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Female Employment and Fertility Change in South Korea

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Abstract

A large amount of literature has addressed the relationship between women's employment and fertility in the Western context. We have less relevant knowledge about the context of East Asia. This thesis addresses this situation by providing insight into how women's employment is interrelated with their fertility in South Korea. I investigate women's life-course transitions to motherhood, labor force return after childbearing, and second childbearing, respectively. Data used for my analyses come from the Korea Labor and Income Panel Study (KLIPS).

My studies show that the traditional practice of leaving the labor market at an early stage of family life has gradually been replaced by a pattern of staying at work until and during pregnancy. Among wage earners, women with stable employment positions are more likely than others to become a mother. Further, women with a good labor market standing are more likely to return to the labor force immediately after childbirth without any career interruption. Still, a considerable number of women shift to homemaking after childbirth. The outbreak of the Asian financial crisis in 1997 pushed mothers to hold tighter to the labor market than before. Labor force participation after first birth depresses women's likelihood of having a second child.

These studies suggest that a good labor market standing facilitates both motherhood entry and job continuity after childbirth in South Korea. However, the considerable number of women that shift to homemaking during motherhood and the depressed second birth rates of mothers in the labor force reveal that Korean women still face hardships when trying to combine work and family responsibilities.

Sammanfattning

Tidigare forskning om kvinnligt förvärvsarbete och barnafödande har främst baserat sig på förhållanden i olika västliga länder. Det finns betydligt mindre forskning om sådana samband i Östasien. Den nu presenterade avhandlingen bidrar därför med värdefull kunskap om sambanden mellan kvinnligt förvärvsarbete och barnafödande i Sydkorea. Den bidrar med studier om livscykel förlopp relaterade till att bli förälder, återinträda på arbetsmarknaden efter en första nedkomst och att få ytterligare ett barn. Data för analyserna kommer från Korea Labor and Income Panel Study (KLIPS).

Studierna visar att tidigare praxis bland kvinnor att lämna arbetsmarknaden redan i ett tidigt skede av familjebildningen gradvis ersatts av ett mönster där de stannar kvar i arbetskraften fram till att de fått sitt första barn. Bland förvärsarbetande kvinnor gäller att de med stabila anställningsförhållanden har en större benägenhet att skaffa ett första barn. Kvinnor med en stark position på arbetsmarknaden är dessutom mer benägna att fortsätta sin förvävsaktivitet i samband med att de blir föräldrar. Trots detta lämnar en stor andel kvinnor arbetsmarknaden i samband med att de skaffar barn. 1997 års asiatiska finanskris motiverade dock många kvinnor att behålla sin anknytning till arbetsmarknaden. En sista delstudie i avhandlingen visar att mödrars förvävsarbete minskar benägenheten att skaffa ett ytterligare barn.

Avhandlingen påvisar att en stark ställning på arbetsmarknaden underlättar för kvinnor att både bli förälder och att behålla sin anknytning till arbetslivet efter att de fått sitt första barn. Trots detta visar det stora antal hemmafruar bland mödrar och den låga andrabarnsfruktsamheten bland förvävsarbetande kvinnor att det i Korea fortfarande är svårt för kvinnor att kombinera familjeliv med förvävsarbete.

List of studies

1. Ma, Li (2013). Employment and motherhood entry in South Korea, 1978-2006. *Population - E*, 68(3): 419-446.

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2. Ma, Li (2013). Economic crisis and women's labor force return after childbirth: Evidence from South Korea. *Stockholm Research Reports in Demography* 2013:11.
3. Ma, Li (2014). Labor force participation, family policy change and second birth rates in South Korea. *Stockholm Research Reports in Demography* 2014:10.

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Introduction

Over the past few decades, many countries in the Pacific Asia region have experienced remarkable socio-economic, institutional, and demographic change. South Korea (or Korea) stands out for its fast-speed economic growth. During this period, it has developed into a prominent industrialized society and became a member of OECD in 1996. The large-scale education expansion has led to an increase in tertiary education attainment. Women's educational performance is slightly higher than that of men. Meanwhile, female labor force participation has been increasing slowly but steadily. One other notable feature of modern Korean society is its dramatic fertility decline since the 1960s. Korea's Total Fertility Rates (TFR) was at the 6-child level in the early 1960s. It dropped to below the replacement level in the early 1980s. When it reached a low of 1.3 in 2001, Korea's "lowest-low fertility" era began.

Previous studies have demonstrated that the family planning program initiated in the early 1960s was a main driving force behind Korea's fertility decline (Choe and Retherford 2009). Further, the prolonged education and the related delayed labor force participation of women and men postpone the timing of both marriage and childbearing, which in turn affects the fertility level (Jones 2007, Kye 2008, Choe and Retherford 2009). But once married, highly educated women are more likely to enter parenthood (Kye 2008). In addition, the high cost of educating children in Korea depresses couples' desire for a big family size (Anderson and Kohler 2013).

