Feminist Economics, 2014
Vol. 20, No. 2, 65–89, http://dx.doi.org/10.1080/13545701.2013.862342

COUNTING CARE WORK IN SOCIAL POLICY: VALUING UNPAID CHILD- AND ELDERCARE IN KOREA

Jayoung Yoon

ABSTRACT

This study demonstrates the usefulness of quantifying and valuing time spent on unpaid care work and explores the links between social policies, unpaid care work, and gender equality in the context of recent social care reforms in the Republic of Korea. Using information provided by two nationally representative surveys, this article elaborates on the gendered organization of care provision and the total costs of care services for children and the elderly, including unpaid family care, family expenditures on care services, and state support in the form of public expenditures. The study finds that omitting the role of family care services overestimates the state's role in caring for children and elderly adults. A closer look at the impact of long-term care insurance reveals the need for integrated analyses of the qualitative and quantitative aspects of the social organization of care, especially in regard to gender equality.

KEYWORDS

Valuing unpaid care, unpaid care, care policies, time use

JEL Codes: H5, J18, D13

INTRODUCTION

Feminist research recognizes unpaid work as critical to the analysis of economic issues. Estimating the monetary values of unpaid work alters our perceptions of what constitutes economic welfare or progress and of women's contribution to the economy (Killian Mullan 2010; Nancy Folbre 2008a; Katherine Abraham and Christopher Mackie 2004; Iulie Aslaksen and Charlotte Koren 1996; Duncan Ironmonger 1996; Barnet Wagman and Nancy Folbre 1996; Luisella Goldschmidt-Clermont 1993). Beyond making unpaid work visible through valuation, scholars, including those

concerned with gender-responsive budget movements, argue that unpaid work should be seriously considered when designing and evaluating policies to improve gender equality (Indira Hirway 2005; United Nations Development Programme/Economic and Social Commission for Asia [UNDP/ESCAP] 2003; Debbie Budlender, Diane Elson, Guy Hewitt, and Tanni Mukohpadhyay 2002). Despite the widely accepted importance of incorporating unpaid work into social policies, however, doing so is difficult because unpaid work is not easily quantified.

Unpaid care work has entered the policy arena in Korea, where the costs of providing care to children and elderly people are a growing public concern. Since the mid 2000s, the Korean government has enacted policy changes to support family care, which involve potential transformations in gender relations and general notions of care work, including the expansion of childcare subsidies and the introduction of national long-term care insurance (LTCI). These policies were intended to socialize the costs of care by relieving individual families of the burdens of unpaid care (Jae Eun Seok 2010; Ito Peng 2009). But how much of a role they play in the social organization of care, the provision of care, and advancements in gender equality is largely unknown, given the minimal information available about the value of unpaid care work.

The current study demonstrates the benefit of quantifying and valuing time spent on unpaid care work and explores the links between social policies, unpaid care work, and gender equality. We measure and value time spent on unpaid child- and eldercare work and put the costs of unpaid care in the broader context of the social organization of care in Korea. Then, we illustrate the implications of state support for care and gender equality for the gendered nature of family care. Due to data limitations, a direct assessment of policy changes is impossible to conduct. But for eldercare, we attempt to explore the gendered implications that the introduction of LTCI may have for the organization of caregiving and receiving. A closer look at the link between social policies and care work offers insight into the way social policies transform women's role in the care provision. Additionally, we present the total costs and the relative contributions of care services such as unpaid family care, family expenditures for care services, and state support in the form of public expenditures on childcare and eldercare. The concept of the "care diamond" developed by Shahra Razavi (2007) helps illustrate the distribution of costs of care among the family, the market, and the state. Understanding who bears the relative shares of the total care costs helps explain the extent to which invisible unpaid work underpins the costs of social reproduction.

These results contribute to a better understanding of how care work is socially organized and of the full costs of caring for dependents, which policymakers need as they design and evaluate social policies pertaining to care.

ESTIMATING AND VALUING UNPAID CARE WORK: A LITERATURE REVIEW

Theoretical and empirical studies that assign value to unpaid work have underscored the limitations of using conventional measures of economic performance, such as GDP (Joseph E. Stiglitz, Amartya Sen, and Jean-Paul Fitoussi 2009; Folbre 2008a; Abraham and Mackie 2004; Duncan Ironmonger 2000; Nancy Folbre and Barnet Wagman 1993). When women undertake the bulk of unpaid work, it often goes unrecognized, which disregards the commensurability of women's productive roles to those of men. Although the methodological approach to valuing unpaid work could be improved, these measurements advance feminist research and highlight women's contribution to the economy.

Despite methodological difficulties, we need to go beyond making unpaid work visible and value it in terms of social policies to advance gender equality. Policymakers often suffer from a "money illusion" that focuses only on the monetary aspects of value or cost (Eldar Shafir, Peter Diamond, and Amos Tversky 1997; Robert T. Michael 1996). It is inadequate to envision what public policies should do to meet the care needs of society without knowing the real volume or value of the care services provided. According to the US Committee on National Statistics (Abraham and Mackie 2004), the notion of unlimited free care services provided by the family is passé, and therefore it is critical to establish policies that direct public expenditures to programs that secure the welfare of families.

The estimated costs of child- and eldercare can also inform policymakers of the resources devoted to care needs and their distribution among different stakeholders. Nancy Folbre (2008b) shows that the omission of the value of care work exaggerates the share of the state for care provision for children. Ari Houser and Mary Jo Gibson (2008) measure the cost of adults providing unpaid care to elderly adults who have limitations in daily activities to be roughly US$10 per hour. The total value of unpaid eldercare was estimated at US$375 billion in 2008, which was about 86 percent of Medicare spending (US$432 billion) and roughly equal to the total sales of Wal-Mart (US$379 billion) or to 120 percent of Medicaid spending (US$311 billion).[1] These estimates of the value of informal care provide a yardstick to measure the coverage of existing policies that expend resources on eldercare and of policy proposals that would extend the collective provision of care services (Douglas A. Wolf 2004). Janet E. Fast, Deanna L. Williamson, and Norah C. Keating (1999) argue that any changes in social policy to reduce public expenditures, like those implemented in the early 1990s in the United States, simply shift costs from formal to informal care. The argument that informal care is cost effective is untenable when hidden costs are explicitly considered.

These empirical studies implicitly point to the care diamond to show the social organization of care. The United Nations Research Institute for

Social Development (UNRISD) conducted a project employing the care diamond, which is useful for reconceptualizing the institutions involved in care provision such as the public, the market, families/households, and the not-for-profit sector. Studies using this concept focus on the qualitative features of a shift among stakeholders (Aya K. Abe 2010; Peng 2009; Razavi 2007). These analyses emphasize characteristics of elder- and childcare policies from the standpoint of the sectors that finance, manage, and regulate benefits. Yet, no one has investigated how these social policies affect the quantitative nature of the production and distribution of care services among them.

In this study, we portray the quantitative nature of the care diamond by estimating the total care costs incurred by the family (unpaid care work), the market (paid care work expended by households), and the state (paid care funded by the government). As this paper focuses on the quantitative distributions of the costs among family/market/state, we define the state as the one that finances care services even though it fails to directly provide it and the market as the monetary value of paid care. We exercise caution in setting up the quantitative aspect of the care diamond: the boundaries between family, market, and state may not be as clear cut as those assumed in this study. Some might argue that the "market" should be integrated into the family in quantitative terms because the family is responsible for paid care; or that the boundary between the market and the state is blurry because the market actually provides the paid care despite public financing.

