Does the Ethnic Composition Environment Matter?  
Peer Effects on Fertility among Foreign Wives in Korea

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Does the Ethnic Composition Environment Matter?

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The main purpose of this paper is to explore the socio-demographic differentials and peer effects on fertility among foreign wives in Korea. This paper focuses on examining whether and to what extent favorable ethnic composition of a residential area and increased accessibility to other marriage immigrant wives reduce the real or perceived social disadvantages, constraints and insecurities of foreign wives that might otherwise lead to lower fertility. Another hypothesis examined in the paper is whether or not foreign wives show distinctive levels of fertility according to household composition.

Based on the 2009 Korean National Multi-cultural Family Survey data and the Marriage and Divorce Registration Data for 2010, the results of the multivariate regression analysis show that the propensity to have children ceteris paribus rises substantially among foreign wives who live in an area with a large population of transnational couples. Peer effects are found to be stronger when a marriage immigrant wife lives with her husband’s parents.

Introduction

It is well documented that social capital and social networks play important roles in the processes of international migration and immigrant adaptation to the country of destination. When people make decisions regarding migration or adjust themselves to a new environment, they tend to rely on peer groups who have similar backgrounds or share similar experiences (Massey et al., 2005). Chain migration and ethnic enclaves recently observed in Korea also reflect this interdependence and mutual influence among immigrant peer groups (Park et al., 1999; Kim et al., 2012a).

Peer groups play an even more crucial role for marriage immigrant wives, compared to foreign workers, in providing emotional and psychological support and accelerating
adaptation. This effect is mainly attributed to the different circumstances that they encounter. Most foreign workers eventually return to their native country after a temporary stay in Korea and tend to concentrate around their workplace. In contrast, marriage immigrant wives form a family and permanently live in Korea and tend to disperse across the country. Marriage immigrant wives are more likely to be eager to be accepted by Korean people. Thus, adjusting to new circumstances is a higher stakes issue for marriage immigrant wives than foreign workers.

A peer group not only provides emotional and psychological support but also influences decision-making in everyday life. Among the many decision-making issues for marriage immigrant wives, childbearing is one of the most important and complex issues. Although childbearing allows them to have stability both in a family and in the country of destination, it leads to another lifetime change and doubles the burden. Hence, childbirth and the childrearing of siblings, friends and neighbors can influence one’s decisions and behaviors. Especially for marriage immigrant wives, having a peer group who is in similar circumstances in a neighborhood and with regards to their fertility can have a great effect. Also, depending on the household composition, i.e., co-habitation status with the husband’s parents, their decision on fertility can be different.

Nevertheless, the effects of peer group and household composition have rarely been discussed in either the study of marriage immigrant wives or fertility (Kim and Song, 2013). This gap is mainly due to the lack of data and difficulties in defining and analyzing the peer effects. Nor is it clear what causal mechanisms operate in the relationship between household composition and the level and differentials of fertility behavior.

The proportion of cross-border marriages in Korea has risen steadily from 1.2% of all marriages occurring in 1990 to the highest level of 13.5% in 2005, although the trend has
reversed since then (Statistics Korea, 2013a). The proportion of cross-border marriage was estimated at 9.1% and 8.7% in 2011 and 2012, respectively (Statistics Korea, 2013b). Recent increases in cross-border marriage in Korea during the past several decades provide a valuable opportunity to examine whether or not peer effects influence fertility.

Given the often inhumane marriage process through brokers and attitudes of discrimination toward foreigners of many Koreans, marriage immigrant wives often fall into isolated and precarious statuses in Korea (Han and Seol, 2006). Limited information about a spouse and family exacerbates this insecurity. Under these circumstances, marriage immigrant wives are likely to view fertility with reservation.

When adjusting to married life and making decisions on fertility, marriage immigrant wives may rely on those in similar circumstances. Through interaction with other marriage immigrant wives, social networks can be formed and psychological and emotional support can be obtained. Those who have strong social networks and social capital with other marriage immigrant wives may positively consider having a child. Household composition, defined as whether or not a wife is living with the husband’s parents in this paper, in itself can affect the level and timing of fertility or mediate peer effects on fertility. It is likely to work in two different ways, that is, either by providing support for childcare or exerting pressure for childbirth. Based on strong familism and an extended family system mostly in rural areas in Korea, the effects of household composition reflect Korean culture.

The purpose of this paper is to examine peer effects, defined as ethnic composition in the county, on fertility among marriage immigrant wives in Korea. Mainly due to the lack of hard data, previous studies on marriage immigrant wives have tended to explain their behavior in terms of individual or couple characteristics. Given that individuals constantly interact with others, expanding our research scope to explaining variables such as family,
friends and neighbors will broaden our understanding of the behaviors.

