



Research Title: Study on the Expansion of Incentives for Small and Medium-sized Family Friendly Certified Companies:
Focusing on Tax Incentives

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Strategies for Expanding the Family Friendly Certification Program for Work-Life Balance

Abstract

- ◎ The Family Friendly Certification Program is a scheme that grants certification to businesses and public institutions that appropriately manage family-friendly systems, such as support for childbirth and childcare, and the implementation of flexible work hours.
- ◎ This study uses data from the second cohort of the Korean Women Manager Panel from the Korean Women's Development Institute, applying the Propensity Score Matching (PSM) methodology to examine the relationship between family-friendly certification and the proportion of employees utilizing maternity leave and parental leave, as well as the ease of utilizing work-life balance systems for employees.
- ◎ A regression analysis was conducted on the groups of businesses matched through PSM. The results showed that in an analysis including all businesses, those with family-friendly certification had a higher proportion of maternity and parental leave users and exhibited greater ease of utilizing work-life balance systems compared to non-certified businesses.
- ◎ The higher proportion of female maternity leave users in certified businesses compared to non-certified ones suggests that the Family Friendly Certification Program may contribute to improving the fertility rate.
- ◎ However, in small and medium-sized enterprises (SMEs) with family-friendly certification, no significant difference was observed in the ease of utilizing flexible work hours and reduced working hours systems (during pregnancy and childcare periods) among the work-life balance systems compared to non-certified businesses.

- ⦿ While the government currently supports the adoption of work-life balance systems in various ways, SMEs may still face challenges in implementing and managing these systems due to factors such as lack of information, difficulties in the application process, associated costs, and so on.
- ⦿ Considering these factors, it is necessary to provide practical incentives, such as tax relief to SMEs with family-friendly certification, in order to support the effective operation of various work-life balance systems by compensating for the costs of implementing these systems.
- ⦿ Additionally, if certification standards related to the work-life balance systems for SMEs are further refined to improve the working environment of SME employees, it is expected that this could play a role in reducing the financial burdens associated with childbirth and childcare for workers.

Background and Issues

- ⦿ **The Family Friendly Certification Program grants certification to businesses and public institutions that appropriately manage family-friendly systems, such as support for childbirth and childcare, and the introduction of flexible work hours.**
 - ▶ Previous studies have shown that family-friendly management has positive effects on employee turnover intention, organizational commitment, job satisfaction, and improvements in corporate productivity and financial indicators (Kim & Cha, 2009; Yu et al., 2007; Lee & Kim, 2009; Hong et al., 2014).
 - ▶ However, there is a lack of survey data that includes comprehensive information on whether a business has received family-friendly certification, the number of employees on maternity or parental leave, and other relevant factors, making it difficult to find analyses of the impact of family-friendly certification on the use of work-life balance systems such as maternity and parental leave.
- ⦿ **This research examines the effects of family-friendly certification on the proportion of employees using maternity and parental leave, as well as the ease with which employees can utilize work-life balance systems.**

Data Analysis

- To examine the effects of family-friendly certification, this study utilized data from the second cohort of the Korean Women Manager Panel from the Korean Women’s Development Institute, which included information on whether or not businesses have received family-friendly certification.
 - ▶ The second cohort of the Korean Women Manager Panel collects data on whether a business has obtained family-friendly certification, the number of employees who have taken maternity leave over the past year, the number of employees currently on parental leave or who have returned from parental leave, and employees' opinions on work-life balance systems within the business. These are appropriate data for analyzing the effects of family-friendly certification.
 - ▶ The data from the second cohort of the Korean Women Manager Panel were collected starting in 2020 from 604 human resources managers in businesses with 100 or more employees, and 3,500 female and 1,511 male employees in managerial positions (manager level and above) from those businesses. The data from the first through third surveys have been made publicly available.
 - ▶ Based on the data from the first to third surveys, there are 446 businesses and institutions (hereafter referred to as ‘businesses’) that have received family-friendly certification, with a total of 4,749 employees working in those certified businesses. When focusing solely on SMEs¹⁾ 161 businesses were certified, with a total of 1,530 employees working in these certified businesses.

<Overview of Data>

	Total		SMEs	
	Businesses	Employees	Businesses	Employees
Certified	446 (147)	4,749 (1,738)	161 (54)	1,530 (554)
Non-certified	1,071 (457)	7,513 (3,273)	519 (226)	3,406(1,492)
Total	1,517 (604)	12,262 (5,011)	680 (280)	4,936 (2,046)

Note: 1. The numbers in parentheses () represent the number of observations based on the first-year survey.

