Changing Partner Choice and Marriage Propensities by Education in Post-millennium Taiwan, 2000-2010

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Abstract

This paper applies Schoen's (1988) harmonic-mean two-sex marriage propensity approach to nationwide marriage registration data to investigate the changing educational patterns of marriage in post-millennium Taiwan. The findings show that while the recent retreat from marriage is observed across all groups, the drop in marriage rates is particularly drastic among the least educated. Marriage has become more prevalent and affordable for better educated Taiwanese. Additionally, the proportion of educationally homogamous marriages has increased, and the share of hypergamous marriages of all heterogamy also increased from 2000 to 2010. Decomposition analyses show that these changes are mainly due to a reduced magnitude in force of attraction, not to the availability of eligible partners. Differences in gender-role values and economic well-being across social groups are potential causes for these family changes. The impact of foreign brides and cohabitation on the marriage patterns observed in an era of family decline is also discussed.

Keywords: marriage, partner choice, mate selection, educational differentials, Taiwan

Acknowledgement:

This research was supported by the National Science Council of Taiwan under Grant #102-2410-H-001-073-MY2. The author would like to thank Drs. Robert Schoen and Yu Xie for valuable comments on earlier versions of this paper. The author also thanks Fen-chieh Felice Wu for excellent research assistance.

Marriage patterns in Taiwan used to be characterized by "early and universal" in the first half of the twentieth century (Lee 1994; Thornton and Lin 1994). The institution of marriage is essential to the lives of Taiwanese men and women. As economic transformations reshaped the lives of people in the last century, rapid and profound demographic transitions in family behaviors also ensued. Beginning in the latter half of the twentieth century, marriages began to be postponed and increasingly more individuals decided not to marry at all. While discussions on marriage decline in East Asia have often focused on well-educated women, emphasizing how better education and earning potential among the younger cohorts have driven down marriage rates over the years (Jones 2005; Retherford, Ogawa, and Matsukura 2001; Tsuya and Bumpass 2004), men and women from lower social classes also experienced tremendous family transitions in an era of post-industrialization. Fewer of them can afford to marry and more have experienced family disruption due to their dwindling economic standings. Both are likely to lead to a positive educational gradient in marriage behaviors. Yet, empirical research in Taiwan has not paid much attention to recent marriage differentials by education in times of economic restructuring. The current study aims to contribute to family research in East Asia by using the detailed marriage registration data to conduct an in-depth investigation of educational variations in retreat from marriage and mate selection in Taiwan. Decomposition analyses will also be conducted to investigate the sources of such changes. Additional analyses will also be carried out to explore the impact brought by the changing economy and shifting attitudes toward sex-role values and marriage as potential explanations for the differential marriage patterns observed across social groups.

Social change and family in Taiwan

The transformations of Taiwan from an agriculture-based to an industrialized economy and further to capital- and skill-intensive industries have formed the backdrop of large-scale social changes. One vivid example is reflected in family behaviors. In the first half of the twentieth

century, less than one percent of women were never married by age 50. The level of never-married men was slightly higher, but only about 2% to 5% of men were still single before turning 50. The proportion of ever married women by age 50 stayed at about 99% until 1980 and began to decline for more than three decades. As Taiwan became a post-industrialized society in the late 1990s, another phase of accelerated marriage decline is observed after the millennium. By 2010, about 10% of men and 12% of women have never been married in their late forties, which is a substantial change from the previous universal marriage pattern. All these changes have been accompanied by advancement in women's socioeconomic statuses. Since the 1970s educational expansion has taken place along with industrialization in Taiwan. Increasingly more women advance to tertiary education after finishing high schools. The proportion of female students among all college students has risen from 21% in 1960 to 36% in 1970 and further to 50% in 2010 (Ministry of Education 2012). The improvement in human capital among women has propelled a surge in labor force participation rates at prime working ages—a tremendous increase from 56% to 84% at ages 25 to 29 and from 55% to 77% at ages 30 to 34 in between 1987 and 2010 (DGBAS 1987-2010). Men and women in their twenties are the first groups to respond to the broader social and economic changes by postponing family formation events (Thornton and Lin 1994). Unmarried men and women used to be the minorities among individuals in their early thirties back in 1980—only 13.5% of men and 7.7% of women aged 30 to 34 were never married. As of 2010, over half (54.1%) of men and more than one-third (37.2%) of women in their early thirties have not entered a marital union (Ministry of the Interior 2011).

The phenomenon of Taiwanese young adults marrying less and later has been under the spotlight of public and academic discussions for years. While it is not naively assumed that the retreat from marriage is even across social classes, the attention has largely focused on well-educated middle-class women and the less educated are often absent from the debates of

how marriages can be promoted or saved. The fact that well-educated women are being "too picky" about their ideal partners (also known as the preference for a hypergamous marriage) is often referenced as one of the main causes of rising singlehood. This may seem to line up well with the Second Demographic Transition theory that maintains the better-educated lead the trend of forming fewer marital unions and having fewer children. Nonetheless, the advent of post-industrialization and a globalized economy since the late 1990s in Taiwan has resulted in massive outsourcing of manufacturing factories and manual jobs to developing countries in South Asia and China as well as an expanding service sector that attracts ever-growing numbers of female workers into the labor market. Heightened unemployment rates, widening income inequalities between classes, and a changing labor force structure by sex in a service-based economy are the new social realities. As less-educated men lost their jobs and more women entered the labor market than ever before, sex gap in earning capacity has converged substantially when compared to previous decades (DGBAS 2013). These changes inevitably affect individual life chances such as social mobility and family formations among the younger generations of Taiwanese men and women who are coming of age at the turn of the millennium. In fact, it has been documented in the literature that demographic behaviors differ across class lines in a post-industrialized context (Cherlin 2010; Esping-Andersen 1999; Furstenberg 2008; Mclanahan 2004). The socioeconomically disadvantaged is often the ones that experience more dramatic changes in family behaviors as a large proportion of them has gone through job loss and economic instability that make union formation an unaffordable dream (Esping-Andersen 1999, 2009). The least-educated Taiwanese men and women are likely the ones that show a stronger retreat from marriage than their best-educated counterparts as income inequality worsens in recent years. Furthermore, it is very likely that the best educated are marrying each other more because the high level of living standard to be sustained in a modern society requires financial inputs from both partners. Yet, studies that

focus on the socioeconomic differentials in family behaviors during the past two decades have been very scanty. Marriage patterns in contemporary Taiwan have crucial implications for social mobility and for the adults and children involved in these families. Hence, it is imperative for researchers to acquire a comprehensive understanding of the shifting patterns of nuptiality along social lines in Taiwan.

This paper aims to explore the changing educational differentials in marriage as Taiwan transitioned into a post-industrialized society over the past few decades. Applying Schoen's (1988) harmonic-mean two-sex marriage propensity approach to analyze detailed nationwide marriage registration data by age and education between 2000 and 2010, this study will examine three research questions: (1) how have partner choice and marriage behaviors vary across educational groups in Taiwan after the millennium? (2) are these changes due to changes in eligible partners or force of attraction? (3) what are the potential causes of the educational differentials in marriage behaviors observed in post-millennium Taiwan?