DEMOGRAPHIC AND ECONOMIC TRENDS AND SOCIAL POLICY IN SOUTH KOREA

The Korean welfare state has been gradually modified to recognize familial unpaid care work as a response to the so-called "care crisis" characterized by demographic and economic transitions and radical changes in gender relations.

Demographic changes have spurred public concerns regarding care provision. The fertility rate has declined in Korea from 2.82 in 1980, 1.57 in 1990, and 1.46 in 2000 to below-replacement levels, reaching 1.23 in 2011.[2] Korea's fertility level is the lowest of OECD countries; from 1970 to 2009, its fertility level had the third greatest drop, after Mexico and Turkey, among these countries.[3] Korea is fast becoming one of the most rapidly aging societies; projections are that in eight years it will progress from an aged society, with 14–20 percent of the population over 65, to a super-aged society, with the over-65 portion of the population exceeding 20 percent; whereas projections estimate the US taking sixteen years and France taking forty years to reach a similar point (Hanam S. Phang 2005). These figures have sparked fears of care crisis, a population decline, and labor shortages and have mobilized women into the workforce.

The increase in women's labor market participation has added to the shortage of care, bringing issues of child- and eldercare to the center of policy debates; and it has transformed ideas about family and gender relations. Marriage and childrearing are one option among many life choices. Because inadequate public care programs and the strong social norm of familial solidarity have left caregivers unprotected from the costs and risks of being a primary caregiver, women have often avoided undertaking care responsibilities. The increase in women's labor market participation has also escalated expectations for equal sharing of unpaid work between men and women, yet men have been slow to adapt. Such a gap between expectations and reality causes gender conflicts, which lead women to opt out of the care provision role (Jae-Kyoung Lee 2002).

Eldercare was previously the unquestioned responsibility of the eldest son and his wife (Seok 2010). However, an increasing number of people perceive eldercare to be the responsibility of society as a whole, not that of the eldest son alone. In 2002, 18.2 percent of Korean people over 15 years of age stated that both the family and society bore responsibilities for eldercare, whereas in 2010, 47.4 percent of Korean people did.[4] This perception of shared responsibility means that cohabitation with adult children has diminished, and elderly people in poverty have suffered from desertion and been found dead in isolation.

"Care" was only recently placed at the center of social policy in Korea. In the past, social policies shaped by Confucian familial solidarity justified minimal levels of government support except for families in dire poverty (Roger Goodman and Ito Peng 1996). Familial responsibility for care is, therefore, very salient in Korea: governmental spending on family policies ranked lowest among OECD countries, at 0.25 percent of GDP, relative to the OECD average of 2.3 percent, as of 2005 (Willem Adema and Maxime Ladaique 2009). Around 2000, Korean mothers living with at least one child under age 18 spent 2 hours per day on care activities, including feeding, bathing, talking to, or playing with children – the highest number of hours among the OECD countries; whereas UK mothers spent 1.25 hours and Swedish mothers, 1.18 hours (Jayoung Yoon 2010). And yet, Korea, along with Italy, Spain, and Japan, exhibits a trend whereby fertility rates and women's employment rates are simultaneously low.[5]

Against this background, the social care reforms introduced after 1997 respond to feminist and welfare advocate demands for welfare expansion and greater gender equality, as well as economists' demands for an active labor market strategy (Peng 2009). Unlike Western countries, where state support for care has been reduced due mostly to neoliberal responses to budget crises (Kate Bezanson 2006; Isabella Bakker and Stephen Gill 2003; Gøsta Esping-Anderson 1999), Korea is slow in developing care-centered social policy. But rather than supporting care work in the form of

allowances or cash benefits, social policy has given preference to expanding care services. The state has assumed greater welfare-related responsibilities by legislating, financing, and directly providing welfare services (Ito Peng 2010). Thus, public support for care is intended to promote employment by directly creating care employment and by allowing caregivers to redistribute their time from unpaid to paid work.

State support for children has expanded in the form of childcare subsidies, or the childcare voucher. This voucher subsidizes childcare for children ages 6 and under, regardless of maternal employment status. Relaxing eligibility requirements, based on income threshold during the 2000s, caused childcare subsidies to increase dramatically and by 2013, to become universal. By 2009, the total number of children enrolled in childcare centers increased to 1.7 times the number in 2000. The budget for childcare accounted for a mere 0.1 percent in 1991, 0.7 percent in 2005, and 1.8 percent of the GDP in 2010 (Mi-Young An 2012: 141–3).

State support for eldercare services was introduced with the national LTCI in July 2008 as a form of universal mandatory social insurance similar to that in Germany and Japan. The national LTCI enables the government to collect insurance premiums from all adults who hold national health insurance. It provides domiciliary and institutional care services, excluding medical services, to people over age 65 with physical disabilities and to those between 40 and 64 suffering from premature aging. The LTCI shifted the principle of eldercare from a means-tested program financed by taxes to a rights-based, universal program (Seok 2010).[6] When the system was first introduced in 2008, only about 4 percent of adults 65 and older benefited (Hee-sook Yoon 2010: 68). The government budget increased significantly to accommodate the new LTCI system. The government budget allocated to eldercare services was only 0.58 percent relative to the GDP, but increased to over 2 percent of the GDP in 2008; the number of in-home care workers increased fourfold between 2007 and 2009 (An 2012: 144). As of July 2010, the LTCI covered 5.4 percent of elderly people. LTCI finances caregiving provided by a family member when he or she acquires a certificate of qualification for in-home eldercare. This feature was initially introduced to support eldercare in rural areas where in-home care workers or facilities are scarce but was later expanded to urban areas.

These care policies were a response to changes in demographic and labor market environments and were designed to support unpaid care work and secure the labor force. While there are many objectives behind care policy (including increases in fertility, care provision, and employment rates), these specific care policies were established to relieve individual families – and women in particular – from paying for care services and undertaking unpaid care work. To a great extent, these polices helped socialize care costs. But we still lack an understanding of the extent to which these care policies play a role in transforming gender relations in the care

provision and redistributing care costs between the family, market, and the state.

DATA AND METHODOLOGY

Data and sample

This study uses two distinct datasets to analyze unpaid time spent on care for children ages 6 and under and for elderly people ages 65 and over. The data used for childcare comes from the Korean Longitudinal Survey of Women and Families (KLoWF; Korean Women's Development Institute 2010, 2012), a nationally representative survey. The survey collected information on family and working lives from women ages 19–64 residing in sampled households. This study uses the second wave of the survey, conducted in 2008–09, which included 8,364 women. The survey was also conducted in 2010 but failed to collect key information about parental care, asking only about non-parental care. Therefore, this study focuses on an analysis for one year, unlike that for eldercare.

Although previous studies examine time-use surveys (Folbre 2008b; Nancy Folbre and Jayoung Yoon 2007), we use the KLoWF because it asks about care work by relatives who do not co-reside with a child. Informal care services provided by relatives play a substantial role in assisting parents in Korea (Sook-yeon Won and Pascall Gillian 2004). The KLoWF provides information on family expenditures for paid care, which helps us analyze the full costs of childcare needs. Unfortunately, the data lacks information about the receipt of a childcare subsidy, which hinders analysis of direct policy effects on an individual or household level. It is unlikely that respondents reported the subsidy as a part of family expenditures in 2008, when it was directly provided to the facility.

