Economic Foundation of Marriage in the Context of Labor Market Changes: A U.S. – Japan Comparison

So-jung Lim

University of Wisconsin-Madison,

Center for Demography and Ecology &

Department of Sociology

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Abstract

Using the nationally representative panel data from the U.S. (NLSY79) and Japan (JPSC), this study examines to what extent the recent shifts in economic structure and substantial labor market changes under the process of economic globalization are associated with one of the key behaviors in recent family changes, transition into first marriage. Results from the discrete-time hazard models show that better standing in the labor market is associated with greater odds of marriage among the U.S. women. This relationship remains significant after controlling for school enrollment and educational attainment. This finding is consistent with research on the effects of labor market status on union formation for the U.S. men and suggests that it may be useful to broaden our conceptualization of women's economic standing in examining economic foundations of marriage. On the contrary, for Japanese women, employment, regardless of employment type, is negatively associated with marriage. This study finding confirms the literature that income independence hypothesis appears to have an explanatory power in settings with high level of gender inequality within an institution of marriage.

During the past few decades, we have observed dramatic changes in marriage and family in industrialized countries. Many such changes, like delaying marriage and increases in both cohabitation and divorce rates, have received a great deal of attention and concern. Debates about "family decline" in the U.S. (e.g., Popenoe 1993) and the "second demographic transition" (e.g., Leschaeghe 1995; Van de Kaa 1994) are two such examples. The economic conditions of men and women have been at the core of the theoretical and empirical arguments surrounding rapid changes in marriage and family. For example, some have argued that increase in women's labor force participation is related to declines in marriage rates (e.g., Becker 1981), while others have emphasized the importance of economic prospects and changes in the labor market positions of both men and women in understanding recent family changes (e.g., Oppenheimer 1988, 1997; Sweeney 2002).

Given this theoretical and empirical background, recent shifts in economic structures and substantial changes in the labor market should have important implications for the changes in marriage and family that we have observed. Of particular importance is the expansion of nonstandard employment in the process of economic restructuring and globalization since 1970s. When it comes to increases in the proportion of workers employed in nonstandard positions, the U.S. is no exception to the global trend; according to the CPS, more than one-third of Americans over the age of 17 working in the paid labor force in 1995 held nonstandard jobs.

Both theoretical expectations and existing empirical evidence suggest that some of the primary characteristics of nonstandard employment such as low wages, job instability, and lack of benefits will have an important impact on family behaviors. One's status in the labor market and economic prospects, for instance, is among the most important determinants of transition to marriage (Oppenheimer 1997, 2003) and economic factors have been increasingly important for

marriage for both men and women (Sweeney 2002). Furthermore, changing employment relations and rising job insecurity, as seen in the growth in non-standard employment, have contributed to change dramatically the traditional meaning of work and have produced differential uncertainty and vulnerability in economic prospects depending on individual resources and the broader institutional context (e.g., Kalleberg 2009).

Taken together, one might expect that the changing labor market and the resultant expansion of nonstandard employment would be associated with recent changes in family, particularly to the degree that they increased economic inequality and concentrated negative consequences among the already disadvantaged; however, this relationship has not yet been examined empirically in great detail.

In this study, I attempt to fill this gap by examining the implications of the recent expansion of nonstandard employment for one of key family outcomes, entry into (first) marriage.[1] Specifically, using the nationally representative panel data, I evaluate interrelationships between women's labor market status and marriage formation in the U.S. and Japan with different institutional contexts to see if there are any regularities or dissimilarities since economic restructuring and labor market changes are global phenomena.

