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Changes of wage gap by gender in Korea from 1985 to 2015: Focusing on women's career discontinuity

Author(s)

Mingil Kim, SungkyunKwan University, South Korea,
bixub15@gmail.com
Minhyo Cho, SungkyunKwan University, South Korea,
Chomh@skku.edu

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Ⅰ. Introduction

According to the OECD employment database, the gender wage gap in Korea is 36.7% in 2014, about 22% p higher than the OECD average of 14.03%. The wage gap in Korea is the highest among the surveyed OECD countries, with a difference of about 8% p compared to Estonia (28.3%), which ranks second. Thus, the wage gap between men and women is very high in Korea. A high level of gender wage gap can hinder women's willingness to participate in the labor market (Kang&Kim, 2014). Given the recent improvement in the level of women's human capital and the ability to work, women's deviation from the labor market can be a national disaster. Considering that current Korea is likely to experience labor supply shortage in the labor market due to the low fertility rate, participation of women in labor market and efficient use of female labor force are necessary.

In order to alleviate this problem of gender inequality, the Gender Equality Employment Act was enacted in 1987. In 1995, the Basic Law on Women's Development was enacted to promote gender equality, increase women's participation in society, and promote women's welfare. Since the enactment of laws to improve the labor rights of women, such as the Gender Equality Employment Act and the Basic Law on Women's Development, women's entry into the labor market began to take off in the 1990s. According to the National Statistical Office, the proportion of women among wage earners in 1963 was 24.1% in 1963, but increased to 43.3% in 2014. The share of women among university graduates and higher education workers increased from 18.7% in 1985 to 38.1% More than doubled. However, even though the quantitative level of female labor has increased through the advancement of women into the labor market, the wage gap between men and women is still high. Gender equality policies in the future will need to alleviate the wage gap between men and women in order to increase the quality of women 's labor with the quantitative increase of female workers. For this purpose, a detailed analysis of the gender wage gap in the labor market will be needed.

The purpose of this study is to analyze the gender wage gap. The wage gap can be broken down by the wage gap due to the productivity difference of the individual workers and the discrimination experienced in the labor market. The wage gap caused by individual productivity differences can be regarded as a legitimate wage gap caused by differences in human capital, but the wage gap due to discrimination can be a social problem. Oaxaca decomposition methodology mainly used by Oaxaca (1973) is used to analyze the wage gap. The results of this study are as follows. The analysis of the wage gap of men and women using the Oaxaca decomposition method analyzes mainly the influence of education, occupation, marital status, and employment type on the wage gap of all men and women(Jung, 2007; Keum, 2911; Kang&Kim, 2014; Baek. 2015).

In this context, this study examines the relationship between women 's career

disconnection and gender wage gap. Specifically, we use the data of "Survey on the Actual Conditions of Employment by Employment Type" to examine the existence and magnitude of the wage gap according to the age of the individual, taking into consideration that the phenomenon of career disconnection is prominent at a certain age. In other words, we will analyze the wage gap between men and women by dividing age by age 20, before experiencing career interruption, by 30 when experiencing career interruption, and by 40 when returning to labor market after career interruption. In addition, we will use data from 1985 to 2015 for 31 years in order to examine the effect of various policies for the realization of gender equality mentioned above and wage discrimination in the actual labor market. Finally, this study was conducted to understand the process of women's career breaks and labor market re-entry, and to examine the quantitative analysis of gender wage gap results. . Such an analysis could provide useful information to correct and supplement policies related to gender equality in the future labor market.

Ⅱ. Theoretical works

1. Theories about discrimination

Theories about gender discrimination in the labor market include preferential discrimination, statistical discrimination, and occupational segment theory. First, preferential discrimination theory was proposed by Becker (1971). Becker (1971) sees that employers can have a preference for males and that gender discrimination may arise from these preferences. For example, if an employer has a preference for a man, the employer will give additional wages to the man to hire a man, provide job benefits, pay a relatively low wage to avoid hiring women, This will reflect preferences in the form of disadvantages in business. Becker (1971) believes that discrimination based on this preference will disappear naturally if market competition intensifies. Since wages paid to workers are included in the production cost of the commodity, the cost of production of the commodity increases as the wage increases. An increase in production costs will weaken the price competitiveness of goods within the market, and employers with discriminatory employment will suffer losses in the commodity market as compared to employers who do not employ discriminatory employment. In particular, the more competitive the market, the greater the employer's losses due to additional wages, and the employer will pay out wages based on labor productivity by eliminating preferences, or be forced out of the commodity market. Thus, if the labor market is competitive, the more competitive the employer's losses will be in the commodity market due to the increase in the cost of producing goods due to the discrimination of wages, which will act as a factor to mitigate the discrimination of wages against workers.

Next, Arrow (1971) and Phelps (1972) presented statistical differentiation theory.

Arrow (1971) said that employers can not accurately determine the productivity of individual workers until the employer hires them, and can not easily be dismissed once they are hired. As a result, when employers want to hire workers, they want to get the most information at the lowest possible cost. In this context, we pointed out that gender is the most affordable information available to the individual worker's capabilities, and discrimination can occur depending on gender. Phelps (1972) has a similar view. According to Phelps (1972), statistical differentiation is based on an incomplete labor market situation in which the Walrasian equilibrium is not achieved. In the real labor market, employers do not know the exact labor productivity of the workers because of the incomplete information on the labor market or the characteristics of the work. If the employer believes that the cost of identifying individual workers' exact labor productivity is high and the employer believes that the average labor productivity of men is higher than the average labor productivity of women, there will be gender discrimination in the labor market. For example, if an employer is perceived as having a shorter working year and lower productivity than a male worker, the female worker will be disadvantaged. This perception is formed by social prejudice or the average work ability of the employer that the employer has hired so far.

Bergmann (1974) pointed out that discrimination can occur because the occupation group in which women are primarily engaged is different from the occupation group in which men are mainly engaged. In the case of women, they experience difficulty in finding jobs with high wage levels due to social prejudice, resulting in occupational segments. In the Korean context, for example, there is a prejudice that men should work in manufacturing jobs with relatively high wages and women should work in simple service jobs with relatively low wages. Because of this prejudice, even if the human capital level is similar, males are mainly employed in manufacturing jobs, and women are employed in simple service jobs. Finally, regardless of personal characteristics, the wage gap between men and women increases.

2. Gender gap in Korea

The wage gap between men and women in Korea is also high in the world. As shown in <Table 1>, in 2014, Korea's gender pay gap ratio is 36.7%, which is the highest among OECD countries. This is 22.7% p higher than the OECD average of 14.03%, which shows the severity of the wage gap between men and women in Korea. The gender wage gap in major OECD countries is very high compared to 17.45% in the US, 17.38% in the UK and 15.35% in Australia. Especially, Estonia (28.3%), which has the highest gender wage gap among the countries except Korea, showed a difference of 8.4% p.