Estimation of childcare time is based on information provided about care arrangements for each child in a standardized manner that will be discussed in the next section. The sample includes 2,932 children ages 6 and under, living with or without parents (see Table in the Supplemental Content for sample characteristics).

To estimate and value the time spent on care work for elderly people, we used data from the Korean Longitudinal Study of Aging (KLoSA; Korea Labor Institute 2010; Korea Employment Service Institute 2012), a nationally representative survey conducted in 2008 and 2010. The survey collects information from individuals ages 45 and older on economic and social activities and health conditions. Approximately 10,000 respondents were surveyed in 2008. The KLoSA asks respondents whether they experience limitations in an activity of daily living (ADL; dressing, eating, washing and bathing, toileting, or getting out of bed) or an instrumental activity of daily living (IADL) – housework, laundry, cooking, shopping,

outdoor activities, transportation, finance management, making calls, or taking medication – and need help with these activities (seventeen items in total). The scales for ADL/IADL range from 0 to 17: the higher the number, the more likely the person is severely ill and in need of care services. Those who reported limitations with performing these activities were also asked to report whether the limitations were expected to disappear within three months, in which case they were determined not to need any help from others. Those who needed help reported who helped them (up to five caregivers could be listed). Helpers included spouses, mothers, fathers, mothers-in-law, fathers-in-law, sons and daughters, sons- and daughters-in-law, siblings, spouse's siblings, other relatives, volunteers, care workers dispatched from public institutions, and care workers hired by respondents.

The data fail to offer information about whether the respondent received LTCI. This precludes us from analyzing its direct policy effects. We therefore focus on changes in the distribution of costs between the family and the state between the years 2008 and 2010 at the macro level. This missing information raises the issue of whether LTCI paid for the help. Since LTCI subsidizes care provided by a family member, counting all family care as unpaid runs the risk of overestimating unpaid family care and double-counting the care costs shouldered by the family. The data also lack information on whether any family member has the certificate to provide eldercare.

We circumvented these issues, first by identifying the beneficiary of LTCI for family care where no nonrelative paid care was received. Then, we selected only those elderly people who reported limitations in all of those ADL and IADL items, and who were highly likely to receive LTCI, to avoid overestimating paid family care. Third, we used the following method to carve out the paid part of family care: we assumed that LTCI finances only 96 hours a month where a beneficiary receives 4 hours of care a day and 24 days a month, so no greater than 96 hours of care provided by a family member were paid by LTCI. For example, even if a wife cares for her husband for about 120 hours a month, only 96 hours are counted as financed by LTCI. Lastly, LTCI finances only one paid caregiver, so we assumed that the paid family caregiver is the one who undertook the greatest share of the eldercare when at least two family members are engaged in giving care.

The sample includes 4,040 people ages 65 and older. Of these, 824, or 20 percent of the sample, reported having at least one limitation with ADL or IADL. There were no great demographic differences in elderly people between 2008 and 2010, except the indicators of their health conditions. Although the samples for both years include people over 65, the sample for 2010 contains a higher percentage of people with chronic illness (59 versus 64 percent) and a greater average number of limitations in ADL or IADL

(1.19 versus 1.23; see Table in the online Supplemental Content for sample characteristics).

Definition and measurement of care work

The biggest point of contention in conceptualizing care work is how to define and measure actual care time (Folbre and Yoon 2007). Previous studies looked to so-called "third-party criterion" to determine whether time inputs can be defined as care work. This criterion defines specific activities performed by caregivers as "work" when a third party can be recruited to produce the same goods and services for consumption by care recipients (Margaret G. Reid 1934), and implies that caregivers engage in care work regardless of whether they gain mental satisfaction or joy from the work they perform (Folbre 2008b).

In this study, we relied on standardized questions about giving and receiving care to measure the time devoted to unpaid care work for children and elderly people. For childcare, we used responses to the survey question, "How much time per week did a caregiver care for a child?" Because the survey offered no detailed or precise definitions of what it means by "care for," it is highly likely that respondents interpreted it in many different ways: some might think of "care for" as including broad ranges of care work, even on-call time and the time during which the caregiver sleeps; others might think of it as including very narrow direct care activities or as the time replaced by substitutes for parents. Responses to this question showed little variation in childcare time by age of the child, which means that respondents might have reported only direct care time. However, compared to studies of time-use surveys that do not consider on-call time due to the limitations of the data, standardized questions could be potentially advantageous for including on-call time (Folbre and Yoon 2007).

Furthermore, care time provided by fathers is subject to underestimation. The survey collected data from women respondents alone, so the time spent by a father as sole parent is systematically dropped. And, even in the case of two-parent households, it is likely that mothers may fail to recognize the intermittent time spent by fathers as significant care.

For eldercare, the data did not explicitly mention "care"; instead, the survey used the term "help." Unlike with childcare, however, respondents were at least aware of what activities were included (ADL or IADL) when they responded. The conceptual tension between direct and indirect care also applies to eldercare: the care time involving the active form of physical activities accounts for only a fraction of total care time (Michael Bittman, Janet E. Fast, Kimberly Fisher, and Cathy Thomson 2004). Therefore, eldercare time might also be subject to underestimation. This underestimation problem looms larger particularly when the caregiver is a spouse or relative residing with the elderly person, compared with those

who visit for a short or fixed period of time for contracted, specific activities. In the case of both child- and eldercare, the omission of on-call time yields a very conservative estimate of the time spent on unpaid care.

VALUING CARE WORK

There are two conventional approaches to valuing unpaid care work: the input approach and the output approach. The input approach calculates the value per hour by measuring the amount of time spent on care and applying an hourly wage rate. The output approach calculates the value of unpaid work time by measuring the value added – the output price minus the price of any intermediate inputs – by this work. The output approach is preferred to the input approach because it directly estimates "value" added by labor inputs (Ironmonger 1996; INSTRAW 1995; Goldschmidt-Clermont 1993). Although the output approach offers the advantage of considering the productivity of unpaid work time in the value of time calculated (Goldschmidt-Clermont 1993), the input approach is used more often because it is more difficult to measure the output of unpaid work than to measure the time put into such work.

A few empirical studies attempt to compromise between input- and output-based approaches to arrive at alternative estimates of productivities of labor inputs (Mullan 2010; Douglas Dalenberg, John Fitzgerald, and John Wicks 2004). They count the total amount of care services that children receive and value it based on market prices of childcare services. However, both studies generate estimates of the "gross" economic value of childcare services without subtracting other input costs such as capital and intermediate goods. Despite these limitations, they offer important and meaningful improvements for measuring care work. This study uses a similar method explored in Dalenberg, Fitzgerald, and Wicks (2004) and Mullan (2010). This method estimates and values time to incorporate an analysis of unpaid care work into Korean social policy, which in most cases targets individual children and elderly persons receiving care, not those providing care.

After estimating the total output of care services provided to children and elderly people, the next step is to choose appropriate market prices for care services in order to value this time. Since the purpose of the paper is to compare economic values of unpaid care with public support for care, we use the prices of child- and eldercare that the government sets for providing care. For childcare, we apply the unit price of providing an hour of care to an individual child of varying ages: US$3.85 for an age of 0, US$2.77 for age 1, US$2.21 for age 2, US$1.60 for age 3, US$1.53 for age 4, and US$1.54 for ages 5–6.[7] Because the price based on facility care includes the costs of intermediate goods other than labor inputs such as lunch/snacks and educational materials, a "gross" output value is generated.