Though a large amount of research has addressed the link between women's employment and family dynamics in the Western context such as the US and Europe, little literature is available on how women's economic activity is interrelated with their childbearing in Korea. This poses questions as whether women's employment engagement enhances or depresses their first-time or higher order childbearing, whether women are likely to return to the labor force after childbirth, and how their career opportunity appears upon return. This thesis will address these questions in three individual studies, which explore women's life-course transitions to motherhood, labor force return after childbirth, and second birth, respectively. The association between employment and fertility is the pivotal focus. Data used for analyses are from the Korea Labor and Income Panel Study (KLIPS waves 1 to 10).

In study 1, I explore the link between women's employment and motherhood entry in Korea. I demonstrate how the trend of first births evolves over time and how women's job characteristics, together with other factors may

help shape the trend. The role of family policies in women's entry into motherhood is discussed.

In study 2, I examine women's labor force return after childbirth, and how the outbreak of the Asian financial crisis affected return patterns and women's career prospects. Further, women's own human capital accumulation, husband's earning potential, and the role of the job-protected maternity leave are considered.

In study 3, I investigate how women's labor force participation before and after the first birth is linked to second birth rates in Korea. Furthermore, I test how the changes of Korea's family planning program, among other factors may have contributed to the development of this relationship.

In this introduction, I will first introduce the theoretical framework for my studies. Then, I will give a brief account of the socio-economic context of Korea. This is followed by a description of the data used for the analyses. Lastly, I provide a brief summary of findings from the three empirical studies.

Theoretical framework

Employment, childbearing and employment resumption after childbirth are important transition stages along a woman's life course in contemporary societies. These transitions are important topics in social science research. Many studies have shown that women's economic and fertility behaviors are influenced not only by their own or family characteristics, but also by the societal, institutional, and economic context.

Across Europe, a pattern emerges where decisions to have a child depend on whether a birth can be reconciled with employment (Thévenon 2009). If social policies are sufficient enough to ease the conflict between work and family responsibilities, positive employment and fertility relationships often appear (Brewster and Rindfuss 2000). For example, in the Nordic countries where the welfare policies aim at strengthening women's labor force participation and promoting gender and social equality, the compatibility level between female employment and parenthood is high. Both female employment rates and fertility levels are relatively high (i.e., Andersson 2008). However, in countries that encourage a traditional gender division of work and care, less policy support is given to facilitate women's work and family life (Matysiak and Vignoli 2008). If the level of support for children and family is low, individuals will feel insecure. They may choose to delay family formation and have fewer children (McDonald 2006). When women are forced to make a choice between employment and family, there will be both too few babies and low female employment (OECD 2007).

Factors at the individual level, such as women's own labor market characteristics are closely linked to fertility. Its role varies by context. In Holland, employed women tend to schedule children later in life (Kalwij 2000). In the Nordic countries, where the welfare benefits are closely linked to accumulated employment experience, women are more likely to establish themselves on the labor market before considering childbirth (Andersson 2008, Lundström and Andersson 2012). In both France and Germany, women with well-established careers or with stable employment positions are more likely to become a mother than those who work on a temporary basis (Regnier-Loilier and Vignoli 2011, Schmitt 2012). In Italy, however, non-working women are more likely to become a mother than those employed (Santarelli 2011). The association between women's employment and continued childbearing also differs from country to country. Housewives exceeded working mothers in the transition to higher order births in Sweden during the 1960s-1970s (Hoem and Hoem 1989). However, today, it is "power couples" –

where both partners are highly educated and hold high occupational status that are more likely to proceed to second births (Dribe and Stanfors 2010). In Holland and Austria, homemakers have higher likelihood than employed women to proceed to second or third births (Kalwij 2000, Hoem et al. 2001). Similarly, housewives in Southern European countries are more likely to continue childbearing than mothers in the labor force (Baizán 2007). However, the role of the job features of mothers' employment in continued childbearing is not very clear (Wright et al. 1988, Kravdal 1992).

With regard to women's post-birth labor force resumption, previous studies have congruously shown that the job-protected maternity or parental leave enhances women's job continuity after childbirth (e.g. Rønsen and Sundström 2002, Baker and Milligan 2008, Baxter 2008). Usually, women consider possible benefits before deciding whether to return to work at a certain point of time (Berger and Waldfogel 2004). Women's employment rates are often lowest during the first year of their child's life. Still, some women make their way back to the workforce during this early period (Baxter 2008). Women's own human capital accumulation and household financial needs are important indicators for women's transition to work after childbirth. For example, well-educated women have higher probability of return in many countries, such as West Germany, Britain, and Australia (Gustafsson et al. 1996, Smeaton 2006, Baxter 2008). Women with well-established careers such as high-income earners or permanent job holders have also higher probability of return to work than others and they return sooner rather than later (Gustafsson et al. 1996, Smeaton 2006, Baxter 2008). Women in greater financial needs are also found to make a quick return (Klerman and Leibowitz 1994, Smeaton 2006). In the context of East Asia, it has been found that married women in Japan with high educational level are both more likely to remain in and less likely to reenter the labor force relative to others (Raymo and Lim 2010). For women who return to the labor force after childbearing, the probability of being recruited as a full-time employee is much smaller than that of becoming a part-time or temporary employee (Yu 2002).