<Table 1> Gender wage gap in OECD countries in 2014

(Unit: %)

Year	Average	Korea	Japan	Canada	Czech	US	UK
2014	14.03	36.65	25.87	19.22	16.25	17.45	17.38
Year	Australia	Mexico	Slovakia	Ireland	Hungary	Norway	New Zealand
2014	15.35	18.3	14.3	15.17	3.77	6.28	6.08

Source: OECD employment database 2015

Specifically, the average wage of men in 2015 is about 2.84 million won, while the average wage of women is 1.78 million won, and the wage gap is over 1 million won (Ministry of Employment and Labor, 2015). This wage gap may be caused by the difference in productivity between men and women, but it can also be caused by male and female occupational segmentation and gender discrimination. Table 2 shows the ratio of male and female workers by job type and the average by job type. Looking at the proportion of men and women employed by occupation, 62.6% of service workers and 50.5% of simple laborers were high occupations. Monthly average wages of these jobs are respectively 1.96 million won and 1.68 million won, which is lower than monthly salary of 6.84 million won, 2.86 million won, and 2.66 million won for managerial, functional, and device machine assembling. In other words, it shows that the occupational segmentation phenomenon may exist in the Korean labor market.

<Table 2> Gender Employment Rate and Monthly Wage by Occupation

(단위: %, 천원)

	Managers	Professionals	Clerks	Service	Sales
Female rate	11.5	39.8	41.9	62.6	48.6
Male rate	88.5	60.2	58.1	37.4	51.4
Monthly wage	6,837	3,546	3,218	1,957	2,490
	Agriculture	Craft	Engineer	Elementary	
Female rate	14.57	11.9	15.7	50.5	
Male rate	85.43	88.1	84.3	49.5	
Monthly wage	2,581	2,855	2,657	1,676	

Source: Ministry of Employment and Labor, Survey on the Actual Conditions of Employment by Employment Type 2015

In addition to these occupational segregation phenomena, women's career disconnection is also likely to increase the gender wage gap (Jung, 2007). As can be seen in Table 3, the number of women with career interruptions since 2011 is 1.9 million in 2011, 1.98 million in 2012, 1.95 million in 2013, 1.98 million in 2014, 1.20 million in 2015, 190 in 2016. Among married women, the percentage of women with career interruptions also reached 20%, indicating that many women experienced career breaks. Many women experience career breaks, which can increase gender wage differentials in the labor market.

<Table 3> Number of women who experience career discontinuity

(Unit: Thousands, %)

	2011	2012	2013	2014	2015	2016
15-54 Married women	9,866	9,747	9,713	9,561	9,420	9,273
Number	1,900	1,978	1,955	1,977	2,053	1,906
Rate	19.3	20.3	20.1	20.7	21.7	20.5

Source: National Statistical Office, Regional Employment Survey

3. Literature reviews

First, the analysis of the factors influencing the gender wage gap revealed that the type of work, the status of female employees, age, years of service and working hours, and the presence of unions have an effect on gender wage discrimination. Specifically, Cho&Cho (2009) tried to examine the wage gap between unions and men and women. Using the 2004 Economically Active Population Survey data, the effects of unions on gender wage differentials show that gender wage differentials in the union sector are reduced compared to the non-union sector. However, when we look at the reduction in the wage gap in detail, 68% of the decrease in the wage gap is due to the productivity difference, and 28% is due to the difference in price due to the observed characteristics existing between the union and non- And 10% is due to price differences that are not observed. In other words, the wage gap between labor unions is only about 10%. Kim(2010) analyzed the wage gap between male and female managers using data from the second wave of Female Manager Panel Survey (2008). According to a female manager panel survey, the average wage of female managers was found to be 90% of that of male managers, and that of male and female managers was similar. In other words, the researcher sees the wage gap of men and women managers not by the difference of human capital but by the horizontal and vertical isolation of the labor market through the size of the business, the proportion of women in the business, and the rank. As a result of wage disaggregation on the wage gap of male and female managers, 37% of the wage gap was due to discrimination. The researcher believes that this value is lower than the total number of workers' discrimination, and that the entry of women into management is likely to reduce discrimination in the labor market.

Shin(2011), in 2007, analyzed the survey data of the economically active population survey, and found that more than 50% of gender wage difference is discrimination. In particular, they found out that the main factor of producing sex-specific wages is me, and pointed out that compensation for years of service and working time is more favorable to women than men. On the other hand, Kim(2013) analyzed the wage gap by gender and working type using the original data of the survey on the actual conditions of employment by type of employment in 2011. As a result, 44.9% of the gender wage gap was discriminated. By type of employment, 47.1% of the gender wage gap was found to be due to discrimination for regular workers, and 55.6% of non-regular workers were discriminated. The authors pointed out that non-regular workers were the most

vulnerable groups, and pointed out that in order to improve their wages, it is necessary to eliminate gender discrimination against pay, as well as to eliminate wage discrimination between regular and non-regular workers. Cho(2015) tried to analyze the gender wage gap for each age group through an additional survey of the August 2013 Economic Census Survey. As a result, the lowest wage gap existed in the 20s in 2013, and the wage gap increased with age. In particular, gender wage gap was the most severe among those in their forties. In terms of human traits, the educational level of men and women in the 20s and 30s is similar, but in the case of those in their 40s and older, the educational gap between men and women is large. It is presumed that it is because it is difficult to get good quality jobs when leaving the market and re-entering the labor market.

The results of the analysis of the factors of the gender wage gap reveal that the existence of the union, the years of service and the working time and the women 's entry into the management are effective to alleviate the gender wage gap and discrimination. On the other hand, the increase in non - regular workers, the age of workers, showed that wage gap and discrimination of men and women increased.

Next, studies examining trends in the gender wage gap have mainly focused on occupations, education levels, and marital status.

Jung(2007) analyzed the wage gap between men and women by marital status and job type from 1985 to 2004 through 「Wage Structure Basic Statistics Survey」 (currently 「Survey on Working Conditions by Employment Type」). Compared to unmarried women, married women were more discriminated by marital status than non - married women, and this difference was due to the unobserved productivity difference due to the burden of childcare. The trend of wage gap shows that the wage gap is decreasing, but the difference due to the difference in productivity is decreased, and the gap due to price difference (discrimination) is not changed much. Kang&Kim(2014) analyzed the wage compensation system and wage gap by classifying the occupations in the labor market of 1999-2011 as male concentration (blue color, white color) and female concentration. As a result, the gender wage gap increased in all occupations. When we look at the ratio of productivity gap (difference due to personal characteristics) and coefficient gap (labor market discrimination) in wage gap, the ratio of productivity gap and coefficient gap is constant in blue collar and female concentration work, The ratio of the gap increases. This can be seen as an increase in the discrimination of men and women in white collar jobs. In addition, we analyzed the determinants of wages. Education and age were the main determinants of wages. In the case of the age coefficient, the coefficient of the women was lower than that of the men, indicating that this is probably caused by a woman's career disconnection.