For eldercare, we employ the unit price of a homecare worker set by the insurance scheme. The home-based care is financed for the labor input alone, so the value of unpaid work estimated using the price is "net" value. Because the LTCI benefit supports both institution-based and home-based care, it can be said that the public expenditure includes labor costs and intermediate goods such as facilities and materials. The state sets the price of eldercare to vary based on the number of hours provided. We calculate the unit price of eldercare, assuming that the eldercare is provided for 4 hours per session, the most prevalent scheme. The unit price of an hour of eldercare services is US$8.91 in 2008 and US$8.54 in 2010.[8] The unit price in 2010 is lower than that for 2008 because the nominal price has not changed. The unit price of eldercare is generally higher than that of childcare because eldercare is based on one-on-one care, whereas childcare operates based on a group care system. Because this study rests on the valuing assumption of how much more the government should pay under the current institutional environments without unpaid care, I allow for the disparate level of unit prices stemming from different assumptions about economies of scale between child and eldercare.

ESTIMATION AND VALUATION OF CARE FOR ELDERLY AND CHILDREN IN SOUTH KOREA

The following presents results on the estimation and valuation of the unpaid care time spent on child and eldercare in Korea. Let us begin with the way individual families organize care services to children ages 6 and under. Table 1 shows average weekly childcare time spent for one child in 2008 by various caregivers such as mothers, fathers, female relatives, male relatives, nonrelatives, and other purchased or institution-based care. It confirms the gendered nature of childcare provision. For all children, out of the 59.55 hours of care received per week, maternal time accounts for two-thirds (38.65 hours). Female relatives devote 1.63 hours a week to the child, almost the same amount fathers spend on childcare (1.7 hours). Institutional care, at 17.37 hours per week, provides a substantial amount of direct care, after mothers. As children mature, parental time decreases and institutional care time increases. The total number of hours reported as only 59.55 hours per week suggests that respondents defined care very conservatively, excluding on-call time. Therefore, caution should be exercised; the value estimated in this study might greatly underestimate the full range of actual childcare time devoted to children.

How large is the share of unpaid childcare? As Figure 1 shows, about 70 percent of the total care time that a child receives is unpaid. Institutional care accounts for most of the paid care. We assumed that such care is paid for by the family or the state and that zero family expenditures for care indicate childcare subsidies provided to low-income families or because

Table 1 Childcare arrangement by type of caregiver and age of child, 2008

Average weekly hours of childcare

Age of child	*M*	*F*	*FR*	*MR*	*NR*	*I*	*Total*
All ages	38.65	1.70	1.63	0.00	0.20	17.37	59.55
0	50.01	1.92	3.22	0.00	0.35	3.44	58.95
1–2	46.11	1.92	2.04	0.00	0.39	8.51	58.97
3–6	32.26	1.53	1.06	0.00	0.07	25.07	59.98

Average weekly hours of unpaid childcare and its percentage out of total in parentheses

Age of child	*M*	*F*	*FR*	*MR*	*NR*	*I*	*Total*
All ages	38.65	1.70	1.08 (67%)	0.00 (94%)	0.04 (21%)	0	41.47 (70%)
0	50.01	1.92	2.16 (67%)	0.00 (100%)	0.29 (82%)	0	54.39 (92%)
1–2	46.11	1.92	1.24 (61%)	0.00 (17%)	0.00 (0%)	0	49.27 (84%)
3–6	32.26	1.53	0.77 (72%)	0.00 (100%)	0.00 (19%)	0	34.58 (58%)

Average monthly expenditure for childcare (US$)

Age of child	*M*	*F*	*FR*	*MR*	*NR*	*I*	*Total*
All ages	–	–	10.2	8.6	2.4	112.7	133.9
0	–	–	14.9	14.3	2.1	20.6	51.9
1–2	–	–	16.3	0.0	4.5	41.8	62.7
3–6	–	–	5.9	11.9	1.3	170.1	189.3

Note: M = mother; F = father; FR = female relative; MR = male relative; NR = nonrelative; I = institution.
Source: KLoWF 2008–09.

of free community services. Infants and younger children are more likely to receive unpaid care services than children ages 3–6, probably because maternal unpaid time makes up the greatest percentage of noninstitutional care for younger children. Relatives are more likely to provide unpaid care than nonrelatives. Although male relatives assume minimal responsibility for childcare, it is mostly unpaid, suggesting that male relatives, unlike female relatives, rarely engage in regular childcare arrangements set up for remuneration. The last panel shows the average monthly expenditure for childcare. For all children, individual families spend about US$134, of which about 84 percent is spent on institutional care.

What is the monetary value of unpaid care provided to the children? As previously noted, we multiplied the unit price of childcare by the yearly hours of unpaid care to derive the yearly estimates of monetary values of unpaid childcare work per child in 2008. We multiplied the weekly hours of corresponding caregivers by 52, assuming that a caregiving year consists of 52 weeks. As Table 2 shows, the total parental time, 2,081 hours per year,

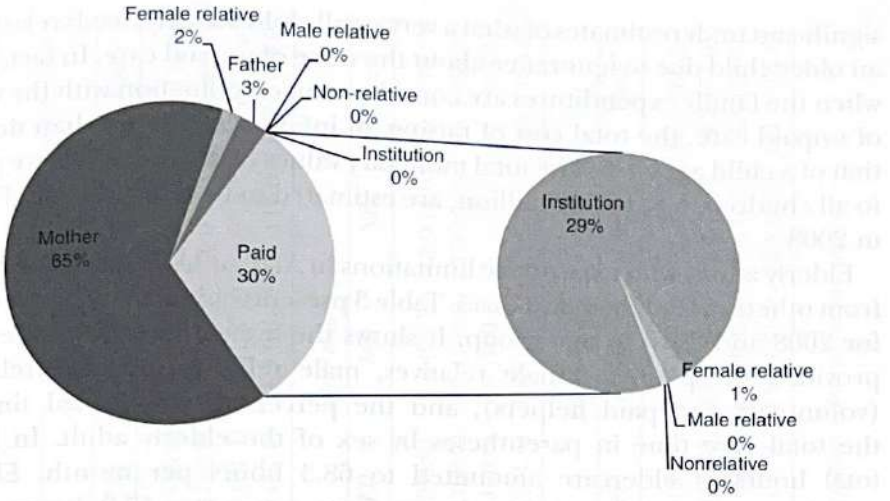

Figure 1 Composition of the average weekly time spent on childcare by types of caregivers in 2008
Source: KLoWF 2008–09.

Table 2 Average yearly estimates of unpaid time spent on childcare and its monetary values, 2008

Yearly unpaid hours of childcare per child (hours)

Age of child	*M*	*F*	*FR*	*MR*	*NR*	*Total*
All	1,994	87	56	0	2	2,140
0	2,581	99	112	0	15	2,809
1–2	2,379	99	64	0	0	2,542
3–6	1,664	79	40	0	1	1,784

Yearly monetary values of childcare per child (US$)

Age of child	*M*	*F*	*FR*	*MR*	*NR*	*Total*
All	4,488	197	126	0	5	4,816
0	9,924	380	429	0	58	10,792
1–2	5,930	247	160	0	0	6,336
3–6	2,583	122	62	1	1	2,769

Note: M = mother; F = father; FR = female relative; MR = male relative; NR = non-relative.
Source: KLoWF 2008–09.

is equivalent to the average yearly working hours of a social services worker in 2008. The yearly monetary value of unpaid childcare per child amounts to US$4,816. The value of unpaid childcare given to an infant is slightly less than four times the value of that given to children ages 3–6, which suggests

significant underestimates of what a very small child actually needs relative to an older child due to ignorance about the value of unpaid care. In fact, even when the family expenditures are considered in combination with the value of unpaid care, the total cost of raising an infant is still more than double that of a child ages 3–6. The total monetary values of unpaid childcare given to all children, US$15,752 million, are estimated to be 1.57 percent of GDP in 2008.