In order to compensate for the lack of data, this study incorporates a methodological refinement into the analysis by combining the individual and aggregate levels of data. For the individual level of data, it relies on the 2009 Korean National Multi-Cultural Family Survey (MOHW et al., 2010). By utilizing the Marriage and Divorce Registration Data for 2010, the proportion of foreign wives\(^{1}\) among wives who registered their marriage in 2010 was calculated for 251 counties (CSMR, 2012) and was integrated into the survey data set above. Based on the integrated data, this study attempts to uncover the implications of variations in ethnic composition at the aggregate level in the process of reproductive behaviors of marriage immigrant wives in Korea.

*Fertility Behavior of Marriage Immigrant Wives*

Facing lowest-low fertility and a very fast pace of aging population in Korea, the fertility of foreign wives and education of their children have become emerging issues of concern among scholars and policy makers in terms of the possibilities to address the population shrinkage and labor shortage. However, little attention has been paid to the fertility of transnational couples and their causal mechanisms. Only a few recent studies have found that the fertility level of transnational couples tends to be lower than that of native Korean couples (Kim, 2008; Kim et al., 2012b).

The low level of fertility among transnational couples in Korea is distinct from that of Western countries. The high level of fertility among immigrants or transnational couples in Western countries has been explained from a socialization perspective, which assumes that

\(^{1}\) Foreign wives, being referred to in most government registration data, include marriage immigrants, foreign workers and foreign students who are non-native Koreans, and thus is a broader concept compared to marriage immigrant wives. In the Korean context, however, the two concepts overlap with each other almost completely. Therefore, the terminology of marriage immigrant wives and foreign wives is used interchangeably throughout this paper.
internalized values and attitudes toward large family and high fertility from the country of origin exert a strong influence on the immigrant’s reproductive behavior. Although the history of marriage immigration in Korea is relatively short and the fertility of foreign wives is subject to change in the future, a socialization perspective does not seem to be relevant in explaining the low level of fertility among foreign wives currently observed in Korea (Kim and Song, 2013).

This paper employs a minority status perspective to explain the fertility of marriage immigrant wives (Goldscheider and Uhlenberg, 1969; Sly, 1970; Kim, 2008; Chen, 2008; Kim and Song, 2013). This perspective argues that the disadvantageous status of immigrants represses fertility level independent of individual socioeconomic characteristics. Insecurities associated with minority group status as well as the struggle to advance up the educational, social and economic scales tend to limit childbearing.

There are other theoretical perspectives that can be applied to explaining the fertility of marriage immigrant wives. The adaptation perspective argues that the fertility level of immigrants converges to that of native people through adaptation to social norms of family size and fertility in the destination countries (Chen, 2008). Due to the relatively short history of immigration, however, it does not seem to be applicable to contemporary Korea. The low socioeconomic characteristics of marriage immigrant wives and their spouses in Korea does not allow for a characteristics perspective, which argues that the fertility level of immigrants becomes similar to that of natives only if an individual’s socioeconomic characteristics similarly hold (Goldscheider and Uhlenberg, 1969; Sly, 1970; Chen, 2008; Kim, 2008; Kim and Song, 2013).

Relying on a minority status perspective, this study employs peer effects, defined as ethnic composition in the neighborhood, as an explanatory variable to see how and to what
extent it can influence the level and timing of childbearing. Peer effects are often referred to as neighborhood effects or contextual effects (Schultz-Nielsen, 2010). It was originally employed to explain delinquent behaviors or poverty/health related outcomes. Peer effects include socioeconomic environments as well as interaction with other people and cultures. In the U.S., where residential segregation by race and class is prevalent, neighborhood environment and interactions with peer groups have received academic attention to explain differentiation in childhood development (Sampson et al., 2002).

However, studies on fertility have rarely focused on peer effects until recently. Relying on the Chinese case, where migration to other counties is officially limited and a one-child policy is universal across regions which in turn resolves selectivity and endogeneity issues, Li and Zhang (2009) argue for the prevalence of the strong neighborhood effect on fertility. That is, rises in the average number of children of neighboring households also tend to increase a household’s fertility.

Based on an analysis of data from Denmark, Shultz-Nielsen (2010) also argues for neighborhood effects on fertility behavior, emphasizing that the effect is greater where ethnic composition is homogeneous. Weeks et al. (2010) found that not only objective circumstances in neighborhoods such as housing and hygiene but also social interaction with neighbors influences women’s decisions about marriage and childbearing in Ghana. These findings were interpreted as the result of the tendency of human beings to imitate and the indirect impact of social atmosphere regarding childbirth.

