Extended Abstract for the
Population Association of America
Annual Meeting 2014

Please do not cite or distribute without authors' consent.

Effect of Work-Family Compatibility Policies on Women's Fertility Intention: A Case of South Korea

Seung-Won Choi, Ph.D. Student
Department of Sociology
Michigan State University

Aggie J. Noah, Ph.D. Candidate
Department of Sociology
Population Research Institute
Penn State University

Introduction

Over the past few decades, South Korea (hereafter, Korea) has received considerable attention for its lowest fertility rate. Korea's fertility has been steadily decreasing since the early 1960s; and in 2009, its fertility rate of 1.14 was recoded as the world's lowest fertility rate. From 2005 to 2010, Korea's total fertility rate (TRF) has remained around 1.13 which is significantly lower than the world average of 2.56 (NSO, 2010). Korea was one of five "lowest-low" fertility countries in 2008 (i.e., period TFR below 1.3) (Kohler et al. 2002, 2006; Billari and Kohler 2004); and the empirical evidence suggests that the TFRs in "lowest-low" fertility countries will continue to decrease (Jones et al., 2008).

This remarkable fertility decline in Korea is notable for several reasons. First, the fertility rate in Korea appears to continue to decline without any signs of leveling off (Jones et al., 2008). In fact, while many Eastern European countries that had lowest-low fertility in 2003 were able to transition out of rapidly declining fertility within just five years (Kohler et al., 2002, 2006; Billari and Kohler, 2004), and become more stable (Caldwell, 2006); Korea's low fertility remains unstable. Secondly, the pattern of fertility decline in Korea is different from patterns observed in Europe. That is, the initial onset as well as tempo (rate) and quantum (magnitude) of fertility decline in Korean context differ from the European context, and traditional demographic theoretical frameworks may provide limited explanations to understanding the pattern of fertility decline in Korea (Caldwell and Schindlmayr, 2003; Morgan and Taylor, 2006; McDonald, 2008). For example, fertility decline in Korea has been more abrupt and rapid; the degree of fertility decline that Europe has achieved in over a half century has been achieved in only 10-15 years in Korea. Thirdly, there is a considerable lag in adopting effective policy in order to inhibit the fertility decline in Korea. For example, while there is strong evidence that the steep decline of fertility level below the replacement level within two and half decades is largely due to government policies and family planning programs to reduce family size (Cho, 2000); these types of policies were not repelled until the mid-1990s.

In recent years, the Korean government has recognized the serious consequences of low fertility for families and the society; and it has started to openly promote high fertility. In 1994, the government established a Population Policy Deliberation Committee to review existing population policy; and in 1996, the government officially announced its new population policy which has a heavy emphasis on reproductive health care services and promoting higher fertility. In addition, a Committee on Ageing and Future Society (CAFS) was created to prepare more social programs that will promote higher fertility for women. CAFS organized a series of plans in an attempt to foster environments in favor of child-rearing. These plans include expanding the government's financial support for maternity leave grant, establishing more childcare systems, and making women's work environment more children friendly (Lee, 2009). Despite these noble attempts to increase the fertility rate, Korea's fertility rate has been continuing to decline.

One of the first public policies the Korean government adopted to promote higher fertility was expanding the government's financial support for maternity leave grant through direct cash payment and indirect transfers. While such methods are common fertility promoting policies (d'Addio and d'Ercole, 2005; Mills et al., 2011); evidence suggest that these policies have been largely ineffective in Korea. Critiques of Korea's public policy to promote higher fertility also

argue that there are too many concurrent policies without investing much in one targeted policy, and the failure of such diversification of public policy is inevitable. Alternatively, there is growing evidence that improving work–family compatibility is positively associated with women's increased fertility intention.