It is argued that individuals tend to calculate the possible costs and benefits of an action before deciding what to do. In anticipation of the outcomes of alternatives, they make the choice that is likely to give them the greatest satisfaction (Heath 1976, Scott 2000, Biggart and Beamish 2003). When foreseeing the possible opportunity cost of leaving the labor market for childbearing and childrearing, well-educated and skilled women may opt for spending more time in the labor market before entering parenthood so that they can collect sufficient economic resources and human capital for a decent life after childbirth. These women may also have a higher intensity to resume employment after childbirth. Further, their greater economic resources can help them better combine work and family life, which may make them more likely to have additional children.

Apart from individual level characteristics, factors at the institutional level may affect women's life-course transitions in different ways. Availability of childcare services, eligibility for paid job-protected maternity or parental leave, and flexible working hours (the three policy directives recommended by OECD), facilitate women's combination of work and family life and may enhance women's entry into motherhood, transition to higher order births, as well as job continuity after childbirth. A shortage of these policy supports may lead to a depression in all these transitions. Other macro-level factors such as economic swings also play important roles in these transitions. Some women may refrain from having a child during economic recession; others might see the period as an opportunity for becoming a parent to reduce overall perceived uncertainty (Macunovich 1996). In the face of economic upheavals when the family breadwinner experiences unemployment risks, women staying at home may contribute to the family economy either by seeking paid work or by pursuing a more labor-intensive domestic activity than before (Elder 1974, Goldin 1981, Moen et al. 1983, Tilly and Scott 1978).

In summary, motherhood entry, continued childbearing and labor market return after childbirth are important inter-related transition phases of women's life. Studies on these transitions have been documented in the literature. However, most focus on Western societies. We have relatively less relevant knowledge about the context of East Asia. This thesis reduces this gap by presenting the evidence of South Korea.

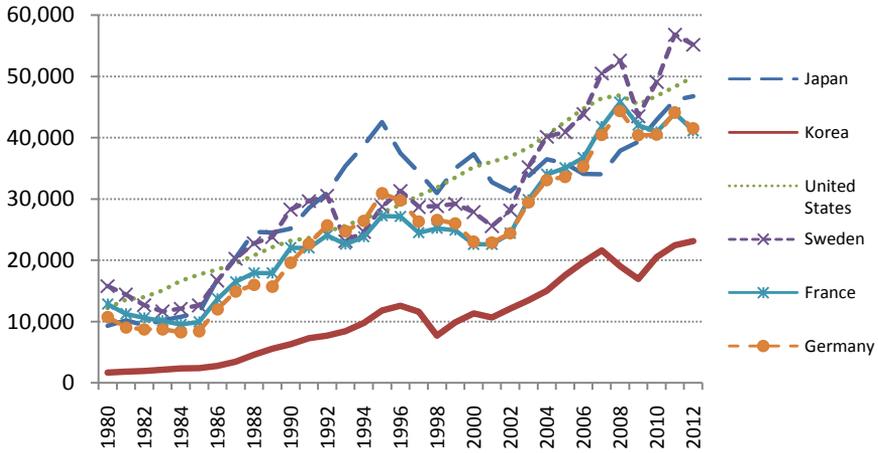
Socio-economic and institutional context of South Korea

Economic development and welfare regime

From the 1980s to the late-1990s, Korea enjoyed miraculous economic growth. Figure 1 presents the development of the gross domestic product (GDP) per capita of Korea in comparison with that of several other selected OECD countries. Korea's GDP per capita is lower than that of other countries. During the 1980s and most of the 1990s it increased steadily. However, this development was interrupted in 1997 by the outbreak of the Asian financial crisis. The labor market was then restructured. Unemployment rates increased. The number of regular employment positions decreased; instead, the number of workers hired on non-regular basis increased (Koo 2007). Only after 2002 did the country's economy recover.