Elderly adults who experience limitations in ADL or IADL need assistance from others to lead their daily lives. Table 3 presents eldercare arrangements for 2008 and 2010 by age group. It shows the average monthly care time provided by spouses, female relatives, male relatives, and nonrelatives (volunteers and paid helpers), and the percentage of unpaid time of the total care time in parentheses by sex of the elderly adult. In 2008, total hours of eldercare amounted to 68.3 hours per month. Elderly people received help of 34.1 hours from a spouse, 17.2 hours from female relatives, 7.3 hours from male relatives, and 9.7 hours from nonrelatives. Spouses provided almost half the care services for elderly adults. As adults age, the spousal role shrinks, while female relatives such as daughters and daughters-in-law play substantial roles of taking care of elderly people.

Patterns of receiving eldercare services are gendered. First, elderly men receive more care services than elderly women (77.3 versus 61.1 hours). Disparities in health fail to explain this gap: the average numbers of limitations with IDL/IADL would predict that elderly women demand more care services than elderly men (6.35 versus 5.73). There are no statistical differences between elderly men and women in the number of chronic illnesses, either. Second, elderly men tend to receive more family care than elderly women. Elderly men receive the substantial part, 80 percent, of their care from their spouse, and elderly women receive the greatest amount of care from female relatives, about 42 percent. This may be due to the disparities in longevity by sex.

How much time is devoted to unpaid eldercare? Table 3 also shows that an elderly person with at least one limitation in ADL or IADL received on average 59.6 hours of unpaid care time, 87.3 percent of the total care services. The older people are, the less likely their care services are provided without payment. There are very few instances in which male relatives received payment for care services, whereas female relatives received no payment for about 96.9 percent of their care services. Of the care services provided by non-relatives, 16.5 percent was unpaid.

The pattern of receiving unpaid care is also gendered. Elderly men were more likely to receive unpaid care than women (94.3 versus 80.5 percent). But the disaggregation by caregivers tells us that elderly men tend to pay more for care services received from female relatives and nonrelatives than elderly women do (Table 3). This could be due to men having greater

Table 3 Average monthly total time and percentage of unpaid time spent on eldercare for elderly adult by types of caregivers in 2008 and 2010

	2008					*2010*				
	All elderly adult					*All elderly adult*				
Age	*S*	*FR*	*MR*	*NR*	*Total*	*S*	*FR*	*MR*	*NR*	*Total*
All	34.1 (100.0)	17.2 (96.9)	7.3 (100.0)	9.7 (16.5)	68.3 (87.3)	39.3 (91.9)	24.2 (89.0)	7.3 (88.3)	19.5 (3.5)	90.2 (71.7)
65–69	60.3 (100.0)	5.2 (79.3)	6.8 (100.0)	6.3 (11.6)	78.6 (91.6)	50.3 (92.2)	9.4 (100.0)	1.9 (100.0)	10.0 (1.4)	71.5 (80.7)
70–79	38.3 (100.0)	7.2 (100.0)	5.1 (100.0)	7.0 (3.9)	57.5 (88.3)	52.6 (92.3)	11.3 (91.4)	5.0 (100.0)	14.7 (3.8)	83.6 (77.0)
80+	16.8 (100.0)	34.5 (97.4)	10.2 (100.0)	14.6 (25.2)	76.1 (84.5)	15.3 (89.6)	49.9 (87.0)	13.5 (81.7)	31.4 (3.6)	110.1 (63.0)
	Male elderly					*Male elderly*				
Age	*S*	*FR*	*MR*	*NR*	*Total*	*S*	*FR*	*MR*	*NR*	*Total*
All	62.1 (100.0)	6.5 (88.1)	4.7 (100.0)	4.0 (7.9)	77.3 (94.3)	70.0 (91.3)	6.6 (90.9)	2.8 (92.7)	12.9 (1.0)	92.4 (78.7)
65–69	85.6 (100.0)	2.8 (100.0)	9.2 (100.0)	1.1 (100.0)	98.7 (100.0)	66.5 (92.2)	8.9 (100.0)	0.0 (100.0)	7.9 (0.0)	83.3 (84.3)
70–79	58.0 (100.0)	3.7 (100.0)	0.9 (100.0)	5.0 (0.5)	67.5 (92.6)	76.4 (91.8)	3.7 (100.0)	1.8 (100.0)	10.9 (0.0)	92.7 (81.5)
80+	49.4 (100.0)	15.2 (80.7)	8.0 (100.0)	4.6 (3.4)	77.1 (90.5)	55.5 (87.0)	12.2 (71.4)	10.8 (88.8)	27.4 (2.7)	105.9 (63.5)
	Female elderly					*Female elderly*				
Age	*S*	*FR*	*MR*	*NR*	*Total*	*S*	*FR*	*MR*	*NR*	*Total*
All	11.9 (100.0)	25.6 (98.7)	9.4 (100.0)	14.3 (18.8)	61.1 (80.5)	15.6 (94.1)	37.7 (88.7)	10.7 (87.5)	24.6 (4.5)	88.6 (66.2)
65–69	25.6 (100.0)	8.5 (69.9)	3.5 (100.0)	13.3 (1.3)	50.9 (69.2)	26.5 (92.2)	10.1 (100.0)	4.5 (100.0)	13.2 (2.7)	54.2 (72.6)
70–79	18.7 (100.0)	10.7 (100.0)	9.2 (100.0)	9.0 (5.8)	47.5 (82.2)	26.0 (93.7)	19.9 (89.6)	8.6 (100.0)	19.0 (6.3)	73.5 (70.7)
80+	2.1 (100.0)	43.3 (100.0)	11.2 (100.0)	19.1 (27.5)	75.6 (81.7)	3.9 (100.0)	60.6 (87.9)	14.3 (80.2)	32.5 (3.9)	111.3 (62.8)

Notes: S = spouse; FR = female relative; MR = male relative; NR = non-relative. Percentage of unpaid time spent on eldercare in parentheses.
Source: KLoSA 2008, 2010.

