

Time Use Analysis of Married Paid Workers by Employment Types*

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Abstract

Purpose – This study aims to analyze time use of employees to see how they make a balance between work and family. We tried to analyze time use and time pressure of married paid workers in order to understand their work and family balance.

Methodology – Time use was compared by employment types and time pressure groups. We analyzed the factors influencing time pressure, dividing two employment types. The data were selected from the 2009 Korean Time Use Survey.

Results – Those who feel time pressure among full-timers spent more time on work and housework and less time on personal care and leisure than those who do not feel time pressure. Logit analysis on time pressure showed that full-timers feel more time pressure than part-timers do. Gender, age, education, income, day-off type, and the presence of preschool children were significant variables on time pressure.

Conclusion – These results imply that time use and time pressure for married paid workers are affected by employment types. Flexibility of labor needs to enhance work and family balance for females who have preschool children.

Keywords: Time Use, Time Pressure, Married Paid Workers, Employment Types, Work-Family Balance.

JEL Classifications: D13, J81, J88.

1. Introduction

Increase of double-income households are connected to increased interest in the issue of work and family balance. It also affects the changes in the division of roles between family members. Under the dual-income household model, a new role model is required in family. In other words, how to combine harmoniously the two roles of work and family became an important issue influencing the quality of life (Lee & Lee, 2011). The difficulty of managing work and family demands has increased for many working adults, and many employers have come to view "family-friendly" policies as an important attraction and retention strategy (Batt & Valcour, 2001). So many companies are increasing human resource policies that address work and family balance to help their employees cope with their time-pressured lives. Work-family conflicts can have a

detrimental effect on both productivity and family life (Gornick & Meyers, 2003). Family-friendly arrangements in companies play an important role in easing the reconciliation of work and family life. There are a number of factors which may encourage employers to adopt policies to promote work-life balance. These include the business case for such policies (such as lower staff turnover, reduced absence, improved productivity), as well as changes in human resource management and changes in technology that enhances opportunities for working from home. Another key factor is increasing demand for greater flexibility from employees. The potential of flexible working arrangements to reduce work pressure and work-life conflict therefore has important implications for employees' physical and mental well-being and potentially has benefits for employers through reduced absenteeism (Russell, O'Connell, & McGinnity, 2009). As balance between work and family becomes an important factor in measuring one's quality of life, employers need to understand employees' demand for work-family balance in terms of human resource management.

We tried to analyze time use of employees to see how they make a balance between work and family. Married paid workers, to a certain extent, all have similar conditions regarding time use since they need to maintain balance between work and family. The difficulties of work and family balance are shown objectively by the actual conditions of time use and subjectively by time pressure. Therefore, this research aims to analyze the time use and time pressure of married paid

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workers in order to understand their conditions of work and family balance. Because the most basic criteria that determine paid workers' time use are employment types (full-time/part-time), this research will compare the time use between full-timers and part-timers. The research will also analyze the difference between the time use of those who feel time pressure and those who do not feel time pressure in order to understand the reasons for the subjective feelings of time pressure. Lastly, this research will try to study how the feelings of time pressure differ according to socio-demographic and time-related characteristics with Logit analysis. With this research, it will be possible to understand which group feels the most difficulties in terms of time use and allocation. This research is meaningful in providing basic data for understanding the conditions of work and family balance of married paid workers.

2. Literature Review

2.1. The Time Use of Married Couples

Since discussion related with personal time use has been mainly initiated from topics such as the relationship between laboring hours and wage, the subjects of early researches related with time use were confined to male employees. As scholars such as Becker(1965) who divided time spending activities to work and leisure, or Mincer(1962) & Gronau(1977) who classified activities to paid work, leisure, and housework focusing on female labor supplies (Sung, 2006), discussion topics related with time use extended to female as well. However, some debates arose that Mincer(1962) & Gronau(1977) who interpreted the different time spending activities of men and women as a result of maximization of efficacy, were neglecting gender inequality matters that works beneath the 'economic rationality' (Kim & Kim, 2007). Since then, vast amount of researches related with time use of paid work, leisure, and housework developed focusing on the differences between men and women. For example, in Winkler's research (2002) where he tried to compare the difference of perception in time use of 5,751 spouses collected by the National Survey of Families and Households in 1992~1994, both husbands and wives think that they do more housework than their spouses answers that they do. Still, women spent more time for housework than men, and the perceived difference between spouses on time men spent for housework was higher than that of women. As a conclusion of the research, the scholar emphasizes the importance to lessen bias by structured questionnaires and increase reliance of the time data by simultaneously conducting discreet measuring tools such as time diaries.