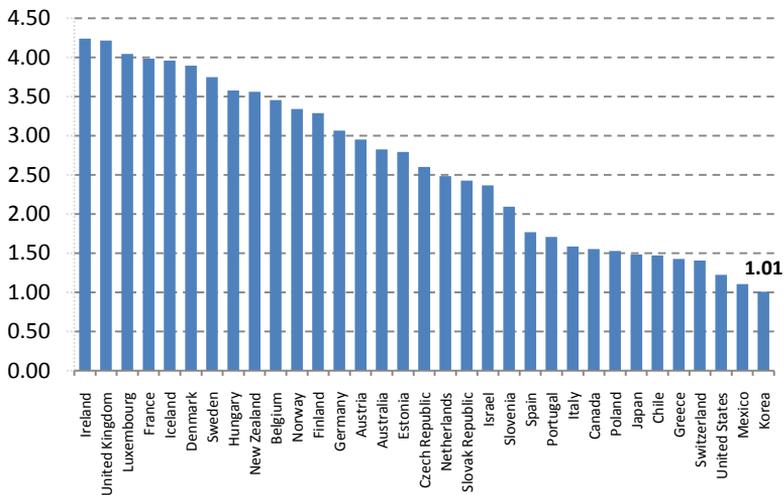
The increase in GDP per capita reveals little about the welfare benefits that Korean families enjoy. As of 2009, Korea was ranked the lowest among the OECD countries for their public spending on family benefits (Figure 2). This is in line with the welfare state orientation of Korea and other East Asian countries. Kwon (2005:479) defines the welfare system of the East Asian countries as “developmental” and “selective”. The main idea is to discourage people from dependence on the state. Under such a regime, individuals mainly depend on families or own savings for their safety. However, benefits are provided to those working in productive sectors that facilitate economic development. Wage earners in large-scale businesses and public sector employees are the priority groups covered by these welfare policies (Kwon 1997).

Figure 1: Gross domestic product (GDP) per capita of Korea, in comparison to that of other selected OECD countries, in USD



Source: IMF 2013

Figure 2: Public spending on family benefits in Korea, in comparison with other selected OECD countries, in percent of GDP, 2009.



Source: OECD 2012a

Women's education and employment

Influenced by the principles of Confucianism, East Asian societies commonly consider that education is the route to social status and material success (Starr 2012). Education enjoys high status in the Confucian heritage cultures. At the institutional level, Korea recognizes that education is the major driver of economic growth, international competitiveness and individual advancement (OECD 2009a). At the micro level, high education is a necessity for individuals to attain a well-paid and secure job (Seth 2002). Educational zeal among Korean parents is well known (Koo 2007). It is reflected in parents' time investment in children's education, in pressure on children to succeed at school and in the priority that education receives in family expenditure (Starr 2012).

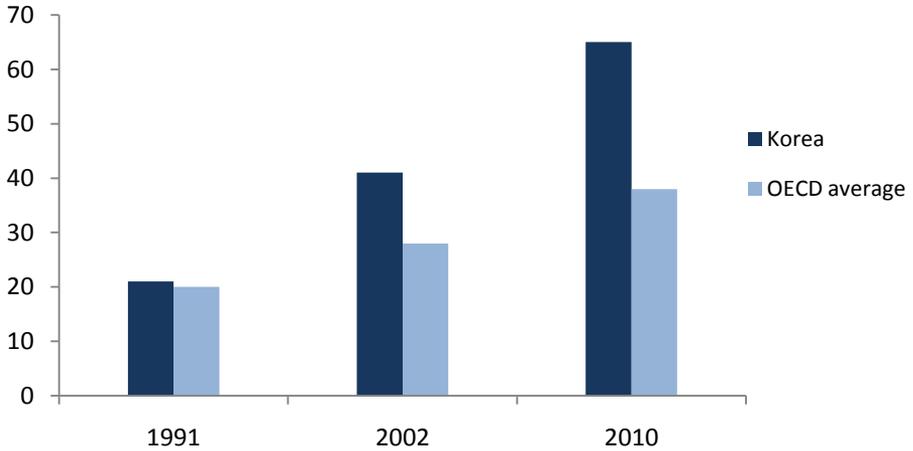
Statistics (Figure 3) show that the increase in tertiary education attainment in Korea has been very prominent, much faster than that of the OECD average. In 1991, 21% of the population aged 25-34 in Korea had tertiary qualifications. The rate doubled to 41% in 2002. By 2011, the rate for Korea reached 65%, well above the OECD average (OECD 2012b). Figure 4 presents the percentage of population aged 25-34 in Korea who had attained tertiary education in comparison to a few other selected OECD countries in 2010. It is clear that Korea was listed the highest among the OECD countries. Women's achievement is slightly higher than that of men.

Women's involvement in economic activities has increased along with their educational improvement. Figure 5 demonstrates a gradual and steady increase of female labor force participation in Korea from 1980 to 2008 in comparison with a few other OECD countries. As a whole, female labor force participation rates in Korea are much lower than the OECD average. Nonetheless, the trend has increased slowly with a couple of setbacks. The first dip occurred in the mid-1980s when Korea's economy was just about to take off and the second in the late 1990s when Korea was hard hit by the Asian financial crisis.