Improving work-family compatibility is composed of multiple policies to promote births including maternity and fraternity leave with or without salary-maintenance benefits (Rønsen, 2004; Datta Gupta et al., 2008), access to quality child care (Rindfuss et al., 2007), and childcare subsidies and early education (Datta Gupta et al., 2008; Letablier et al., 2009). Previous studies have found that policies to improve work-family compatibility have been effective in reducing the age in which women have the first birth and increasing women's fertility intention (Di Prete et al., 2003; Del Boca, 2002; Hank and Kreyenfeld (2003); Rindfuss et al. 2007; Zabel, 2009). Socio-cultural and historical contexts of Korea suggest that work-family compatibility policies may be effective in Korea. A great deal of gender inequality, burden of "second shift" (Hochschild, 1989), M-shaped employment patterns all contribute to decreased women's fertility intention; and alleviating work-family conflict may increase fertility for women.

This paper aims to investigate how various policies to improve work-family compatibility affect women's fertility intention. In Korea, the implementation of these policies have been fairly recent (i.e., in 2005), and whether the positive effects of work-family compatibility policies on women's fertility intention in the European context can translate to Korea is an important issue. We utilize a nationally representative longitudinal survey in Korea to investigate the effect of six different work-family compatibility policies: Maternity leave (with or without regular pay), availability of child care leave, family allowance (direct cash support), workplace day care facility, day care support (monetary) and flexible working schedule.

Data and Methods

This study used data from the first wave (2007) and the second wave (2008) of the Korea Longitudinal Survey of Women and Families (KLoWF), which was collected by the Korean Women's Development Institute. The KLoWF is a nationally representative longitudinal survey which assesses Korean women's life history and various aspects of life, especially focusing on their work and family lives. This dataset has the baseline sample of 9,997 women aged between 19 and 64 in 9,084 Korean households in 2007, which were in all urban and rural areas of Korea, excluding Jeju and the other islands. The second wave (2008) of the KLoWF followed up with the baseline sample and the total sample is 8,364. Face-to-face interviews were performed by interviewers who visited households with Computer Assisted Personal Interviewing (CAPI). The analytic sample for this study included 1,343 women who were younger than 50 years old meeting reproductive age (15-49) and employed at wave one, also completed fertility intention question at second wave.

Multinomial logistic regression was used to analyze to predict the respondents' fertility intention using indicators of work-family compatibility policy. The dependent variable in this study is respondents' fertility intention (1=having intention, 2=no intention, 3=don't know). "Unclear plan" was created from "don't know" as a separate category, not missing, because approximately 6.4% of respondents selected this category and unclear fertility intention is

qualitatively different than missing at random. Four models were estimated in this study. The first model includes context level variables measuring whether or not respondents' workplace provides work-family compatibility policy (0=not provided, 1=provided). Six work-family compatibility policies for Korean working mothers used in this study are: maternity leave, child care leave, family allowance, workplace day care facility, day care support, and flexible working schedule. Model two contains socio-demographic controls for age, age squared, marital status (0=non-married, 1=married), education attainment (1=less than high school, 2=high school or GED, 3=some college, 4=Bachelor's degree, 5=beyond Bachelor's degree), employment type (0=temporary employment, 1=permanent employment), household monthly income (1=0/99, 2=100/199, 3=200/299, 4=300/399, 5=400+, the unit is 10,000 won), and marital satisfaction (1=very unhappy through 7=very happy). In the third model, individual level terms are added, which are related to work-family conflict as expected mediators: husband's sharing household chores (1=very unsatisfied through 5=very satisfied), whether or not having a household chores helper (0=no, 1=yes), and family value about having a baby earlier after getting married (1=strongly disagree through 4=strongly agree). Four items are also included in the final model, which are over-working time, irregular working time, child care, and domestic work (1=strongly disagree through 4=strongly agree). These measure the determinants of work-family conflict which respondents feel. Missing values were imputed with Stata ICE (Royston, 2005). Five datasets were imputed for all missing values on all variables in the model using sequential chained regression.