Conceptual frameworks

Women's socioeconomic status and marriage

Recent theoretical discussions about family decline in the developed world have focused on the impact brought by women's rising educational attainment and increasing earning capacity. The main argument is that advancement in women's socioeconomic status inevitably brings about changes in family behaviors, but how the outcomes should turn out differ across theoretical perspectives. One perspective is based on Becker's economic theory of marriage that maintains the advancement in socioeconomic attainment among women will result in lower rates of marriage (Becker 1991), which is often termed the "economic independence hypothesis." This line of argument emphasizes that the breadwinner-housekeeper division of labor within a marital union creates "gains to trade" and thus marriage is a rational choice for two individuals who wish to build a joint economic unit that maximizes productivity. It

follows that the gains to marriage is largely reduced when women gain more ground in higher education and the labor market, as they become less dependent on their spouses' income. In turn, the opportunity costs of marriage increase so that gainfully employed women tend to have lower incentive to establish a family and less time for childrearing and domestic works.

On the contrary, another perspective proposed by Oppenheimer stresses the important contribution of women's earnings in contemporary families (Oppenheimer 1997). While men are normally the sole breadwinner providing economic resources in traditional families, Oppenheimer maintains that gender specialization can be a risky strategy for coping with economic uncertainty and financial shock of a family. In contrast, when both partners contribute independently to a joint pool of earnings, a form of economic interdependency arises out of economies of scale. In modern societies where consumer prices have increased much faster than wage levels, dual-earner families certainly enjoy economic advantages over single-earner families for securing a better standard of living. In turn, the fact that women are having better education and becoming economically independent should make them more attractive marriage partners and it should raise their likelihood of marriage.

Hence, the first set of competing hypotheses for the association between education and marriage likelihood is: more education is associated with more marriages, particularly among well-educated women in recent years (H1a); or more education is associated with fewer marriages for well-educated women in recent years (H1b).

Social exchange theory on marriage

Alongside the theoretical debates about the influence of women's socioeconomic attainment on marriage patterns, how individuals select their future partners is a key process of "who marries whom." In both Becker's and Oppenheimer's arguments, an exchange of characteristics between partners form the basis of a marriage. Whether it is a breadwinner looking for a homemaker to establish a family or two breadwinners who wish to reap

economies of scale for a modern standard of living, rewards from marriage is expected through matching and exchanging valuable traits and resources between two parties.

Exchange theory on marriage has been adopted to understand both homogamy and heterogamy. While marriage choice is often characterized by homogamy where individuals with equivalent resources form unions to double the total utility, departures from it can be conceptualized as maximizing utility through exchanges of different desirable assets. The classic example for the latter pattern is the class-caste exchange between well-educated black men and white women as the most common type of black-white intermarriage in the U.S. (Davis 1941; Merton 1941). A later study by Schoen and Wooldredge (1989) also found exchanges between men's higher education and women's younger age. On the one hand, it follows that as the socioeconomic status of women improves, well-educated women may be less confined to marrying *the* typical breadwinner male partners who tend to be older and better educated than themselves and exert a wider range of choice for potential partners. In turn, a trend toward educational hypogamy may become more prevalent as women move up the social ladder. On the other hand, it is also likely that high living costs in modern societies not only make women's earnings valuable in a marriage but also cause a continued reliance on men's economic resources as a key criterion for establishing a family, and thus hypergamy still prevails.

The second set of competing hypotheses for the patterns of partner choice is: with women's improved socioeconomic status, it is hypothesized that the proportion of educational hypogamous marriages of all heterogamy will increase (H2a); or with a continued dependence on men's economic resources, it is hypothesized that educational hypergamous marriages still dominate heterogamous unions (H2b).

Past research on educational differentials in marriage

Considerable empirical evidence over the past decades has proven Oppenheimer's theory to

be more satisfactory in explaining the reality that college-educated women, though marrying later, are in fact more likely to enter a marital union than their less-educated peers in several developed societies (Goldstein and Kenney 2001; Heard 2011; Ono 2003; Qian and Preston 1993; Santow and Bracher 1994; Schoen and Cheng 2006; Schwartz and Mare 2005; Sweeney 2002). For instance, using the 1995 Current Population Survey, Goldstein and Kenney (2001) show that for women born in the 1950s and 1960s, college graduates are forecasted to be more likely to marry than their less educated counterparts, even though they tend to enter marriages later. Schwartz and Mare (2005) further used multiple waves of the U.S. census and Current Population Survey data to show college graduates are becoming more likely to marry a partner with similar education than to marry someone with lower education, and the least educated have become much less likely to marry up. Women with higher income are also reported to have higher likelihood of entering first marriages in Sweden (Ono 2003). In the other side of the globe, unions in New Zealand and Australia (i.e., marriage and cohabitation combined) are becoming more prevalent among the socioeconomically advantaged men and women in the period between 1996 and 2006. This expanding union gap between social groups is due to a slight increase in union formation among the more advantaged (i.e., better educated and with higher income) and a stronger drop in proportions currently in a union among the more disadvantaged (Heard 2011).

Empirical research in other societies has reported different socioeconomic patterns of marriage. Better educated men and women in the Netherlands who were born in the cohorts of 1920s to 1960s were more likely to remain single than their less educated peers (Dykstra and Poortman 2010). Similar negative association between education and the risk of marriage is also found in several Eastern and Southern European countries (Kalmijn 2013). In Asia, research on the social gradient of marriage has been quite scanty. The few existing studies on Japan show that well-educated Japanese women are less likely to enter a marriage than their

less educated counterparts (Raymo 2003; Raymo and Iwasawa 2005). While the findings support the economic independence hypothesis, the authors put forward a "marriage market mismatch hypothesis" to offer a context-specific explanation for this phenomenon. The fact that Raymo and Iwasawa (2005) found a substantial decline in marriage among the college-educated Japanese women is due to a shift in marriage market composition (i.e., fewer suitable educated partners) underscores women's continued reliance on men economically in a social context where heightened housing and living costs are challenging for young couples and obstacles remain for gender equality and for balancing work and family. Another relevant recent study on marriage in post-reform era China shows that while more education is associated with earlier entry into marriage in places where housing prices are high, better educated people marry later in places with low housing prices (Yu and Xie 2013). These studies demonstrate that marriage behaviors are not only shaped by an individual's social status, partner availability, and gender relations but also the broader economic context of a society.

It is likely that the negative educational gradients found in Japan also describe the marriage differentials in Taiwan, given that both societies share many similar social circumstances and cultural values. However, post-industrialization has also caused job loss among the least educated men and more women are entering into the service sector in Taiwan. This has led to men's relatively disadvantaged position in the marriage market among the less educated. Thus, whether more education among women is associated with more marriages and the rise and fall of educational hypergamy in contemporary Taiwan remain open questions to be tackled. The sections below seek to unpack these issues with period data.