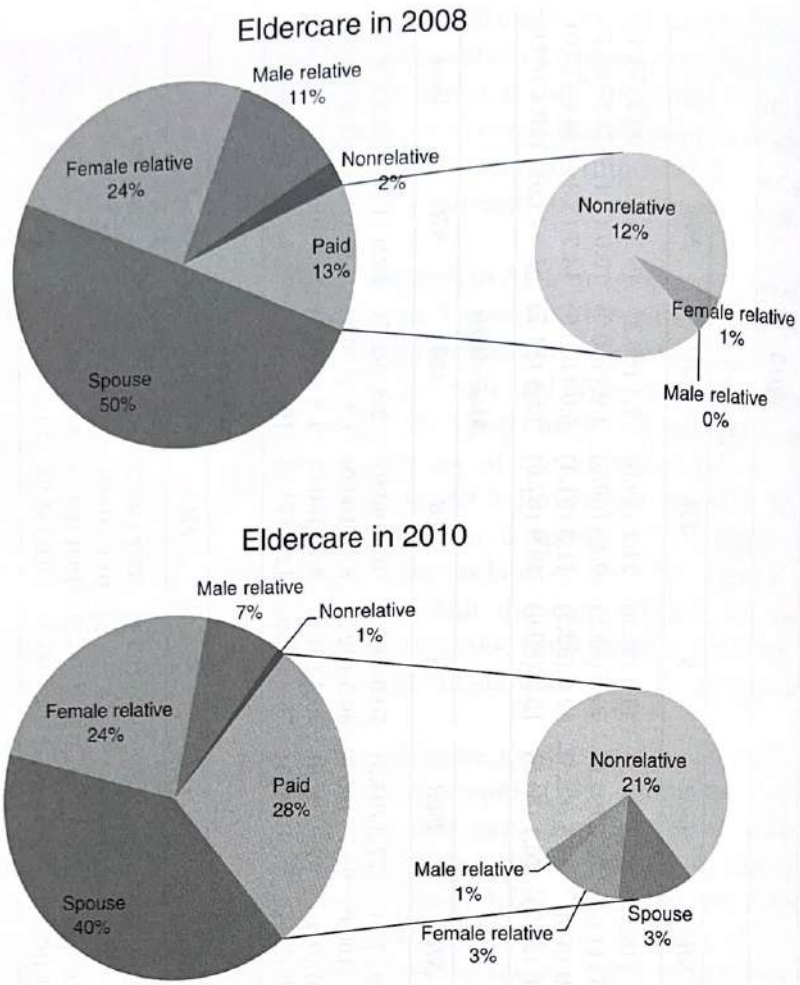

Figure 2 Composition of monthly time spent on eldercare by caregiver type, 2008 and 2010
Sources: KLoSA 2008, 2010.

financial resources than their spouses, who might outlive the depletion of financial resources caused by a husband's illness.

What changes did the introduction of LTCI effect in eldercare provision? First, the total amount of care time increased from 68.3 to 90.2 hours per month. While all types of caregivers, except male relatives, increased their care time, the extent to which the care time increased is the greatest for nonrelatives, going from 9.7 to 19.5 hours, and the smallest for spouses, growing from 34.1 to 39.3. This dramatic increase in care time was driven by several factors: there was greater demand for eldercare in 2010 than in 2008; elderly people in 2010 had worse health problems than those for 2008, according to sample statistics; and LTCI helped compensate for previous care deficits.

Also, the care gap between elderly men and women narrowed. Elderly men received 26 percent more care than women in 2008, but only 4 percent more in 2010. Nonrelatives and female relatives care helped to narrow this gender gap. Although the amount of care time provided by a female relative to elderly men remained almost unchanged (6.5 versus 6.6 hours), care time to elderly women increased rather significantly, from 25.6 to 37.7 hours per month. This could be explained by instances in which a female relative became an in-home caregiver that LTCI financed. In fact, the percentage of unpaid care time provided by female relatives to elderly women decreased from 98.7 to 88.7 percent, even though the total amount of unpaid time was still greater for 2010.

However, the gendered organization of care provision remains reinforced. Female relatives still spend more time providing care to elderly people. Nonrelatives, who are highly likely to be female in-home care workers (although there is no way to identify the sex of nonrelatives from the data), now undertake a greater share of the total eldercare time, with an increase from 14 percent in 2008 to 21 percent in 2010.

Finally, the percentage of unpaid care time decreased from 87 percent to 72 percent in 2010 (Figure 2). Spouses benefited the most from LTCI by providing a smaller share of care, from 50 to 40 percent. LTCI financing for family care resulted in the reduction in the percentage of unpaid care time for spouses and female relatives in 2010. Note that this unpaid portion of family care might have been smaller if a different assumption had been made about the odds that an elderly person receives care from a certified family member by LTCI. In 2010, the older the elderly persons are, the more likely that the care received is unpaid.

Based on the estimated amount of unpaid eldercare, we multiplied the unit price of eldercare by the annual number of unpaid hours in Table 4 to derive monetary values for care services per person for both years. On average, the monetary value of unpaid care that elderly people received amounts to US$6,373 per person in 2008. And the total monetary value of eldercare for all elderly with at least one limitation in ADL/IADL adds up to US$6,253 million. The monetary values of eldercare increased in 2010 from US$6,253 to US$6,604 million, but the percentage of the GDP remained almost the same at 0.65 percent of the GDP.

Table 5 illustrates the comparisons of child- and eldercare monetary values with state expenditures and family expenditures allocated to childcare and long-term care. The three correspond to the family (unpaid care work), the market (paid care work expended by households), and the state (paid care funded by the government) in the framework of the care diamond. The state expenditures represent direct governmental spending for childcare or insurance payments for eldercare. Along with the childcare subsidy and LTCI, we included the public expenditure support for kindergarten and care for the elderly in poverty, which influences the time devoted to unpaid

Table 4 Average yearly estimates of unpaid time spent on eldercare and its monetary values in 2008 and 2010

	2008					2010				
Yearly unpaid hours of eldercare per elderly person with at least one limitation (hours)										
Age	*S*	*FR*	*MR*	*NR*	*Total*	*S*	*FR*	*MR*	*NR*	*Total*
All	409	199	88	19	715	434	258	77	8	777
65–69	724	50	81	9	863	556	113	22	2	693
70–79	459	86	61	3	609	582	124	60	7	773
80+	201	404	123	44	772	164	521	133	14	832
Yearly monetary values of eldercare per elderly person (US$)										
Age	*S*	*FR*	*MR*	*NR*	*Total*	*S*	*FR*	*MR*	*NR*	*Total*
All	3,644	1,777	781	171	6,373	3,704	2,203	657	69	6,633
65–69	6,448	441	726	78	7,693	4,751	961	191	15	5,918
70–79	4,092	768	540	29	5,429	4,973	1,061	509	58	6,602
80+	1,793	3,596	1,092	392	6,874	1,403	4,453	1,132	117	7,105

Note: S = spouse; FR = female relative; MR = male relative; NR = non-relative.
Sources: KLoSA 2008, 2010.

care. Family expenditures correspond to private expenditures for formal care services from the market or for informal care services provided by relatives.

Let us start with the full costs of meeting care needs for children and the elderly (see Figure 3). The state's budgets for children amounted to US$2,471 million. The paid care in the market, or family expenditure for paid care, is worth US$5,559 million, more than twice the budget. The monetary value of unpaid childcare time, US$15,752 million comprising 66 percent of the total costs, far exceeds the state budget: it is more than six times the budget from 2008. In 2008, the family assumed 88 percent of the total costs for eldercare, and the monetary values for unpaid eldercare, US$6,253 million, were 15.7 times the state's share, US$415 million. It is clear that the introduction of LTCI was crucial in making the state bear a higher share of the costs of eldercare. The expansion of LTCI increased the public expenditure in 2010 to almost five times that in 2008, and private family expenditures for care services were reduced to slightly less than half. Thus, the relative contribution of the family in providing unpaid care work for the elderly is shrinking in the care diamond, declining from 88 percent in 2008 to 73 percent in 2010.