High educational attainment and labor force participation of women cannot guarantee high labor market rewards. Figure 6 presents men and women's employment profiles in Korea in 2011. It is clear that women's employment profile was considerably lower around childbearing ages. Women in their early 40s are relatively more active in employment. This M-shaped curve implies that even in the 21st century, women's employment is strongly related to their domestic roles. A considerable number of women are still living according to the expectation of society and families – providing care at home upon family formation and expansion and possibly resuming employment when their children need less care. However, when women return to the labor force, the jobs they get are often irregular, low paid, part-time, and temporary (OECD 2009b). In Korea, irregular workers earn only about

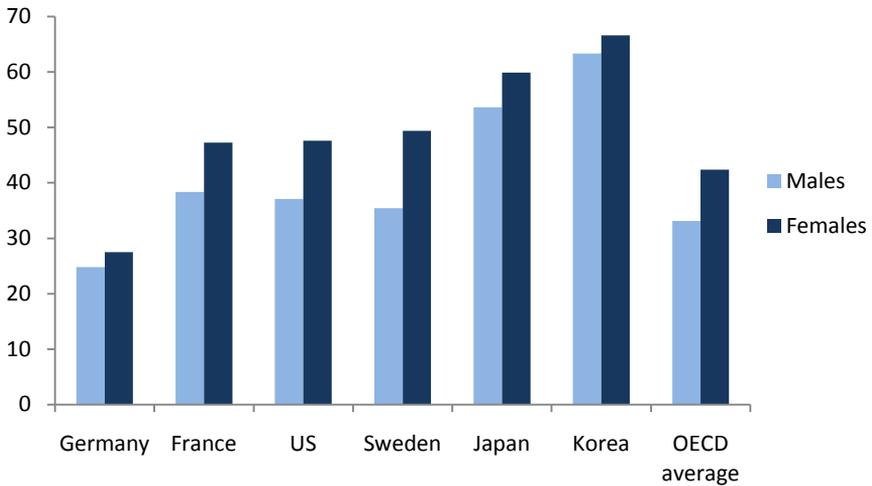
60% of the average wages of regular workers for the same amount of hours worked (Koo 2007).

Figure 3: Levels of tertiary educational attainment in population aged 25-34, by years, percent



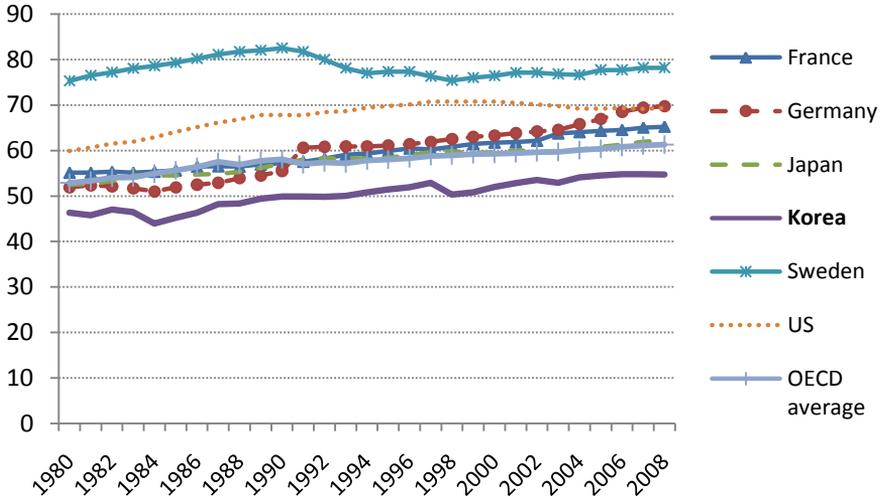
Source: OECD 2009a, 2012b

Figure 4: Population aged 25-34 with tertiary education in Korea compared to other selected OECD countries, by gender, percent, 2010



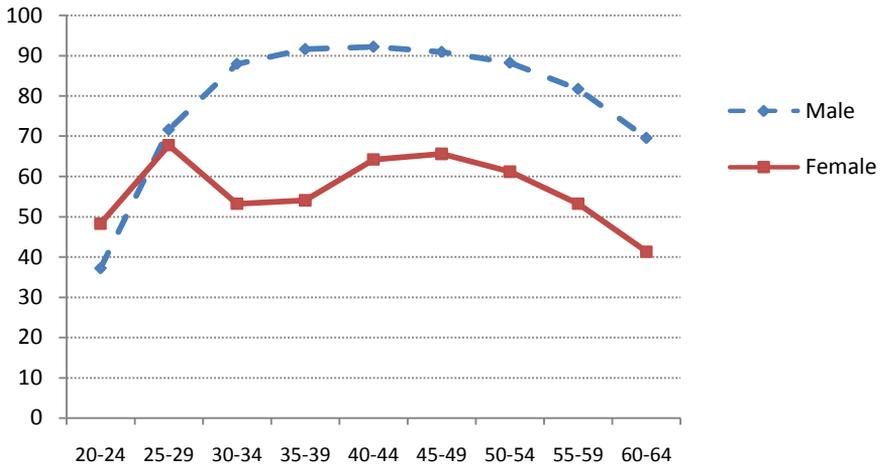
Source: OECD 2012b

Figure 5: Female labor force participation rates in Korea compared to other selected OECD countries, percent