Background

Globalization, labor market changes, and the expansion of nonstandard employment

After the three decades of post-war prosperity, substantial changes have occurred in economic structure and labor market since 1970s. For instance, sluggish economic growth and economic restructuring led to increase in unemployment rates and reduction in the number of family wage

[1] In this study, I focus on first marriage even when marriage order is not specified. Literature suggests that theoretical expectations with regard to the economic standing on high-order marriage may differ from those for first marriage (for a review on this literature, see Sweeney 1997).

jobs that once enabled low skill workers to support their families. Faced upon growing competition and uncertainty in a globalizing market, the cost reduction and flexibility has become more important for companies to survive in the changing economy. One of the important consequences in the labor market in such a changing economy was the altering employment relations and more importantly, the fundamental change in the meaning of work (Kallerberg 2009). Rapid expansion of nonstandard employment in industrial societies is a good example reflecting the recent labor market changes (Houseman and Osawa 2003).

Nonstandard employment, or nontraditional employment, is a term which includes part-time employment, day labor and on-call work, temporary-help agency and contract-company employment and other self-employment (Kalleberg et al 1997). The usage of the term varies across countries and the boundaries of different forms of nonstandard work often overlap (for a review on the definitions and variety forms of nonstandard employment, see Kalleberg 2000). Therefore, it may be therefore useful to understand such job arrangements in contrast with standard employment which is expected to be "done on a fixed-schedule- usually full-time- at the employer's place of business, under the employer's control, and with the mutual expectation of continued employment" (Kalleberg et al. 2000). To simplify, compared to standard employment, nonstandard employment is associated with greater flexibility in work hours (e.g., part-time work) and work place (e.g., day labor and on-call work), and lack of direct relationship between employer and employees (e.g., employment through temporary-help agency).

The growing concern with regard to the rapid increase of nonstandard jobs is connected to fact that such jobs tend to have characteristics potentially detrimental to workers relative to standard employment (Kalleberg 2009). For example, nonstandard jobs are more likely than standard jobs to provide low wages, no health insurance and no pension coverage (e.g.,

Kalleberg et al.2000). Nonstandard employees are also less likely to be protected by unions and labor laws compared to standard employees (Kalleberg et al. 2000). Therefore, to the extent that nonstandard jobs are associated with such "bad" characteristics, from the workers' perspective, the expansion of nonstandard employment in the labor market (and reduction of "good" standard jobs) would have negative consequences for life outcomes in many domains. Lower pay and long-term economic consequences of nonstandard employment, for instance, are directly related to one's economic well-being (Ferber and Waldfogel 1998). Lack of health insurance is a risk factor for health of workers' and their families (Seccombe 2000), in particular in the U.S. where there is no universal health care provided (Kalleberg 2000). Therefore, understanding the implications of nonstandard employment for individuals, families, and societies is important as the growing share of the population is affected with changing labor market (Kalleberg 2009). More importantly, the growth of nonstandard employment may be one of key factors to understand the growing socioeconomic inequality to the extent that labor market changes have differential effects depending on one's resources such as skills and human capital.

Previous studies: Implications of labor market changes for marriage

Theoretical and empirical evidence suggests that the aforementioned changes in economic structure and labor market may have particularly important implications for recent family change, in particular for understanding marriage behaviors. Theoretical explanations emphasize the importance of economic circumstances in marriage (e.g., Becker 1981; Easterlin 1978; Oppenheimer 1988; Wilson 1987) and studies have continuously confirmed the significance of one's economic standing in entry into and staying in marriage (e.g., Oppenheimer et al. 1997; Sweeney 2002: Smock). Higher education and income is positively associated with marriage

among men (e.g., Oppenheimer 2003; White and Rogers 2000) and women (e.g., Sweeney 2002; White and Rogers 2000). Employment stability and the quality of career-entry job are also found to affect the timing of marriage for U.S. men (Oppenheimer et al 1997; Oppenheimer 2003).