Preliminary Findings

The results in Table 1 demonstrate the effect of different work–family compatibility policies on women's fertility intention. While the presence of maternity leave policy is associated with a reduced risk of having fertility intention for women in Model 1, this effect becomes not significant after controlling for individual and relationship characteristics. On the other hand, the presence of maternity leave policy is associated with a reduced risk of having unclear fertility intention for women in all models. This finding suggests that maternity leave policy is positively associated with women's increased fertility intention, and this policy appears to be effective in promoting fertility for women. In addition, the presence of child care leave significantly increased the risk of having unclear fertility intention for women. This perplexing finding may be due to women's perception of job security after taking a leave for child care. That is, while this work–family compatibility may exist; further investigation should look at whether a discrepancy between policy and actual policy utilization exist. Surprisingly, other different work–family compatibility policies had no significant effect on women's fertility intention. At the individual-level, marital status and marital satisfaction are significantly associated with women's fertility intention. There are two substantive plans for future analyses. First, we plan to investigate whether different work–family compatibility policies on women's fertility intention differ by parity (i.e., first birth versus higher order birth). Second, we plan to investigate whether contextual policy variables are heterogeneous with respect to the dependent variable. If there is significant variance at level 2, we will employ hierarchical linear modeling technique.

Table 1. *Multinomial Logistic Regression Predicting Women's Fertility Intention by Work-Family Compatibility Policies (n=1,343).*

	Model 1		Model 2		Model 3	
	No Intention	Unclear Plan	No Intention	Unclear Plan	No Intention	Unclear Plan
Context-level: work-family compatibility policy						
Maternity leave	0.39*** (0.00)	0.37*** (0.00)	0.61 (0.08)	0.41** (0.01)	0.62 (0.08)	0.42** (0.00)
Child care leave	1.44 (0.16)	3.79*** (0.00)	1.86 (0.11)	4.12*** (0.00)	1.86 (0.12)	4.10*** (0.00)
Family allowance	1.12 (0.57)	0.65 (0.26)	0.80 (0.39)	0.57 (0.20)	0.79 (0.36)	0.55 (0.17)
Workplace day care facility	0.90 (0.72)	1.17 (0.76)	1.19 (0.57)	1.10 (0.87)	1.21 (0.53)	1.15 (0.82)
Day care support	0.97 (0.91)	0.90 (0.80)	1.04 (0.86)	0.98 (0.96)	1.05 (0.85)	1.00 (0.98)
Flexible working schedule	0.88 (0.56)	0.84 (0.76)	0.88 (0.69)	0.79 (0.70)	0.91 (0.76)	0.83 (0.74)
Individual-level: Socio-demographic status						
Age			1.15 (0.26)	0.96 (0.74)	1.15 (0.26)	0.98 (0.79)
Age squared			1.00 (0.40)	1.00 (0.43)	1.00 (0.36)	1.00 (0.44)
Education attainment			0.79 (0.08)	1.17 (0.33)	0.80 (0.09)	0.40 (0.36)
Married			5.05*** (0.00)	0.38*** (0.00)	5.07*** (0.00)	0.40** (0.00)
Permanent employment			0.99 (0.95)	1.14 (0.53)	1.02 (0.84)	1.18 (0.44)
Household monthly income			1.01 (0.91)	1.03 (0.88)	1.02 (0.83)	1.06 (0.82)
Marital Satisfaction			0.76** (0.00)	0.70** (0.00)	0.78** (0.00)	0.70* (0.03)
Individual-level: Work-family conflict						
Husband's sharing household chores					0.93 (0.36)	0.93 (0.61)
Having household chores helper					0.76 (0.25)	0.61 (0.30)
Family value (having a baby earlier)					0.98 (0.79)	1.03 (0.81)
Over working time					1.07 (0.60)	1.13 (0.48)
Irregular working time					0.92 (0.60)	0.87 (0.46)
Child care					1.00 (0.98)	1.02 (0.91)
Domestic work					0.98 (0.85)	0.79 (0.13)

Note: The values are relative risk ratios (RRR) and p-value in parentheses. Multiple imputation (m=5) in Stata ICE using sequential chained regression was used for all missing values.
*p < .05. **p < .01. ***p < .001.