There is a long tradition in time use survey to be conducted by time diary methods. Since 1965, US conducted surveys with various institutions on decennial periods, and U.S. Department of Agriculture also funded small scale time diary surveys in 1920, 1930, and 1970. The most recent survey that could represent survey of time use is, American Time Use Survey

conducted by U.S. Census Bureau and funded by Bureau of Labor Statistics since 2003 (Allard et al., 2007). For example, in Allard & Janes research (2008) regarding time use of men and women by analyzing data from ATUS, married women spent more time doing housework, childcare, and purchasing goods than men. If focusing on the weekday working hours, men spent more time for work than men, and if focusing on childcare, women utilized weekday morning and night hours for childcare, while men tried to participate in weekends for their children less than five years old. It was also analyzed that both men and women spent more than half of time doing leisure and sports with their kids.

In Korea, various studies on time usage of spouses conducted by time diary method, has started to emerge from the 1970's (Cho, 1993; Han, 1991; Huh, 1997; Im & Lim, 1992; Lee & Lee, 1994; Lee et al., 1994; Lee & Lee, 1994; Lee et al., 1996). However, the studies before 2000's carried limitations being analyzed by data with small size samples. Large scale analyses of time use were able to be performed since 1999 by broad academic fields, when 'Statistics Korea' started a national scale 'Korean Time Use Survey'. Many scholars who studied family related issues mainly verified hypotheses such as domestic and economic dependence of spouses, dual imposition of labor on women in dual-earner households.

In most of the prior studies, the gender roles are proven to remain strong even after the increase of women's employment, which impose dual imposition of labor on women (Kim & Kim, 2007; Kim, 2005, 2008; Son, 2005; Sung, 2006).

Yet, some changes in the level of strictness in gender roles are recently being detected. Some studies state that there has been changes in gender roles which could be called 'Lagged adaptation mode', where men tend to increase their time for housework as the overall labor hours of women increased(Gershuny et al., 1994; Kim, 2005). Gershuny(2000), in an study comparing the time use among different countries, especially since 1974 men time for paid work had significantly declined while housework and leisure went the opposite way. For women, time for housework has declined while leisure has significantly increased.

Moreover, Raley et al. (2006) shows in a study that, while working hours of women with children have increased as the dual-earner household has increased to 40.9% in 2000, the gap of time for housework between spouses had slightly deceased. In this study, even though women still spent more time for housework than men, the gap of time used for housework between men and women which was average weekly 7.2 hours in 1965, has dropped to less than 2 hours in 2000. Also in this study, it is shown that the time for child care has been increased for both men and women, where especially men who spent average 26 hours a week for childcare in 1975, increased their time for childcare up to 33 hours in 2000, lessening the gap of time used for childcare between spouses.

Most of the studies stated above are the analysis of the amount of time spent of each individual, and there exists studies with additional analysis of the time spending patterns. However, such studies only show the limited areas of time use such as leisure(Yoon & Kim, 2007) or child care(Allard & Janes,

2008), or measure only few periods of time in a day, with scarce amount of qualitative information such as what activity one is doing in which place and how they feel in that particular moment (Schneider & Waite, 2005). Even though there is a study by Yoon (2005) measuring the 24 hour time use in concrete and classified activities, the study is based on a small scale sample of 53 spouses.

In need to have a profound analysis with a stable sample size, we use the data from Korean Time Use Survey' conducted by 'Statistics Korea'. Through this study, we expect to secure a more sound result in multiple aspects regarding the amount and patterns of time use of spouses in dual-earner households.