Therefore, theories and empirical evidence implies that, if nonstandard jobs are associated with characteristics detrimental to workers' economic well-being (and nonstandard employees have inferior status in the labor market relative to standard employees), then the expansion of nonstandard employment may have contributed to changes in marriage that we have observed in recent years. Furthermore, there is growing evidence that labor market changes exemplified by rise in nonstandard jobs may be more relevant to understand the determinants and differentials in family formation. Research findings, in particular from the qualitative studies indicate that people's perception about the economic foundation of marriage is broader than the measures commonly used in the literature such as income and education. For example, research on the "economic bar" to marriage documents that people perceive economic stability as a prerequisite to marriage, which requires achievement of a set of financial goals including secure income, employment quality, and asset accumulation (e.g., Edin and Kefalas 2005). This economic bar to marriage is found not only among lower class (Edin and Kefalas 2005) but also among working and lower-middle class (Smock et al 2005). All this evidence suggests that job instability inherent in nonstandard jobs, along with other characteristics such as low wage and lack of benefits may have an impact on the sense of economic stability, which in turn affects marriage formation.

In spite of theoretical explanations and empirical evidence examined above, very few studies have explicitly evaluated the linkages between one's status in the labor market and likelihood of marriage in the context of changing labor market, in particular with focus on the

implications of growing nonstandard employment. This study begins to fill this gap by comparing the relationship between women's economic standing in the labor market and entry into marriage in two very different contexts – the U.S. and Japan.

Contextual similarities and differences in the U.S. and Japan

As noted, the expansion of nonstandard employment has been a global phenomenon and it is therefore useful to evaluate whether the association between women's labor market status and their transition into first marriage, if any, is similar across countries with different institutional contexts. For example, differentials in labor law and employment regulations such as job security entitlements across countries make nonstandard employment more marginalized in one country relative to other countries. Some countries like Sweden, France, Belgium, The Netherlands, and Spain have labor law to enforce equal treatment between full-time standard and part-time employees (Thurman & Trah 1990) while in other countries such as the United Kingdom, Germany, and Japan, the work hours or wages of part-time employees usually are below the threshold level eligible for coverage for benefits or certain policies (Houseman 1995). Similarly, labor market characteristics including the rigidity of labor market segmentation and gender relations may also affect the quality of nonstandard jobs.

For this reason, a U.S. and Japan comparison could provide valuable insights in evaluating the extent to which women's labor market status is associated with marriage given distinct differences in their labor market and gender contexts. First, the rate of growth of nonstandard employment has been relatively fast in Japan although it has been pervasive in most countries with advanced economies since 1970s (Kalleberg 2000, 2009). According to labor statistics, nonstandard employment (as percentage of paid employment) grew from 22.6 percent

to 31.1 percent in 1997 (38 percent increase in 15 years) in Japan while it grew from 20.5 percent in 1982 to 24 percent in 1999 (17 percent increase in 15 years) (Houseman and Osawa 2003).

Feminization of nonstandard employment, in particular among part-time jobs is also peculiar in Japan where women part-time workers account for about 80 percent of all part-time employees (Kalleberg 2000). In addition to the greater share of women, nonstandard employment has some unique features in Japan. For instance, the commonly used specification of full-time versus part-time based on the working hours is not useful since many part-time workers in Japan work as similar hours as full-time workers (Nagase 2003). Whether one has a standard or nonstandard job is rather a matter of the "status" under the rigid labor market segmentation: differential treatments between regular workers with standard jobs and the remaining nonstandard employees are customary in terms of wages, benefits, and job stability. Due to high level of segmentation, nonstandard jobs also have very little room for career advancement and thus there is limited chance for nonstandard workers to move to standard positions. This pattern contrasts with that in other industrialized countries including U.S. where temporary or nonstandard work is often used as a transition to full-time work (Houseman and Osawa 2003). In addition, gender discrimination in labor market is pervasive and Japanese companies have used female labor force to protect core standard employees (who are mostly male) by assigning women in non-career track jobs, which are highly correlated with nonstandard employment (Brinton 2001). These differentials in the labor market with regard to the conditions of nonstandard workers make a U.S. and Japan comparison very useful for the research question in the present study.