1) In the second cohort of the Korean Women Manager Panel, the survey includes corporate businesses, non-corporate entities, public institutions, and unincorporated organizations. The total number of businesses encompasses all these categories, while the SMEs are defined as corporate businesses and non-corporate entities with fewer than 300 employees. It is important to note that this classification does not use the current criterion for SMEs based on revenue, but instead focuses on the number of employees.

● This study estimated the Average Treatment Effect on the Treated (ATT)²⁾ for the experimental group using the Propensity Score Matching (PSM) methodology to evaluate the utilization outcomes of work-life balance systems in family-friendly certified businesses, followed by regression analyses on the matched businesses.

▶ Family-friendly certified businesses are those that have successfully implemented family-friendly systems. Such businesses may possess characteristics, such as industry type or the composition of their workforce, that make it advantageous or necessary to adopt family-friendly systems. Therefore, a simple comparative analysis of the work-life balance system utilization outcomes between family-friendly certified businesses and non-certified businesses could result in sample selection bias.

● In this study's analysis, the Propensity Score Matching (PSM) methodology was used to compose a group of non-certified businesses with conditions similar to those of family-friendly certified businesses (in terms of observed characteristics such as industry, business size, proportion of women employees, etc.) in order to compare the utilization outcomes of work-life balance systems, followed by a regression analysis.

▶ The variables used to measure the utilization outcomes of work-life balance systems include the proportion of employees who used maternity and parental leave over the past year (from the human resources manager survey) and responses regarding the ease of utilizing work-life balance systems (from the employee survey).

<Variable Description>

	Variable	Definition and Explanation	
Survey for Human Resources Managers*	Maternity Leave Usage Rate (Female, Male, Total)**	The ratio of employees under 40 years of age who used maternity leave over the past year to the total number of employees under 40 at the business.	
	Parental Leave Usage Rate (Female, Male, Total)**	The ratio of employees under 40 years of age who are currently on parental leave or have returned from parental leave over the past year to the total number of employees under 40 at the business.	
Survey for Employees	Ease of Utilizing Work-Life Balance Systems	Flexible Work Hours	A variable is set to 1 if respondents answered "Somewhat agree" or "Strongly agree" to the question of whether any of the following systems (flex-time work, flexible working hours, or telecommuting) are easily utilized in the organization. If the response to all systems was "Strongly disagree," "Somewhat disagree," or "Neutral," the variable is set to 0.
		Maternity Leave, Parental Leave, and Reduced Working Hours (During Pregnancy and Childcare Period)	A variable is set to 1 if respondents answered "Somewhat agree" or "Strongly agree" to the question of whether each of these systems is easily utilized in the organization. If the response to all systems was "Strongly disagree," "Somewhat disagree," or "Neutral," the variable is set to 0.

Note: * In the Korean Women Manager Panel, the number of employees under 40 years old used to calculate the maternity and parental leave usage rates includes only regular employees, while the number of maternity leave users over the past year includes all employees. This resulted in some cases where the usage rates exceeded 100% (in 1.5% of total observations), and these observations were excluded from the analysis.

** The variables used are the ratios of female employees, male employees, and all employees regardless of gender. Each variable is calculated by substituting the number of employees that match the gender condition. For example, the female maternity leave usage rate refers to the ratio of the number of female employees under 40 who took maternity leave over the past year to the total number of female employees under 40 at the business.

2) ATT refers to the effect of family-friendly certification. Specifically, it signifies the difference in the utilization outcomes of work-life balance systems that arises when comparing family-friendly certified businesses to the scenario in which they did not receive the certification.

● The variables used in the PSM analysis to control for the characteristics of businesses and employees are as follows. When using variables from the survey targeting human resources managers as the dependent variable, only business characteristics were controlled. However, when using variables from the survey targeting employees, both employee characteristics and business characteristics were controlled.

- ▶ Business characteristics: Industry type, location of the business, type of business (corporate entity, non-corporate entity, public institution, non-incorporated organization), years in operation, number of employees, percentage of female employees, percentage of regular employees, percentage of employees under 40 years of age, and whether the business is led by a female representative.
- ▶ Employee characteristics: Age, gender, marital status, presence of children, and job rank within the workplace.