Research design

Data

To investigate the changing educational patterns of marriage, a set of detailed nationwide marriage match data by grooms' and brides' age and education for marriages were requested from the Department of Household Registration in Taiwan. These age- and education-specific marriage match data are only available for years after 2000. This study uses data from years 2000 and 2010. As a population of 22 to 23 millions, there were about 183,000 and 133,000 marriages formed in Taiwan in 2000 and 2010 respectively. A total of 841 (29x29) cells of marriage match data (23 age categories for brides and grooms from age -18, 18,…, 34, 35-39, 40-44, 45-50, 50-54, 55-60, 60-64, 65+) presented in cross-tabulation format were provided. These marriage counts include marriages of all orders and are used as the numerators for calculating age-specific marriage rates for both men and women. The education of brides and grooms is categorized into four groups: less than high school, high school, junior college, and college and above. Individuals who did not finish college/university are grouped in the high school category. There are 16 spreadsheets (4 education categories for both brides and grooms yield a total of 16 education combinations) with these 29x29 marriage match data for both years 2000 and 2010. About 2.2% of all marriages involve one men or women age 65+ in 2000 and 1.55% in 2010.

As for the denominators, the exposure marriageable population data for the analyses of marriage patterns by age and education for the post-2000 years were calculated using the 2000 and 2010 Census data. Since the numerators are marriages of all orders, the exposure populations are individuals who are single, divorced, and widowed in the census data. Twenty-nine age categories (i.e., one-year age intervals from 18 to 39, 5-year age intervals from 40-44 to 60-64, and two open intervals for ages younger than 18 and ages 65 and older) were used for the calculations of age-specific marriage rates and marriage propensities.

Measures of marriage

In this study, marriage behaviors are described by using the harmonic-mean two-sex marriage

propensity approach proposed by Schoen (1988). This approach has been applied to several studies on marriage patterns (Okun 2001; Qian 1998; Qian and Preston 1993; Schoen and Cheng 2006; Schoen and Wooldredge 1989). The merit of this method is that it can simultaneously takes into account the joint availability of unmarried men and women of specific traits, say age and education, to facilitate comparisons of marriage behaviors between groups that is free of compositional distortions. As marriage often involves a man and a woman of different ages and educational levels, the unmarried populations that are exposed to a specific type of marriage match need to be taken into account. This is particularly important as the unmarried population of a certain educational level can vary greatly across years due to educational expansion that took place in many modern societies. This type of two-sex problem is treated with procedures that make use of age-specific occurrence-exposure marriage rates for both men and women to measure the force of attraction for marriage (Schoen 1988).

Occurrence-exposure rates are calculated by dividing the number of marriages between grooms and brides of specific traits by the population at risk of such match. First, let M_m (x,a) be the marriage rate for men between age x and x+a, such that

$$M_m(x,a) = C(x,a) / P_m(x,a) \qquad \text{(Eq. 1)}$$

where C(x,a) represents the number of marriages involving men in age x to x+a and P_m (x,a) is the exposure unmarried male population (i.e., never married, divorced and widowered) in age x to x+a. Analogously for women, let M_f (y,b) be the marriage rate for women between age y and y+b. It follows that

$$M_f(y,b) = C(y,b) / P_f(y,b) \qquad \text{(Eq. 2)}$$

where P_f (y,b) is the exposure unmarried female population in age y to y+b. Marriage propensity between men with trait set A (e.g., 29-year-old college graduate) and women with another trait set B (e.g., 31-year-old junior college graduate) can therefore be represented by

U (A;B) and is calculated as

$$U(A;B) = aM_m(A;B) + bM_f(A;B) \quad \text{(Eq. 3)}$$

Both a and b in Eq. 3 are the widths of the male and female age intervals respectively. M_m (A;B) is the male marriage rate for marriages between men with trait set A and women with trait set B, while M_f (A;B) is the comparable female marriage rate. Hence, marriage propensity U (A;B) is the sum of occurrence-exposure trait-specific marriage intensities that show the magnitude of marriage attraction between single men and single women of certain age and education characteristics, independent of the population composition. The total propensity of a certain education match is the sum of propensities across all age matches within that specific type of education match. Age interval length of 5 and 10 were assigned to the youngest and the oldest open age categories when using Eq. 3 to calculate marriage propensities.

This study further explores two additional marriage scenarios in 2010 by holding the force of attraction constant at the 2000 level and by holding the structure of eligible partners constant at the composition observed in 2000. These two sets of analyses facilitate the investigation of the changes in marriage behaviors that are due to different structures of eligible partners and to changing magnitudes of marriage attraction across groups over the one-decade period.

Results

Changing educational patterns of marriage

As marriage rates plummeted in the first decade after the millennium, Table 1 shows that the total marriage propensity was slashed nearly in half from 23.14 in 2000 to 12.36 in 2010. The marginal sums of the top two panels of Table 1 also show that the least educated was hit the hardest during an era of dramatic family decline. Changes in total marriage propensities (refer to bottom panel of Table 1) of men and women without a high school degree were -71.3% and

-62.5% respectively across this ten-year period, which are much higher than the comparable figures of -14% and -0.2% for unions involving a man or a woman with a college degree. In addition, the total marriage propensities for men without a high school degree versus those with a college degree used to be 7.73 and 4.72 in 2000 and the comparable figures were 2.22 and 4.06 in 2010. For women, the comparable propensities were 8.49 and 3.44 in 2000 and 3.18 and 3.44 in 2010. The association between education and the propensities to marry has shifted from negative to positive for both men and women, although the educational discrepancy is less strong for women. A closer look at Table 1 shows that a 17.6% increase in overall marriage propensity is observed for marriages formed between a college-educated bride and an equally educated groom from 2000 to 2010. An even higher increase of 33.4% is also found for marriages between a college-educated bride and a junior-college-educated groom from 2000 to 2010. The comparable percentage change for marriages between junior-college-educated brides and college-educated grooms only show a -8.6% decrease in the same period. Unions formed between men and women of other educational combinations show much stronger decline over this decade. Further analyses reveal that the rise and fall of marriage propensities by education are mainly driven by delayed union formation among the better educated. As can be seen in both panels of Appendix 1 for men and women, gains in marriage propensities for the better educated (i.e., m4-f4, m3-f4, m4-f3 pairings) are clustered in unions formed in the thirties and forties. The picture for all the other types of educational matches is consistent across all ages in this one-decade period—a uniform shying away from matrimony. One point to be noted is that even though mean level of education in Taiwan has improved over the years for both sexes, about 19% of men and 17% of women age 20-49 did not have a high school degree in 2010. About 39% of men and women in the same age range are high school graduates. Thus, the group that experienced substantial decline in marriage is a non-negligible proportion of the entire population.

