# Gender Differences in Contribution to Domestic work Associated with Outsourcing in Korea 

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## Introduction

With a rapid economic achievement, education and socio-economic status of Korean women has also considerably improved. $40.0 \%$ of total women held bachelor's degrees in 2015 , which was only $1.6 \%$ in 1970. College entrance rate of women was estimated at $32.4 \%$ in 1990 but increased to $73.5 \%$ in 2017, even higher than men ( $66.3 \%$ ). As more women are educated and employed conflicting with traditional gender role and values, one of strategies to deal with housework or childcare is outsourcing. According to the Korea Institute for Health and Social Affairs (2015), 25\% of married couples with children received help from their parents for housework or childcare, and it increased to $53 \%$ for dual earning couples. Choi (2016) explains that married couples depend on their parents and babysitters for young children, while they depend on nursery and kindergarten as children get older.

Then how much does outsourcing reduce a demand for housework and childcare? Will it change the contribution to domestic work between couple? Despite the prevalence of domestic outsourcing in Korea, none of previous studies have investigated its relationship with couple's time worked at home. In this paper, we examine how paid or unpaid helper is associated with time spent on housework or childcare by wife and husband respectively, using panel data for nine years with individual fixed effects. We also examine how the outsourcing is associated with husband's relative contribution to domestic work compared to wife, by types of housework.

## Literature Review

While more women are employed and still continue to take responsibility for domestic work, Goode (1960) argues there are four strategies that may ease their role constraints: (1) separates work and family life (compartmentalization); (2) outsources household works (delegation); (3) reduces roles by having less children or quitting her job; (4) finds a job that allows her to balance work and childcare. Since 1980, most researchers have focused on the division of domestic work between wife and husband, developing the relative resources approach, the time availability approach, and the gender role attitudes approach. The main assumption is that household labor should be divided between spouses (Hook, 2006), depending on income, time, or attitudes toward gender equality. On the other hand, Raz-Yurovich (2014) argues that family members not only choose to make domestic production, but also outsource domestic activities. As the relative cost of childcare decreases due to high education (Hazan \& Zoabi, 2014) or maternal employment (Vandelannoote, Vanleenhove, Decoster, Ghysels, \& Verbist, 2014), they can substitute childcare with outsourcing. Hank and Kreyenfeld (2003) suggest that the availability of public childcare arrangements is a more important factor in outsourcing childcare compared to the cost of it in European countries. According to recent studies, not only the frequency, specificity, and uncertainty level of the transaction, but also social beliefs and preferences are able to facilitate or hinder outsourcing (RazYurovich, 2014; Kornrich, 2012; Van der Lippe, Frey, \& Tsvetkova, 2012).

Empirical studies suggest that buying domestic services lead to greater gender equality at home, reducing time shortages and subjective time pressure (Bittman, Meagher, \& Matheson, 1999; Bergmann, 2005). In Netherlands, domestic help reduces women's time on cleaning by about 1.5 hours per week, but it does not have any effects on men's time on cleaning (Van der Lippe, Tijdens, \& De Ruijter, 2004).

[^0]On the contrary, time gains from purchasing housework services are marginal in France (Windebank, 2007), the U.S. (Killewald, 2011), and UK (Sullivan \& Gershuny, 2013). Using cross-sectional data in Australia, Craig and Baxter (2016) recently find that husband gains more than wife from paid domestic help, but paying for housework does not alleviate unequal gender division of housework and couples' feelings of time pressure. In the context of Asia, Hsu (2010) shows that woman is a major provider of domestic work, while her mother or mother-in-law are helpers for it. The study also suggests that these informal helpers for household work can ease the burden of housework for both men and women, but ultimately reinforces the traditional gendered division of labor in China, Japan, South Korea, and Taiwan.

Some researchers have examined unequal division of household labor between wife and husband in Korea with three theoretical approaches (Eun, 2009; Heo, 2008). However, none of them focus on the relationship between outsourcing and the contribution of married couples to housework or childcare. A few studies investigate the effects of outsourcing on different outcomes: Choi (2006)'s study shows that a housework helper has a statistically significant association with the degree of double income couples' stress, but Jang and Jeong (2006) find that it does not have any association with balancing the work and family.