Source: OECD 2009c

Figure 6: Employment profiles by gender and age, Korea, 2011



Source: OECD 2012c

Labor market constraints and family policy insufficiency

Demanding labor market conditions contribute to the M-shaped female employment curve. The average number of hours usually worked per week per person in Korea is the highest among OECD countries. In 2000, Korean workers had to work 52 hours per week on average. The figure was reduced to 45 hours per week in 2011, but was still above the OECD average of 38.4 hours (OECD 2012d). Flexible employment opportunities are rare. Both regular and irregular employments are related to workers' contribution of long working hours (Koo 2007). This is one of the major reasons why women would choose to leave the labor force when having small children (Tsuya et al. 2000). If they wish to work, they have to bear long working hours. Otherwise, they have to stay at home as homemakers.

Insufficient social and family policies may also make women less prone to remain at job after becoming a mother. Childcare services are limited in Korea. 20% of children below age three had access to childcare services in 2005 (OECD 2006). By 2008, the rate had increased to 38%, surpassing the OECD average (OECD 2012c). Job-protected paid maternity/parental leave was not introduced until 2001. The uptake of parental leave has been very low, as the income compensation for taking the leave amounted to only one-eighth of women's average income and one-tenth of men's (Lee 2009). Belatedly in 2011, the income compensation increased substantially (MOEL 2011). Employees with regular and stable employment positions have better chance to enjoy such benefits. Non-regular workers, who work on a temporary basis, are often excluded from such welfare benefits (Koo 2007). As of 2011, only 37% of total female employees held regular employment positions (Statistics Korea 2011).

In summary, Korea has developed into an industrialized and post-industrialized society over the past decades. However, the social operation of Korea is still gender-based by and large, with men taking the main responsibility of providing economic support to the household and women acting as the full-time homemaker. Its welfare system is based on familistic principles. The limited welfare benefits are prioritized to employees with regular and stable positions. Women in Korea have become increasingly well-educated and more closely engaged in the labor force. However, the demanding labor market conditions and the social policy insufficiency make it hard for women to combine work and family life (OECD 2009b). Currently, Korea is challenged with both too few babies and too little female employment.

Fertility development and family planning campaign

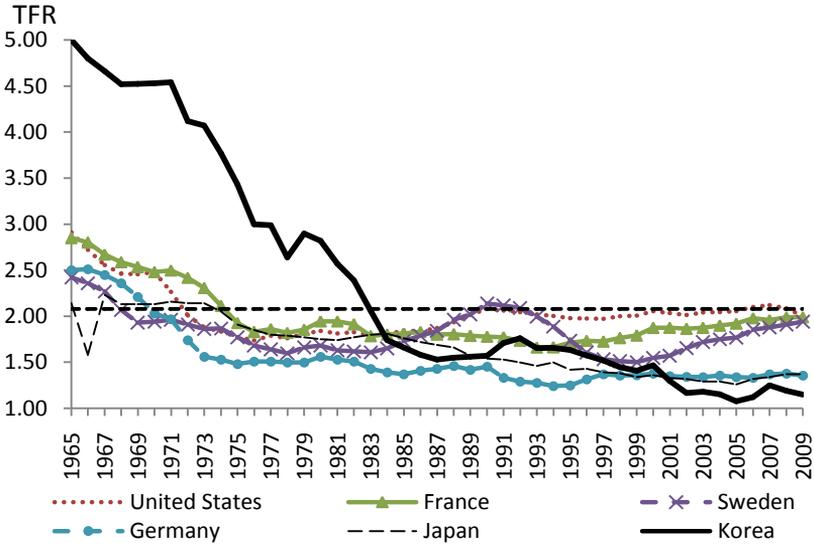
Compared with other OECD countries, Korea was late in experiencing fertility decline, but its fertility decline was sharp and fast (Figure 7). During the early 1960s, Korea's TFR was as high as 5 or more. However, it dropped to below the replacement level by 1983. The breakthrough to 1.3 in 2001 marked the beginning of Korea's lowest-low fertility era.

It is frequently argued that the dramatic fertility decline was initially driven by Korea's family planning campaign initiated in the early 1960s. Viewing the fast population growth as an obstacle to economic growth, the government implemented the family planning program in 1962. Its goal was to control population growth and to bring down the family size to three or fewer children. From the 1960s to the late 1980s, free contraceptive services were offered and a lot of measures were taken to encourage smaller family size (Cho 1996). This program was an integral part of the country's national economic plan (Rhee 2007). Partly because the goals had been achieved in the early 1980s, the government adjusted its policy direction in the late 1980s. Free contraceptive services were abolished or reduced. The concept of small family size was no longer propagated. In the mid-1990s, a new population policy that emphasized population quality and welfare was issued, symbolizing the official abandonment of the previous family planning program (Cho 1996).