As for partner choice, the proportion of educationally homogamous marriages (i.e., sum of the diagonal cells divided by the total marriage propensity of a given year) increased from 39% in 2000 to 43% in 2010, despite the propensities of most types of educational homogamy declined over this decade (refer to Table 1). That is, a larger share of men and women are marrying partners with a similar educational attainment as themselves in an era of family decline. For the educationally homogamous marriages in the diagonal cells, marriage propensities used to be stronger among the least educated than the most educated men and women in 2000 (3.88 vs. 1.86). Yet this pattern reversed in 2010 as the most educated couples have much higher marriage propensities than the least educated (2.18 vs. 1.24). On the other hand, ratios of the sum of the upper right off-diagonal cells (i.e., the educationally hypergamous marriages) to the sum of the lower left off-diagonal cells (i.e., the educationally hypogamous marriages) increased from 1.35 to 1.53 between 2000 and 2010, revealing a stronger trend toward "marrying up" among women in educationally heterogamous unions. When the comparison groups are restricted to heterogamy that crosses at least two educational levels (i.e., the sum of the upper right three cells to the sum of the lower left three cells), the ratios changed from 1.43 to 1.94 in the ten-year period. In other words, there is a stronger trend toward hypergamy formed between much better educated grooms and less educated brides in 2010 than in 2000.

Changes due to availability of eligible partners or to magnitude of marriage attraction

The next set of analyses aims to explore the marriage patterns by looking at how the shift in educational gradient of marriage reflects changes in the availability of eligible partners or changes in the force of attraction. To investigate the former, the number of marriages that would have occurred in 2010 was calculated by holding the force of attraction observed in 2000 constant. Hence, the ratios of the predicted 2010 marriage rates (by sex and age groups) to the actual marriage rates observed in 2000 measure the change in the availability of eligible

partners between 2000 and 2010. On the other hand, the ratios of the actual 2010 marriage rates to the predicted marriage rates observed in 2010 measure the change in the force of attraction between 2000 and 2010. These ratios were averaged across prime age groups from 20 to 49 to acquire a summary measure for a given education match. A mean value greater than 1 indicates a positive change in eligible partners or force of attraction. These procedures were carried out for both sexes and the findings are presented in Table 2.

The upper panel of Table 2 reveals that in 2010 men with the least education who were in hypogamous marriages face a surplus of eligible better-educated female partners. All men in unions involving a college-educated woman also experience a surplus of eligible female partners in 2010. From the women's perspective, college-educated women in all unions face a shortage of eligible men in 2010, but availability of potential spouses have improved for most women without a college degree. The lower panel of Table 2 shows that from both men's and women's perspectives, almost every group experience a tremendous decline in propensity to marry except for unions where at least one partner is college-educated (i.e., marriage types m3-f4, m4-f4, and m4-f3). One important finding to be noted is that despite a shortage of eligible men (with at least some tertiary education) for college educated women, a positive change in force of attraction indicates that an increasing share of these women still managed to find a partner.

Potential explanations for the differential retreat from marriage

Analyses using two social survey data (i.e., the Taiwan Social Trend Survey (TSTS) and the KAP survey) collected in recent years were conducted to explore the attitudinal and structural causes of differential retreat from marriage. Table 3 shows that a positive educational gradient in marriage intention among singles has been observed from 1998 to 2006 for both men and women. Single men with tertiary education[1] were nearly two times more likely (OR=1.75,

[1] The response categories for education in the TSTS data vary between 1998 and later years. Junior college and

p<.0001, Model 1) than the least educated single men to indicate a future marriage plan, whereas single women with similar education were three times more likely (OR=3.02, p<.0001, in Model 3) than the least educated to express a marriage intention, holding all other covariates constant. Such a positive educational gradient has become stronger over time. A closer look at data from separate years indicated that such a gradient only emerged after the millennium (in the 2002 and 2006 TSTS, but not the 1998 survey), which is also reflected in the significant interaction terms of education and survey year shown in Models 2 and 4. When considered with the macro-level marriage trend presented earlier, the best educated men and women are not only marrying more they also have the strongest motivation to enter a marital union than their less educated counterparts. Such a low marriage intention among the least educated is likely to further bring down their already low marriage rates in the future.[2]

Additional analyses were carried out to explore the perceived key factor for a happy marriage. The results in Table 4 show a convergence of value in the most selected factor for both single men and women between 1998 and 2006. Before the millennium, much more single men and women stressed the importance of economic standing as the foundation for a happy marriage. Even though a quarter to two-fifths of single men and women still think that a good economic standing is important for a happy marriage in 2006, a lot more of them endorse "mutual trust and tolerance" across all groups. While men and women seem to become similar in terms of their perception for a happy marriage, their attitudes toward sex roles and marriage still differ substantially. For the five attitudinal variables examined in Table 5, men with lower education are particularly slow to adapt to an egalitarian gender relation. Men with tertiary education are significantly more likely than their least educated counterparts to adopt liberal sex-role and marriage attitudes, holding age and marital status

college are collapsed into one response category for years 2002 and 2006 to make the models comparable. The TSTS terminated in 2006 so that models for years beyond 2006 cannot be presented.

[2] The expansion of education in Taiwan might lead one to think that the proportion of adults without a high school degree is very small. Yet the 2010 vital statistics show that about 18% of the adult men and women between the ages of 20 and 49 did not have a high school degree.

constant. Better educated men are less likely to agree with a traditional division of labor between men and women, to think that a woman should put her husband's career before her own, and to believe a bad marriage is better than being single or divorced. They are more likely than the least educated men to believe that men should help with more household chores than what they are sharing now. In another set of analyses, women are more liberal than men on four of the five items after age and education are controlled for, revealing a discrepancy in sex-role and marriage values between the two sexes (results shown in the bottom panel of Table 5).

On the economic front, unemployment rates have been on the rise since the mid-1990s for men and women of all educational levels (see Figure 1). In particular, men without tertiary education have experienced a tremendous growth in unemployment in the post-millennium years and the risk of being out of work is much higher among blue-collar male workers than female workers. In the 1980s men without a high school degree used to have the lowest unemployment rates than men in other educational groups, but in 2009 the proportion of them losing jobs reached an unprecedented high point. In addition, since the 1990s inflation-adjusted disposable income levels have been declining for workers in all social groups (DGBAS 1987-2010). Despite Taiwan's sustained economic growth in gross domestic product (GDP) in the 2000s, a continuous decline in employee compensation as a proportion of GDP has been observed since 1990, reaching an all-time-low point in 2010 (DGBAS 2010). That is, the profits and gains have not been justly distributed to laborers and employees in an era of post-industrialization. Another piece of evidence for economic deterioration is revealed in the percentile distribution of disposable income for both men and women. According to the annual Survey of Family Income and Expenditure, even though income improved between 1995 and 2000 for the 20^{th}, 50^{th} and 90^{th} percentiles for both sexes, barely any increase in disposable income at the 20^{th} and 50^{th} percentiles is observed in following

decade from 2000 to 2010. The only group that experienced substantial income gain during this period was the most advantaged high-income earners at the 90th income percentile (DGBAS 1995-2010). In other words, wage levels have stagnated and even declined for over a decade in the face of continuous annual inflation and that economic stress can be tangibly felt by the majority of Taiwanese laborers, particularly those from the lower class.