References

Billari, F.C., and H. P. Kohler. (2004). "Patterns of low and very low fertility in Europe." *Population Studies* 58(2): 161-176.

Caldwell, J.C. (2006) "The western fertility decline: Reflections from a chronological perspective." *Journal of Population Research* 23(2): 225-242.

Caldwell, J.C. and T. Schindlmayra. (2003). "Explanations of the fertility crisis in modern societies: A search for commonalities." *Demography* 57(3): 241-263.

Cho, N. (2000). "Policy response to population ageing and population decline in Korea." *Expert Group Meeting on Policy Responses to Population Ageing and Population Decline*, Population Division, United Nations, New York, 16-18 October, 2000.

d'Addio, A.C. and M. d'Ercole. (2005). "Trends and determinants of fertility rates in OECD countries: The role of policies," OECD Social, Employment and Migration Working Paper No. 27, OECD, Paris.

Datta, G.N. and M. Verner. (2008). "The impact of Nordic countries' family friendly policies on employment, wages, and children." *Review of Economic Households* 6:65–89.

Del Boca, D. (2002). "The effect of child care and part-time opportunities on participation and fertility decisions in Italy." *Journal of Population Economics* 15:549–573.

Di Prete, T.A., Philip, M.S., Engelhardt, H., and H. Pacalova. (2003). "Do cross-national differences in the costs of children generate cross-national differences in fertility rates?" *Population Research and Policy Review* 22:439–477.

Hank, K., and M. Kreyenfeld. (2003). "A multilevel analysis of child care and women's fertility decisions in Western Germany." *Journal of Marriage and Family* 65:584–596.

Hochschild, A. R. 1989. *The second shift: Working parents and the revolution at home*. York: Viking Penguin.

Jones, G., Straughan, P., and A. Chan. (2008). *Ultra-low fertility in Pacific Asia: Trends, causes and policy issues*. New York, NY: Routledge Research on Public and Social Policy in Asia.

Kohler, H-P., Billari, F.C., and Ortega, J.A.(2002). "The emergence of lowest-low fertility in Europe during the 1990s." *Population and Development Review* 28(4): 641-680.

Korea Longitudinal Survey of Women and Families (KLoWF), 2008.

Lee, S.S. (2009). "Low fertility and policy responses in Korea." *The Japanese Journal of Population* 7(3): 57-70.

Letablier, M-T., Luci, A., Math, A., and O. Thevenon. (2009). "The cost of raising children and the effectiveness of policies to support parenthood in European countries: A literature review." *Directorate-General Employment, Social Affairs and Equal Opportunities*. Brussels: European Commission.

McDonald, P. (2008). "Explanations of low fertility in East Asia." in Jones, G., P. Straughan, A. Chan. (Eds.) *Ultra-low fertility in Pacific Asia: Trends, causes and policy issues*. New York, NY: Routledge Research on Public and Social Policy in Asia.

Mills, M., Rindfus, R.R., McDonald, P., and E.Velde. (2011) "Why do people postpone parenthood? Reasons and social policy incentives." *Human Reproduction Update* 17(6): 848-860.

Morgan, P..S and M.G. Taylor. (2006). "Low Fertility at the Turn of the Twenty-First Century." *Annual Review of Sociology* 32(1): 375–399.

National Statistics Office of Korea (NSOK), 2010.

Rindfuss, R.R., Guilkey, D., Morgan, S.P., Kravdal, Ø., and K.B. Guzzo. (2007). "Child care availability and first-birth timing in Norway." *Demography* 44:345–372.

Rønsen, M. (2004). "Fertility and family policy in Norway - A reflection on trends and possible connections." *Demographic Research*, 10(10).

Royston, P. (2005). "Multiple imputation of missing values." *Stata Journal*, 4: 227-241.

Zabel C. (2009). "Eligibility for maternity leave and first birth timing in Great Britain." *Population Research and Policy Review* 28:251–270.