

# The Preference Changes in Spouse Selection in Japan: New Evidence from Marriage Behaviors in 2002 and Onwards

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## 1. Introduction

This study examines the latest marriage behavior of Japanese women in 2002 and onwards. Theoretical focus of this study is the relationship between women's economic standings and marriage formation in a gender-traditional society. Japan is one of a few developed countries where women's higher earnings potential and marriage formation are negatively associated (Ono 2003, Raymo 2003, Raymo and Iwasawa 2005). Previous studies suggest growing women's economic independence (Ono 2003, Raymo 2003) or in addition to that, persistent women's desires for hypergamy (Raymo and Iwasawa 2005) explains the consistently observed negative relationship between women's higher earnings potential and later and less marriage in Japan until the 1990s.

Does this explanation still hold for recent marriages in Japan? By using the latest and largest panel data of young adults in Japan, this study examines the effects of women's economic standings on marriage intensity in Japan. The effects of women's education and earnings on probability of marriage in a given age are investigated by the Shared Unmeasured Risk Factor (SURF) model (Hill, et. al. 1993), an advanced model of the discrete-time hazard analysis. By taking advantages of the longitudinal data, this study also takes into account women's gender attitude and career orientation to control for the heterogeneity among women with similar socioeconomic statuses. The results show a new evidence of the effects that women's economic standings have reversed and are now positive with respect to marriage. We interpret the results as new evidence of the preference change in spouse selection in recent marriages. This paper discusses the theoretical implications behind the change.

## 2. Backgrounds

Both sociological and economic theories of marriage emphasize the concept of specialization and exchange (e.g., Becker 1981; Persons 1949). In his economic theory of marriage, Becker (1981) argues that gain from marriage is maximized when a man and a woman are specialized in either market or household activities and pool the outputs within the couple. In a modern society where typically men have comparative advantage to women in labor market and women thought to be comparatively advantageous to men in domestic labor, gain from marriage is maximized when the husband is specialized in market production and the wife is specialized in household tasks (Becker 1981). Thus, growing women's economic independence observed by the upward trends of women's higher education and labor force participation increasingly reduces the desirability of marriage. Becker (1981) argues that women's economic

independence is a major cause of the later and less marriage in today's developed countries, so called the women's economic independence hypothesis.

While the women's economic independence hypothesis enjoys its popularity, recent studies on marriage in western countries show increasingly less support for the theoretical base of the specialization and trading model of marriage. Those studies use individual level data to investigate the relationship between women's earnings potential such as education, employment and earnings, and marriage intensity. They found no relationship or even positive relationships if anything, between women's economic standings and marriage intensity (see Oppenheimer 1997).

The international comparisons of marriage formation, however, suggest that the relationship between women's economic standings and marriage intensity differ according to the gender context in a society (Blossfeld 1995, Ono 2003). Those studies found that women's higher earnings potential such as educational attainment or annual earnings, positively relate to marriage hazards in countries with higher gender equality while they have negative effects on marriage hazards in countries with relatively strong gender division in work and family life. Traditional gender division within the family is fundamental to the theoretical base of Becker's theory. Therefore, the validity of the economic theory of marriage is depending on how much gender-traditional families are commonly supported within the society.

By its high prevalence of asymmetric gender roles within the family, Japan has been one of a few countries where economic theory of marriage still has explanatory power for marriage behaviors. Previous studies found support for Becker's theory by showing that women's education (Raymo 2003, Raymo and Iwasawa 2005) and earnings (Ono 2003) have negative effects on marriage formation in Japan. In their study of marriage market in Japan, however, Raymo and Iwasawa (2005) provides evidence that not only women's economic independence but also female status hypergamy plays a major role to explain the negative relationship. In their study, they examined the effects of the compositional change in educational attainment of women on education-age specific marriage rates between 1980 and 1995 (Raymo and Iwasawa 2005). Their results indicate that one-fourth of the decline in marriage rate among university-educated women is explained by the changes in availability of potential spouses. Given the rapid expansion of women's university education, women's desires to marry men of higher socioeconomic status than themselves are causing marriage squeeze of highly educated women by suppressing the relative supply of better or similarly qualified men. They call this explanation as the marriage market mismatch hypothesis (Raymo and Iwasawa 2005). Raymo and Iwasawa (2005) also note that controlling for the compositional changes in educational levels, Japanese women with university education have lower propensity to marry than women with high school education between 1980 and 1995. They speculate that higher earnings potential of university-educated women lowers the desirability of marriage in Japanese society "where asymmetric gender relations make it difficult for women to combine work and family" (Raymo and Iwasawa 2005, pp. 817). Therefore, it is suggested that a combination of women's increasing economic independence and women's persistent desires to "marry up" explains the negative relationship between women's high earnings potential and marriage intensity in Japan.