2.2. The Impact of Employment Type to Time Use of Married Couples

State of employment and employment type strongly affects the choice of time use of married couples, as in a study of Gershuny (2000), which revealed that full-time workers, regardless of gender, worked more than the others and had less time to have personal time, do housework or leisure.

However, in most of the studies, the state of employment gives different impact to time use between different genders. For example, in the study of You & Choi (2002), the employment status imposed negative effects to time for housework and leisure of men and women, and time for child care of women. The fact that men's time for childcare was not influenced by the employment status shows that employment state gives different impacts to different genders.

In general, women tend to be more influenced by the flexible work types, and need more efforts to adjust time for both work and family than men. It could be interpreted as a phenomenon happening in the phase of women adapting to the labor market. For example, even though employed mothers spend less time with their child than unemployed mothers, they try to secure their time with their children by adjusting their child's school time, paid work time compared to their husbands, and curtail time for housework so they would be able to minimize the gap of time for childcare between them and mothers not in the labor market (Bianchi & Lynne, 2000).

The ever increasing time for paid work of women who have children, could also give indirect influence to time use of married couples. For instance, couples with children are spending more time doing activities with their children than before, while decreasing the time invested in social activities and leisure (Sayer, 2005). These trends could also be seen indirectly by the increasing time pressure. A study by Mattingly & Sayer (2006) shows that women rapid participation on the labor force gives critical influence to people's level of perceived of lack of time, especially of women, pointing out that women have stronger attempts to maintain efforts for both paid work and housework.

Based on the previous studies, we investigate the time use

differences according to the employment type and time pressure of married paid workers. We also try to study how the feelings of time pressure differ according to socio-demographic and work-related characteristics in order to understand their conditions of work and family balance.

3. Methodology

This study deals with the following questions:

- How is married paid workers' time use different according to the employment types?
- How is married paid workers' time use different according to the time pressure groups?
- What are the factors affecting married paid workers' sense of time pressure?

The data analyzed in this research were 9836 time diaries (5884 weekdays, 1955 Saturdays and 1997 Sundays) of 4918 married paid workers (4191 full-timers and 727 part-timers) from the '2009 Korean Time Use Survey' developed by the Korean National Statistical Office. This study selected respondents aged between 20 and 60 according to Anderson et al. (1994) and Lee & Lee (2011). It is because the aged between 20 and 60 is the main age group of paid working. Characteristics of the subjects are as shown in <Table 1>. Regarding employment types, 93.4% of the men were full-timers, whereas 73.4% of women were full-timers. In terms of age groups, there were relatively more part-timers in their 50s. Furthermore, compared to middle school and high school graduates, who are relatively more part-timers, college-graduates tend to be full-timers. In addition, there are relatively more part-timers working in service and sales, farming, technical engineering, mechanics, and simple labor. When it comes to the average monthly income, there is a significantly higher percentage of part-timers than full-timers who are paid under one million won. Concerning days off, those who answered that they regularly had days off were mostly part-timers. There were relatively more full-timers than part-timers for those with spouses, and for those with pre-school children, there were relatively more full-timers. Among the part-timers, there were relatively more dual-earner families.

Time use is classified into personal care, work, study, housework (housekeeping and family care) and leisure (voluntary work and community participation, social life and recreation, etc.). Time pressure groups consist of the "perceiving time pressure (PTP) group," which is an aggregate of those who answered that they "always feel the time pressure" or "sometimes feel the time pressure" and the "non-perceiving time pressure (NPTP) group," which is an aggregate of those who answered that they "rarely feel the time pressure" or "never feel the time pressure".

<Table 1> Characteristics of subjects

Unit: Mean(S.D.), Frequency(%)