Two recent studies (Kuziemko, 2006; Lyngstad and Prskawetz, 2010) shifted the scope of neighborhood effects to siblings, showing that only the childbirth of sisters but not brothers influenced the fertility of siblings in the U.S. and Norway. They equate sibling effects as social capital such as social support and networks. For example, Kuziemko (2006)
argues that raising children becomes more enjoyable when there are others who can share the experience. Not only the costs for childcare including finances, time and energy can be saved but also emotional support and information relating to childcare can be obtained when sharing with others.

Considering the disadvantageous status of marriage immigrant wives and their low level of fertility, this paper employs a minority status perspective to examine the fertility of marriage immigrant wives in Korea. Given that the fertility level of marriage immigrant wives is not homogeneous, however, attention is focused on the peer effects in order to explain the fertility differentials among foreign wives living in a diverse ethnic composition environment.

Peer effects, measured by the proportion of foreign wives in a certain county, are employed on the basis of the assumption that social and psychological support from those in similar circumstances may help to improve marginal status, which in turn increases the level of fertility. Despite different individual socioeconomic characteristics and nationalities, minority status as a marriage immigrant wife itself enables sharing of the experience of living in Korea. In particular, the shared experiences of pregnancy and childbirth as foreign wives tend to form a sense of sisterhood within residing areas. Therefore, an aggregate level of measurement such as ethnic composition within a county may have an impact on fertility.

The concept of household composition is also employed in this paper to examine whether or not living with the husband’s parents influences the childbearing behavior of immigrant wives. Household composition may have a direct impact on fertility and can be an intermediate variable between the ethnic composition of a certain area and fertility at the individual level. Living with the husband’s parents may have intricate effects in two ways. Reflecting the patriarchal family system in Korea, living together with the husband’s parents
is likely to exert pressure to have children. At the same time, however, they can provide substantial assistance and support for childcare. Either way, it is assumed to encourage childbirth. A previous study finds that living with parents-in-law tends to increase the fertility level of native Korean couples (Chun and Lee, 2009). They attribute the result to the parents-in-law’s support for childcare, thereby reducing the financial and emotional burdens of young couples.

Hence, two hypotheses are established in this paper. First, foreign wives are likely to have more children ever born as the proportion of the foreign wife population in a county rises. It is also hypothesized that a higher proportion of foreign wives in a county tends to shorten the duration period between the marriage, first childbirth and second childbirth of foreign wives. The ethnic composition environment is expected to have an independent effect after controlling for individual socioeconomic characteristics. Secondly, foreign wives who live with their husband’s parents *ceteris paribus* tend to have more children ever born and a shorter birth interval. It is also assumed that the peer effects stated in the first hypothesis tend to be stronger for foreign wives who live with their husband’s parents.

**Data and Sample Characteristics**

This paper is based on micro-data from the 2009 Korean National Multi-cultural Family Survey (MOHW et al., 2010). The analysis is limited to 47,007 foreign (Korean-Chinese, Han-Chinese, Vietnamese, Filipina or Mongolian) wives who married Korean men in 1985 or thereafter. *The Marriage and Divorce Registration Data* for 2010 is also utilized to create variables at the aggregate level for 251 counties (CSMR, 2012).

It should be noted that marriage immigrant wives in Korea have different backgrounds and paths to international marriage migration according to their nationality. For example,
Vietnamese, Filipina and Mongolian women mostly come to Korea through marriage by brokers or relatives who are already married to Korean men. In contrast, Korean-Chinese and Han-Chinese women come to Korea for a greater variety of reasons. Some come to Korea for work and then marry Korean men. Others come to Korea not for marriage itself but for obtaining citizenship and getting a job. Still others come to Korea through marriage by a broker or relatives. In contrast to immigrant wives from other countries, most Filipinas are religious. Some are Catholics while others are members of the Unification Church. These differences may explain some of the different characteristics of foreign wives by nationality described below.

Table 1 presents the mean values of the variables in the study population by country of origin of the foreign wife. The individual characteristics are shown on the upper side of the table, and the proportion of individuals and the mean score of marital satisfaction are shown on the lower side of the table. In terms of the size of the samples, Korean-Chinese and Vietnamese are the majorities followed by Han-Chinese, Filipinas and Mongolians. These differences reflect the trends in the size of marriage immigrants to Korea during the past decades.

As for the age of marriage immigrant wives, Korean-Chinese are the oldest with a mean age of 37.5, while Vietnamese are the youngest with a mean age of 24.2. However, the age of Korean husbands is fairly similar in the 40s regardless of the nationality and age of their wives. Thus, the age gap between spouses is about 10 years, with Vietnamese showing the biggest gap of 17 years and Korean-Chinese, the smallest gap of 7.4 years.