At the same time, we should note that gendered labor market context, in conjunction with still pervasive gender specialization model of marriage (or gender asymmetry in the division of

domestic labor) is often hypothesized to explain weak or negative association between women's economic resources and entry into marriage (e.g., Ono 2005; Raymo 2003) in Japan. This inverse relation between women's economic circumstances such as income and education and likelihood of marriage is consistent with the "economic independence hypothesis" based on the specialization and exchange model of marriage. In specific, this hypothesis argues that better economic prospects encourage men to marry while women's economic independence has discouraging effects on marriage since it reduces gains to marriage for women (e.g., Becker 1981).

Therefore, Japan makes a clear contrast in that women's economic resources such as educational attainment (e.g., Blossfeld and Huinink 1991; Goldstein and Kenney 2001) and earnings (e.g., Sweeney 2002) have been found to increase the odds of marriage in most industrial countries (e.g., Ono 2005). Taking the U.S. as an example, the cumulative evidence suggests that both men and women with better economic prospects tend to marry and that individuals increasingly value economies of scale, reduction of economic risk, and income maximization, rather than the benefits of gender specialization within marriage (for a review, see White and Rogers 2000).

In sum, characteristics of nonstandard employment such as low wage, job instability, and lack of benefits implies that nonstandard workers may have less economic resources and/or inferior labor market stability compared to standard workers. Therefore, having a nonstandard job may be negatively associated with transition into marriage in both the U.S. and Japan if the contextual differences of two societies are not strong enough to offset the effects of differential in labor market status on marriage. Moreover, some features unique to the Japanese labor market (e.g, limited mobility from nonstandard to standard employment) indicate that we may find

stronger negative relation between nonstandard employment and likelihood of marriage among Japanese women. However, previous studies also imply that employment type might not be critical in marriage formation in the Japanese context if women's economic independence still discourages women to marry due to the gender asymmetry of division of labor within marriage (e.g., Blossfeld 1995). If it is the case, being employed (i.e., having economic resources) would be inversely associated with entry into marriage among Japanese women (e.g., Ono 2005).

Finally, provided the growing educational differentials in labor market outcomes and the high correlation of educational attainment and employment type (especially true in Japan), the association between labor force status and marriage, if any, may be explained by educational differences in labor force participation and employment type (i.e., having a standard job or not). I will also evaluate this mechanism in the following analysis.

Data and methods

Data for the U.S. come from the National Longitudinal Survey of Youth (NLSY 79). NLSY79 is a longitudinal survey of men and women born in the years 1957-64 and provides annually updated information (biennially after 1996) on labor force activity and family formation. At baseline, NLSY79 cohorts are ages 14 to 22 years old in 1979. Data for Japan come from the Japanese Panel Survey of Consumers (JPSC), an annual survey of a nationally representative sample of young women born in the years 1958-1968. The original sample was stratified by marital status, with 1,002 married women and 498 unmarried women between the ages of 24 and 34 surveyed in the first wave in 1993. In wave 5 (1997), a second cohort consisting of 201 married and 299 unmarried women was added. A third cohort (351 married and 485 unmarried

women) was recruited in wave 11 (2003). Data from the first to twelfth waves (1993-2004) are used for this study.

To construct analytic sample, for the U.S. women, I use data from 1979 to 1994 for NLSY 79 since majority of NLSY79 cohorts have already experienced marriage in early 1990s. In fact, almost 90 percent of women in the NLSY79 aged 29-37 in 1994 are married or have ever married at that time. For Japanese women, I construct full history of labor force participation and family formation for left-censored cases including those who are already married at the first observation. Specifically, in wave 5 (1997), the JPSC collected work history information from age 18 up to survey year for the first and second cohort and in wave 11 (2003) for the third cohort. Based on this information, I was able to construct full event history data containing labor market activity and family building behaviors from age 18. For the comparability, the analytic sample for Japanese women is censored at age 36 when about 90 percent of women ever experienced marriage formation.