Results

● The comparison of the proportion of maternity leave users after matching, surveyed from human resources managers, showed that in the analysis including all businesses, the proportion of female maternity leave users in family-friendly certified businesses (7.023%) was 1.176 %p higher than in non-certified businesses (5.847%), and for male employees, the proportion was 1.055 %p higher.

- ▶ In the case of SMEs, the proportion of female maternity leave users was not significantly higher; however, the proportion of male maternity leave users was 2.093 % higher.

<Proportion of Maternity Leave Users>

		Certified	Non-certified	Difference
All Businesses	Female	7.023	5.847	1.176
	Male	6.464	5.410	1.055
	Total	6.607	5.566	1.041
SMEs	Female	7.790	7.287	0.503
	Male	7.118	5.026	2.093
	Total	6.769	5.787	0.983

● The comparison of the proportion of parental leave users after matching showed that in the analysis including all businesses, the proportion of female parental leave users in family-friendly certified businesses (13.795%) was 2.799 %p higher than in non-certified enterprises (10.996%), and for male employees, the proportion was 0.954 %p higher.

- ▶ In the case of SMEs, the proportion of female parental leave users was 4.037 %p higher, and the proportion of male parental leave users was 1.654 %p higher.

<Proportion of Parental Leave Users>

		Certified	Non-certified	Difference
All Businesses	Female	13.795	10.996	2.799
	Male	4.546	3.592	0.954
	Total	8.053	6.862	1.191
SMEs	Female	14.076	10.038	4.037
	Male	5.482	3.837	1.645
	Total	9.007	5.179	3.828

● To control for other characteristics that may influence the use of maternity and parental leave, regression analysis (pooled OLS) results were presented, distinguishing between all businesses and SMEs.

- ▶ In the analysis including all businesses, the proportion of female maternity leave users in family-friendly certified businesses was 1.382 %p higher than in non-certified businesses, and the proportion of female parental leave users was 3.988 %p higher in the certified businesses.
- ▶ The higher proportion of female maternity leave users in family-friendly certified businesses compared to non-certified ones suggests that the Family Friendly Certification Program may contribute to improving fertility rates.
- ▶ For male employees, there was no statistically significant difference in the proportion of maternity leave users between family-friendly certified businesses and non-certified ones, but the proportion of male parental leave users was 0.932 %p higher in the certified businesses.
- ▶ In the analysis of SMEs, there was no statistically significant difference in the proportion of female and male maternity leave users between family-friendly certified and non-certified businesses. However, the proportion of parental leave users was higher in the certified businesses.
- ▶ In the analysis of the total workforce, combining both female and male employees, the proportions of maternity and parental leave users in family-friendly certified businesses were higher than in non-certified businesses in both all businesses and SMEs.

<Regression Analysis (Pooled OLS) Results of Matched Businesses>

VARIABLES	All Businesses			SMEs		
	(1) Female	(2) Male	(3) Total	(4) Female	(5) Male	(6) Total
⟨Maternity Leave⟩						
Certified Businesses	1.382*	0.205	1.059**	1.530	1.375	1.913***
	(0.726)	(0.598)	(0.520)	(1.434)	(1.118)	(0.716)
Observation	966	973	981	413	410	421
⟨Parental Leave⟩						
Certified Businesses	3.988***	0.932*	1.785**	6.731***	2.561***	3.763***
	(1.084)	(0.499)	(0.712)	(1.651)	(0.644)	(1.004)
Observation	909	953	925	357	396	382

Note: 1. The results were analyzed by controlling for variables such as years in operation, presence of a female representative, proportion of regular employees, business size, industry classification, location of the businesses, and year (dummies).
 2. The values in parentheses are clustered standard errors.
 3. *** p<0.01, ** p<0.05, * p<0.1

● The comparison after matching for the ease of using work-life balance systems, as reported by employees, showed that for all systems analyzed, employees working at family-friendly certified businesses perceived it easier to utilize these systems compared to those working at non-certified businesses.

- ▶ In the comparison of all businesses, the proportion of employees who found it easier to use flexible working hours was 7.37 %p higher in certified businesses compared to non-certified ones. Similarly, the proportion was higher in certified businesses for maternity leave (10.73 %p), parental leave (13.17 %p), the system for reduced working hours during pregnancy (9.38 %p), and the system for reduced working hours during childcare period (8.46 %p).³⁾
- ▶ A similar pattern was observed in the comparison of SMEs where employees in family-friendly certified businesses found it easier to use all systems analyzed compared to those in non-certified businesses.