When unpaid family care work is ignored, the state's contribution to care services is often inflated to much higher-than-actual levels (see Table 5). For

Table 5 Comparisons between values of unpaid care, expenditures by the state and the family

	Childcare 2008			*Eldercare*					
				2008			*2010*		
	Value (millions of US$)	*Share of total D*	*Share of total E*	*Value (millions of US$)*	*Share of total D*	*Share of total E*	*Value (millions of US$)*	*Share of total D*	*Share of total E*
State expenditure (A)	2,471[a]	31%	10%	415[b]	47%	6%	2,124	89%	24%
Family expenditure (B)	5,559	69%	23%	473[c]	53%	6%	268	11%	3%
Unpaid care (C)	15,752		66%	6,253		88%	6,604		73%
Total D (A + B)	8,030			888			2,392		
Total E (A + B + C)	23,782			7,141			8,996		

Notes: [a]Governmental expenditures allocated to subsidy for using childcare facilities and kindergarten.
[b]LTCI expenditures and public support for eldercare services for the poor in 2008.
[c]Calculated by multiplying monthly expenditures collected in the data by 12.

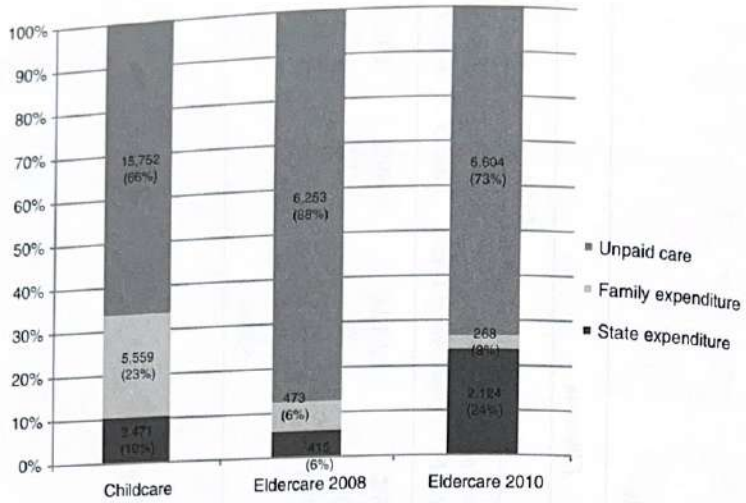

Figure 3 Relative shares of unpaid care, family expenditure, and state expenditure
Note: Values are in millions of US dollars.
Sources: KLoWF 2008–09; KLoSA 2008, 2010.

instance, the omission of the value of unpaid work exaggerates the state's share from 10 to 31 percent for children, and from just 6 to 47 percent for the elderly, according to data from 2008. In 2010, omitting the values of unpaid work exaggerates LTCI's contribution to socializing care costs.

SUMMARY AND CONCLUDING REMARKS

Social policies and programs, including those related to providing formal care, can profoundly affect the distribution of costs among stakeholder groups and transform gender relations. Developments in social policies since the late 1990s have strengthened the state's role in care services for children and elderly people in Korea. In this study, we investigated the full costs of care services for children and elderly people to understand the extent to which the state socializes care costs by estimating and valuing unpaid care time devoted to children ages 6 and under and people 65 and older who have limitations with ADL or IADL. This study was designed not to evaluate how care policies in Korea actually induced changes in care provisions, but to illustrate how care costs are distributed between individual families and the public under particular features of care policies. The current study may have several limitations due to the data and methodology used: the measures of unpaid work rely on answers to deliberately phrased, standardized survey questions; the reports are subject to variations and biases due to an unspecified definition of care work; the estimates produced are likely to be the lower bounds of what a caregiver actually performs; what the respondents regard as care may reflect only direct childcare; and

finally, values assigned to assumptions and prices employed are questionably arbitrary. In particular, the market prices applied for childcare are fairly low because they reflect economies of scale of group childcare. However, in this study we adopt assumptions and prices suitable for our objective. Reaching consensus on how to estimate and value unpaid care may be difficult, but the importance of counting unpaid care work in social policies urges us to overcome such difficulties.

Computing the value of invisible unpaid work is essential to understanding social policies and budgetary processes that increasingly became a feminist concern in evaluating gender issues. To that end, the appropriate data and methodological tools should be collected and developed to carefully measure the unpaid care work performed in Korean society. However, the present analysis of eldercare has shed light on the link between the changes in care policy, the organization of care, and gender equality.

First, counting unpaid care work in social policies advances gender equality by recognizing the extent to which care services are produced and provided in a gendered way. The results show that mothers, spouses, and daughters undertake significant shares of unpaid care work for dependents. Care policies that ignore unpaid care time fail to achieve their policy objectives of enhancing women's economic positions or meeting care needs.

Second, our results show that omitting family care results in overestimations of the state's role in care services for children and elderly adults. The plans for social policies often fail to be informed by the extent to which families undertake unpaid care work. Policymakers need to seriously consider the hidden costs of care services provided by the family.

Third, our examination of the changes affected by the introduction of LTCI demonstrates the need to evaluate its policy effects on the social organization of care and gender equality. While the expansion of LTCI played a key role in reducing the unpaid portion of care work and out-of-pocket expenditures, it seems to increase women's role as caregivers, which can harm gender equality. One might argue that men's participation in care work, paid or unpaid, is essential to advancing gender equality, given that the caring role traditionally ascribed to women needs to be dissociated from women. The degraded and inferior working conditions for in-home care workers also may mean a setback in gender equality (Peng 2010). On the other hand, LTCI certainly played a role in providing care to elderly women, who are more likely to find themselves without caregivers. These results suggest that the implications of LTCI for gender equality should be investigated on both qualitative and quantitative grounds: policy for the advancement in gender equality should pay more attention to both the provision of unpaid care and the receipt of care services than to either one alone.

Finally, we show how the society organizes care services for children and elderly people through the state, the family, and the market. To the

extent that resources are limited, more for one demographic group means some amount less for the other. Particularly in a society where the fertility rate is extremely low, the decision about which, childcare or eldercare, should receive more resources has tremendous implications for social reproduction. The results suggest that both the state and individual families devote more resources to children than to elderly people. This does not necessarily mean, however, that child welfare exceeds the welfare of elderly people, in terms of fulfilled care needs, given that the levels of resources sufficient and necessary for the welfare of each group are not specified. The results might just suggest that the social infrastructure for children is better developed than that for the elderly. As the aging of Korean society progresses and as LTCI expands its coverage, the resources for meeting the care needs of elderly people may catch up to those for children. The changes in the relative devotion of resources to the two groups should be carefully tracked, as they have significant implications for social reproduction.

Jayoung Yoon
Korea Labor Institute, 1160 Goyangdaero Ilsanseo-gu
Goyang-si, Gyeonggi-do 411-701, Seoul, Korea
e-mail: jayoungy@gmail.com

NOTES ON CONTRIBUTOR

Jayoung Yoon earned a PhD in economics at University of Massachusetts–Amherst and is currently Research Fellow at the Korea Labor Institute based in Seoul, Korea. Her major research interests include nonmarket time and care work and their implications for economic well-being and gender equality. She has published several articles, using time-use surveys, on measurements and valuations of childcare time and the investigation of economic and noneconomic factors affecting the time spent on housework and care.

ACKNOWLEDGEMENTS

This article is part of the research on Globalization and Changes in Accumulation System and Class Structure organized and supported by a National Research Foundation of Korea grant funded by the Korean Government (NRF-2010-413-B00027).

NOTES

[1] Medicare is a social insurance program for elderly and certain disabled individuals. Medicaid is a social welfare and means-tested health and medical services program for certain individuals and families with low incomes and few resources.

2 Korean Statistical Office (KOSIS).

3 OECD family database (www.oecd.org/social/family/database); see Chart SF2.1.A for total fertility rates in 1970, 1995, and 2010.