Im(2010) estimated the size of wage discrimination based on the level of education and occupation from 1998 to 2005 using labor panel data. As a result, the higher the level of education, the lower the proportion of discrimination among the wage gap of men and women, and the wage discrimination by professionals is the least. In addition,

wage discrimination in the service industry is improving. However, when we look at the overall discrimination analysis, the female penalties are not improving, while the male premium increases, indicating that gender discrimination in the labor market may be stabilizing. The wage discrimination in the early 2000s is estimated to be caused by the economic crisis caused by the 1997 national bankruptcy. Keum(2011) also shows that the economic crisis in the late 1990s worsened the wage gap between men and women. Keum(2011) analyzed the factors influencing gender wage gap from 1998 to 2008 using labor panel data. As a result, the wage gap between men and women has remained stagnant despite the expansion of professional and managerial positions in highly educated women. This is because the wage gap between regular and irregular workers has widened due to the IMF, and women's relative wages concentrated on irregular workers have been lowered. The major factors influencing the wage gap were the effects of education and tenure. In addition, the Oaxaca decomposition equation also analyzes wage discrimination, which shows that the proportion of wage gaps due to discrimination has increased since 2005. This suggests that the efforts to improve gender discrimination may be moving away from social concerns and the possibility that indirect discrimination within the company may still be widespread.

Baek(2015) analyzed the influence of the education gap on the wage gap in 1990, 2000, and 2010 on the wage gap based on the data on the actual state of work by employment type. The education and occupation experience were set as independent variables, and the logarithm wage per hour of full - time workers was used as a dependent variable. As a result, discrimination in the labor market accounted for 53.72% of the wage gap in 1990 and decreased to 47.86% in 2000, but increased again to 53.02% in 2010. The authors' wage gap due to differences in educational background, which is the main variable, decreased, but wage gap due to career experience increased. As a result, the influence of academic achievement on wage gap is decreasing as women 's education level increases, while the difficulty of developing career of women due to career disconnection, etc.

According to the analysis of the trend of gender wage gap, the decrease in gender wage gap in Korean society is mainly due to the productivity gap between men and women, and the wage gap due to discrimination did not improve or deteriorate. In many studies, it is presumed that labor market deviation due to maternity, the burden of women due to child-rearing, and career interruption is the cause of discrimination in the labor market. In this way, although the phenomenon of women 's career breaks seems to be an important factor in expanding discrimination against men and women, studies on the wage gap between men and women focusing on the age and the career interruption of women are insufficient. In this study, we try to analyze the wage gap of men and women centering on women 's career breaks.

Ⅲ. Research Methods

1. Data

I use the data of 31 years from 1985 to 2015 of the Survey on Employment Status by Employment Type, Based on survey data of 31 years of employment by type of employment, male and female workers aged 20 to 49 were analyzed.

The Survey on the Actual Conditions of Employment by Employment Type examines the actual condition of workers' working conditions by the characteristics of people and businesses and examines them every year to make use of them as basic data for policies such as measures for protection of irregular workers, to be. The survey covers all industries excluding the public administration, defense and social security administration, household service industry, international and other foreign institutional sectors according to the Korean Standard Industrial Classification. The employment type sector surveyed 32,000 businesses with one or more employees, Is for commercial workers of businesses with five or more commercial workers. In this study, wage structure data will be used. Based on the data of each year 's survey on work situation by employment type, male and female workers aged 20 years or older and 49 years or younger were extracted. In this case, the analysis data by year is shown in <Table 4>.

<Table 4> Observations of Each Year

Year	1985	1986	1987	1988	1989	1990	1991
Obs	496,064	494,790	492,385	492,599	573,305	409,592	389,814
Year	1992	1993	1994	1995	1996	1997	1998
Obs	347,505	374,450	363,326	347,653	360,935	345,041	327,858
Year	1999	2000	2001	2002	2003	2004	2005
Obs	403,830	416,322	420,120	310,147	302,951	293,845	406,364
Year	2006	2007	2008	2009	2010	2011	2012
Obs	403,921	375,386	500,808	487,272	490,203	489,774	494,960
Year	2013	2014	2015				
Obs	492,846	491,365	508,259				

We conducted interviews with 10 women in their forties who returned to the labor market after experiencing a career disconnection based on the first stage quantitative analysis. In the case of 40s, women are the age when they experience career breaks and return to the labor market, most directly experiencing discrimination due to career breaks. The purpose of this study is to analyze the wage gap between men and women due to women 's career disconnection. For this purpose, interviews were conducted with 10 women who returned to the labor market after experiencing a career interruption in Busan A region. Based on the first stage quantitative analysis, semi - structured interview guides were prepared and about 11 minutes interview was conducted for each interviewee.

2. Research Model

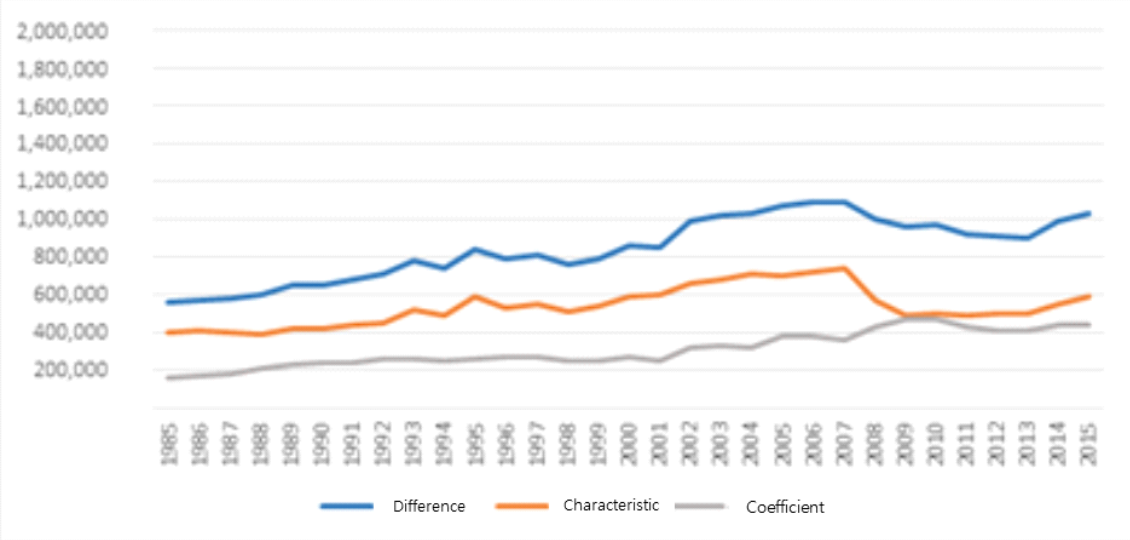
This study was conducted in two stages. First, in the first step analysis, the Oaxaca decomposition methodology was used to decompose the wage gap of men and women into the differences due to individual differences and the differences due to discrimination, and to identify the actual discrimination among wage gaps. In the second step analysis, we conducted the semi-structured interviews for women who had cut off their 40s based on the results of the first stage analysis, and tried to analyze the causes of the discrimination of men and women in the labor market. The reason for interviewing women who have lost their 40s career in the second stage analysis is to focus on discrimination due to career disconnection. In the case of women in their 20s and 30s, it is likely that there will be limitations in explaining discrimination due to career disconnection, since they have not experienced re-entry into the labor market after their career breaks or career breaks. On the other hand, in the case of 40s, experience of labor productivity deteriorated due to career disconnection, and experience of labor market re-entry after career disconnection, it is possible to analyze wage discrimination due to career disconnection in depth.