Confucianism has been an influential sociopolitical ideology for 500 years in Korea, clearly defining hierarchical role of men working outside the home and the women doing housework and looking after children at home (Fuchs, Kasahara, \& Sven Saaler, 2018). During the Choson dynasty from 1392 to 1910, the strict rules and norms were established, regarding "Obedience, chastity, perseverance, and women virtues" as virtue of woman and wife (Yoon, 1986). Even though the country has accepted Western notion and culture in recent decades, traditional gender roles are still expected. In addition, the family-based care for child or elderly has been emphasized as one of the central hallmarks of Confucianism. Up until the 1990s, the government recommended that family should continue to care for family members, whereas state had much weaker responsibility in social welfare areas (Moon, 2012).

Furthermore, working environment of Korea makes married couples difficult to balance between their work and housework or childcare. The OECD (2016) survey shows that annual hours worked in Korea were $17 \%$ longer than the OECD average in 2014. Considering that working hours of small firms, overtime hours (12 hours per week) and additional hours during the weekends were not included in the survey (Sung, 2017), the average hours worked were expected to be longer in reality than the estimates from the OECD. As a legacy of the rapid economic development and Confucianism, working hard and long is still considered virtuous and loyal in Korea (Ko, 2007), which make married couples depend on outsourcing for housework or childcare.

## Methods

We pool panel data from the Korean Longitudinal Survey of Women and Families (KLoWF) conducted by the Korean Women's Development Institute in 2008, 2010, 2012, 2014, and 2016. ${ }^{3}$ The KLoWF contains information regarding economic activities, education, attitudes, family and daily life of 9,997 women aged from 19 to 64 who live in the selected households across 234 districts of Korea. From the unbalanced panel data, only married couples living together are included in our analyses, since divorced, bereaved, or separated couples have different time constraints. Woman who remarried in the middle of the surveys are excluded. Not only the panels surveyed since 2008, but also new panels involved later are included in the analyses. The sample size used in the analyses is smaller mainly because of missing values in independent variables.

To investigate our main question "how much does a helper for household chores alleviate the burden on woman and man?", we estimate OLS regression models with fixed effects on woman, controlling for unobserved individual characteristics that do not vary over time. The outcome variable is minutes spent on housework (cleaning, laundry, cooking) by wife or by husband. Our main independent variable is a

[^1]binary variable which equals 1 if married couples receive help for housework from family members, hired person, or any institutions, or 0 otherwise. The analysis includes working hours and wage (won, $2015=100$ ) of the couples in the regression models, since couples demand outsourcing more when they work longer hours (De Ruijter \& Van der Lippe, 2007) and earn more (Bittman, Meagher, \& Matheson, 1999; Cohen, 1998), which are also found to be associated with their housework hours (Kamo, 1998; Nakhaie, 1995; Presser, 1994). Time spent on housework, wage and working hours are recalculated on a weekly basis. As men who are least committed to relationships with spouses are likely to spend the least time on housework (Ciabattari, 2004), we include a measure for couple's relationships. The measure has four questions: "How often do you watch movies, performance, and sports game together with your husband?", "How often do you go for a walk, hiking, or exercise together with your husband?", "How often do you meet parents-in-law or siblings of spouse together with husband?", "How often do you meet your parents or siblings together with husband?". Responses are 'less than once every month', 'once every month', 'once every two weeks', 'once every week', or 'more than twice every week', summed to generate relationship scale, of which Cronbach's alpha is acceptable (0.60). Higher score of the measure indicates that couples spend more time together. Since healthier people may be more able to do housework or childcare, we include self-reported health status (Cornelisse-Vermaat, Van Ophem, Antonides, \& Van Den Brink, 2013). Moreover, we add variables for the number of children, and demographic characteristics such as age and years of education for the couples.

## Results

Table 1 reports the descriptive statistics of married women and their husbands for six waves $(2008,2010$, $2012,2014,2016$ ) from the KLoWF. While $79.3 \%$ to $88.0 \%$ of husbands are working, $47.7 \%$ to $57.2 \%$ of wives are working. On average, a wife spends 22.3 to 27.2 hours for housework per week on average, while a working wife spends 19.0 to 19.9 hours per week on average. On the other hand, a husband spends only 2.6 to 3.5 hours for housework per week on average, which is not much different from hours of housework done by a working husband. For housework or childcare, $41.1 \%$ to $58.8 \%$ of married couples depend on outsourcing.

