Are Economic Foundations of Marriage Shifting in China? Evidence in a Socialist Context

Wei-Jun Jean Yeung
Department of Sociology and Asia Research Institute, National University of Singapore
Yingchun Ji
Asia Research Institute, National University of Singapore

Abstract

Much research has shown that the relationship between women's economic prospects and marriage formation has shifted from negative to positive in the Western societies in the last few decades. Theoretical framework used to explain the phenomena in developed countries has shifted from Gary Becker's gender specialization model to V. K. Oppenheimer's mate searching theory. We investigate circumstances in China where men and women's roles in family and labor market have undergone significant changes after the communist regime took over and then subsequently after the economic reform. We draw data from the 2006 and 2008 Chinese General Social Survey, for multiple cohorts of men and women born between 1936 and 1985. Our findings show educational attainment delays women's marriage formation, but has mixed effects for men across cohorts. However, occupation has negative effects on both men's and women's marriage formation. These patterns need to be explained in the unique Chinese socioeconomic and cultural contexts. Neither Backer nor Oppenheimer model are adequate in explaining how economic capacity affects men and women's marriage behavior differently in China. Contextually relevant theories and hypotheses should be developed.

Are Economic Foundations of Marriage Shifting in China?

Evidence in a Socialist Context

Introduction

In the last few decades, women's increasing education level and labor market participation accompanied by their delayed marriage and decreasing marriage rates in the Western societies have inspired much debates and research. The gender specialization model (Becker, 1992) attributes women's economic independence as the underlying force of the decline of marriages. As women achieve more economic independence, their gain from the type of marriage in which men specialize in market work and women focus on household production becomes more limited. However, Oppenheimer's (1988, 1997) classical research eloquently argues that men's deteriorated economic prospect is the real culprit. Under uncertain economic circumstances, women's economic resources can become economic bonus on the marriage market, although men and women with better economic prospect may spend more time searching for a better matching mate. Much research confirms this positive association in the United States (Bloom and Bennett 1990; Goldscheider and Waite 1986; Goldstein and Kenney 2001; Lichter et al. 1992; Oppenheimer 1994). Sweeny (2002) provides empirical evidence supporting Oppenheimer's theory that the relationship between women's economic prospects and marriage formation has shifted from negative to positive in the last two decades in the United State.

But, what about newly industrialized, non-Western societies: will they follow suite? Can these social changes be explained by theories and hypotheses developed directly in the Western contexts? Much research has applied the above theories to help understand family formation in these societies. A recent study in Japan finds that in contrast to the negative relationship

between women's earning capacity and her propensity to marry for the 1960s birth cohort, a positive relationship is found for the 1970s cohort (Fukuda 2013).

However, an essential fabric woven in the story is often missing in this line of literature, namely, the historical and cultural contexts. As Sweeny (2002) argues that the gender specialization model was designed for the 'typical' 1950's marriage when the male bread winner family was the norm in the United States, the 'traditional' gender ideology prevailed and women had not yet entered the labor market at a large scale. Yet, after 1960s, as women's labor force participation has dramatically increased, mass education has spread rapidly and gender ideology becomes more egalitarian, Oppenheimer's career-entry theory is thus more appropriate in explaining the shifting marriage dynamics in the U.S. and other Western, industrial societies. A caveat is that we cannot fully understand the economic aspects of marriage formation without carefully examining the historical, institutional, and cultural contexts of a certain society.

Thornton and Fricke (1987) make it a central argument that "changes within the family cannot be understood without considering the family's role in specific cultural and social contexts." Thornton (2005) strongly criticizes the pitfall of 'reading history sideways' without understand local contexts: take it for granted that the Western family patterns will be the tomorrow for the non-Western societies. Recent research in Asian countries also emphasizes the role of historical culture and local institutional contexts in shaping the unique transition to adulthood in Asian societies, including marriage formation (Ji 2013; Park 2013; Yeung and Hu 2013).

China has witnessed turbulent ideological revolution and unprecedented socioeconomic uprising in the human history since the Chinese Communist Party first took power a half century

ago. Before the revolution, China was a Confucius society built upon the patrilineal family institution with strict gender hierarchy. Women's main role is at home. After the communist regime, the state policies have attempted to promote gender equality in different social dimensions, such as marriages and labor market. The marriage and other laws have been reformed multiple times since the 1950s to give women the rights to choose their marriage partners freely, to own property, and to participate fully in education and the labor market.