Ⅳ. Results

1. Trends in gender wage gap

The average wage gap between the ages of 20 and 49 shows a continuous increase in the gross wage gap and the coefficient gap. On the other hand, the gap of characteristics has continuously increased, but since 2007 the gap has decreased so that the gap level has not increased significantly. Since 2007, the gross wage gap has also shown a slight decline, but it appears to be due to a decline in the gender gap, not gaps due to discrimination (coefficient gap). This result is similar to the findings of Kang(2011) that the proportion of discrimination since 2005 is increasing. In addition, as pointed out in Jung(2007), it seems that the decrease in the gender wage gap is not caused by a decrease in gender discrimination but by a decrease in gender gap. The wage gap between the ages of 20 and 49 is summarized in the following <Figure 1>.

<Figure 1> Trend of wage gap between 20 and 49 years old



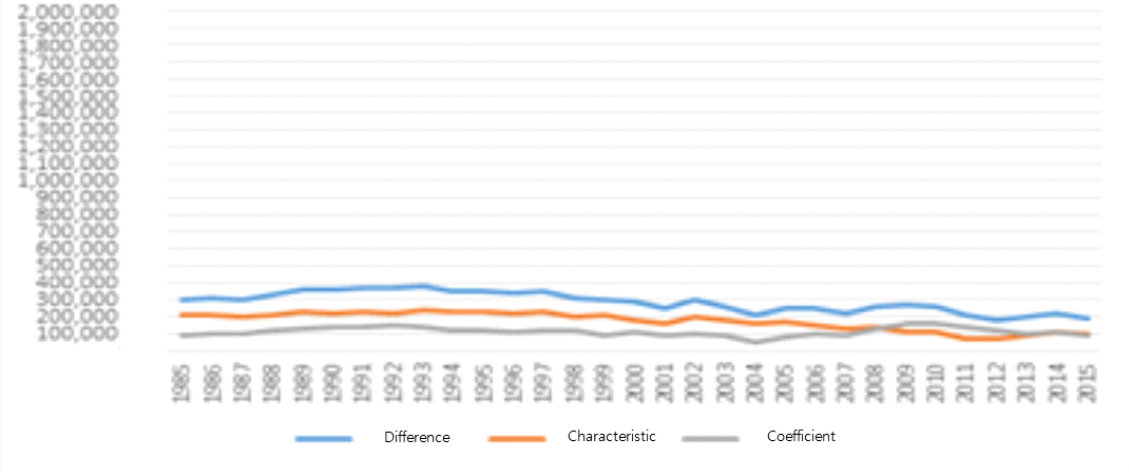
The trend of the wage gap by age group is shown in <Figure 2>, <Figure 3>, and <Figure 4>. Looking at the trend of wage disparity by age group, it is shown that the gender wage gap and the characteristic disparity decreased with time in the twenties, but the coefficient difference (discrimination) did not change much. In the 30s, the gap between the total wage gap and the characteristics decreased from 2015 to 1985. However, unlike in their 20s, the gap rapidly increased in 2002. In the case of the coefficient gap, it has been shown that it repeats the increase and decrease with the passage of time, and the coefficient gap is slightly increased in 2015 compared with 1985. Unlike the 20s and 30s in the 40s, the total wage gap, the characteristic gap, and the coefficient gap continuously increased. Also, the absolute value of the gap is higher than that of the twenties and thirties, and it seems to be the factor that increases the characteristic gap and the coefficient gap between 20 and 49 years old.

As shown in <Figure 1>, gender discrimination appears to have increased sharply in all ages since 2008. According to a study by Im(2010) and Keum(2011), gender discrimination increases in the labor market when a national economic crisis occurs. In 2008, because of the financial crisis caused by the subprime mortgage crisis sex discrimination seems to have increased. This shows that wage differentials between men and women have increased since 2008, while in the 30s and 40s, the gender gap in wages has decreased. According to a study by Kim(2015), companies at the time of the 2008 financial crisis pointed out that as a way to overcome the financial crisis, public enterprises and large corporations carried out tightening management through wage freeze, return, reduction, is. It can be seen that the ratio of male employees to female workers is higher than that of female workers and large corporations have cut wages to overcome the financial crisis, which has reduced the gender wage gap.

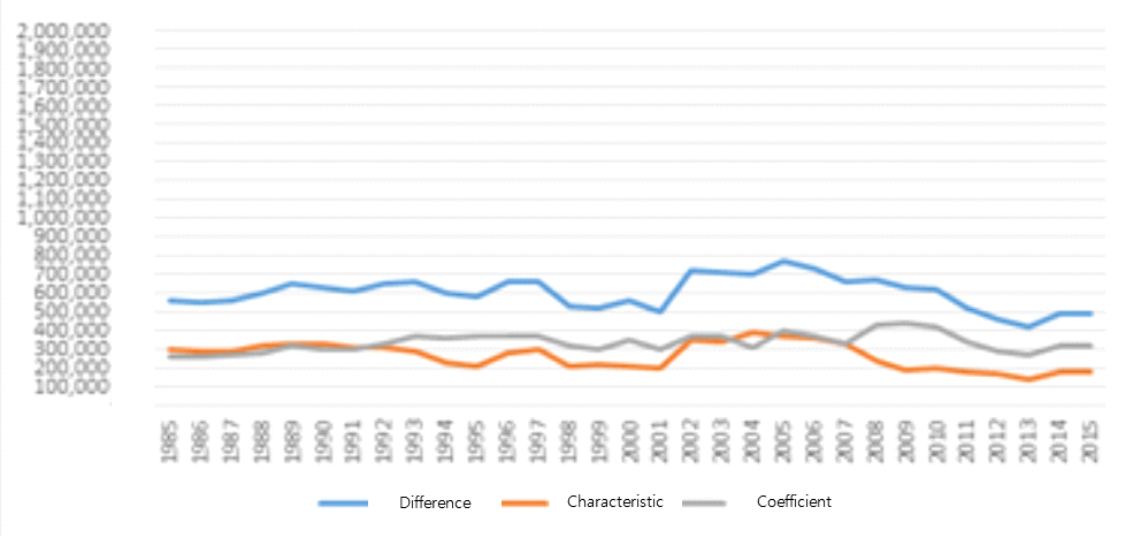
By age group, in the case of 20s and 30s, wage disparity and discrimination were slightly changed due to the national economic situation. However, gender wage gap and

