activities equaling 24 hours.

RESULTS

Hours and Monetary Value of Unpaid Care Work and Person Care

Tables 2 to Table 5 shows total average hours on unpaid care work and earnings for the different approaches. Table 2 shows total average hours and earnings of all employed. The total hours spent on unpaid care work was 259 hours for males and 1,270 hours for females per year. Males spent 104 hours per year on person care while females spent 299 hours. Applying an average earnings of all employed, the total earnings for unpaid care work is 225,124,975 million won and it is 59,335,264 million won for person care.

Table 3 shows that using average earnings of all employees, the total average monetary value of unpaid care work is 222 trillions won and it is 58 trillions won per year.

Table 4 shows that using the generalist approach, the total average monetary value of unpaid care work is 138 trillions won and 36 trillions won for person care.

Table 5 shows that using average earnings of domestic and related helpers, cleaners and launderers, the total value of unpaid care work is 144,860,794 million won and 38,180,364 million won for person care.

Comparison of the Value of Unpaid Care Work with GDP

Table 6 shows the value of unpaid care work and person care as a percentage of GDP, which was 779 trillions won in 2004.

The value of unpaid care work by males was equivalent to 6% of GDP using all approaches. The value of person care by males was 2% versus the value of unpaid care work by females at 24% and person care at 6%. In total, the value of unpaid care work ranged from 18% of the GDP, using the generalist approach, to 29% using all employed approaches in 2004. The value of work on person

TABLE 2. AVERAGE HOURS AND EARNINGS FOR ALL EMPLOYED APPROACH

	Unpaid care work			Person care		
	Male	Female	Total	Male	Female	Total
Hours per year	259	1,270	774	104	299	204
Population 10+	20,574,121	20,916,076	41,480,197	20,574,121	20,916,076	41,480,197
Total hours per year	5,328,697,339	26,563,416,520	32,105,672,478	2,139,708,584	6,253,906,724	8,461,960,188
Earnings per hour	8,732	6,914	7,012	8,732	6,914	7,012
Total earnings (Million won)	46,530,185	183,659,461	225,124,975	18,683,935	43,239,511	59,335,264

TABLE 3. AVERAGE HOURS AND AVERAGE EARNINGS FOR ALL EMPLOYEES APPROACH

	Unpaid care work			Person care		
	Male	Female	Total	Male	Female	Total
Hours per year	259	1,270	774	104	299	204
Population 10+	20,574,121	20,916,076	41,480,197	20,574,121	20,916,076	41,480,197
Total hours per year	5,328,697,339	26,563,416,520	32,105,672,478	2,139,708,584	6,253,906,724	8,461,960,188
Earnings per hour	7,750	7,000	6,936	7,750	7,000	6,936
Total earnings (Million won)	41,297,404	185,943,915	222,684,944	16,582,741	43,777,347	58,692,155

TABLE 4. AVERAGE HOURS AND EARNINGS FOR GENERALIST APPROACH

	Unpaid care work	Person care
Hours per year	774	204
Population 10+	41,480,197	41,480,197
Total hours per year	32,105,672,478	8,461,960,188
Earnings per hour	4,301	4,301
Total earnings (Million won)	138,086,497	36,394,890

TABLE 5. AVERAGE HOURS AND EARNINGS FOR DOMESTIC WORKERS APPROACH

	Unpaid care work	Person care
Hours per year	774	204
Population 10+	41,480,197	41,480,197
Total hours per year	32105672478	8,461,960,188
Earnings per hour	4,512	4,512
Total earnings (Million won)	144,860,794	38,180,364

TABLE 6. UNPAID CARE WORK AND PERSON CARE AS A PERCENTAGE OF GDP: DIFFERENT APPROACHES

	Unpaid care work			Person care		
	Male	Female	Total	Male	Female	Total
Average earnings for all employed	6	24	29	2	6	8
Average earnings of all employees	5	24	29	2	6	8
Average generalist earnings	-	-	18	-	-	5
Average domestic worker earnings	-	-	19	-	-	5

TABLE 7. VALUE OF UNPAID CARE WORK COMPARED TO TAXATION: DIFFERENT APPROACHES

	Direct tax		Total tax	
	Unpaid care work	Person care	Unpaid care work	Person care
Average earnings for all employed	452%	119%	148%	39%
Average earnings of all employees	447%	118%	147%	39%
Average generalist earnings	277%	73%	91%	24%
Average domestic worker earnings	291%	77%	95%	25%

care ranged from 5% to 7% depending on the approach used.