Figure 8 presents an annual index of first- and second-birth conception rates¹ (conceptions of first and second live births) in Korea from two separate event-history models based on individual level data from the Korea Labor and Income Panel Study. It shows that the first birth trend was relatively stable in the 1980s. But a general decline occurred from the late 1980s. No reversal can be seen by the end of our observation time. The second birth trend went downward during the first half of the 1980s. After a reversal in the early 1990s, it fluctuated modestly until the end of our observation time.

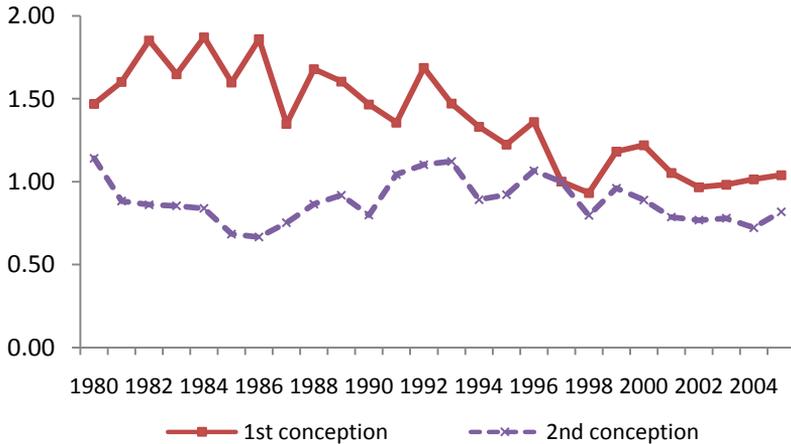
¹ I show conceptions (rather than births) because conceptions better reflect any link to changes in policies or in economic turns than births do.

Figure 7: Total fertility rates of Korea, in comparison with other selected OECD countries, 1965-2009



Source: OECD 2012c

Figure 8: Annual index for conceptions of first and second birth, from two separate models, standardized for other variables (reference year: 1997)



Source: Author's own estimation from event-history modeling on KLIPS

Notes: Other variables for first birth: woman's age, employment status, education, religion, childhood residence, father's education, mother's education and marital status; other variables for second birth: time since first birth, woman's age, childhood residence, gender of first child, education, labor force participation before first birth, labor force participation after first birth, and husband's education

Data description

Data used for the three studies in this thesis are from waves 1 to 10 of the Korea Labor and Income Panel Study (KLIPS), Korea's only labor-related panel survey, initiated by the Korea Labor Institute. The first wave was conducted in 1998. 5,000 households in urban areas were interviewed. Retrospective and current information on household members aged above 15 years was collected, including data on individual's demographic characteristics (such as birth history and marital status changes), educational attainment, work history, and job characteristics. The survey was subsequently conducted annually to track changes in characteristics of households as well as individuals. If an individual within a household turned 15, or if an individual aged above 15 joined a sampled household, he or she was included in the survey. New respondent data were then collected regarding retrospective information. If some members of a household moved out and formed new families, the new households and their members were tracked as well. The most recent data for our research are from wave 10, conducted in 2007.

Summary of empirical findings

Study I: Employment and motherhood entry in South Korea, 1978-2006

This study uses event history analysis to explore the relationship between women's employment and motherhood entry in the socioeconomic and institutional context of South Korea. To better capture the effect of pre-pregnancy employment status and job characteristics on first-birth fertility decisions, I subtracted 9 months from the date of any reported first birth.

The study shows that motherhood entry declines during the study period, particularly from the 1990s onward, with marriage postponement and decline arguably contributing to this downward trend. Women who leave the labor market are more likely to become mothers than working women and women with no employment experience. Labor market withdrawal is a signal of family formation and extension. However, this practice has been challenged in recent years, and staying at work up to and during pregnancy has gained prevalence. Among wage earners, women employed in the public sector are more likely than others to become a mother. This underlies the importance of employment stability for motherhood entry in Korea. The fertility behavior of private-sector employees appears to be sensitive to changes in the business cycle.

These findings imply that giving up career opportunities at an early stage of family life is no longer the universal norm for women in Korea. Some women opt for working up to and during pregnancy to minimize the potential opportunity cost of leaving the labor force for childbearing and childrearing. Further, similar to findings for some developed countries in the West, job stability, which is often bound with better welfare benefits, provides women with a sense of security to proceed to enter motherhood.

Study II: Economic crisis and women's labor force return after childbirth: Evidence from South Korea

From the 1980s to the late 1990s, South Korea experienced a remarkable economic boom. The outbreak of the Asian financial crisis in late 1997 brought an interruption to these developments. It was only after 2002 that the country regained its economic growth.