discrimination in general have remained constant over the past 30 years. On the contrary, in the case of the 40s, the wage gap has continuously increased since 1985, but it has slowed down in 2008, but it has increased again after 2010. Specifically, the gross wage gap in 1985 was about 300,000 KRW in the 20s, about 560,000 KRW in the 30s, and about 850,000 KRW in the 40s. However, it can be seen that the gap widened to about 1,900,000 KRW in 20s, about 490,000 KRW in 30s, and about 1,700,000 KRW in 40s in 2015. In other words, the wage differential between men and women in their 20s and 30s decreased slightly compared to 30 years ago, but in the forties, it increased by about 900,000 KRW. As shown in Figure 4, the sharp increase in the wage gap in the forties is remarkable in the period since the 2000s, and the portion of the wage gap that has been caused by discrimination is steadily increasing. The wage gap in the 40s is so large that it can not be explained solely by the accumulation of previous gaps. In the end, the 40s who experienced career disruptions seem to experience unequal discrimination while experiencing differences in the main characteristics of wages, such as years of service, career years, occupations, industry, and size of firms, , And this gap is even worse today than it was 30 years ago. In addition, the gap between men and women in their 40s, which has been remarkable since the 2000s, can be considered in connection with structural changes in the labor market.

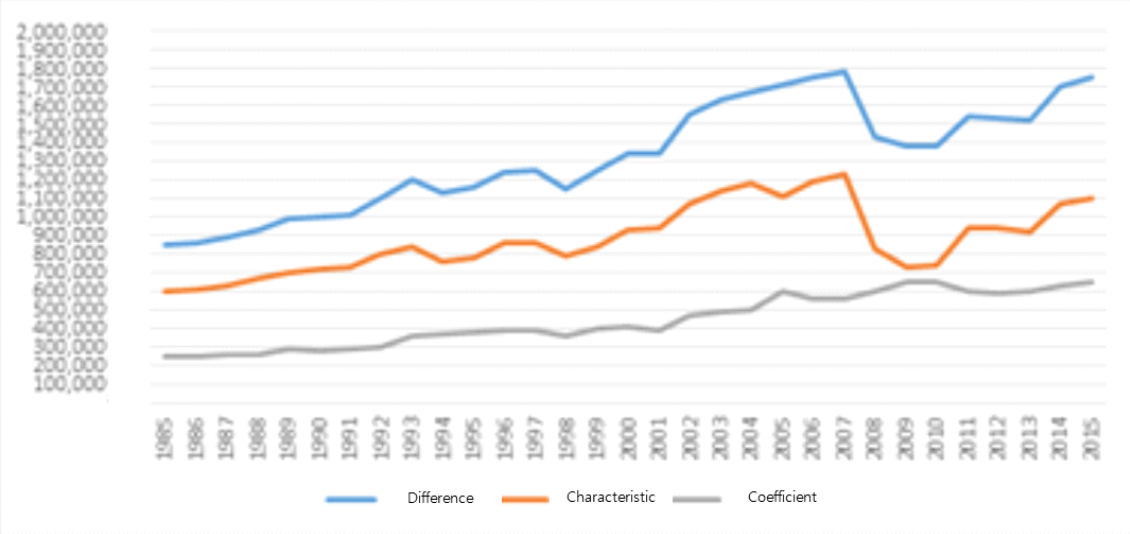
<Figure 2> Wage gap between men and women in their 20s



<Figure 3> Wage gap between men and women in their 30s



<Figure 4> Wage gap between men and women in their 40s



2. Cause diagnosis of wage gap

The high level of wage gap in the forties appears to be caused by an increase in the wage gap between occupational segregation phenomena and occupations as indicated by Bergmann (1974). Looking at the distribution of women in their forties, women are mainly engaged in low-wage jobs, services and elementary workers. Specifically, the ratio of services and simple labor in the forties was 26.73% in 1985, 28.1% in 1995, 29.09% in 2005 and 22.25% in 2015. For men of the same age group, the ratio of workers is lower than that of women, which is 12.04% in 1985, 8.34% in 1995, 5.63% in 2005 and 5.99% in 2015. Table 5 shows the ratio of specific services and simple laborers.

<Table 5> Ratio of service and elementary workers

	20s		30s		40s	
Year	male	female	male	female	male	female
1985	7.12%	2.63%	7.05%	14.62%	12.04%	26.73%
1995	3.79%	6.37%	3.53%	10.94%	8.34%	28.1%
2005	9.78%	8.85%	4.43%	9.42%	5.63%	29.09%
2015	15.02%	9.55%	6.92%	6.97%	5.99%	22.25%

In addition to the low wage occupation bias of these women, wage widening among the occupations seems to have influenced the gender wage gap increase. The monthly average wage change of service workers and elementary workers with high female employees ratio is as follows. First, the average wage of service workers is from 7,400,000 KRW in 1985 to 1,470,000 KRW in 1995, 1,960,000 KRW in 2005, and 1,980,000 KRW in 2015 And the increase in the number of workers. The average wage of service workers and the wage gap of high-income professions and related workers are estimated to be about 730,000 KRW in 1985, about 760,000 KRW in 1995, about 1,414,000 KRW in 2005, and about 1,163,000 KRW in 2015. In other words, the average wage gap between the two types of jobs has been widening since the 2000s. Looking at the wages of simple laborers, the average wage increased by 920,000 KRW, including 760,000 KRW in 1985, 1,250,000 KRW in 1995, KRW 1,450,000 in 2005 and KRW 1,600,000 in 2015. The wage gap between elementary workers and experts and related workers also rose sharply since 2000, when the wage gap in 1985 was about 710,000 KRW, 1995 was about 980,000 KRW, 2005 was about 1,820,000 KRW, and 2015 was about 1,930,000 KRW. The increase in the wage gap between the average wage of workers in the forties and those in simple jobs and those in other jobs seems to have influenced the increase in the wage gap between men and women in their 40s.