Table1. Descriptive statistics of married couples, South Korea, 2008-2016.

|  | 2008 | 2010 | 2012 | 2014 | 2016 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Number of children 0-18 | 1.12 | 1.03 | 0.98 | 0.89 | 0.79 |
| Using outsourcing (\%) | 58.8 | 51.1 | 49.3 | 45.7 | 41.1 |
| Husband's characteristics |  |  |  |  |  |
| Age | 47.5 | 49.7 | 51.4 | 53.1 | 54.9 |
|  | $(11.1)$ | $(11.3)$ | $(11.3)$ | $(11.4)$ | $(11.6)$ |
| Weekly domestic work hours (all husbands) | 3.0 | 2.6 | 3.5 | 3.4 | 3.3 |
| Employed (\%) | $(5.0)$ | $(4.6)$ | $(6.3)$ | $(6.0)$ | $(5.8)$ |
| Weekly hours worked (only employed) | 83.2 | 88.0 | 79.3 | 83.0 | 81.0 |
|  | 54.4 | 48.6 | 48.4 | 46.7 | 46.3 |
| Weekly domestic work hours (only employed) | $(15.4)$ | $(15.4)$ | $(13.3)$ | $(14.0)$ | $(12.0)$ |
|  | 3.0 | 2.5 | 3.5 | 3.4 | 3.2 |
| Average wage (only wage earners) | 269.0 | $(4.5)$ | $(6.2)$ | $(5.9)$ | $(5.6)$ |
|  | $(133.1)$ | $(106.6)$ | $(156.1)$ | $(165.4)$ | $(169.7)$ |
| Wife's characteristics |  |  |  |  |  |
| Age |  |  |  |  |  |
| Weekly domestic work hours (all women) | 24.2 | 46.5 | 48.1 | 49.8 | 51.6 |
|  | $(10.3)$ | $(10.5)$ | $(10.6)$ | $(10.6)$ | $(10.9)$ |


|  | $(22.5)$ | $(18.4)$ | $(22.0)$ | $(18.2)$ | $(17.3)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Employed (\%) | 47.7 | 50.9 | 52.8 | 54.9 | 57.2 |
| Weekly hours worked (only employed) | 48.4 | 45.7 | 43.6 | 43.8 | 41.8 |
|  | $(19.3)$ | $(18.0)$ | $(17.8)$ | $(16.7)$ | $(15.4)$ |
| Weekly domestic work hours (only employed) | 19.7 | 19.3 | 19.9 | 19.0 | 19.5 |
|  | $(12.7)$ | $(11.6)$ | $(15.1)$ | $(12.6)$ | $(12.8)$ |
| Average wage ${ }^{4}$ (only wage earners) | 126.9 | 127.0 | 136.8 | 149.5 | 165.5 |
|  | $(86.2)$ | $(84.4)$ | $(93.5)$ | $(96.4)$ | $(100.0)$ |
| Number of observations | $\mathbf{6 , 3 3 1}$ | $\mathbf{5 , 2 9 1}$ | $\mathbf{5 , 7 1 2}$ | $\mathbf{5 , 2 9 7}$ | $\mathbf{5 , 2 6 1}$ |

Notes: For age, hours and wages, standard deviation are reported in parentheses
To figure out how less husband and wife spend time on domestic work or childcare, we estimate the following equation:

$$
Y_{i t}=\beta_{0}+\beta_{1} X_{i t}+\beta_{2} \text { Outsourcing }_{i t}+\beta_{3} \text { Wage }_{i t}+\beta_{4} \text { Hours worked }_{i t}+\eta_{i}+\varepsilon_{i t}
$$

In addition to outsourcing, wage and weekly hours worked of couple are included. $\mathrm{X}_{\text {it }}$ are number of younger (aged 0 to 6 ) and older children (aged 7 to 18) in household, scale of couple's relationship, woman's self-reported health status, demographic controls such as age and years of education of couple. $\eta_{i}$ is individual fixed effects. The dependent variable indicates minutes of domestic work done by husband or wife per week.

Table 2 reports the OLS regression results with individual fixed effects, controlling all covariates ${ }^{5}$. Using outsourcing for domestic work is associated with the decrease in the contribution of wife by 48 to 53 minutes per week, but it does not have any significant associations with the contribution of husband.