Variables	Category			Total	X ²
		full-timer	part-timer		
Gender	Male	2706(93.4)	190(6.6)	2896(100)	755.927***
	Female	1485(73.4)	537(26.6)	2022(100)	
Age	20-29	230(88.5)	30(11.5)	260(100)	58.158***
	30-39	1384(87.5)	198(12.5)	1582(100)	
	40-49	1724(85.6)	290(14.4)	2014(100)	
Education	50-59	853(80.3)	209(19.7)	1062(100)	448.924***
	Under middle school	530(71.3)	213(28.7)	743(100)	
	High school	1858(82.9)	384(17.1)	2242(100)	
	College	1576(92.9)	120(7.1)	1796(100)	
Occupation	Graduate school	227(95.8)	10(4.2)	237(100)	497.541***
	Managerial/professional	970(92.3)	81(7.7)	1051(100)	
	Clerical	1021(96.0)	42(4.0)	1063(100)	
	Service/Sales	659(76.2)	206(23.8)	865(100)	
Monthly income	Farming/Simple Skilled	1541(79.4)	398(20.6)	1939(100)	2145.409***
	Under 999,999 won	629(55.5)	505(44.5)	1134(100)	
	1,000,000-1,999,999 won	1527(90.3)	164(9.7)	1691(100)	
	2,000,000-2,999,999 won	1073(96.3)	206(3.7)	1114(100)	
Day-off Type	Over 3,000,000 won	962(98.3)	398(1.7)	979(100)	1264.515***
	A day per week	1237(88.2)	166(11.8)	1403(100)	
	Two days every 2week	500(92.4)	41(7.6)	541(100)	
	Two days per week	1762(90.5)	186(9.5)	1948(100)	
	A day every 2 week	169(90.9)	17(9.1)	186(100)	
	Not regular	275(49.7)	278(50.3)	553(100)	
Presence of spouse	Others	248(86.4)	39(13.6)	287(100)	22.723***
	Yes	3897(85.7)	650(14.3)	4547(100)	
Gender-role attitude	No(Widowed, Divorced)	294(79.2)	77(20.8)	371(100)	4.678*
	Traditional	1700(86.2)	273(13.8)	1973(100)	
Presence of preschool children	Liberal	2491(84.6)	454(15.4)	2945(100)	51.234***
	Yes	1101(89.7)	127(10.3)	1228(100)	
Dual/Single Earner	No	3090(83.7)	600(16.3)	3690(100)	14.94***
	Dual earner	2308(84.0)	440(16.0)	2748(100)	
Time pressure	Single earner	1733(86.8)	287(13.2)	2170(100)	122.655***
	Yes, always	1668(89.0)	207(11.0)	1875(100)	
	Yes, often	1980(84.6)	360(15.4)	2340(100)	
	No, rarely	480(78.3)	133(21.7)	613(100)	
	No, never	63(70.0)	27(30.0)	90(100)	

* p<0.05, ** p<0.01, *** p<0.00

4. Results

4.1. Time Use According to Paid Workers' Employment Types

A comparison between full-timers and part-timers' time use showed that there is a significant difference between the time use of full-timers and part-timers in all time domains, as shown in <Table 2>. Full time workers worked 536 minutes on weekdays, which is significantly more than the 375 minutes that part-time workers worked. Part-timers used more time on personal care, housework and leisure. In other words, it could be inferred that full-timers work longer, and part-timers used more time on housework, leisure and others as their working hours were relatively shorter.

On Saturdays, as working hours were considerably shorter compared to that of weekdays, full-timers reorganized their time use in a way that allows them to increase time spent on

personal care, housework and leisure. Still the time spent on housework was 135 minutes, which was shorter than the 229 minutes spent by part-timers, and the time spent on leisure was 399 minutes, which was longer than the 297 minutes spent by part-timers. Likewise, on Sundays, full-timers increased their time spent on personal care, housework and leisure, but full-timers' time spent on housework is 165 minutes, which was shorter than the 213 minutes spent by part-timers, and the time spent on leisure was 412 minutes, which was longer than the 365 minutes spent by part-timers.

Thus, on weekdays, full-timers showed work-focused time use, using most of the time working and the remainder of the time on housework and leisure. On weekends, however, because working hours were reduced, full-timers used more time on housework and leisure, but full-time workers looked to allocate more time to leisure than do part-time workers. Part-timers spent much time not only on work, but also on housework, on all days of the week, and in terms of time use

structure, it was found that they engage in work and housework simultaneously.