### 3. Motivations

Supports for both the women's economic independence hypothesis and the marriage market mismatch hypothesis (Raymo and Iwasawa 2005) imply that the general preference in spouse selection in Japan is female status hypergamy (or male status hypogamy) followed by the norm of the male-bread winner family type. As a result, women of high socioeconomic status (or men of low socioeconomic status) marry later and less than their counter parts (Raymo and Iwasawa 2005). Now the research question of this study is whether observed preferences in spouse selection continue in the same way in recent marriages.

There are a number of reasons to suspect that spouse selection preferences to be changed in the latest marriages. First, women's enrollment rate to university continuously increase at faster pace than men's during the 1990s and onwards. The ongoing rapid changes in educational compositions in marriage market causes decline in the relative supply of men of similar or higher educational attainment. The marriage squeeze of university-educated women may facilitate preference changes in spouse selection by relaxing social constraint of women to marry with men of lower educational attainment, thus, lower socioeconomic status than themselves (Blossfeld and Timm 2003). In contrast to university-educated women, university-educated men are having more supply of women with university education in marriage market. Thus, structurally university-educated men have more chance to marry within the same educational group. This certainly contributes to declining the tendency of men's hypogamy and women's hypergamy in recent marriages. Second, due to the prolonged economic recession during the 1990s, men's economic status relative to women decline significantly in Japan. Therefore, it is possible that men's preference in spouse selection changed from those of male status hypogamy to homogamy or even to male status hypergamy for those men of low socioeconomic status. Men's preference changes should have taken place during the 1990s as a result of the increased economic uncertainty in the labor market positions of young adults. These scenarios suggest that women with higher earnings potential are increasingly more likely to be chosen as a spouse by men with both high and low socioeconomic statuses in recent marriages.

By taking advantages of longitudinal data, this study also overcome several potential weaknesses that previous studies possessed. First of all, the roles of education are sometimes ambiguous in the previous studies due to the unobserved heterogeneity within the same educational group. Previous studies on women's earnings potential and marriage typically use education as the measure of earnings potential due to the retrospective nature of the dataset (Blossfeld 1995, Raymo 2003, Raymo and Iwasawa 2005). Education is generally a poor proxy of earnings potential and reflects many aspects of individual's characteristics, values and preferences (Sørensen 1995). Therefore, what education reflects are certainly not only earnings potentials but also other things such as intelligence, quality of social networks and preference in life style. This study uses women's annual earnings as well as education in the models. Although annual earnings are not necessarily better measures of women's earnings potential (Xie, et. Al. 2003), it is worth examining if the similar patterns can be replicated by other proxy of earnings potential and how effects of education will change after controlling for earnings.

Similarly, previous studies also fail to take into account women's family values and career

orientations. The marriage market mismatch hypothesis implies women's desires to be economically dependent on men while the women's economic independence hypothesis assumes increase in women's independence from men (Raymo and Iwasawa 2005). Therefore, co-existence of two hypotheses suggests high degree of heterogeneity in women's attitudes to family life and career among the same educational group (Raymo and Iwasawa 2005). The situation that both more family traditional (less career oriented) and less family traditional (more career oriented) women marry later and less because of their high earnings potential explains spread of such low prevalence of marriage in Japan. Given rapid rise in women's university enrollment rates, this explanation has tremendous importance not only to explain current marriage behavior but also to project future trend of Japanese marriage.

This study explores the two hypotheses, the marriage market mismatch hypothesis and the women's economic independence hypothesis, by directly investigating the effects of women's attitudes to gender roles and career orientation on marriage formation. Gender attitude and career orientation are both asked in the first wave of the survey. Gender attitude is measured by asking respondents who should take responsibility for each of three family domains such as household income, household tasks and childrearing. The answers are given by either "mainly husband", "mainly wife", "both husband and wife" or "don't know" to each item. Career orientations are measured by asking women if they want to continue their current job after marriage or birth. By using these items, this study investigates 1) the net effects of gender attitude and career orientation and 2) interaction effects of 1) and covariates on women's economic standings such as education and earnings, on marriage probabilities in a given age. The first investigation reveals whether Japanese marriage is based on specialization and trading model of marriage. If marriage in Japan is still based on specialization and trading model of marriage, more traditional gender attitude and less career orientation are positively related to marriage formation, net of women's socioeconomic status. Moreover, the effects of women's economic standings are expected to be different according to women's gender attitude or career orientation. In the second investigation, women with more traditional gender attitude (or less career-oriented) are expected to have stronger negative relationships between their economic standings and marriage intensity if marriage market mismatch hypothesis stands. On the other hand, less traditional gender attitude (or more career-oriented) will strengthen the negative effects of women's economic standings on marriage intensity if the women's economic independence hypothesis is supported.