Table 2. Associations between outsourcing and weekly time (minutes) spent on domestic work or childcare with fixed effects, Married couples, South Korea, 2008-2016.

|  | Time spent by husband <br> (1) <br> (2) |  | Time spent by wife(3) |  |
| :---: | :---: | :---: | :---: | :---: |
| Outsourcing | $\begin{gathered} 9.918 \\ (8.144) \end{gathered}$ | $\begin{gathered} 9.472 \\ (8.109) \end{gathered}$ | $\begin{gathered} -52.99^{* *} \\ (26.17) \end{gathered}$ | $\begin{aligned} & -47.68^{*} \\ & (25.94) \end{aligned}$ |
| Number of children aged 0-6 | $\begin{gathered} 87.52^{* * *} \\ (7.163) \end{gathered}$ | $\begin{gathered} 94.65^{* * *} \\ (7.174) \end{gathered}$ | $\begin{gathered} 758.7^{* * *} \\ (23.01) \end{gathered}$ | $\begin{gathered} 713.0^{* * *} \\ (22.94) \end{gathered}$ |
| Number of children aged 7-18 | $\begin{aligned} & 19.28^{* * *} \\ & (5.246) \end{aligned}$ | $\begin{aligned} & 21.90^{* * *} \\ & (5.231) \end{aligned}$ | $\begin{aligned} & 142.8^{* * *} \\ & (16.85) \end{aligned}$ | $\begin{aligned} & 134.1^{* * *} \\ & (16.73) \end{aligned}$ |
| Couple's relations |  | $\begin{gathered} 7.359^{* * *} \\ (0.930) \end{gathered}$ |  | $\begin{gathered} -2.156 \\ (2.973) \end{gathered}$ |
| Men's characteristics |  |  |  |  |
| Age | $\begin{gathered} 8.700 \\ (9.691) \end{gathered}$ | $\begin{gathered} 9.572 \\ (9.649) \end{gathered}$ | $\begin{gathered} -45.30 \\ (31.14) \end{gathered}$ | $\begin{gathered} -43.76 \\ (30.86) \end{gathered}$ |
| Years of education | $\begin{gathered} 9.510 \\ (10.93) \end{gathered}$ | $\begin{array}{r} 10.50 \\ (11.72) \end{array}$ | $\begin{gathered} -6.611 \\ (44.17) \end{gathered}$ | $\begin{aligned} & -7.559 \\ & (43.79) \end{aligned}$ |
| Hours worked |  | $\begin{gathered} -0.801^{* * *} \\ (0.127) \end{gathered}$ |  | $\begin{gathered} 2.170^{* * *} \\ (0.406) \end{gathered}$ |
| Wage |  | $\begin{gathered} -0.0536 \\ (0.0512) \end{gathered}$ |  | $\begin{gathered} -0.184 \\ (0.164) \end{gathered}$ |
| Women's characteristics Age | -3.543 | -5.383 | 29.45 | 33.15 |

[^2]|  | $(9.719)$ | $(9.682)$ | $(31.23)$ | $(30.97)$ |
| :--- | :---: | :---: | :---: | :---: |
| Years of education | -9.930 | -10.81 | 22.48 | 35.90 |
|  | $(13.37)$ | $(13.32)$ | $(42.97)$ | $(42.59)$ |
| Hours worked |  | $0.771^{* * *}$ |  | $-6.521^{* * *}$ |
|  |  | $(0.144)$ | $(0.462)$ |  |
| Wage |  | $0.604^{* * *}$ |  | $-2.026^{* * *}$ |
|  |  | $(0.150)$ |  | $(0.479)$ |
| Self-reported health | $-8.489^{* * *}$ |  | $-20.13^{* *}$ |  |
|  |  | $(3.041)$ | $(9.726)$ |  |
| Observations | 27,892 | 27,892 | 37,068 | 33,136 |
| Number of couples | 7,432 | 7,432 | 8,319 | 8,163 |

Note: *** $\mathrm{p}<0.01$, ** $\mathrm{p}<0.05,{ }^{*} \mathrm{p}<0.1$

To see relative contribution of husband to domestic work or childcare, we have created another dependent variable which equals the percentage of minutes spent on domestic work or childcare by husband in total minutes spent by couple. Table 3 presents that outsourcing does not decrease unequal distribution of work at home between wife and husband.