Those younger than eighteen years old in the NLSY79 data are also excluded since Japanese data collect work history information from age 18 and early marriers may also be different from those who marry at later ages (Bumpass et al 1991). Those who were married or divorced at age 18 were also excluded since they are not exposed to any risk of first marriage. After applying these restrictions, the final analytic sample used in the analysis is comprised of 25,307 person-years of records for never-married women for U.S. and 11,102 for Japan.

In this analysis, I use discrete-time hazard models for predicting transition into first marriage. Estimating discrete-time hazard is appropriate given the outcome of interest and the nature of the data (i.e., annual survey). This method also allows me to examine how women's entry into marriage varies in relation to their status in the labor market while also taking the role

of age (baseline hazard) into account. Based on the results of preliminary analyses, I specify the baseline hazard of first marriage using linear and squared measures of age.

The risk for first marriage is assumed to start at age 18 and women in the analytic sample are censored at the earliest of the following four events: first marriage, loss to follow-up, the most recent survey or the upper age limit (i.e., 36 for the Japanese sample). The dependent variable is first marriage, which is equal to one for women who were never married at survey year (t-1) and married at survey year t and equal to zero for women who were still not married at year (t).

The independent variable of main interest is an indicator of one's position in the labor market. This variable includes three categories: not-working/unemployed (reference category), having a standard job, and having a nonstandard job. Following the criteria used in earlier studies (e.g., Ferber and Waldfogel 1998; Kalleberg 2000), I categorize part-time work, self-employment, and temporary or contract work as nonstandard jobs.

When collecting information on the labor force participation, the JPSC use categories clearly separating standard and nonstandard employment. In detail, the question on job history asks respondents to specify their annual employment status among full-time regular work, part-time work, dispatched worker from temporary labor agency, self-employed/family worker, homemaker, student, and not working. When multiple jobs are held, they are required to provide information on the job with the longest term. I combined such information on work history for the years prior to interview with the information on labor force status obtained at every survey to construct independent variable for the Japanese sample.

On the contrary, NLSY79 began to collect more direct and detailed information on nonstandard employment such as temporary and dispatch employment from 1994. Therefore, for

survey years prior to 1994, using the information on work experience (up to five jobs that respondent had by the interview time), I identified a major job that respondent had in each year with the longest duration of employment. Those whose major job is part-time (less than 35 hours per week), self-employment, or terminated due to the end of temporary or seasonal jobs are categorized as nonstandard employees (e.g., Ferber and Waldfogel 1998).

Since school enrollment may affect women's likelihood of marriage and labor force participation, particularly in the case for Japanese women (Brinton 2001), I control for enrollment status (recorded as 1 if yes). In addition, I add time-varying educational attainment as measured by the highest educational level completed at each age to evaluate whether the education is responsible for the association between labor market status and entry into marriage.

Based on findings from previous research (e.g., Sweeney 2002), I also control for father's and mother's educational attainment as a proxy for family background. All the measures are used in the analysis are time-varying variables except parental educational attainment. In addition, all the explanatory variables including labor market status, educational attainment and enrollment status used in the regression models are obtained at the previous year (t-1) in order to estimate the extent to which women's labor market status at year (t-1) is associated with their likelihood to marry at year (t).

Since the major goal of this study is to compare the relation between women's status in the labor market and the transition into marriage in the U.S. and Japan, I have kept models simple for the purpose of compatibility and in part for the reason of data limitation. For example, I constructed jog history data based on retrospective information for the years prior to survey for the Japanese women in order to follow them since they graduated from high school (at age 18) as I did for the NLSY79 cohorts. One consequence of doing this is that I cannot incorporate a

measure of time-varying income in the analysis, a potentially important mediator linking women's labor force activity and entry into marriage since information on income for the years prior to interview are not available.[2] In addition, some variables such as nonmarital fertility and cohabitation are excluded from the analysis because these family behaviors are rare and thus irrelevant to entry into marriage among never married women in Japan.