4.2. Differences in Time Use According to the Time Pressure Groups

Based on the assumption that the time pressure perceived may differ according to time use despite identical employment types, this research analyzed the time use of each time pressure group. First, on weekdays among full-timers, while the PTP group spends more time on work and housework, the NPTP group spends relatively more time on personal care and leisure. When it comes to part-timers, there was no difference in terms of the time spent on work and housework, but the NPTP group spends longer time on personal care and leisure. If the number of total working hours is defined to be the sum of time spent on work and housework, time pressure increases as the amount of

total working hour increases, and time pressure decreases as the amount of time spent on leisure increases <Table 3>.

On Saturdays, among full-timers, while the PTP group spends more time on work, the NPTP group spends more time on personal care and leisure. When it comes to part-timers, there was a difference among the time pressure groups in terms of time spent on leisure alone in that the NPTP group spends longer time on leisure <Table 4>.

On Sundays, there was not much difference among the time pressure groups. Full-timers showed differences in terms of time spent on housework and leisure, while part-timers, only in terms of time spent on leisure. For full-timers, the factor that caused time pressure on Sundays is the time spent on housework, as the PTP group spends longer (171 min) on housework than does the NPTP group (132 min). The NPTP group spends relatively more time on leisure (453 min). For part-timers, the only difference was the time spent on leisure <Table 5>.

<Table 2> Time use according to employment types

Unit : Hours/minutes per day

Activity	Weekdays			Saturday			Sunday		
	full-timer	part-timer	t-value	full-timer	part-timer	t-value	full-timer	part-timer	t-value
Personal care	620	627	-2.223*	675	662	1.904	724	704	2.693**
Work	536	375	25.371***	291	251	2.401*	138	159	-1.414
Study	1	1	-672	0	2	-1.354	0	0	.401
Housework	79	192	-27.821***	135	229	-9.760***	165	213	-4.940***
Housekeeping	54	143	-29.262***	93	184	-12.360***	122	180	-7.165***
Family care	25	49	-11.368***	42	45	-.510	43	33	2.000*
Leisure	205	245	-8.579***	339	297	3.405**	412	364	3.824***
Voluntary work and community participation	1	3	-5.923***	2	2	-.325	1	1	-.110
Social life/ Recreation and leisure	188	224	-7.667***	322	276	3.741***	394	345	3.917***
Others	15	16	-1.940	15	17	-2.867**	16	17	-.493
Waiting for bus, train etc.	1	2	-3.611***	1	1	-2.352*	1	1	-2.104*
Total	24:00	24:00		24:00	24:00		24:00	24:00	

* p<0.05, ** p<0.01, *** p<0.001

<Table 3> Time use on weekdays according to perception of time pressure

Unit : minutes per day

Activity	Weekdays					
	full-timer			part-timer		
	PTP	NPTP	t-value	PTP	NPTP	t-value
Personal care	619	630	-3.060**	623	642	-2.381*
Work	541	500	5.981***	381	353	1.626
Study	1	0	1.593	1	0	.968
Housework	82	61	4.972***	194	185	.718
Housekeeping	55	46	2.822**	142	147	-.478
Family care	26	14	5.551***	52	38	1.980*
Leisure	198	250	-10.272***	240	260	-1.611
Voluntary work and community participation	1	1	-.810	4	3	.490
Social life/ Recreation and leisure	182	232	-10.021***	219	240	-1.637
Others	16	16	-1.356	17	19	-.703
Waiting for bus, train etc.	1	1	-1.737	1	2	-.368
Total	24:00	24:00		24:00	24:00	

* p<0.05, ** p<0.01, *** p<0.001

<Table 4> Time use on Saturdays according to perception of time pressure

Unit : minutes per day

Activity	Saturday					
	PTP	full-timer NPTP	t-value	PTP	part-timer NPTP	t-value
Personal care	672	696	-2.875**	660	668	-.538
Work	302	213	4.651***	264	204	1.740
Study	0	0	-.165	2	0	.526
Housework	137	119	1.654	231	219	.504
Housekeeping	93	90	.395	184	185	-.082
Family care	44	29	2.600**	48	34	1.181
Leisure	328	411	-5.721***	282	350	-2.748**
Voluntary work and community participation	2	2	.096	1	6	-1.951
Social life/ Recreation and leisure	311	393	-5.663***	262	326	-2.636**
Others	14	16	-1.150	18	16	.798
Waiting for bus, train etc.	1	1	.502	1	2	-.644
Total	24:00	24:00		24:00	24:00	