<Ease of Use of Work-Life Balance System>

		Certified	Non-certified	Difference
All Businesses	Flexible Work Hours	0.7665	0.6931	0.0737
	Maternity Leave	0.8590	0.7523	0.1073
	Parental Leave	0.8270	0.6950	0.1317
	Reduced Working Hours During Pregnancy	0.7578	0.6648	0.0938
	Reduced Working Hours During Childcare Period	0.7570	0.6225	0.0846
SMEs	Flexible Work Hours	0.7475	0.6230	0.1242
	Maternity Leave	0.8280	0.6425	0.1850
	Parental Leave	0.8049	0.5766	0.2282
	Reduced Working Hours During Pregnancy	0.7212	0.6014	0.1197
	Reduced Working Hours During Childcare Period	0.6775	0.5331	0.1450

Note: For the variable representing the ease of use of work-life balance system, as surveyed from employees, a dummy variable was used, where 1 indicates that the employee perceives the system as easy to use, and 0 indicates otherwise. While the figures for the differences between certified and non-certified businesses are presented as decimal points, they are interpreted as percentages in the analysis.

● To control for characteristics that may influence employees' perceptions of the ease of using the systems, logistic regression analysis was conducted, with the results presented separately for all businesses and for SMEs.

- ▶ The analysis of all businesses showed a high likelihood of employees perceiving that it is easy to use the systems for flexible working hours (3.2%), maternity leave (6.6%), parental leave (6.3%), reduced working hours during pregnancy (6.8%), and reduced working hours during childcare period (6.0%).
- ▶ In the case of SMEs, the likelihood of perceiving maternity leave (11.1%) and parental leave (11.0%) as easy to use was high. However, no significant results were observed for flexible working hours or the reduced working hours during pregnancy and childcare period.

3) For the variable regarding the ease of using work-life balance systems, as surveyed from employees, a dummy variable is used where 1 indicates that the system is considered easy to use, and 0 indicates otherwise. While the figures for the difference between certified and non-certified businesses are presented in decimal form, they are interpreted as percentages.

<Regression Analysis (Logistic Regression) Results of Matched Employees>

VARIABLES	(1) Flexible Work Hours	(2) Maternity Leave	(3) Parental Leave	(4) Reduced Working Hours During Pregnancy	(5) Reduced Working Hours During Childcare Period
<All Businesses>					
Certified Business	0.032** (0.015)	0.066*** (0.012)	0.063*** (0.013)	0.068*** (0.015)	0.060*** (0.017)
Observation	6,728	8,059	8,083	7,446	6,623
<SMEs>					
Certified Business	0.039 (0.028)	0.111*** (0.023)	0.110*** (0.024)	0.040 (0.029)	0.047 (0.031)
Observation	2,200	2,795	2,784	2,510	2,110

Note: 1. The results were analyzed by controlling for variables such as the employee's gender, age, marital status, presence of children, business size, industry classification, location of the business, and year (dummies).
 2. The values in parentheses are clustered standard errors, and the coefficients presented are marginal effects.
 3. *** p<0.01, ** p<0.05, * p<0.1

Policy Recommendations

- This study's analysis shows that, when including all businesses, family-friendly certified businesses have higher proportions of maternity and parental leave users, and their employees find it easier to utilize work-life balance systems compared to non-certified ones.
- However, in SMEs that are family-friendly certified, no significant differences were observed in the ease of utilizing flexible working hours or reduced working hour systems (during pregnancy and childcare period) which are part of work-life balance systems.
- Although the government currently provides various forms of support to help businesses adopt work-life balance systems, SMEs may face challenges in adopting and operating these systems due to a lack of information, difficulties in the application process, and associated costs.
 - ▶ In particular, for flexible working hours and working hour reduction systems, SMEs that struggle with labor shortages may find the costs of implementing these policies to be substantial, making their practical operation difficult.
 - ▶ Moreover, employees working in SMEs with limited autonomy over their time management may feel that the costs of childbirth and childcare are high.
- In light of these challenges, it is necessary to provide more tangible incentives, such as tax support, for SMEs that are family-friendly certified. This would help cover the costs of operating work-life balance systems and ensure their effective implementation.
 - ▶ Additionally, by refining the certification criteria related to work-life balance systems for SMEs, the working environment for SME employees could be improved, which is expected to reduce the perceived costs of childbirth and childcaring for the workers.

References

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Supervising Ministry : Family Culture Division, Ministry of Gender Equality and Family

Related Ministry : Family Culture Division, Ministry of Gender Equality and Family