Table 3. Associations between outsourcing and the relative contribution of husband to domestic work or childcare compared to total contribution by couples, Married couples, South Korea, 2008-2016.

|  | Relative contribution of husband <br> $(1)$ |  |
| :--- | :---: | :---: |
| Outsourcing | 0.012 | -0.051 |
| Number of children aged 0-6 | $(0.371)$ | $(0.366)$ |
|  | -0.367 | 0.254 |
| Number of children aged 7-18 | $(0.326)$ | $(0.324)$ |
|  | $-0.440^{*}$ | -0.234 |
| Couple's relations | $(0.239)$ | $(0.236)$ |
|  |  | $0.401^{* * *}$ |
| Men's characteristics |  | $(0.042)$ |
| Age |  |  |
|  | 0.517 | 0.553 |
| Years of education | $(0.440)$ | $(0.435)$ |
|  | 0.474 | 0.454 |
| Hours worked | $(0.627)$ | $(0.619)$ |
|  |  | $-0.048^{* * *}$ |
| Wage |  | $(0.006)$ |
|  |  | $-0.006^{* * *}$ |
| Women's characteristics |  | $(0.002)$ |
| Age |  |  |
| Years of education | -0.266 | -0.375 |
| Hours worked | $(0.441)$ | $(0.436)$ |
| Wage | -0.320 | -0.434 |
|  | $(0.607)$ | $(0.600)$ |
|  |  | $0.069^{* * *}$ |
|  |  | $0.006)$ |
|  |  | $0.049^{* * *}$ |


|  | $(0.007)$ <br> Self-reported health <br>  <br> Note $:$${ }^{* * *} \mathrm{p}<0.01,{ }^{* *} \mathrm{p}<0.05,{ }^{*} \mathrm{p}<0.1$ | 27,840 |
| :---: | :---: | :---: |
| Number of husbands | 7,429 | 27,840 |

In Table 4, we examine the share of husband in doing five types of domestic work (cleaning house, doing grocery shopping, doing laundry, cooking, and dishwashing). The questions are "How often do you do each domestic work per week?", which are responded by 5 categories: almost everyday, 4-5 days per week, 2-3 days per week, 1 day per week, rarely. Dependent variable is the percentage of the frequencies in doing each domestic work of husband in total frequencies of couple. The result shows that outsourcing does not increases husband's share in all domestic works.

Table 4. Associations between outsourcing and relative contribution of husband to doing each domestic work compared to total contribution by couples, Married couples, South Korea, 2008-2016.
\(\left.$$
\begin{array}{lccccc}\hline & \begin{array}{c}(1) \\
\text { Cleaning } \\
\text { house }\end{array} & \begin{array}{c}(2) \\
\text { Grocery/othe } \\
\text { r shopping }\end{array} & \begin{array}{c}(3) \\
\text { laundry }\end{array}
$$ \& \begin{array}{c}(4) <br>

cooking\end{array} \& dishwashing\end{array}\right]\)|  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Outsourcing | 0.320 | 0.236 |  |  |
| Num of children aged 0-6 | $(0.309)$ | $(0.311)$ | 0.156 | 0.141 |
|  | -0.059 | -0.109 | $-1.271^{* * *}$ | -0.295 |
| Num of children aged 7-18 | $-0.274)$ | $(0.275)$ | $(0.231)$ | $(0.236)$ |

Note: *** $\mathrm{p}<0.01$, ** $\mathrm{p}<0.05,{ }^{*} \mathrm{p}<0.1$

The results show the longitudinal changes within couples in contribution to domestic work when they use outsourcing. Using outsourcing is significantly associated with decrease in time spent on domestic work or childcare by wife, but not time of husband. In addition, outsourcing is not related with any changes in the share of husband in domestic work or childcare, as well as five types of domestic work. This result is consistent with a study done by Van der Lippe, et al. (2004) in Netherlands, which finds that domestic help reduces women's time on cleaning, but not men's time.

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[^1]:    ${ }^{3}$ Since the questions related to outsourcing are different in 2007, we exclude data of 2007.

[^2]:    ${ }^{4}$ Wage is calculated in Korean currency, Won (2015=100).
    ${ }^{5}$ Since the fixed effects are significant in all our models, we report only the results with fixed effects.