* p<0.05, ** p<0.01, *** p<0.001

<Table 5> Time use on Sundays according to perception of time pressure

Unit : minutes per day

Activity	Sunday					
	PTP	full-timer NPTP	t-value	PTP	part-timer NPTP	t-value
Personal care	725	720	.605	702	709	-.409
Work	139	132	.420	167	126	1.243
Study	0	3	-2.638**	0	0	.521
Housework	171	132	3.524***	222	182	1.783
Housekeeping	126	99	2.967**	186	157	1.424
Family care	45	33	2.059*	36	25	1.303
Leisure	406	453	-3.377**	348	423	-2.680**
Voluntary work and community participation	1	1	-.332	1	1	-.147
Social life/ Recreation and leisure	388	435	-3.363**	329	405	-2.751**
Others	16	17	-.053	17	16	.450
Waiting for bus, train etc.	1	1	.490	1	0	.1388
Total	24:00	24:00		24:00	24:00	

* p<0.05, ** p<0.01, *** p<0.001

4.3. Analysis of the Factors Affecting Time Pressure

On weekdays, according to the results of Logit analysis on time pressure, gender, age, education, income, day-off type, presence of preschool children, working hours, time spent on housework and working type appeared to be statistically significant variables <Table 6>. Namely, it was found that those who show a higher probability of being classified into the PTP group were females, rather than males; those who are in their 30s and 40s, rather than their 20s; college graduates and graduate school graduates, rather than high school graduates; those who have higher income; those who work six days a week rather than those who work five days a week; those who have pre-school children; and those who spend more time on work and housework and full-timers, rather than part-timers. On Saturdays, gender, income, day-off type, presence of preschool children and working hours appeared to be significant variables. Those who show a higher probability of being classified into the PTP group were female, rather than

male; those who work six days a week, rather than those who work five days a week; those who have pre-school children; and those who spend more time on work. On Sundays, the number of statistically significant variables decreased, and only monthly income, day-off type, and profession were analyzed as significant variables.

Overall, gender appeared to be relevant on all days, so gender can be analyzed as an important variable determining time use and time pressure. In other words, women are more likely to feel time pressure, probably because of the burden of having dual roles. This can be understood that although greater female economic participation has led to increased working hours, their time doing housework has not decreased to that extent. Although male housework participation should have increased as much as female economic participation has increased in order to rearrange the division of roles between males and females, actual male housework participation has not increased as much, putting further pressure on females.

<Table 6> Factors affecting time pressure

Variables	Category	Weekdays		Saturday		Sunday	
		B	S.E.	B	S.E.	B	S.E.
constant		-.302	.459	.068	.726	.805	.674
Gender (0: Male)	Female	.692***	.130	.705**	.216	.390	.201
Age (0: 20-29)	30-39	.486*	.189	.345	.324	.495	.298
	40-49	.504**	.192	.302	.330	.305	.299
	50-59	.009	.201	.021	.350	-.073	.316
Education (0: high school)	Under middle school	.017	.117	-.085	.204	.046	.198
	College	.255*	.106	.124	.185	-.234	.179
	Graduate school	.680*	.270	.425	.395	.354	.405
Monthly Income (0: 1,000,000- 1,999,999 won)	Under 999,999 won	-.485***	.119	-.478*	.205	-.498*	.198
	2,000,000- 2,999,999 won	.283*	.120	.250	.207	-.035	.193
	Over 3,000,000 won	.495***	.141	.396	.237	.116	.227
Day-off Type (0: Two days per week)	A day per week,	.539***	.103	.702**	.202	.516**	.173
	Two days every 2week	.335*	.153	-.196	.217	-.207	.209
	Not regular , Others	.072	.113	.245	.212	-.015	.197
Occupation (0: Clerical)	Managerial/professional	-.129	.138	.251	.228	-.218	.226
	Service/Sales	.033	.148	.163	.249	-.369	.252
	Farming/Simple Skilled	-.185	.125	-.186	.211	-.532*	.224
Presence of spouse (0: No)	Yes	.126	.145	.028	.278	.314	.244
Presence of preschool children (0: No)	Yes	.589***	.130	.707**	.224	.320	.212
Dual/Single income (0: Single income)	Dual income	.155	.089	.172	.153	.237	.148
Gender-role attitude	Continuous variable	.058	.062	-.026	.105	.009	.102
Work time	Continuous variable	.001**	.000	.001*	.001	.001	.001
Housework time	Continuous variable	.001*	.001	.001	.001	.001	.001
Leisure time	Continuous variable	-.001	.000	.000	.001	.000	.001
Employment type (0: part-time work)	full-time work	.298*	.115	.383	.203	.314	.191
N		5884		1955		1997	
-2 log likelihood		4352.236		1469.948		1592.646	
Chi-Square		409.108***		139.117***		100.349***	
Degree of freedom		24		24		24	