<Table 6> Changes in monthly wage by occupations

	1985년	1995년	2005년	2015년
Managers	2,473,000	3,667,000	5,225,000	6,892,000
Professionals and Related Workers	1,471,000	2,233,000	3,362,000	3,614,000
Clerks	1,014,000	1,732,000	2,627,000	3,256,000
Service Workers	741,000	1,478,000	1,958,000	1,980,000
Sales Workers	1,171,000	1,223,000	1,792,000	2,495,000
Skilled Agricultural, Forestry and Fishery Workers	836,000	1,643,000	2,298,000	2,479,000
Craft and Related Trades Workers	546,000	1,621,000	2,442,000	2,905,000
Equipment, Machine Operating and Assembling Workers	847,000	1,650,000	2,351,000	2,677,000
Elementary Workers	764,000	1,253,000	1,546,000	1,682,000

In addition, the increase in non-regular workers can be regarded as the cause of the wage gap. According to the National Statistical Office's Economically Active Population Survey, in 2005, the ratio of non-regular workers to total wage workers in their forties

was 47%. This is 18% p higher than the 29% of non-regular workers compared to the total wage workers in their 40s. In 2010 and 2015, the percentage of non-regular workers for women is also higher than for men. In 2010, 42% of the 40 non-regular workers were 21% higher than the 21% male non-regular workers. In 2015, the proportion of non-regular workers in the 40s was 36% % P higher.

<Table 7> Changes in ratio of non-regular workers

(Unit: Thousands)

		2005			2010			2015		
		workers	non-regular	ratio	workers	non-regular	ratio	workers	non-regular	ratio
male	20s	1,746	560	32%	1,598	470	29%	1,667	534	32%
	30s	2,971	752	25%	3,042	550	18%	2,972	480	16%
	40s	2,233	652	29%	2,661	559	21%	2,852	530	19%
female	20s	2,025	677	33%	1,817	599	33%	1,816	584	32%
	30s	1,545	619	40%	1,714	560	33%	1,832	539	29%
	40s	1,525	712	47%	1,880	794	42%	2,057	748	36%

Source: National Statistical Office, Economically Active Population Survey

Taking this into account, the high level of wage differentials in their 40s is likely to be related to their inclusion in low-wage jobs in their forties, widening wage gap between jobs, and increasing non-regular workers.

3. Cause analysis of wage gap of career discontinuity women

Oaxaca analysis showed that women in their forties experienced the greatest wage differentials and wage discrimination in the labor market. In the case of 20s and 30s, the wage gap between men and women remained constant during the period of 1985 ~ 2015, while the wage gap continued to increase in the forties. In particular, given that women in their forties are experiencing career breaks and are returning to the labor market, such discrimination appears to be closely related to women's career breaks. Therefore, in this section, we interviewed 10 women who returned to the labor market after a career discontinuity in Busan region.

Interviews with women who have returned to the labor market after a career discontinuity show that women who want to return to the labor market are structurally discriminated against in the labor market re-entry. In the interviews, women worked mainly in white-collar jobs before experiencing a career interruption, but they were more likely to enter simple labor and service industries when they returned after a career break. Indeed, some women pointed out that current wages are lower than in the past.

> *"It was the same salary that I received 20 years ago and now I have the same salary... I was so without any thought... The salary I received after college graduation that year was the same as now... I was surprised that it was like 20 years ago." (Interviewee F)*

"At that time, I think I got a 30 ~ 40 million won. When I think about the price, I guess 20 years ago (salary) is not much different. "(Interviewee H)
"I was a nurse, and how much did I get then? Was it a 150? I think so. Then I worked for three years... but I can not remember how much I got last. It is not much different now. But 15 years ago, there will be a difference between now and the price... "(interviewee I)

The phenomenon that women are reemployed as unskilled or simple laborers seems to be due to the occupational segment of the labor market for women with career discontinuity.

First of all, looking at the aspect of occupational segmentation in the labor market for career discontinuity, it is found that women who have career discontinuity have difficulty in finding a job other than non-skilled simple laborer at the time of job search. This phenomenon appeared to be caused by age limitations and lack of demand in the labor market. Interview respondents were concerned that employers were reluctant to hire a career-cut woman because they thought the age of the job-seeker was important and that older women have a poor relationship with their peers. In addition, from the perspective of employers, there were many young workers who could replace women with career discontinuity, so that the choice of career was narrowed.

"I have an age limit for the office. He saved a little young woman. Up to 30s. So moms have a cut line for me to have a real comfortable job, and I have nothing to take with me. So I go to that restaurant with a cafeteria or a nursing home qualification, and the mothers are getting older in the office. Nowadays, the restaurant also cuts only in the early 40s and does not accept older ones. "(Interviewee E)
"There is a lot of young people smart people nowadays, so the owners and the bosses use younger people than our aunt." (Interviewee G)

In addition, the labor market seemed to lack of demand. Even if a career discontinuity woman tries to get a job, it seems that there are few jobs available except for low-paid jobs and low-wage jobs. Most of the interviewees answered that they had lower wages than their wages. The interviewees were asked to find jobs at the minimum wage level, and they said that they had no jobs to choose.

"I get a monthly salary. Minimum wage. But I've been doing it for about four years. So I get a bit more time than others. "(Interviewer D)
"When I work at school ... Besides the helpers, there are too few salaries in the school for meals, and there are too small wage per hour," (interviewee E)

There seemed to be a problem of lack of information on job search. Career discontinuity women returning to the labor market were found to be seeking jobs through the introduction of acquaintances rather than employment centers or the Internet. Most interviewees responded that they got a job at the current job through the introduction of their acquaintances. Job search through these acquaintances seems to be

consistent with Jang(2009)'s study. In this way, women who are severely disabled are likely to find employment in high-quality jobs if they do not have a high-quality social network because they often work through referrals.

"My acquaintance was in charge of the Center. So I can get a job. "(Interviewer D)
"I know a lot through my acquaintance." (Interviewee E)
"Through acquaintance. But what I got through my acquaintance was that because I was preparing first, that's what happened"(Interviewer I)

In addition to these factors, women 's career choices are limited by family or personal factors. In the case of women with career discontinuity, it is found that they have a burden of housework even when they return to the labor market. Due to the burden of housework and nursing, they were trying to seek jobs that would not affect housework and nursing at the time of job hunting

"Unlike the past, there are children and there is something to be regulated, I think it was hard to get any way." (Interviewee A)
"When I first started working, I thought that I have to consider my children's school time." (Interviewee B)
"I do not want to go back to the hospital because I have children behind me at home" (Interviewee I)

Except constraints caused by such housework and childcare, it has been shown that low-wage labor workers are selected due to a decrease in confidence in labor due to long-term career discontinuity and a decrease in human capital. In particular, the decline in human capital has been pointed out as a major factor in increasing wage discrimination in previous researches on wage discrimination(Jung, 2007; Kang&Kim, 2014; Baek, 2015).

"I've been talking about what I can do because I'm at home and I want to get a job, but I do not have the courage, so I was a lot worried about what to do." (Interviewee A)
"I have to go to the hospital and work three shifts, and I'm in my 40s and I have three shifts. It's been 15 years since my career has been cut off, so now that I go to the hospital and do three shifts, it's hard for me to be healthy and I do not think I will be able to adapt myself, so I have not chosen it."(Interviewee I)

In addition to the structural discrimination experienced at the entry stage of the labor market, discrimination in the workplace also appeared to exist. However, wage differentials experienced by women seem to arise from differences in regular / non-regular workers. The wage gap mentioned by the interviewers was mainly due to the difference between full - time and contract workers.