Results

Table 1 presents descriptive statistics (means and standard deviations) of the variables used in the analysis for the U.S. (NLSY79) and Japanese women (JPSC). The probability that a never married woman marries at a given year (t) is 0.10 in the U.S. sample and 0.15 in the Japanese sample. For Japanese women, age ranges between 18 and 36 and mean age is 21.6 years old. Mean age of women in the NLSY79 data is 22.8 years old (age ranges between 18 and 37).

With regard to the labor force status, the greater proportion of Japanese women is out of labor force (27 percent) relative to U.S. women (10 percent), which in part reflects the lower rates of labor force participation among students in Japan. In the Japanese sample, 24 percent of women are enrolled in school while 34 percent of the U.S. women report being enrolled. The distribution of the level of educational attainment (i.e., highest grade completed at a given year) shows that the proportions of higher education (i.e., some college or more) are comparable in two countries. However, Japanese sample has much greater proportion of women with high school education and very small proportion of women with lower education (i.e., less than high school) compared to the U.S. sample. This difference reflects nearly universal high school education in Japan resulting from the dramatic increase in the rate of high school advancement

[2] In the subsequent analysis, I plan to use information on income by gender, education, and employment type from other national data for those missing cases in the Japanese sample to evaluate the role of income as a mediator.

during the post-war (Brinton and Lee 2001). As for the parental education, the proportion of having a father or a mother with higher education (college level) is slightly greater among U.S. women compared to Japanese women.

Table 2 presents the results of discrete-time hazard models for the transition into first marriage among the U.S. and Japanese women. As described earlier, the dependent variable is an indicator of binary outcome of first marriage, recoded as 1 if a woman married in a given year (t) and 0 if stayed never-married. For easier interpretation, coefficients are presented in terms of odds ratio. Odds ratio greater than 1 indicates the higher likelihood of marriage and odds ratio less than 1 implies lower likelihood of marriage.

The baseline model includes labor force status and family background measured by parental educational attainment. It also includes the quadratic representation of age. The two coefficients for age indicate that the hazard of marriage is inversed U-shaped, with the likelihood of marriage increase with age but at some point (t = 22.6 for the U.S. and t = 29.1 for the Japanese women) this association changes in direction and hazard of marriage decreases. The differences in the baseline hazard reflect the differences in mean age for first marriage in two countries, that is, the tendency of late marriage in Japan and relative early marriage in the U.S.

As for the parental educational attainment, having a mother with less than high school education is negatively associated with first marriage compared to having a mother with high school education among the U.S. sample. Women who have a highly educated mother (i.e., college level) are also less likely than those whose mother is a high school graduate to marry. On the contrary, there are no differentials in the likelihood of marriage by father's education among the U.S. women. For Japanese women, mother's education is not significantly related to the

probability of marriage but having a highly educated father decreases the odds of marriage (reference group is those having a father with high school education).

The coefficients for the status of labor force participation and employment type in the baseline model show that U.S. women with standard jobs at year (t-1) are more likely than those out of the labor force to marry at year (t). In specific, having a standard job increases the odds of marriage by 34 percent compared to not working. Those having a nonstandard job, however, do not differ from women not employed in terms of their likelihood of marriage. As for the Japanese women, being employed, regardless of employment type, is positively associated with the transition to marriage (relative to those out of the labor force). Bivariate relationships between employment status and the likelihood of marriage from the baseline model show that a woman's position in the labor market is associated with differential transition into marriage in both countries. However, (statistical) differences in the likelihood of marriage by employment type were only found in the U.S.