Both Filipinas and Mongolians show the highest level of education (12.3 years), whereas Vietnamese have the lowest (8.9 years). Korean husbands’ average years of
education is 11.6 and does not show much difference by the nationality of their spouses. The average age at marriage of foreign wives is 27.8 and shows differences by nationality, with Vietnamese being the youngest (22.0) and Korean-Chinese the oldest (31.7). Average age at marriage of the Korean husband is 38.9 and is similar regardless of the nationality of their wives.

The average duration of living in Korea is 62.2 months, with Korean-Chinese showing the longest period of time living in Korea (88.5 months), followed by Filipinas (70.6 months) and Mongolians (58.7 months). Vietnamese wives show the shortest duration of living in Korea at 33.7 months. Considering that women from Vietnam, Mongolia and the Philippines in general come to Korea through marriage, their duration of living in Korea corresponds to that of their marriage. However, the duration of marriage and living in Korea may not

### Table 1

<table>
<thead>
<tr>
<th>Country of origin of the foreign wife</th>
<th>China (Korean)</th>
<th>Vietnam</th>
<th>The Philippines</th>
<th>Mongolia</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of wife</td>
<td>37.5</td>
<td>24.2</td>
<td>31.8</td>
<td>31.0</td>
<td>31.8</td>
</tr>
<tr>
<td>Age of husband</td>
<td>44.9</td>
<td>41.2</td>
<td>42.6</td>
<td>41.1</td>
<td>42.9</td>
</tr>
<tr>
<td>Education years of wife</td>
<td>10.8</td>
<td>8.9</td>
<td>12.3</td>
<td>12.3</td>
<td>10.4</td>
</tr>
<tr>
<td>Education years of husband</td>
<td>11.4</td>
<td>11.5</td>
<td>11.4</td>
<td>11.9</td>
<td>11.6</td>
</tr>
<tr>
<td>Age at marriage of wife</td>
<td>31.7</td>
<td>22.0</td>
<td>26.7</td>
<td>27.7</td>
<td>27.8</td>
</tr>
<tr>
<td>Age at marriage of husband</td>
<td>39.2</td>
<td>39.0</td>
<td>37.4</td>
<td>37.7</td>
<td>38.9</td>
</tr>
<tr>
<td>Duration in Korea (months)</td>
<td>88.5</td>
<td>33.7</td>
<td>70.6</td>
<td>58.7</td>
<td>62.2</td>
</tr>
<tr>
<td>Wife’s remarriage (%)</td>
<td>40.1</td>
<td>2.2</td>
<td>2.5</td>
<td>18.5</td>
<td>22.4</td>
</tr>
<tr>
<td>Husband’s remarriage (%)</td>
<td>33.4</td>
<td>18.4</td>
<td>13.6</td>
<td>24.4</td>
<td>25.8</td>
</tr>
<tr>
<td>Marital satisfaction score</td>
<td>42.7</td>
<td>39.3</td>
<td>45.7</td>
<td>43.7</td>
<td>41.7</td>
</tr>
<tr>
<td>Seoul resident (%)</td>
<td>20.4</td>
<td>6.2</td>
<td>8.1</td>
<td>11.3</td>
<td>13.6</td>
</tr>
<tr>
<td>Non-metropolitan resident (%)</td>
<td>55.8</td>
<td>71.8</td>
<td>73.8</td>
<td>71.0</td>
<td>63.4</td>
</tr>
<tr>
<td>% of foreign wife population</td>
<td>10.0</td>
<td>12.2</td>
<td>13.1</td>
<td>11.4</td>
<td>11.0</td>
</tr>
<tr>
<td>Live with husband’s parents (%)</td>
<td>17.2</td>
<td>46.8</td>
<td>35.9</td>
<td>28.9</td>
<td>30.0</td>
</tr>
</tbody>
</table>

Source: MOHW et al. (2010); CSMR (2012).
coincide in the cases of Korean-Chinese and Han-Chinese, as they often come to Korea through labor migration.

The overall remarriage rate of foreign wives in the sample is 22.4% and that of Korean husbands is 25.8%. However, depending on the nationality, the remarriage rates of couples vary. For example, Korean-Chinese and Han-Chinese show high proportions of remarriage, and their Korean husbands show a similar proportion. In contrast, only 2% of Vietnamese and Filipinas remarried to Korean husbands, which may be related to the younger age at marriage of these women. The lowest remarriage rate of Korean husbands is those who married to Filipinas (13.6%), but it is much higher than that of their Filipina spouses.