"I do not have a lot of benefits and bonuses because I'm a temporary contract worker, I was

so different from the school administration office." (Interviewee E)
"There is a lot of difference in salary. All men are full-time employees. We are contract workers, so there is a lot of difference in salary. The pay gap is three times, four times, five times so different. "(Interviewer F)

For some respondents, male workers who were in similar positions answered that they were at similar wage levels. In interviewer I, there was almost no difference from male employees, and wage differences were due to army differences. Interviewer J answered that the wages were the same for male workers in the same office.

The wage gap experienced in the workplace seems to be caused not by pure gender wage discrimination, but by the difference of regular / contract workers. These results seem to be due to the fact that 40s women are employed in irregular jobs with relatively low wage levels compared to men of the same age group. In the case of Keum(2011), the increase in wage premiums for regular workers is also pointed out as a major factor in stiffening the gender wage gap.

Looking at the results of interviews with women who have returned to the labor market, it is shown that women with career discontinuity experience structural discrimination in the labor market. When women return to the labor market after a career discontinuity, they experience age constraints, lack of information, and lack of jobs. In addition, women seem to be engaged in low-wage, unskilled labor due to the burden of women's household and childcare, low confidence due to career discontinuity, and a decrease in human capital. As a result of looking at discrimination in the workplace, it appears that there is a wage gap with male workers in the workplace. However, this wage gap seemed to be caused by the difference in the type of work, ie, full-time / contract, not pure discrimination. The interviewer's wage gap appeared to be mainly due to differences in working styles, and men who had similar forms of work reported similar wage levels.

Ⅴ. Conclusion

This study starts with the awareness that women 's career discontinuity is important factor for the high level of gender wage gap in Korea and that the level of discrimination experienced by women who return to the labor market after the career discontinuity will be high. Based on this, we tried to analyze the trend of wage gap of each age group by dividing male and female workers into 20 groups before experiencing career disconnection, 30 groups experiencing career disconnection, and 40 returning to labor market after career disconnection. In addition, based on the results of this analysis, we tried to verify the cause of wage gap by age group.

The implications of this study are as follows. First, trend analysis of gender wage gap shows that the trend of wage gap is different for each age group. In the forties,

gender wage gap is bigger than other ages. In their 40s, women are experiencing breaks in their careers due to marriage, childbirth, and childcare, and are in a period of returning to the labor market. In other words, women in their 40s experience various types of pay discrimination and restrictions in the process of experiencing a career break and returning to the labor market.

Second, women seem to be experiencing legal discrimination in the labor market. The interviewees' formal occupations were found that occupations classified as office workers such as accounting, hotel clerks, and designers. However, after the re-employment, it was found that the women mainly seek jobs classified as simple laborers such as restaurant, vegetable packing, county cctv control, cleaning companies. Also, all of the interviewees answered that they were reemployed as non-regular workers (contract workers). Most of the men who work at the same job are full-time, whereas the interviewees are re-employed by contract. Interviewees said that regular employees earn more wage than non-regular workers, and welfare level is higher. The difference between regular and non-regular workers seems to be a factor that increases the gender wage gap. In particular, wage differences due to regular/non-regular workers increase the wage gap in the same occupation and increase the gap caused by discrimination. In this way, the high wage gap in the forties can be explained through the bias toward low-wage jobs and the non-regularization. In interviews, interviewees responded that career choices were narrow due to age restrictions, lack of jobs, and lack of information. Especially, from the viewpoint of employers, there were many young workers who could replace women who had career discontinuity. Therefore, there was no reason to hire women with career interruptions. In this way, women with career discontinuity were found to be engaged in low-wage simple labor due to structural discrimination in the labor market, which appears to be the main reason for the high gender wage gap in their forties. In particular, such discrimination can be viewed as a legal discrimination

Based on the results of this study, the following policy suggestions are made. First, there is a need to alleviate the structural discrimination experienced by women with career interruptions in the labor market re-entry. According to Bergmann (1974) 's theory of occupational segmentation, the labor market has prejudices about occupations in which men are primarily engaged, and occupations in which women are primarily engaged. Because of this prejudice, women are mainly engaged in occupations with low wage levels. According to semi-structured interviews, employers have prejudices about the age of women, and this prejudice shows that women with career interruptions are mainly engaged in jobs with low wage levels. The proportion of non-regular workers of female is higher than that of men of the same age in 40s. The ratio of non - regular workers seems to be one of factors that increase the wage gap between men and women. In the analysis of gender wage gap by age group, the gender gap in the 40s was also significant due to variables such as occupation, industry, and size of firms. This indicates that even in the semi-structured interviews, Regardless of whether they are reemployed or not. In order to alleviate the discrimination and wage gap experienced

by women with career interruption, it is necessary to alleviate the structural discrimination between irregular and regular workers in the labor market, while structural reform of the labor market where women with career- It is considered necessary.

Second, it seems necessary to strengthen the vocational training of women. In the case of women in their 40s, they are mostly included in the service sector or simple labor. These two occupations have lower wages than other occupations, and the difference in the distribution of occupations seems to be the factor that increases the wage gap between men and women. Considering this, it seems that vocational training will be needed so that women can be transferred to other occupations other than these low-skilled occupations. This study suggests that tailored training is needed to improve the effectiveness of training programs for women with career interruptions in order to meet the demands of the local labor market and to enhance the professionalism of women (Hwang et al, 2005 Kim, 2006). In addition, in the process of training, it was found that women could increase the learning effect by setting up a job plan themselves, and training and training accordingly (Jang&Ahn, 2007; Lee, 2013). Taking these results into consideration, it will be necessary to establish various customized curricula by grasping the desire for women's labor and the demand for labor demand in the region. Considering that most of the women who have lost their career have lost their professional skills, training on qualifications and job skills that can lead to continuous career development is needed.

Third, it seems necessary to strengthen women's employment network. According to the semi-structured interview results, the women who had been disconnected from the career were found to succeed through job seeking mainly through acquaintances. Especially in the case of the first job to return to the labor market, the utilization of such an acquaintance network is high. In the study of Jang(2008), Women found the first job when returning labor market after the career discontinuity mainly use their social network. However, if women seek employment through a personal network, they will have a negative impact on the quality of employment(Campbell, 1988; Moore, 1990). Jang et al(2010) pointed out that personal networks have shown a decline in the quality of employment, and institutional networks have shown a positive impact on employment. Taking this into consideration, it is necessary to establish an effective institutional network to improve the quality of employment for women. To this end, it is necessary to establish a positive relationship with major businesses in the region. This network will help women to improve the quality of their employment by providing them with education and training programs tailored to their business needs and providing them with quality female workers. Also, if you first invite successful women to an educational institution and share work experience after re-employment and difficulties experienced in the workplace, it will have a positive impact on women's employment and job adaptation.