As hypothesized, having a standard job which implies a better position in the labor market and a better economic standing increases the odds of marriage for women in the U.S. This finding is consistent with the literature suggesting that the model of marriage appears to have shifted to that emphasizing economic cooperation between men and women from that based on specialization and exchange in the U.S. (e.g., White and Rogers 2000) and that economic factors have become increasingly important for women to marry (e.g., Sweeney 2002). At the same time, the results for Japanese women that having an economic independence (i.e., being employed) is positively associated with the odds of marriage somewhat contrasts with the previous studies. Research on the economic foundation of marriage in the Japanese context in general reported the negative effects of economic factors (e.g., income and education) on

marriage for women although it has not explicitly examined any differentials by labor force status with regard to marriage formation.

In the second model, I add time-varying enrollment status and educational attainment (i.e., highest educational level completed at each year) to see if whether enrollment and education changes the relation between labor force participation and employment type observed in the baseline model. As noted, taking the effects of school enrollment into account is particularly important in the Japanese context since combining the roles of student and wife is extremely hard and marrying while in school is not common (Brinton 2001).

Results from the model 2 show that being enrolled decreases the odds of marriage in both countries but school enrollment reduces the odds of marriage more greatly in Japan (84 percent) than in the U.S. (24 percent). It confirms the greater difficulty of combining study and family responsibilities in Japan. More importantly, adding enrollment alters the relation between employment type and marriage observed in the baseline model among Japanese women. It suggests that the higher likelihood of marriage among employed women (relative to not working women) in the previous model is due mainly to the failure of controlling for enrollment status. In addition, for Japanese women lower education significantly increases the likelihood of marriage relative to the reference category (i.e., high school). But we should note that the proportion of Japanese women with less than high school education is very small as seen from the table 1. As for other background variables, coefficients in the second model are similar to those found in the baseline model, except that having a highly educated father loses its statistical significance.

On the contrary, adding enrollment and education does not change the association between the status of labor force participation and employment type found in the first model among U.S. women. Compared to those not working, standard employees are still 25 percent

more likely to marry although the introduction of education and enrollment reduces the odds for standard employment (8 percent reduction). Having a nonstandard job again does not differ from being not employed in terms of the odds of marriage. In other words, for the U.S. women, the likelihood of marriage varies by the type of jobs they have and this relationship remains significant, net of school enrollment and educational attainment. It indicates that the differential odds of marriage between standard employees and other women (i.e., nonstandard employees and those out of labor force) cannot be explained by education and school enrollment. This finding also suggests the need to evaluate other potential linkages between labor market status and entry into marriage such as income in future research.

Conclusions and discussion

Using nationally representative longitudinal data from the U.S. and Japan, this study evaluates whether women's labor market status is associated with the likelihood of first marriage and whether this association varies in two countries with distinct contexts, with a particular focus on the expansion of nonstandard employment in the past few decades.

Results from discrete-time event history analyses show that better standing in the labor market is associated with greater odds of marriage among the U.S. women. This finding is consistent with research on the effects of labor market status on union formation for the U.S. men (e.g., Oppenheimer et al 1997; Oppenheimer 2003). Given that most studies evaluate women's economic standing in terms of income (or wages) and educational attainment while ignoring the employment (e.g., Ono 2005; Sweeney and Cancian 2004) or using simple dichotomous measure such as being employed versus being out of the labor force (e.g., Sweeney 2002), this study result indicates that we may need to broaden our conceptualization of women's

economic circumstances in relation to marriage behavior by incorporating the importance of their labor market status.

In contrast to the findings from the U.S., being employed, regardless of employment type, is negatively associated with marriage among Japanese women. This finding for Japanese women provides supporting evidence for the independent income hypothesis and gender contextual explanations. Rigid labor market segmentation and differential treatment between standard and nonstandard employees in the Japanese labor market imply that those with nonstandard jobs may have inferior economic standing and thus have the lower likelihood of marriage compared to their counterparts with standard jobs. However, study results show that the gender asymmetrical marriage bargain seems to deter women with economic independence (obtained from participation in the labor force) to marry in Japan. In order to reevaluate these cross-country differentials in relation between labor force status and marriage formation, it would be useful to expand the analysis by including countries with varying degrees of labor market regulation and gender context such as Sweden and Germany.