4 Korean Social Survey 2002, 2010, Statistics Korea. http://kostat.go.kr/survey/society/

5 OECD family database (www.oecd.org/social/family/database); see Chart SF2.1.E, "Cross-Country Relation between Female Employment Rates and Total Fertility Rates."

6 Unlike the childcare subsidy, the main reason for the decision to finance LTCI through insurance premiums was the financial burden on government budgets (Seok 2010).

7 2008 Manuals for Child Care Subsidy, US dollars in 2010.

8 Long-Term Care Insurance homepage (http://www.longtermcare.or.kr/portal/site/nydev/).

REFERENCES

Abe, Aya K. 2010. "The Changing Shape of the Care Diamond: The Case of Child and the Elderly Care in Japan." Gender and Development Programme Paper Number 9, United Nations Research Institute for Social Development.

Abraham, Katherine and Christopher Mackie, eds. 2004. *Beyond the Market: Designing Nonmarket Accounts for the United States.* Washington, DC: National Academies Press.

Adema, Willem and Maxime Ladaique. 2009. "How Expensive Is the Welfare State?: Gross and Net Indicators in the OECD Social Expenditure Database (SOCX)." OECD Social, Employment, and Migration Working Papers 92. www.oecd-ilibrary.org/social-issues-migration-health/how-expensive-is-the-welfare-state_220615515052.

An, Mi-Young. 2012. "The Changing Shape of Care-time Diamond: Social Care Expansions in the 21st Century in Korea." *Korean Social Policy Review* 19(2): 137–61.

Aslaksen, Iulie and Charlotte Koren. 1996. "Unpaid Household Work and the Distribution of Extended Income: The Norwegian Experience." *Feminist Economics* 2(3): 65–80.

Bakker, Isabella and Stephen Gill, eds. 2003. *Power, Production and Social Reproduction: Human in/Security in the Global Political Economy.* New York: Palgrave Macmillan.

Bezanson, Kate. 2006. *Gender, the State, and Social Reproduction: Household Insecurity in Neo-Liberal Times.* Toronto: University of Toronto Press.

Bittman, Michael, Janet E. Fast, Kimberly Fisher, and Cathy Thomson. 2004. "Making the Invisible Visible: The Life and Time(s) of Informal Caregivers." In *Family Time: The Social Organization of Care,* edited by Nancy Folbre and Michael Bittman, 69–90. London: Routledge.

Budlender, Debbie, Diane Elson, Guy Hewitt, and Tanni Mukhopadhyay. 2002. *Gender Budgets Make Cents: Understanding Gender Responsive Budgets.* London: Commonwealth Secretariat.

Dalenberg, Douglas, John Fitzgerald, and John Wicks. 2004. "Direct Valuation of Personal Care by Households." *Population Research and Policy Review* (23)(1): 73–89.

Esping-Anderson, Gøsta. 1999. *Social Foundations of Postindustrial Economies.* Oxford: Oxford University Press.

Fast, Janet E., Deanna L. Williamson, and Norah C. Keating. 1999. "The Hidden Costs of Informal Elder Care." *Journal of Family and Economic Issues* 20(3): 301–26.

Folbre, Nancy. 2008a. "Inequality and Time Use in the Household." In *The Oxford Handbook of Economic Inequality,* edited by W. Salverda, B. Nolan, and T. Smeeding, 342–63. Oxford: Oxford University Press.

———. 2008b. *Valuing Children: Rethinking the Economics of the Family.* Cambridge, MA: Harvard University Press.

Folbre, Nancy and Barnet Wagman. 1993. "Counting Housework: New Estimates of Real Product in the U.S., 1800–1860." *Journal of Economic History* 53(2): 275–88.

Folbre, Nancy and Jayoung Yoon. 2007. "What Is Childcare? Lessons from Time-Use Surveys of Major English-Speaking Countries." *Review of Economics of the Household* 5(3): 223–48.

Goldschmidt-Clermont, Luisella. 1993. "Monetary Valuation of Non-Market Productive Time: Methodological Considerations." *Review of Income and Wealth* 39: 419–33.

Goodman, Roger and Ito Peng. 1996. "The East Asian Welfare States: Peripatetic Learning, Adaptive Change, and Nation-Building." In *Welfare State in Transition: National Adaptations in Global Economies*, edited by Gøsta Esping-Anderson, 192–224. London: SAGE.

Hirway, Indira. 2005. "Integrating Unpaid Work into Development Policy." Paper presented at the Global Conference on Unpaid Work and the Economy: Gender, Poverty, and the Millennium Development Goals, Levy Economic Institute, Annandale-on-Hudson, New York, October 1–3.

Houser, Ari and Mary Jo Gibson. 2008. "Valuing the Invaluable: The Economic Value of Family Caregiving, 2008 Update." Insight on the Issues 13: AARP Public Policy Institute, Washington, DC.

INSTRAW. 1995. *Measurement and Valuation of Unpaid Contributions: Accounting through Time and Output: The Case of the Dominican Republic.* Santo Domingo, Dominican Republic: UN International Research and Training Institute for the Advancement of Women.

Ironmonger, Duncan. 1996. "Counting Outputs, Capital Inputs, and Caring Labor: Estimating Gross Household Product." *Feminist Economics* 2(3): 37–64.

———. 2000. "Household Production and the Household Economy." Research Paper 759, Department of Economics, University of Melbourne.

Korea Employment Service Institute. 2012. "Korean Longitudinal Study of Ageing." http://www.keis.or.kr/www/project/survey/graying.jsp;jsessionid=D2690189555633F11530504C5DD74CCA.

Korea Labor Institute. 2010. "Korean Longitudinal Study of Ageing." http://www.kli.re.kr/klosa/en/about/introduce.jsp.

Korea Women's Development Institute. 2010. "Korean Longitudinal Survey of Women and Families." http://klowf.kwdi.re.kr/main.do?sLang=EN.

Lee, Jae-Kyoung. 2002. *In the Name of Family: Korean Modern Family and Feminism* (in Korean). Seoul: Alternative Culture.

Michael, Robert T. 1996. "Money Illusion: The Importance of Household Time Use in Social Policy Making." *Journal of Family and Economic Issues* 17(3/4): 245–60.

Mullan, Killian. 2010. "Valuing Parental Childcare in the United Kingdom." *Feminist Economics* 16(3): 113–39.

Peng, Ito. 2009. "The Political and Social Economy of Care: Republic of Korea Research Report 3." United Nations Research Institute for Social Development. http://www.unrisd.org/80256B3C005BCCF9/(httpAuxPages)/1EF2AE4F5E388259C125756100541F68/$file/RoKRR3.pdf

———. 2010. "The Expansion of Social Care and Reform: Implications for Care Workers in the Republic of Korea." *International Labour Review* 149(4): 461–76.

Phang, Hanam S. 2005. "Demographic Dividend and Labor Force Transformations in Asia: the Case of Korea." Conference proceedings, presented at UN ESA meetings. http://www.un.org/esa/population/meetings/Proceedings_EGM_Mex_2005/phang.pdf.

Razavi, Shahra. 2007. "The Political and Social Economy of Care in a Development Context: Conceptual Issues, Research Questions and Policy Options." Concept Paper, UNRISD Project on Political and Social Economy of Care.

Reid, Margaret G. 1934. *Economics of Household Production.* New York: John Wiley.

Seok, Jae Eun. 2010. "Public Long-Term Care Insurance for the Elderly in Korea: Design, Characteristics, and Tasks." *Social Work in Public Health* 25: 185–209.