As Taiwan transformed into a post-industrialized society, the bleak economic outlook of male low-skilled manual workers raises worries for women who are looking for potential partners from a pool of men with limited means to establish a new family. In fact, there is a substantial growth in labor force participation rates among women without a high school degree in prime working ages of 20 and 50 from 48.06% in 1995 to 60.06% in 2010, whereas men with similar education have experienced a drop in labor force participation rates from 95.95% to 87.67% in the same period (DGBAS 1987-2010). As men's economic prospect is still a crucial determinant of marriage in times of rising inequalities, the loss of jobs due to relocation of manufacturing factories to other developing countries have made marriages unaffordable for many blue-collar workers. Along with obstacles for reemployment in a service and knowledge economy, men with the least socioeconomic resources have experienced tremendous status loss in the marriage market. All in all, both slower attitudinal change for gender equality among men of lower class and deterioration of their economic well-being translate into rapidly dropping marriage propensities among the disadvantaged men in recent years. The better educated is now more likely to wed largely because their marriage behaviors were less affected.

The roles of foreign brides and cohabitation in an era of marriage decline

Since the 1990s, foreign spouses have played a crucial part in the Taiwanese marriage market. About 25% and 16% of the marriages registered in 2000 and 2010 were formed between a Taiwanese and a foreign spouse. The great majority of these foreign marriage migrants did

not have citizenships at the time of marriage[3] and the majority of them are foreign brides (i.e., 93% and 82% of foreign spouses were female in 2000 and 2010 respectively). The impact of such a social phenomenon on the analyses presented earlier is that the marriage rates/propensities were underestimated to different extents, because these marriages were counted in the numerators but the foreign women (and men to a much lesser extent) at risk of marriage were not included in the exposure population. For the analyses on educational patterns of marriage propensities in 2000 and 2010, the actual marriage propensities for unions that involve spouses with high school or less education should have been lower because the majority of foreign spouses did not have any tertiary education (e.g., about 95% of Southeast Asian and 85% Mainland Chinese spouses received high school or lower education in 2008). In other words, the positive educational gradient in marriage intensities observed in 2010 would have been more pronounced if the eligible foreign women and men at risk of marriage were included as part of the marriageable population.

As for cohabitation, family literature in the West often discusses how marriage decline is accompanied by a surge in the prevalence of co-residential unions (Bumpass, Sweet, and Cherlin 1991; Heard 2011; Kalmijn 2007). While cohabitation is relatively less common and still stigmatized in Asian countries (Jones 2007), the prevalence of cohabitation in Taiwan is rising over time (Lesthaeghe 2010). However, questions about marital status in major large-scale social surveys and the censuses often group the currently cohabiting and married individuals as one category and they are indistinguishable in the dataset. One of the very few datasets that specifically asked about the experience of cohabitation is the 1998 and 2004 KAP surveys.[4] Descriptive analyses (results not shown) using these two rounds of KAP

[3] More than 90% of the foreign spouses did not have Taiwanese citizenship at the time of their marriages in 2010, which means that they were not counted in the household registration system. Depending on the countries of origin, the time needed to acquire citizenship in Taiwan ranges from four years for foreign spouses (including Southeast Asia and other countries) to six years for those from Mainland China.

[4] The KAP (Knowledge, Attitude, and Practice) survey is a collaboration between the Population Studies Center at the University of Michigan at Ann Arbor and the Taiwan Provincial Institute of Family Planning to collect data

indicate that cohabitation as a union type has increased between 1998 and 2004. For single women age 20 to 49, cohabitation has become more prevalent among the younger generations and among the less educated. The increase in cohabitation among married women differs very little across cohorts and education. It is very likely that part of the decline in marital unions was substituted by cohabiting unions, especially if the prevalence of cohabitation among the unmarried population increased more among the less educated than the better educated in the KAP data. Although there is evidence showing an increasing prevalence of co-residential unions over time, cohabitation could have very different meanings for different social groups. On the one hand, it could be likely that cohabitation has replaced marriage among the less educated, and the total union formation intensities are actually not decreasing when cohabitation is taken into account. On the other hand, cohabitation could also be rising among the better educated but serves only as a "test-run" for marriage. These are two untestable hypotheses at this point. As panel surveys that include comprehensive records and measures of cohabitation are still lacking in Taiwan, the extent to which cohabitation has become a substitute of or a prelude to marriage awaits more empirical investigation in future research.

Discussion

This paper set out to investigate the changing partner choice and differential marriage propensities by education in an era of marriage decline in post-millennium Taiwan. Results of this study indicate that while marriage decline is experienced by all educational groups between 2000 and 2010, the drop is particularly drastic among the least educated. Because of their relatively mild decrease in marriage propensities, men and women with tertiary education have become more likely to marry than their less educated counterparts in 2010. The most recent education-marriage patterns observed support hypothesis H1a where more

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on marriage, family values, fertility preferences and contraceptive use. The first wave of the KAP survey was conducted in 1965. The survey has been continuously carried out over the years and the last survey wave was administered in 2008. The sample sizes for the different waves vary from over 3,000 to about 5,000 female respondents of childbearing ages between age 15 and 49.

education is associated with stronger marriage intensities among women. This is a reversal of the negative educational differentials in marriage intensity revealed by the 2000 data. As in many Western societies, Oppenheimer's theory appears to line up better with the most recent educational gradient of marriage in Taiwan. Women with more socioeconomic resources are marrying more, especially with men who have similar levels of education.

As for the patterns of partner choice, a larger share of educational homogamy is observed in 2010 than in 2000, which is mainly driven by an increase in homogamy among the better educated. In addition, hypothesis H2b is supported—the proportions of educationally hypergamous marriages of all heterogamy also increased between 2000 and 2010. These findings show that in an era of growing economic uncertainty, the better educated are increasingly more likely to marry a partner with a similar background. For better educated women, marrying down with men without any tertiary education has become a less feasible choice, despite their own rising financial independence. Thus, although improvement in women's socioeconomic attainment in the Taiwanese society could open up broader possibilities for spouse selection, the marriage patterns observed suggest that a continuing preference for men's economic resources in a post-industrialized context is likely to further perpetuate the traditional pattern of hypergamy.

Further analyses show that the changes in marriage propensities across groups are not due to a shortage of potential partners but to an overall drop in propensity to marry. In fact, a surplus of eligible male partners is observed for the majority of women without college education from 2000 to 2010, yet the force of attraction for these women decreased over the same period. In contrast, college-educated women displayed a stronger propensity to marry men with similar education despite facing a shortage of eligible partners. This resonates with recent research that shows how the compositional effect of education has played a very small role in explaining the overall retreat from matrimony in East Asian countries (Jones and

Gubhaju, 2009). In fact, despite the improvements in socioeconomic status of women are often argued to cause retreat from marriage, the best educated women are showing stronger intentions and behaviors to establish new families in Taiwan.