A marital satisfaction score was calculated by combining the responses to several questions of to what degree marriage immigrant wives are satisfied with their overall living conditions and their relationship to their Korean husbands. Women from the Philippines show the highest satisfaction score (45.7) followed by women from Mongolia (43.7), while the lowest satisfaction score was reported by Vietnamese women (39.3).

Noted differences in the residing area by the nationality of the marriage immigrant wives (Kim, 2006) are confirmed in this study. The majority of foreign wives live in non-metropolitan areas (63.4%) and 13.6% live in Seoul. About 20% of Korean-Chinese live in Seoul, whereas less than 9% of Filipinas and Vietnamese live in Seoul. Also, over 70% of women from the Philippines, Vietnam, and Mongolia live in non-metropolitan areas. Those who come to Korea through arranged marriage by a broker, mostly Vietnamese and Filipinas, tend to live in non-metropolitan areas, while those who enter Korea to work, mostly Korean-Chinese and Han-Chinese, tend to live either in Seoul or in other metropolitan areas.

The average proportion of the foreign wife population within a county among those who registered their marriage during 2010 is 11.0%. It is higher for Filipinas (13.1%) and
Vietnamese (12.2%) but is lower for Korean-Chinese and Han-Chinese (10.0%). Variations in the proportion of the foreign wife population according to nationality are in line with the proportions of rural residents. A strong positive association is found between the two variables at the aggregate level. As for living arrangements, the proportion of living with the husband’s parents is 30.0%. The proportion is also different by nationality and may be related to their residing areas. For example, almost half of the Vietnamese (46.8%) and 35.9% of the Filipinas live with their parents-in-law. However, the proportion is low for Korean-Chinese (17.2%) and Han-Chinese (24.9%).

**Descriptive Statistics of the Fertility Differentials by Peer Effects and Household Composition**

As shown in Figures 1 and 2, the average number of children per 1,000 foreign wives at county level is highly correlated with the proportion of the foreign wife population. The Pearson’s correlation coefficient between the two variables is estimated at 0.63. This association is particularly distinctive in non-metropolitan areas. Counties with high birth rates of foreign wives and those with high proportions of foreign wife population are concentrated in rural areas in the southwestern (Jeolla province) and eastern parts (Gyeongsang province) of the Korean peninsula. This reflects the current Korean circumstances in which many men in rural areas have no choice but to marry women from other countries.

It is clear in Figure 3 that the total number of children and children ever born to foreign wives tend to increase as the proportion of the foreign wife population in a county increases. However, plans to have additional children do not show a clear association with the ethnic composition in a certain area. Not only fertility level but also birth interval is related to the proportion of foreign wives in a county (refer to Figure 4). It is not distinct for the interval between marriage and the first childbirth, but shortens the interval between the first and
Figure 1
Regional Variations in the Percentage of Foreign Wife Population and the Average Number of Children per Thousand Foreign Wives, 2010

(a) Percentage of Foreign Wife Population  (b) Average No. of Children/ 1,000 Foreign Wives

Figure 2
Scattergram of the Percentage of Foreign Wife Population and the Average Number of Children Ever Born per Thousand Foreign Wives, 2010

second childbirths. Considering that transnational couples on average show only an 18 month interval between marriage and the first childbirth, ethnic composition within a county does
not seem to influence the duration period for the first childbirth of foreign wives.
Depending on the nationality, the fertility level of foreign wives varies. As shown in Figure 5, Filipinas have the highest number of children, while Han-Chinese have the lowest. The high proportion of foreign wives in a residing area seems to be correlated with a larger number of children. This pattern is especially noticeable among Korean-Chinese and Filipinas. Korean-Chinese and Filipina wives have a higher fertility level and show a higher correlation with the proportion of foreign wives in an area. In particular, the fertility level of Korean-Chinese shows an abrupt increase over a certain proportion of foreign wives. The fact that Filipinas and Korean-Chinese make up the majority of foreign wives in many areas and that their duration of marriage tends to be longer than those from other countries may explain the higher level of fertility and stronger peer effects among them. Religious factors such as being Catholic or Unification Church goers can also be an important factor of high fertility for women from the Philippines.
The association between ethnic composition and birth interval is also different by nationality. As shown in Figure 4, the duration between marriage and the first childbirth does not show much difference. However, Figure 6 reveals variations in birth interval between the first and the second childbirths. As for the birth interval, Korean-Chinese and Han-Chinese tend to have a longer interval, while Vietnamese have the shortest one. This difference can be attributed to the different reasons for marriage immigration and individual characteristics such as age and remarriage. For example, Korean-Chinese and Han-Chinese are older and the remarriage rate is substantially higher than for Vietnamese. As for the peer effects on the birth interval, the overall pattern shows a negative relationship. However, as the proportion of foreign wives in a county increases, the negative effect of it on birth interval is clear for Mongolian, Han-Chinese, and Korean-Chinese wives.
Table 2 shows that place of residence, living with the husband’s parents, and proportion of the foreign wife population in a county are consistently related with the average number of children of foreign wives. The average number of children of those living in metropolitan areas is slightly lower (0.81) than that of those living in non-metropolitan areas (0.95). Those who live with their parents-in-law have a slightly higher average number of children (0.96) than those who live independently (0.87). Regardless of the place of residence and co-habitation status with their parents-in-law, a proportion of the foreign wife population is positively related with the average number of children.