#### **4. Data and Methods**

The data is from the 1st to 5th wave of the Longitudinal Survey of Young Adults in the 21st Century (LSYA21), conducted by the Ministry of Health, Labour and Welfare. The LSYA21 is an ongoing annual panel survey started from November 2002. The samples are initially consisted with men and women aged 20-34 and their spouses who are randomly drawn from nationwide sampling blocks in October 2002. Total of 35,448 men and women are subject for the first wave sampling and 29,052 of them validly responded the survey. Thus, valid response rate was 82.0% which is exceptionally high comparing with other panel data.

Respondents are asked to self-administrate the questionnaire by the drop-off and pick-up method. The mail survey is additionally conducted with the same questionnaire for the respondents who had moved from the initial residential address. The survey is designed to capture the changes in marital status, family compositions, employment, values and attitudes to work and family of young adults in 2002 and onwards. Therefore, the LSYA21 is one of the most reliable and suitable data in Japan to examine our research questions.

The analyses are conducted by the SURF model (Hill et. al. 1993), an advanced model of the discrete-time hazard analysis. Due to the relatively large amount of non-random attrition, it is not appropriate to treat attrition as right censoring in the analysis. The attrition rates in a risk population are 10-15% each year while corresponding marriage occurrences are 4-6%. Furthermore, attrition is non-random to marriage because of a number of reasons. First, marriage is a strong reason for moving. Generally, moving makes it difficult to follow the respondents. Especially, the LSYA21 follows those movers via mail survey which leads much lower response rate than the drop-off and pick-up method. Second, attrition study of other Japanese panel survey finds that engagement as a strong predictor of attrition in the subsequent year (Sakamoto 2006). Objection from the groom or from family of the groom is a strong reason for brides to refuse further participation of the survey (Sakamoto 2006).

When attrition is not randomly occurred to marriage but treated as censoring, the assumption of the random censoring will be violated. Violation of random censoring assumption causes serious bias to parameter estimation (Allison 1995). To avoid risk of the severe bias, attrition is treated as a competing event in my analysis. As a part of attritions is actually marriage, their observable and unobservable determinants share much in common. When unobservable determinants of competing events are correlated, a normal procedure of competing risks hazard model such as discrete-time multi-nominal logit model is not appropriate since the prerequisite assumption of Independence of Irrelevant Alternatives (IIA) is not full-filled (Hill et. al. 1993). Therefore, I use the SURF model (Hill et. al. 1993) to allow for the correlation between unobserved heterogeneities of marriage and attrition. The same application of the SURF model to adjust for attrition in event-history analysis is extensively discussed by Hill (1997).

The analytical samples are 7,588 single women in the first wave survey. Their marriage occurrences between wave 1 and wave 5 are modeled as the probability of marriage in a given age. Explanatory variables are education, annual earnings, gender attitude and career orientation. Control variables are age, period, occupation, living arrangements, SMAM in residential prefecture and marriage intention.

## **5. Expected Results**

Several results are expected from this study. First, according to the preliminary analysis of the 1st to 4th waves of the LSYA21, both women's higher education and higher earnings are positively relating to marriage formation in 2002 and onwards. Although the observation period will be one year longer and the model specification will be slightly different from the preliminary analysis, the same result is expected to be hold in the final analysis. The new result indicates changes in preferences in spouse selection from those

of female status hypergamy to homogamy or even to female status hypogamy in Japan.

Second, the effects of gender attitude and career orientation on marriage formation will be displayed. If marriage in Japan is based on specialization and trading model of marriage, more traditional gender attitude and less career orientation are positively related to marriage formation, net of women's socioeconomic status.

Finally, the marriage market mismatch hypothesis and the women's independent hypothesis are examined by testing the interaction effects of gender attitude (or career orientation) and women's economic standings such as education and earnings. Women with more traditional gender attitude (or lower career orientation) are expected to have stronger negative relationships between their economic standings and marriage intensity if marriage market mismatch hypothesis stands. On the other hand, less traditional gender attitude (or higher career orientation) will strengthen the negative effects of women's economic standings on marriage intensity if the women's economic independence hypothesis is supported.

These expected results imply that Japanese marriage might become more resemble to those of western countries such as the U.S., Australia and Sweden where women with high earnings potential are more likely to marry than those with low earnings potential. What drives this change may be the fact that the male bread-winner type family becomes increasingly out of fit to the reality due to the economic uncertainty of young men. The results clearly show the shift in preferred family type from those of the male bread-winner to dual-earner type. Therefore, this study suggests that the unfitness of the traditional marriage/family type finally causes change in norms of ideal family type among young adults in 21st century Japan.

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