This study further explores the compositional changes of the exposure population by education. The findings suggest that an important explanation for the tremendous decline in marriage propensity among the less educated is likely due to divorce and remarriage patterns. Given the negative educational gradient in divorce that emerged since the 1990s (Chen 2012) and that remarriage rates have been much lower among the less educated men and women[5], the proportion of divorced individuals among the less-educated population at risk of marriage has been expanding constantly over the years. Recent vital statistics show that the proportions of divorced individuals at prime marrying ages are particularly high among the less educated men and women and the trend has been increasing since 2000. Such an expansion in the exposure population has suppressed the overall marriage intensities among the less educated. Along with a rapid drop in number of marriages among the less educated (i.e., only about 9,600 "m1-f1" marriages were formed in 2010 compared to about 36,000 "m1-f1" marriages in 2000), which is faster than the speed of educational upgrading over the past decade, a rapid decline in marriage intensities among the more disadvantaged population in Taiwan becomes an inevitable reality.

For the causes of the reversal of educational differentials in marriage, the recent dramatic decline in marriage rates has a structural cause of deteriorating economic well-being among young employees, as wages stagnated and unemployment rates reached record-high levels. Disposable incomes over the past two decades at most distribution percentiles have declined, except for the richest. The undesirable consequences of industrial outsourcing and income inequality in a post-industrialized society have had a tremendous impact on the lives of many

[5] Author's own calculations based on vital statistics data on remarriages released by the Department of Household Registration, Ministry of the Interior, Taiwan.

young individuals. While governments in Taiwan and in Singapore coordinate matchmaking social activities to raise the marriage rates of the middle-class college graduates (CNBC 2012), the welfare of the disadvantaged sector of the population should also be the focus of public policies. Overall, before a reconciliation between men and women can be reached regarding acceptable arrangements in domestic division of labor and a common expectation for marriage, the trend toward further decline in marriage rates seem to be foreseeable in the years to come, although improvements in economic opportunities can certainly offset part of the downward pressure toward a further decline in marriage.

Moreover, the shifting ideas about the foundation of a happy marriage show a convergence between men and women across social groups. Yet a sex gap remains for sex-role values and marriage attitudes. The least educated men, in particular, are more resistant to adopting liberal gender-role values. In turn, negotiating for an egalitarian relationship becomes more of an attainable goal among the better educated men and women. All things considered, gender equality is still an unfinished revolution. When considering the two distinct stages of gender revolution discussed in Goldscheider, Olah and Puur's (2010) recent research, Taiwan is certainly still moving slowly toward the second stage where equality in the family sphere is attained. More efforts are needed so that both men and women, particularly the less educated, can see a convergence in their views on an ideal intimate relationship and a happy marriage. Both family formation and union stability can be expected to increase when such a consensus is reached (Goldscheider, Oláh, and Puur 2010). These findings also resonate with Schoen's (2010) recent arguments about the crucial role of "gender competition" in linking socioeconomic and ideational developments to contemporary family changes and that the delay in the second stage of the gender revolution is likely due to the pushback from men.

As the majority of research on family decline has focused on women's changing values and attitudes, the analyses here show that men too, are embracing new ideas about the fundamental pillars of a happy marriage across all social groups. As discussed earlier, it is the discrepancy in gender-role and marriage attitudes between men and women that appears to make marriage an unattractive life choice for many young adults in Taiwan and perhaps in many other parts of East Asia as well. As marriage is a result of dyadic interactions and negotiations between the two sexes, men's desires and beliefs certainly contribute to the redefinition of dyadic relationship and family formation and should not be left out of the research scene of contemporary family change (Le Bourdais and Lapierre-Adamcyk 2004; Schoen 2011).

This study is one of the few studies that explore marriage differentials by education in Asia. Marriage propensities have increased for unions between the better educated men and women and decreased for other unions that involve less educated individuals in the decade after the millennium. Even though the percentage of ever married by age 50 in 2010 is still higher among less educated women than the better educated, the social differential in life-time ever married rates could reverse in the future if the positive educational gradient in marriage intensities observed in 2010 persist over a longer period of time. In Japan, a recent panel study on 1,500 women born in 1959 to 1979 (surveyed in 1993 to 2008) showed that the association between women's earnings and marriage probabilities has changed from negative to positive among recent cohorts (Fukuda 2013). The analyses here show additional evidence of a positive social gradient in marriage from a period perspective in an advanced East Asian economy. These findings go along with the expanding social divide that has been shown in many developed societies in recent years (Furstenberg 2008; Kalmijn 2013; Meier and Allen 2008; Smits and Park 2009) where education is increasingly associated with more favorable life outcomes and such a social inequality further penetrates into the well-being of the next

generation (Mclanahan 2004). Finally, it remains an open question whether more East Asian countries will show a positive educational gradient in marriage likelihood as societies go through the process of post-industrialization as well as improve on gender equity at school and work settings, and potentially inside the family in the future. More research is certainly needed to unravel the impact of education on men and women's family formation prospects and how social inequality may be reinforced and reproduced through matrimony in Asia.

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Table 1. Marriage propensities and percentage changes by education in years 2000 and 2010

Year2000			Men		
Women	<HS	HS	Junior College	College+	Total
<HS	3.88	2.45	1.30	0.86	8.49
HS	2.14	2.03	1.44	1.01	6.62
Junior College	1.18	1.07	1.34	0.99	4.59
College+	0.53	0.51	0.55	1.86	3.44
Total	7.73	6.07	4.62	4.72	23.14

Year2010			Men		
Women	<HS	HS	Junior College	College+	Total
<HS	1.24	1.15	0.46	0.33	3.18
HS	0.64	1.08	0.77	0.64	3.13
Junior College	0.22	0.67	0.81	0.91	2.61
College+	0.12	0.40	0.73	2.18	3.44
Total	2.22	3.29	2.78	4.06	12.36

% change between 2000 and 2010

			Men		
Women	<HS	HS	Junior College	College+	Total
<HS	-68.0%	-53.4%	-64.4%	-61.4%	-62.5%
HS	-70.0%	-46.8%	-46.1%	-37.1%	-52.6%
Junior College	-81.6%	-37.7%	-39.3%	-8.6%	-43.2%
College+	-77.0%	-21.4%	33.4%	17.6%	-0.2%
Total	-71.3%	-45.7%	-39.8%	-14.0%	-46.6%

Table 2. Changes in availability of eligible partners and force of attraction by education level between 2000 and 2010

Changes in Eligible Partners 2000 vs. 2010

Men		Groom			
		<HS	HS	Jr. College	College+
Bride	<HS	1.01	0.71	0.99	0.58
	HS	1.09	0.88	1.00	0.77
	Jr. College	1.06	0.66	0.92	0.62
	College+	1.89	1.66	1.44	1.06

Women		Groom			
		<HS	HS	Jr. College	College+
Bride	<HS	1.07	1.51	1.91	2.10
	HS	0.85	1.15	1.21	1.74
	Jr. College	0.99	1.12	1.15	1.44
	College+	0.62	0.81	0.76	0.95

Changes in Force of Attraction 2000 vs. 2010

Men		Groom			
		<HS	HS	Jr. College	College+
Bride	<HS	0.32	0.46	0.34	0.37
	HS	0.30	0.50	0.51	0.68
	Jr. College	0.24	0.66	0.68	0.98
	College+	0.31	0.84	1.46	1.15

Women		Groom			
		<HS	HS	Jr. College	College+
Bride	<HS	0.40	0.50	0.36	0.45
	HS	0.37	0.63	0.56	0.67
	Jr. College	0.20	0.67	0.73	1.05
	College+	0.22	0.80	1.29	1.30

Note: A value greater than 1 indicates a positive change in eligible partners or force of attraction and a value smaller than 1 a negative change between 2000 and 2010.