The results of ANOVA show significant differences in the number of children and the birth interval by the proportion of foreign wives in an area. With increases in the proportion of foreign wives in an area, the average number of children increases and the birth interval shortens. Although the average number of children is 0.90, it becomes over 1.00 when the proportion of foreign wives becomes larger than 15% of the population in the area. Similarly, the average duration between marriage and the first childbirth decreases below 18 months.
when the proportion of marriage immigrant wives is larger than 15% of the population in the area. The birth interval between the first and the second child also significantly decreases as the proportion of foreign wives in the county increases.

As shown in Table 3, those living with their husbands’ parents tend to have more children than those who live independently, showing that the average number of children for the former is 0.96 and for the latter is 0.87. Living with the parents-in-law is more likely to be associated with a shorter birth interval than living independently. This association is more distinct for the interval between the first and the second childbirths. For example, the average duration between marriage and the first childbirth of those who live with the parents-in-law is 16.7 months, whereas that of those who live independently is 18.8 months. The interval between the first and second childbirths of the foreign wives living with the husband’s parents is 27.1 months, whereas that of those living independently is 31.7 months.

Various descriptive statistics document the fertility differentials by nationality of

<table>
<thead>
<tr>
<th>% of foreign wife population</th>
<th>CEB</th>
<th>Interval b/w Marr &amp; 1st B</th>
<th>Interval b/w 1st B &amp; 2nd B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>0 – 4.9</td>
<td>0.82</td>
<td>1,349</td>
<td>18.9</td>
</tr>
<tr>
<td>5.0 – 9.9</td>
<td>0.84</td>
<td>23,333</td>
<td>18.6</td>
</tr>
<tr>
<td>10.0 – 14.9</td>
<td>0.88</td>
<td>10,870</td>
<td>18.2</td>
</tr>
<tr>
<td>15.0 – 19.9</td>
<td>1.05</td>
<td>4,255</td>
<td>17.1</td>
</tr>
<tr>
<td>20.0 – 24.9</td>
<td>1.10</td>
<td>3,086</td>
<td>16.6</td>
</tr>
<tr>
<td>25.0 or over</td>
<td>1.22</td>
<td>1,334</td>
<td>17.5</td>
</tr>
<tr>
<td>Total</td>
<td>0.90</td>
<td>44,227</td>
<td>18.1</td>
</tr>
</tbody>
</table>

F ratio                     | 140.03* | 9.43** | 22.58** |

Co-habitation w/ H’s parents
|                          | Mean | N   | Mean | N   | Mean | N   |
| Live together            | 0.96 | 13,369 | 16.7 | 8,697 | 27.1 | 2,930 |
| Live apart               | 0.87 | 30,858 | 18.8 | 17,476 | 31.7 | 6,740 |
| Total                    | 0.90 | 44,227 | 18.1 | 26,173 | 30.3 | 9,670 |

F ratio                     | 104.15* | 114.29** | 96.56** |

Notes: *: p < 0.01.
Source: MOHW et al. (2010); CSMR (2012).
marriage immigrant wives. The association between ethnic composition in the county and the average number of children and birth interval is consistently presented. Household composition is also shown to be related to the average number of children and the birth interval.

**Peer Effects and the Impact of Household Composition on the Fertility of Marriage Immigrant Wives**

A series of multivariate regression analyses were conducted to determine the independent effect of the ethnic composition environment and household composition with major socioeconomic and demographic variables being controlled. Compared to Korean-Chinese, the fertility level of Han-Chinese and Vietnamese is significantly low while that of Filipinas is high. Age of marriage immigrant wives and their spouses is positively related with the average number of children, which can be attributed to the correlation between age and duration of marriage. In contrast, age at marriage and remarriage of marriage immigrant wives and their spouses are negatively associated with fertility level. High age at marriage can be related with relatively short duration of marriage and low fecundity. Those who remarry may already have children from a previous marriage, which in turn delays or depresses childbirth.