* p<0.05, ** p<0.01, *** p<0.001

The structure of time use is evidence that female time pressure appears to be higher due to the burden of having dual roles. In particular, females who work full-time in their 30s and 40s with pre-school children feel the highest time pressure on weekdays. As a result, it is possible to deduce the difficulties they experience in balancing work and family.

5. Conclusions and Research Limitations

Taking the above results together, it is evident that employment type affects time use and time pressure greatly. Types of employment are shown to be a critical factor in determining the amount of time used for paid work, housework, and leisure. Full-time workers showed work-focused time use, using most of the time working and remainder of the time on housework and leisure on weekdays, but they spend more time to leisure than do part-time workers on weekends. Part-time workers showed work-family balanced time use, using their time not only on work but also on housework and leisure. These results are related to the fact that the majority of part-time workers are women. 26.6% of the married paid worker women were part-timers, whereas 6.6% of men were part-timers.

Furthermore, a comparison of time use between time pressure groups within the identical employment type showed that even if they have same working type, their attitude toward time pressure can differ from each other. In case of full-time workers, those who feel time pressure spent more time on work and housework and less time on personal care and leisure than those who do not feel time pressure. On the other hand, those who feel time pressure among part-time workers spent more time on family care and less time on personal care.

Finally, Logit analysis on time pressure groups suggested that gender, age, education, income, day-off type, presence of preschool children, working hours, housework time, and employment type are significant variables to effect on time pressure perceiving. Female full-timers with pre-school children, in particular, feel time pressure the most as they must balance their dual roles in work and family. This result leads to the conclusion that despite increasing female economic participation, the structure of gender role division is still being maintained.

In addition, the findings suggest the necessity of introducing more flexible and diverse types of employment in the work field, breaking from the standardized way of working full-time in order to maintain the balance of work and family. Recently, the

introduction of "flexible working arrangement" for the sake of the flexibility of the labor market has been discussed at a national level, and such a concept will be very important for the married paid worker's balance of work and family, as well. Flexible working arrangement is one of family-friendly company certification standards. So far, 522 companies have been certified as the "Best Family Friendly Management Company" from the Ministry of Gender Equality and Family. Family-friendly management contributes to support employee's work-family balance and improve the company's productivity as well (Ministry of Gender Equality and Family, 2014). Companies need to understand employees' time use and time pressure in terms of human resource management. When the companies utilize employees' time use data as management tool, they can identify employees' demand for work-family balance. It needs to be considered that supporting employees' work-family balance is the basis to ensure company's sustainability.

The purpose of this study is to analyze time use and time pressure of married paid workers in order to understand their conditions of work and family balance. The findings suggest meaningful implications for employers to identify employees' demand for work-family balance in terms of human resource management, but have some limitations. First, we simply divided employment type to full-time and part-time. This didn't consider voluntariness of employee. Future research examining voluntariness of employment is needed to provide more accurate demand of employee's work and family. Second, we analyze time use and time pressure of married paid workers only by employment type, but it needs to be taken account of the difference by gender. Since the time usage patterns vary greatly depending on gender, future research examining gender-gap on work and family balance is needed to make gender-perspective policy and practice.

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