This study examines how women's labor force return after childbirth and their career prospects varied before, during and after this crisis. Logistic regression model was applied to examine women's employment resumption without any career interruption. Hazard regression models were used to explore women's labor force return after a career interruption and their career prospects upon return. The logistic regression model reveals an increase in women's job continuity without career interruption since the 1980s. The Asian financial crisis boosted the immediate return pattern. The implementation of job-protected maternity leave contributed to this pattern. Women with good labor market standing are more likely to resume employment after childbirth without career interruption. Hazard regression estimations reveal a V-shaped labor force return pattern among women who leave the labor force at childbearing. Some resumed work after only a brief break, while others returned when the youngest child turned three years or more. Further, women who underwent career interruption were more likely to re-enter the labor market during and after the crisis than before. Downward occupational moves were especially common during the economic downturn, partially on account of the labor market restructuring after the crisis, and partially due to women's desire to get a paid job at all under critical economic situations.

These findings suggest that the Asian financial crisis triggered a noticeable change in women's post-birth labor force return behavior. During the stable economic growth periods, families followed the traditional gender-based pattern. The economic volatility pushed families to develop alternative strategies to cope with the new challenges – women holding tighter to the labor force than before. First-time mothers resumed employment without career interruption; mothers providing care at home became strikingly more active in economic activities, though what they could get were overwhelmingly lower status jobs.

Study III: Labor force participation, family policy change and second birth rates in South Korea

Over the past decades South Korea's female labor force participation rates have increased, while its fertility decline has been dramatic. The country's family planning program implemented since 1962 is frequently argued to have initiated the fertility plunge. This study explores how women's labor force participation is associated with second birth rates in South Korea, and how the family planning program among other factors, may have contributed to this relationship. Event history analysis has been applied to longitudinal data.

The study shows that women with employment experience after the first birth had significantly lower second birth rates than homemakers, suggesting that labor force participation after first birth signals an interruption of a woman's reproductive career. Among mothers in the labor force, women employed in the public sector, with higher occupational status, and higher income have slightly higher second birth propensities, indicating the relevance of women's economic resources or employment security for their second birth fertility. The father's potential for collecting economic resources also plays an important role in the maintenance of the two-child family size.

During the 1980s, the observed second birth trend was declining to its nadir. From the late 1980s, the trend started reversing. But this reversal was only temporary, as the trend shifted downward again at the turn of the new century. The practice of the family planning program with the aim of reducing population growth is argued to be closely linked to the downward trend in the 1980s. The program re-direction from the late 1980s seems to have temporarily enhanced second birth rates of homemakers, in particular. The increasing cost of educating children since the 1990s and the economic upheavals during the late 1990s together with other factors may have contributed to the downturn of second birth rates at the turn of the new century.

Concluding discussion

This thesis explores various aspects of female employment and fertility change in the context of Korea. It explores how women's employment is associated with first and second childbearing, and how women's labor force return after childbirth varies with the business cycle. The findings demonstrate that the economic activity and fertility behavior of the increasingly well-educated Korean women are not only affected by their own individual characteristics but also by the socio-economic and institutional context of Korea.

In general, Korean women follow a standard life trajectory. After completing education, they enter the labor market. They quit job and become full-time homemakers at marriage and childbearing, while their husband provides the economic resources to the household. They may resume work when their children need less of their concern, but the jobs they get are usually on a temporary basis. Others do not return to the labor market at all.

The three empirical studies included in this thesis present evidence of some exciting changes in Korean women's life-course patterns. First, leaving the labor market at an early stage of family life (i.e., before pregnancy), which has been a conventional practice among Korea women has gradually lost its prevalence. Korean women become more likely to stay at work until and during pregnancy. Second, all else equal, women with better labor market standing, such as those with stable employment positions, high occupational status, or high earning power have higher probability than others to enter motherhood, and to resume employment after childbirth without career interruption. These findings imply that women in Korea have become more closely engaged in economic activities than before. Foreseeing the potential loss of leaving the labor market for childbearing and childrearing, more and more women choose to work into pregnancy rather than quitting jobs at an early stage of family life. Women who are well-established in the labor market have bigger chance of enjoying the job-protected maternity leave and higher potential of collecting sufficient economic resources, both of which can improve their possibility to better combine employment and motherhood.

Meanwhile, this thesis have reveals some constraints that women face when considering childbearing and labor force participation after childbirth. The lower first birth fertility of women without regular employment position, the considerable number of women who went for homemaking after childbirth, and the lower intensity of transition to a second birth among

mothers in the labor force all demonstrate the hardship for women to combine work and family responsibilities in contemporary Korea. The choice of one of the alternatives puts women at risk of forgoing the other. However, the elevated labor force return of homemakers during and after the economic crisis seems to suggest that the way in which women respond to economic upheavals may lead to changes in gender norms.

Women account for half of a country's talent base and carry the main reproductive responsibility. Many consider it difficult for a country to maintain a sustainable development if women's brain power is ignored and its fertility level runs low. To improve the compatibility of women's employment and family responsibilities, future policies of Korea should be focused on expanding the coverage of paid job-protected maternity leave, expanding its childcare services, and increasing the possibility of working flexible hours, as recommended by the OECD directives (OECD 2011). With these standards met, Korean women may have more freedom to decide the number of children they want, and maintain their economic independence after becoming a mother.

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