Korean husbands at a high educational level or white-collar workers tend to have a small number of children. Current working status or previous working experiences of marriage immigrant wives tend to lead to a smaller number of children. Those who live in Seoul have a lower number of children than those who live in other areas. The proportion of the foreign wife population in a residing area and household composition, the focus of this paper, are significantly related with the number of children after controlling for other variables. A high proportion of foreign wives and living with parents-in-law increase the
### Table 4
Regression Analysis of Factors Related to the Number of Children Ever Born and the Duration Period between Marriage and Child Birth

<table>
<thead>
<tr>
<th></th>
<th>CEB (Model 1)</th>
<th>Dur_Marr_First B (Model 2)</th>
<th>Dur_First B_Second B (Model 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>beta</td>
<td>b</td>
</tr>
<tr>
<td>Han Chinese wife</td>
<td>-0.07**</td>
<td>-0.03</td>
<td>0.44</td>
</tr>
<tr>
<td>Vietnamese wife</td>
<td>-0.04**</td>
<td>-0.02</td>
<td>1.14**</td>
</tr>
<tr>
<td>Filipina wife</td>
<td>0.17**</td>
<td>0.06</td>
<td>0.01</td>
</tr>
<tr>
<td>Mongolian wife</td>
<td>0.00</td>
<td>0.00</td>
<td>0.61</td>
</tr>
<tr>
<td>Age of wife</td>
<td>0.05**</td>
<td>0.48</td>
<td>0.53**</td>
</tr>
<tr>
<td>Age of husband</td>
<td>0.05**</td>
<td>0.45</td>
<td>0.48**</td>
</tr>
<tr>
<td>Education years of wife</td>
<td>0.01</td>
<td>0.01</td>
<td>-0.04</td>
</tr>
<tr>
<td>Education years of husband</td>
<td>-0.02**</td>
<td>-0.02</td>
<td>0.19</td>
</tr>
<tr>
<td>Age at marriage of wife</td>
<td>-0.06**</td>
<td>-0.56</td>
<td>-0.59**</td>
</tr>
<tr>
<td>Age at marriage of husband</td>
<td>-0.06**</td>
<td>-0.50</td>
<td>-0.61**</td>
</tr>
<tr>
<td>Wife’s remarriage</td>
<td>-0.30**</td>
<td>-0.15</td>
<td>4.12**</td>
</tr>
<tr>
<td>Husband’s remarriage</td>
<td>-0.17**</td>
<td>-0.09</td>
<td>2.47**</td>
</tr>
<tr>
<td>Husband’s white-collar job</td>
<td>-0.02**</td>
<td>-0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Wife’s working experience</td>
<td>-0.08**</td>
<td>-0.04</td>
<td>3.22**</td>
</tr>
<tr>
<td>Wife’s current working</td>
<td>-0.26**</td>
<td>-0.15</td>
<td>-1.57**</td>
</tr>
<tr>
<td>Marital satisfaction</td>
<td>0.00**</td>
<td>0.03</td>
<td>-0.01</td>
</tr>
<tr>
<td>Seoul resident</td>
<td>-0.06**</td>
<td>-0.02</td>
<td>1.00**</td>
</tr>
<tr>
<td>Non-metropolitan resident</td>
<td>0.01</td>
<td>0.01</td>
<td>0.34</td>
</tr>
<tr>
<td>% of foreign wife population</td>
<td>0.01**</td>
<td>0.06</td>
<td>-0.06**</td>
</tr>
<tr>
<td>Living w/ the husband’s parents</td>
<td>0.02**</td>
<td>0.01</td>
<td>-0.36</td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.25</td>
<td></td>
<td>18.10**</td>
</tr>
</tbody>
</table>

Number of cases 39,204 23,418 8,781

\[ R^2 \] 0.38 0.09 0.10

\[ F \text{ ratio} \] 1,214.62** 115.87** 50.64**

Note: 1) †: p<0.1; ‡: p<0.05; **: p<0.01.

2) Han Chinese wife (Han Chinese wife=1, others=0); Vietnamese wife (Vietnamese wife=1, others=0); Filipina wife (Filipina wife=1, others=0); Mongolian wife (Mongolian wife=1, others=0); Wife’s remarriage (remarried=1, others=0); Husband’s remarriage (remarried=1, others=0); Husband’s white-collar job (white-collar=1, no=0); Wife’s working experience (worked in the past in Korea=1, did not work=0); Wife’s currently working (work currently=1, doesn’t work=0); Living with the husband’s parents (live together=1, live apart=0); Seoul resident (live in Seoul=1, live in other regions=0); Non-metropolitan resident (live in non-metropolitan area=1, live in other regions=0).

Source: MOHW et al. (2010); CSMR (2012).

average number of children.