My study is one of the first few studies to evaluate the implications of recent labor market changes with a focus on the rapid increase in nonstandard employment for family changes. The finding that employment type is associated with differential likelihood of marriage among the U.S. women is important and calls for the future research to more fully evaluate this relationship. However, I failed to find the linkages between nonstandard employment and lower odds of marriage and it left important research questions. For instance, which characteristics of nonstandard employment discourage women to marry – low wages, job instability, lack of benefits (e.g., health insurance and pension), or nonstandard work hours/shifts? Also, having a nonstandard job is (more) detrimental to men with regard to their family formation as other

measures for economic standing such as income, education, and unemployment were found to be important (e.g., Oppenheimer et al 1997)? To what extent do contextual differences such as labor law and the rigidity of labor market segmentation mediate or moderate the association between one's labor market status and marriage? These are all questions of potentially great importance for understanding linkages between economic circumstances and family behavior at both the individual and aggregate level. Furthermore, understanding differentials in marriage behavior in the context of changing labor market is particularly important given the growing evidence that socioeconomic factors affect family formation and differentials in family building behaviors are linked to the well-being of individuals (especially children) and contribute to the reproduction of inequality (McLanahan and Percheski 2008).

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Table 1: Sample characteristics (Means and SD), by labor force status

Variables	**U.S.**	**Japan**
First marriage	0.10	0.15
Age	22.80 (4.29)	21.57 (3.03)
Labor force status		
Not in the labor force	0.10	0.27
Standard employment	0.69	0.61
Nonstandard employment	0.21	0.13
Father's education		
Less than high school	0.40	0.37
High school	0.34	0.41
More than high school	0.26	0.22
Mother's education		
Less than high school	0.39	0.38
High school	0.40	0.48
More than high school	0.21	0.14
Enrolled in school	0.34	0.24
Education		
Less than high school	0.21	0.03
High school	0.36	0.60
Some college	0.30	0.30
College and more	0.13	0.07
Number of person-years	25,307	11,102

* Standard deviation in parenthesis

Table 2: Results from discrete-time hazard models predicting transition into first marriage in the U.S. and Japan

	U.S.		Japan	
Variables	**Model 1**	**Model 2**	**Model 1**	**Model 2**
Age	1.572	1.295	3.819	3.630
	(7.71)**	(3.90)**	(13.20)**	(12.04)**
Age (squared term)	0.990	0.993	0.977	0.978
	(8.22)**	(4.92)**	(11.25)**	(10.40)**
Labor force status				
Not in the labor force (ref)				
Standard employment	1.335	1.251	1.930	0.592
	(3.79)**	(2.88)**	(6.72)**	(3.57)**
Nonstandard employment	1.176	1.154	2.061	0.622
	(1.87)	(1.62)	(6.25)**	(3.00)**
Father's education				
Less than high school	1.060	1.082	1.041	1.004
	(1.08)	(1.46)	(0.56)	(0.06)
High school (ref)				
More than high school	1.076	1.062	0.829	0.851
	(1.27)	(1.03)	(2.25)*	(1.93)
Mother's education				
Less than high school	0.862	0.875	1.019	0.992
	(2.83)**	(2.50)*	(0.26)	(0.11)
High school (ref)				
More than high school	0.846	0.840	1.014	1.055
	(2.79)**	(2.87)**	(0.15)	(0.56)
Enrolled in school (1 = yes)		0.758		0.163
		(5.01)**		(9.27)**
Education				
Less than high school		0.833		1.809
		(2.82)**		(3.31)**
High school (ref)				
Some college		1.047		0.908
		(0.81)		(1.40)
College and more		1.378		0.926
		(4.35)**		(0.72)
Number of person-years	25307	25307	11102	11102
Log-likelihood	153.34	210.21	1081.79	1181.61

Absolute value of z statistics in parentheses

* significant at 5%; ** significant at 1%