Fourth, women's burden of nurturing seems to be reduced. In the case of women

with career discontinuity, they were asked to find jobs by considering their child's school time and meal times during the re-employment. As a result, women's options were limited to short-time, contracted jobs. In fact, some of the interviewees responded that although they had to choose a limited number of jobs because their children were young at the time of re-entry into the labor market, they were successful in finding jobs with higher wages compared to the past, In this way, the burden of care for children is not only preventing the re-entry of the labor market, but also restricting the choice of women to work, thus negatively affecting the pay discrimination of men and women. Choi(2011) pointed out that it has been shown that childcare subsidies for children do not positively affect women's entry into the labor market. On the other hand, according to a study by Choi(2013), it was shown that a large number of national daycare centers in the region had positive effects on women's decision to participate in the labor market with preschool children. However, the total number of day care centers did not seem to have a significant effect, suggesting that a children's home providing quality childcare services is needed. Taking these studies into account, it seems likely that in order to alleviate the burden of women's care, there is a need for childcare facilities that can trust and leave their children during women's working hours rather than just financial support. If the expansion of childcare facilities can alleviate the burden of care for women, it will be possible to increase the options in the labor market for women who are career-careers, thereby contributing to gender wage discrimination.

In this study, the trend of gender wage gap between Korea and Korea was analyzed through Oaxaca wage decomposition method and semi - structured interview. As we have seen, this study has the following limitations despite its important policy implications. First, there are limitations in the subject of study. As the semi - structured interviews were conducted on women who had been disconnected from a certain area, they have limitations in the spatial range of the sample. In order to identify the causes of discrimination experienced by women returning to the labor market after a career disruption, it is necessary to collect specimens from national units and analyze the experiences of more diverse specimens. Second, there are limitations in the content of the study. In controlling industries and occupations, no detailed classification was used. There are wage disparities in the same major category of industries or occupations depending on the sub-category and sub-category. However, due to the limitations of the secondary data, the industry and occupation were not analyzed in small class units. In order to obtain more accurate wage differentials in the future, it is necessary to analyze the occupation and industries by subdivision.

References

Arrow, K. J. (1971). Some models of racial discrimination in the labor market (No. RM-6253-RC). RAND CORP SANTA MONICA CA.

Baek Sung Jun. (2015). The influence of education on gender wage gap (1990-2010). Educational Finance and Economics, 24, 139-162.

Becker, G. S. (2010). The economics of discrimination. University of Chicago press.

Bergmann, B. R. (1974). Occupational segregation, wages and profits when employers discriminate by race or sex. Eastern Economic Journal, 1(2), 103-110.

Campbell, K. E.(1988). Gender Difference in Job- Related Networks. Work and Occupations, 15(2), 179-200.

Cho Dong-hoon & Jo Joon-mo. (2009). A Study on Gender Wage Gap in Trade Unions. Korea Economic Research, 24, 83-108.

Cho Dong Hun. (2015). A Study on the Gender Wage Gap by Generation. Industrial Relations Studies. 25. 1-25.

Choi Sung Eun. (2011). A Study on the Support of Childcare Fees and the Labor Supply of Married Women. Social Security Research, 27 (2), 85-105.

Choi Hyo Mi. (2013). Married Women 's Participation in Labor Market and Determinants of Working Time: Focused on the Nursery and Kindergarten Proximity. Child Rearing Policy Institute. 21-46.

Im Jung Joon. (2010). An empirical analysis of wage discrimination based on the educational level and occupation of women. Korean Women's Studies, 26 (4), 39-61.

Jang Ji Hyun, Kim Min Young & Jang Won Sub. (2010). The Effects of Job Search Routes on Successful Labor Market Re-entry for Women with Career Breaks. Women's Studies, 78, 31-76.

Jang Seo Young. (2008). A Qualitative Study on the Labor Market Reentry Process of Highly Educated Careerless Women. Women's Studies, 74, 79-104.

Jung Jin Hwa. (2007). Gender wage gap in Korean labor market - Comparison of marital status and occupational characteristics. Labor Economics Review, 30 (2), 33-60.

Kang Ju-yeon&Kim Ki-seung. (2014). Distribution of Female Workers and Gender Wage Gap by Job Type. Labor Economics Review, 37 (4), 113-141.

Keum Jae Ho. (2011). A Study on the Phenomenon and Causes of Gender Wage Gap. International Economic Studies. 17 (3). 161-184.

Kim In Sun. (2006). A Study on the Utilization of Human Resources for Highly Educated Women. Gyeonggi Development Institute.

Kim Ji Kyoung. (2002). An analysis of married women 's career breaks and return to labor market after giving birth. Doctoral thesis. Chung-ang University.

Kim Ji Kyoung. (2004). Determinants of Employment Continuity after Childbirth of Young Married Women. Journal of the Korean Home Economics Association, 42

(3), 91-104.
Kim Joon. (2015). The Financial Crisis and the Global Financial Crisis: Focusing on the Influence on the Korean Labor Market. Order Economy Journal, 18 (3), 65-88.
Kim Nan Ju. (2016). Analysis of retirement after retirement and retirement after retirement. Industrial Relations Research, 26 (2), 1-27.
Kim Tae Hong. (2013). Wage Gap by Gender Employment Status and Factor Analysis. Women's Studies, 31-61.
Kim Young Ok. (2002). The dynamic labor supply of women: focusing on the continuity of employment and the first form of labor market exit. Korea Demography, 25 (2), 5-40.
Kim Young-Ok. (2010). Analysis of wage gap between men and women managers. Women's Economic Studies, 7 (2), 1-24.
Koo, Myung Sook&Hong, Sang Uk. (2005). A case study on the reemployment structure of married women. Journal of Korean Home Economics Association, 23 (3), 153-167.
Kwon, Hye Ja. (2005). Wage Effect of Occupational Separation by Sex and Employment Type. Labor society. 97 volumes. 103-113
Min Hyung Ju. (2008). Two ways of female employment. Economy and society. 223-255.
Ministry of Employment and Labor. (2015). Survey on the Actual Conditions of Employment by Employment Type. Employment statistics
Ministry of Employment and Labor. (2012). Women and Work. Ministry of Employment and Labor
Moore, G. (1990). Structural determinants of men's and women's personal networks. American Sociological Review, 55(5), 726-735.
Oaxaca, R. (1973). Male-female wage differentials in urban labor markets. International economic review, 693-709.
Oaxaca, R. L., & Ransom, M. R. (1994). On discrimination and the decomposition of wage differentials. Journal of econometrics, 61(1), 5-21.
OECD. (2014). employment database.
Phelps, E. S. (1972). The statistical theory of racism and sexism. The american economic review, 62(4), 659-661.
Shin Kwang-young. (2011). Gender wage gap in Korea. Korean Sociology, 45 (4), 97-127.