Results of the regression analysis examining the effects of ethnic composition in a
county and household composition on birth interval are also presented in Models 2 and 3 in Table 4. In general, a short birth interval tends to increase the fertility level. As for birth intervals, the sample is limited to those who already gave birth. Therefore, those who did not give birth after marriage, and those without an additional child after the first child, are excluded from the analyses of Model 2 and Model 3, respectively.

Compared to Korean-Chinese, Vietnamese women have a significantly longer interval between marriage and the first childbirth, and Filipinas show a significantly shorter interval between the first and the second births. Age of foreign wives and their spouses increases birth intervals. Education is positively associated only with intervals between the first and the second births. Age at marriage shortens birth intervals, whereas remarriage lengthens birth intervals. The wife’s working experience tends to lengthen birth intervals, but current working status tends to shorten birth intervals. Although a conclusive interpretation cannot be made based on the analysis, it is likely that those who have worked in the past might delay childbirth in order to extend their working status. In contrast, those who are currently working may compress birth intervals in order to minimize career disruption only if they want to have an additional child. Foreign wives living in Seoul show a relatively longer birth interval for the first childbirth compared to those living in other areas.

After controlling for the effects of all the other variables, the proportion of marriage immigrant wives in a county and co-habitation status with the husband’s parents are significantly related to birth intervals. Living with the parents-in-law shortens the birth intervals, particularly for the interval between the first and second childbirths. Because giving birth after marriage is still considered to be the social norm, and the average interval is within 2 years of marriage, household composition does not influence the birth interval between marriage and the first childbirth. In contrast, having an additional child and the birth interval
can be selective, which gives room for household composition to have an influence. A large proportion of foreign wives in an area significantly shortens the intervals both for the first and second child. This relationship reflects the stronger influence of peer effects than household composition on birth interval.

The results of ANOVA and multivariate regression analysis support our hypotheses and confirm that peer effects and the impacts of household composition are maintained after controlling for the effects of other variables. As the proportion of foreign wives increases in a county, the mean number of children increases and the birth interval shortens. Those who live with the husband’s parents tend to have more children and have a shorter interval between the first and the second childbirths.

**Concluding Remarks**

Korea has long been considered to be ethnically homogeneous. Despite the recent massive influx of marriage immigrant wives and foreign workers, discrimination is still experienced by these groups. Therefore, marriage immigrant wives confront difficulties in being accepted by Korean people. Insufficient information about their prospective spouse and Korean society because of the marriage process by a broker worsens their minority status. As a result, a peer group comprised of other foreign wives in similar circumstances is crucial for marriage immigrant wives to adjust themselves to Korea.

This paper examines peer effects on the fertility behavior of marriage immigrant wives. Human beings consistently interact with others and assert a mutual influence. Such effects have long been considered important in order to understand social phenomena. In this paper, peer effect is measured by the proportion of foreign wives in a county. In order to examine the differentials in fertility among marriage immigrant wives and the causal mechanisms, this
paper employs a minority status perspective and hypotheses of peer effects on reproductive behavior. Combining both an individual and an aggregate level of data allows us to explore whether or not the proportion of foreign wives in a residing area and household composition influence the fertility of marriage immigrant wives.

The results of multivariate regression analysis show that the ethnic composition environment exerts an independent effect on fertility, apart from socioeconomic and demographic variables. The propensity to have children *ceteris paribus* rises substantially among marriage immigrant wives who live in areas with a large population of transnational couples. Despite the different national and socioeconomic backgrounds, marriage immigrant wives are prone to form a bond of sisterhood in response to their disadvantageous status. Particularly in rural areas, marriage immigrant wives may have a higher desire for a support group to share information, emotional support, and costs and benefits in terms of pregnancy and childcare. With increases in the number of foreign wives in an area, institutional support by the government may also be strengthened, which facilitates their reproductive behavior.

The evidence is also consistent with the effect of household composition. When a foreign wife lives with her husband’s parents, she is likely to have more children at shorter birth intervals. The effects of household composition may be distinct in Asian countries, showing familism operating in a way to raise the fertility level either by providing assistance for childcare or by exerting parental pressure to succeed family lineage.

This paper attempts to expand the explanatory variables from the individual level to the aggregate level by examining the effects of peer group and household composition. It contributes to expand the research sphere and to improve our understanding of marriage immigrant wives’ fertility. However, this paper also has some limitations. Due to the lack of data, the proportion of marriage immigrant wives in a county is not differentiated by
nationality. Also, the high concentration of foreign wives in a residing area does not directly lead to formation of social capital or social networks of an individual marriage immigrant wife. However, it is assumed that a high concentration of foreign wives provides favorable circumstances to form social capital or to receive institutional support. When more detailed information is obtained, peer effects will be examined in a more sophisticated way.

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