Comparison of Unpaid Care Work with Tax Revenue

Table 7 compares the value of unpaid care work to tax revenues. Korea collects national and local taxes. National taxes are internal taxes, customs duties, and three earmarked taxes; local taxes include province taxes and city and county taxes. The internal taxes can be direct or indirect taxes. Direct taxes are income tax, corporation tax, inheritance and gift tax, and comprehensive real estate holding tax. Indirect taxes are value-added tax, special excise tax, liquor tax, stamp tax, securities transaction tax and transportation tax. Of these ten taxes, the corporate tax, income tax, and value added tax generate the bulk of the Korean tax revenue. This study uses both direct and total tax for comparison. In 2004, direct tax was 49,806,900 million won and total gross tax was 151,997,400 million won.

Table 7 shows that the value of unpaid care work is larger than that of direct tax regardless of the approach used. Even the value of person care exceeds the value of direct tax in both approaches. The value of unpaid care work exceeds that of total taxes in both the employed and all employee approaches.

Comparison of the Value Of Paid and Unpaid Care Work

This section compares the value of unpaid care work to the value of paid work. For the value of paid work, the study calculated the total wages earned by paid employees. The study excluded self-employed and unpaid family workers. For the volume of earnings of paid employees, this study multiplied the total earnings (calculated by the NSO) by the number of

TABLE 8. UNPAID CARE WORK COMPARED TO EARNINGS FOR ALL PAID WORK IN THE ECONOMY

	Unpaid care work			Person care		
	Male	Female	Total	Male	Female	Total
Average earnings for all employed	35%	495%	134%	14%	117%	35%
Average earnings of all employees	32%	501%	132%	13%	118%	35%
Average generalist earnings	-	-	82%	-	-	22%
Average domestic worker earnings	-	-	86%	-	-	23%

paid employees. In 2004, earnings for all paid work equaled 131 trillions won for males and 37 trillions won for females, for a total of 168 trillions won.

Table 8 shows the value of unpaid care work compared to earnings for all paid work in the economy by gender. The value of unpaid care work was 35% of male earnings when using the all employed approach. The value of work done by males for person care is 13% using the all employees approach and 14% using the all employed approach. The value of unpaid care work done by females is around five times greater than the value of paid work done by females in the economy. In addition, the value of person care done by females exceeds the value of paid work by females in the economy. In total, the value of unpaid care work exceeds the value of paid work in the economy using the all employed and employee approaches.

Comparing the Value of Care Work with Government Expenditure on Care-related Personnel Expenditure

Social services such as education, health, and social welfare are managed and delivered by national and provincial spheres of governments. However, information on local government expenditure on the care-related personnel expenditure is not available. The analysis has to focus on care-related personnel expenditure of the central government that underestimates the total value of government expenditure on care-related personnel expenditure. For education, this study aggregates the personnel expenditures of national and public schools, Ministry of Education (MOE) and educational support institutions under the MOE (17 trillions won) and the personnel expenditure of Ministry of Health and Social Welfare (172 trillions won) to arrive at a total of 17 trillions won.

Table 9 suggests that the value of unpaid work could be more than twelve times the social services of the national government. Even with the generalist earnings approach, it is more than seven times the value of government social services. The value of person care could also be more than three times that of government social services, using the average earnings for an all employed approach.