Table 3. Odds ratios predicting marriage intention among never-married men and women ages 25 to 49 by education (Taiwan Social Trend Survey, 1998, 2002, and 2006)

	Model 1	Model 2	Model 3	Model 4
	Men	Men	Women	Women
Survey Year (ref. 1998)				
2002	0.51 ***	0.44 ***	0.62 **	0.36 *
2006	0.51 ***	0.30 ***	0.58 ***	0.27 **
Age (ref. age 30-34)				
25-29	--	--	--	--
30-34	1.04	1.03	0.71 **	0.71 **
35-39	0.80 †	0.79 *	0.40 ***	0.40 ***
40-44	0.50 ***	0.51 ***	0.25 ***	0.24 ***
45-49	0.30 ***	0.30 ***	0.20 ***	0.21 ***
Education (ref. <HS)				
High school	1.35 **	0.95	1.85 **	1.25
Jr. college and above	1.75 ***	1.14	3.02 ***	1.63
Education x Survey Year (ref. <HS & 1998)				
HS*2002		1.32		1.60
Jr. college+ *2002		1.26		2.13 †
HS*2006		1.92 *		2.04
Jr. college+ *2006		2.28 **		2.70 *
Sample size N	6128	6128	3888	3888

† p<.10; * p<.05; ** p<.01; *** p<.001

Note: All models controlled for 5-year age groups. Question wording for marriage intention in all three waves of TSTS: “Do you intend to marry in the future?”

Table 4. Response distributions of the most important factors for a happy marriage reported by never-married respondents ages 25-49 by education (1998 and 2006 Taiwan Social Trend Survey)

	1998			2006		
Single Men	**<HS**	**HS**	**Jr. College+**	**<HS**	**HS**	**Jr. College+**
Love	17.44	13.15	14.51	7.77	6.96	9.15
Having a good economic standing	39.95	41.78	37.64	41.02	35.56	22.34
Compatible values and interests	9.02	13.75	12.82	8.66	13.12	17.09
Mutual trust and tolerance	22.31	20.28	24.04	32.49	38.67	45.13
Similar family background	1.25	0.1	0.71	0.52	0.81	0.96
Good sex life	0.93	1.59	0.71	0.39	0.2	0.41
Having individual freedom	0.79	2.88	0.6	2.34	1.09	1.48
Get along with spouse's family	2.97	2.81	1.84	1.11	1.21	2.2
Health	5.34	3.37	7.14	5.54	2.26	1.24
Other	0	0.29	0	0.17	0.12	0
Subgroup size (n)	288	363	311	532	992	1049

Single Women	**<HS**	**HS**	**Jr. College+**	**<HS**	**HS**	**Jr. College+**
Love	31.22	23.40	20.35	7.54	9.36	9.06
Having a good economic standing	24.78	33.77	32.42	29.43	31.96	23.77
Compatible values and interests	10.44	10.77	17.09	6.73	11.32	14.39
Mutual trust and tolerance	23.82	17.57	22.83	42.76	41.6	44.58
Similar family background	2.69	1.61	0.18	0.55	0.23	1.33
Good sex life	0	0.63	0.32	0	0	0.15
Having individual freedom	0	1.81	0.94	1.66	1.6	2.9
Get along with spouse's family	0	3.24	0.59	1.07	0.54	1.28
Health	4.76	7.2	5.27	10.11	3.13	2.26
Other	2.29	0	0	0.15	0.26	0.28
Subgroup size (n)	57	185	242	122	540	1157

Table 5. OLS regression models analyzing gender differences in sex-role and marriage attitudes among never-married and ever married men and among never-married adults between the ages of 20 and 49 (N=635, Taiwan Social Change Survey 2006)

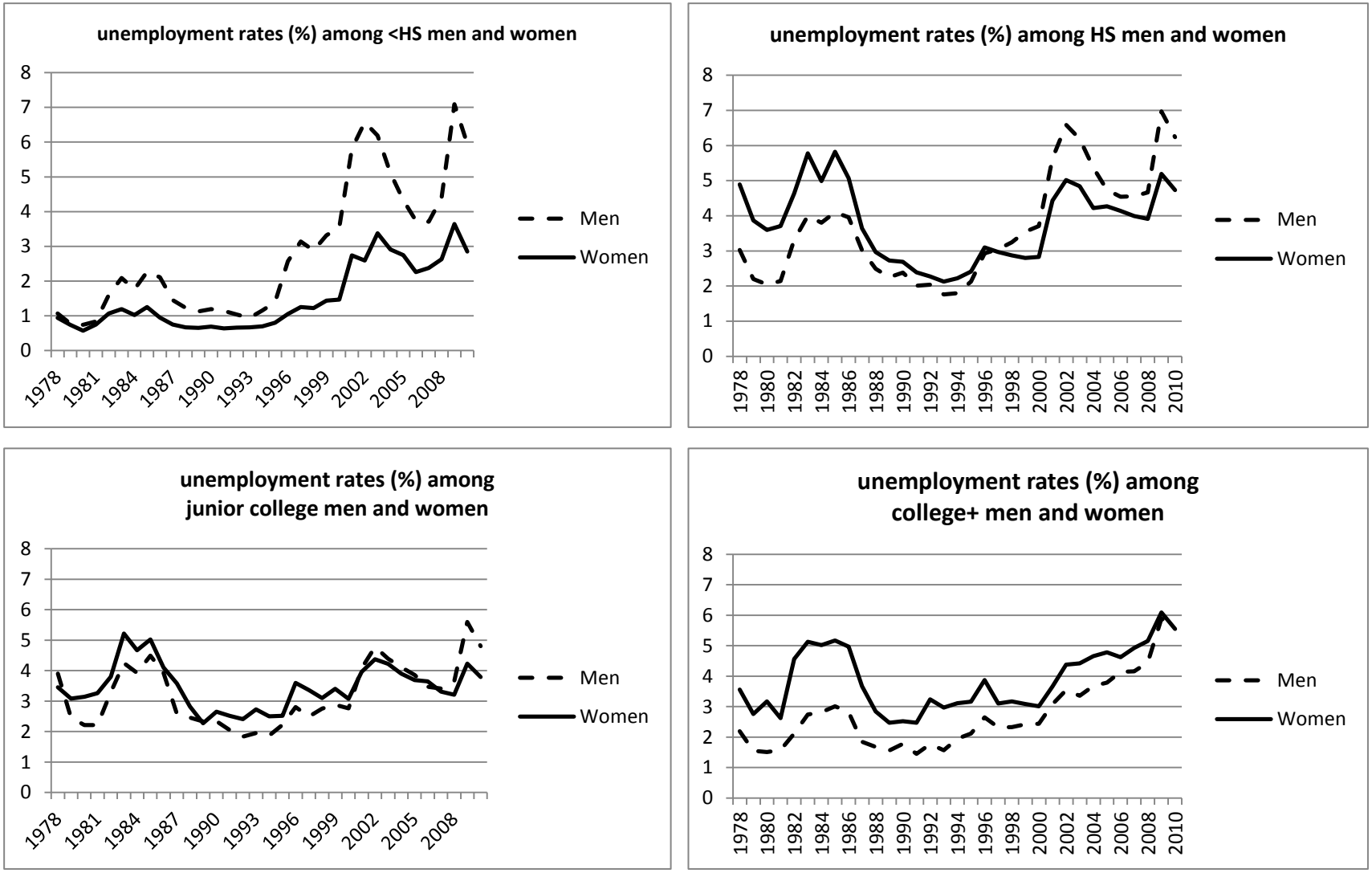
All Men	Q1. A husband's main responsibility is to be the bread-winner and wife the housekeeper.	Q2. Men should help with more domestic chores than what they are doing now.	Q3. It is more important for a wife to help with her husband's career than to develop her own career.	Q4. Having a bad marriage is still better than staying single.	Q5. Having a bad marriage is still better than getting a divorce.
Education (ref.: <HS)					
High school	-0.47*	0.22	-0.09	-0.37	-0.39†
Jr. college & above	-1.60***	0.50**	-0.95***	-1.04***	-0.84***
Marital Status					
Ever married (ref.)	--	--	--	--	--
Single	-0.60**	-0.06	-0.33†	-0.13	-0.19
Sample size (n)	635	635	635	635	635

Never-married Adults	Q1	Q2	Q3	Q4	Q5
Men (ref.: women)	0.58***	-0.34**	0.23†	0.24	0.31*
Education (ref.: <HS)					
High school	-0.17	0.39	0.41	-0.20	-0.75*
Jr. college & above	-1.44***	0.75**	-0.63*	-0.88*	-0.94**
sample size (n)	484	484	484	484	484

† p<.10; * p<.05; ** p<.01; *** p<.001

Note: Each statement is measured on a scale of 1 to 7, with higher values indicating a stronger approval. All regression models control for a respondent's age in 5-year age groups. Ever married respondents include those who are currently married, divorced, and widowed.

Figure 1. Unemployment rates by sex and education in Taiwan, 1978-2010



Appendix 1. Changes in marriage propensities by age and educational matches between 2000 and 2010†

MEN	m1-f1	m1-f2	m1-f3	m1-f4	m2-f1	m2-f2	m2-f3	m2-f4	m3-f1	m3-f2	m3-f3	m3-f4	m4-f1	m4-f2	m4-f3	m4-f4
20-24	-0.2403	-0.1179	-0.0324	-0.0040	-0.1316	-0.0859	-0.0180	0.0009	-0.0319	-0.0156	-0.0353	0.0083	-0.0063	-0.0012	0.0010	-0.0030
25-29	-0.6619	-0.3211	-0.1876	-0.0865	-0.3700	-0.2029	-0.0724	0.0201	-0.2298	-0.1551	-0.2565	0.0579	-0.1315	-0.0087	-0.0099	-0.1009
30-34	-0.6535	-0.3165	-0.1636	-0.0961	-0.3097	-0.1808	-0.0583	-0.0172	-0.1703	-0.1283	-0.1199	0.0750	-0.1435	-0.0366	0.0094	0.1682
35-39	-0.4704	-0.2269	-0.1169	-0.0500	-0.1723	-0.1483	-0.0497	-0.0226	-0.0886	-0.1175	0.0007	0.0499	-0.0760	-0.0620	0.0130	0.1594
40-44	-0.2576	-0.1340	-0.0838	-0.0385	-0.1020	-0.0938	-0.0499	-0.0103	-0.0614	-0.0846	-0.0159	0.0202	-0.0433	-0.0673	-0.0093	0.0671
45-49	-0.1276	-0.0963	-0.0609	-0.0341	-0.0636	-0.0508	-0.0298	-0.0218	-0.0765	-0.0752	-0.0186	0.0024	-0.0321	-0.0519	-0.0184	0.0219

WOMEN	m1-f1	m1-f2	m1-f3	m1-f4	m2-f1	m2-f2	m2-f3	m2-f4	m3-f1	m3-f2	m3-f3	m3-f4	m4-f1	m4-f2	m4-f3	m4-f4
20-24	-0.7778	-0.4707	-0.2754	-0.1001	-0.3556	-0.3134	-0.1683	-0.0476	-0.1352	-0.1504	-0.2152	-0.0044	-0.0370	-0.0432	-0.0402	-0.0444
25-29	-0.9243	-0.3881	-0.2358	-0.1176	-0.4954	-0.2527	-0.1161	-0.0086	-0.3273	-0.2179	-0.2942	0.0742	-0.2616	-0.0798	-0.0619	-0.1540
30-34	-0.4354	-0.1652	-0.1143	-0.0748	-0.1922	-0.1175	-0.0058	-0.0053	-0.1284	-0.1235	0.0055	0.0820	-0.1292	-0.0616	0.0379	0.3029
35-39	-0.1684	-0.1077	-0.0807	-0.0350	-0.0725	-0.0698	-0.0259	-0.0137	-0.0609	-0.0746	0.0185	0.0304	-0.0284	-0.0795	0.0003	0.1602
40-44	-0.0869	-0.0682	-0.0600	-0.0299	-0.0552	-0.0456	-0.0210	-0.0079	-0.0660	-0.0658	-0.0185	0.0008	-0.0172	-0.0484	-0.0046	0.0517
45-49	-0.0505	-0.0415	-0.0483	-0.0248	-0.0554	-0.0243	-0.0285	-0.0069	-0.0581	-0.0380	-0.0257	-0.0091	-0.0294	-0.0361	0.0089	-0.0077

Note: Numbers in column labels refer to educational levels from "1=no high school degree", "2=high school graduate", "3=junior college", and "4=college and above." Hence, "m1-f3" indicates marriages between men without a high school degree and women with junior college education.

†The table above only presents marriage propensities for ages 20 to 49 because these are prime marrying ages and are more indicative of major behavioral changes. Marriage propensities for ages 50 and older tend to be much lower than younger ages.