TABLE 9. UNPAID CARE WORK COMPARED TO NATIONAL GOVERNMENT SOCIAL SERVICES

	Unpaid care work	Person care
Average earnings for all employed	1254%	331%
Average earnings of all employees	1240%	327%
Average generalist earnings	769%	203%
Average domestic worker earnings	807%	213%

Comparing the Value of Unpaid Care Work with Remuneration of Paid Care Workers

Table 10 shows the value of unpaid care work in comparison with the remuneration of paid workers in care-related occupations as recoded in the EAPS. This study includes all occupations classified under the personal services related workers (occupation code 411) and domestic and related helpers (occupation code 911). For the volume of earnings of paid care workers, the study multiplies the total earnings by the number of the paid care workers, calculated by NSO. In 2004, total paid care worker earnings equaled 5 trillions won; for females it was 1 trillions won and for males it was 3 trillions won.

Table 10 suggests that the value of unpaid work could be more than 43 times that of paid care workers. Even with the generalist wage, it is more than 27 times the value of paid care workers. In particular, the value of unpaid care work by females could be more than 117 times that of female paid

TABLE 10. VALUE OF UNPAID CARE WORK COMPARED TO REMUNERATION OF PAID CARE WORKERS

	Unpaid care work			Person care		
	Male	Female	Total	Male	Female	Total
Average earnings for all employed	1313%	11733%	4407%	527%	2762%	1162%
Average earnings of all employees	1166%	11879%	4359%	468%	2797%	1149%
Average generalist earnings	-	-	2703%	-	-	712%
Average domestic worker earnings	-	-	2836%	-	-	747%

TABLE 11. COMPARISON OF TOTAL ANNUAL HOURS SPENT ON PAID WORK, UNPAID CARE WORK AND PERSON CARE

	Male	Female	Total
Paid work	39,359,838,761	23,070,524,905	62,213,471,662
Unpaid care work	5,328,697,339	26,563,416,520	32,105,672,478
Person care	2,139,708,584	6,253,906,724	8,461,960,188

care workers. The value of person care by females could also be more than 27 times that of paid care workers, using the average earnings for all employed and employees approach.

Comparison of Total Hours Spent on Unpaid Care Work, Person Care, and Paid Work

Table 11 shows total hours spent on unpaid care work, person care, and paid work for both males and females. In 2004, the number of hours females spent on paid work equaled 59% of the number of hours that males spent. The number of hours males spent on unpaid care work was only 20% of those females spent. Males spent 34% of the number of hours spent by females on person care. Overall, the total number of hours spent on unpaid care work was 51% of total hours spent on paid work.

CONCLUSION

This research has looked into the economic valuation of unpaid care work, using 2004 time use survey data. It has examined the valuation of unpaid care work conducted by both males and females aged 10 years and over. It also brings the SNA guidelines for unpaid production of services into the analysis. Furthermore, it provides critical discussions on the merits and drawbacks of frequently used specialist and opportunity cost approaches. It has also compared the monetary value of unpaid care work not only to GDP but also to other economic measures.

This research found that the value of unpaid care work compared to GD is 29% using the all employed approach and 18%, using the domestic workers approach. The value of person care is 8% using all employed approach and 5% using domestic workers approach. Furthermore, the study found that the value of unpaid care work is larger than that of a direct tax regardless of the approach used. The value of unpaid care work exceeds that of total tax both in the all employed and all employees approaches. In addition, the value of person care is 35% of total value of paid economy when using both all employed approaches and 22%, using a generalist approach. The value of unpaid care work exceeds the value of government expenditure on care-related personnel and the remuneration of paid care workers. Finally, the study found that total number of hours spent on unpaid care work was 51% of total hours on paid work. This research shows first that unpaid care work should be examined based on appropriate approaches for Korea. Second, it shows that unpaid care work (mostly conducted by

females) should be recognized as part of the production activities. This is because caring and household maintenance activities are necessary for individual well-being but also in the contribution to the national economic competitiveness particularly through human resource development. The research outcomes carry policy implications so that the state, the firm, and society should fully recognize the value of unpaid care work and take actions to share the responsibilities. Recently, the Korean government has actively paid attention to the issue of reconciling work and care. It remains to see how the responsibilities are shared between the state, the market, and the family.

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