With the rapid expansion of mass education, gender differences in education have narrowed dramatically to the extent that female college attendance has surpassed that of male since 2005 (Yeung, 2012). Labor force participation increased for women from less than 10 percent in 1940s to more than 70 percent in 1990s[1]. Dual income families have been normative ever since the early communist time. However, since the economic reform, women's market status has deteriorates, as numerous studies report discrimination and marriage and motherhood penalty for women. Further, the Party prioritizes economic development in recent decades, Marxist ideology promoting egalitarian gender norms is largely overshadowed and is faced with the glorious return of traditional Chinese culture endorsing gender hierarchy.

Against this historical backdrop, China provides a marvelous social laboratory to test the relevance of both gender specialization model and career entry approach in relation to men and women's marriage formation. The relative high socioeconomic status of women and prevalence of dual income family provide testing ground for the career approach; whereas, the shadow of traditional gender hierarchy culture and deterioration of women's labor market condition grant room for the gender specialization perspective. However, a deep understanding of the complexity,

richness and nuance of the Chinese context is necessary to test competing hypotheses extracted from the above theoretical perspectives.

Our research questions are, thereby, to investigate whether timing of marriage among Chinese men and women has changed through time, and to what extent the relationships between men's and women's economic capacity and their propensity of family formation are different. We further scrutinize to what degree this gender discrepancy has changed over time. More specifically, we examine the relationship between education and employment, and the timing of first marriage among multiple cohorts of Chinese men and women, controlling for Hukou and family socioeconomic status and other socioeconomic factors. Using data from the 2006 and 2008 Chinese General Social Survey, we employ Cox hazard models to estimate the above associations.

The Cultural, Institutional Contexts in China

The Dynamics of Conflicting Gender Ideology

As noted earlier, the Chinese communists and socialist regimes have attempted to promote gender equality both within the private and public spheres since the 1950s. As a result of economic reform, social contracts in China have evolved to require individuals to take up increasingly more responsibility for their own and family members' well-being. While the individualistic norms are evolving, the egalitarian gender norms tend to progress backwards. After the economic reform was launched in 1978, promoting gender equality is largely eclipsed by the party's priority on economic development and individuals' hurrying up on the economic ladders. With the deepening of marketization, the dominant Marxist ideology which has nurtured

gender equality norms is losing ground to the traditional Chinese culture which endorses gender hierarchy. The long entrenched Marxist egalitarian gender ideology thus coexists, interacts and maybe even clashes with the even longer rooted Confucius gender hierarchical norms.

Therefore, a more or less reversal ideological changes seem to occur in the Chinese cultural context: transformation from the more egalitarian norms relevant to Oppenheimer's model to the one similar to bread-winner-home-maker genders norms upon which Becker's model is built.

The Changing Economic Scenario Relevant to Gender

With the rapid expansion of mass education, gender differences in education have narrowed dramatically to the extent that female college attendance has surpassed that of male since 2005 (Yeung, 2012). Labor force participation for women increased from less than 10 percent in 1940s to more than 70 percent in 1990s[1]. Since then, Chinese women's labor force participation rates have been consistently above that of their western counterparts and dual-income family has always been the norm, which are different from the United States where women's labor force participation hovers below 60 percent since the 1970s and a considerable proportion of families are single-earner families.

However, since the economic reform and marketization, when the institutional and ideology support of gender equality is weakening, women face various discrimination and penalty in terms of salary and promotion opportunities in the labor market (Cao and Hu, 2007; Zhang, Hannum and Wang, 2008). Women's deteriorating market standing thus reflects the declining returns of their human capital investment. This thus provides a very different economic

scenario of Chinese women than their Western counterparts, whose fellow men tend to experience market status deterioration in the globalization era.

Note here, this institutional context, the high level of women's labor force participation and the prevailing of dual income families is constantly exists in China for many decades. It further adds more nuance to changing ideology of gender norms that have both component of Marxist gender egalitarian ideology and Confucius gender hierarchy. A second note to take is the radical expansion of higher education initiated by the Chinese government in 1999. The first batch of graduates thus goes to market in 2003. The direct result is the relatively high unemployment rate among college students since then, which reflect the declining returns of higher education as human capital investment in China.

Universal and Early Marriage

Despite the relatively progressive gender ideology and high socioeconomic status for women, , marriage remains universal and early in China, particularly for women (Jones & Gubhaju, 2009). This is very different from their western counterparts witness remarkable decline and postpone of marriage formation, and other newly industrializing countries, which are at a similar or low socioeconomic level.

Marriage is regarded as an important landmark of adulthood in China. It carries the responsibility to having children to continue the family 'incense' (blood line) and for social security and caregiving for old ages, considering the social welfare system is still fragmented and fledging in China. Further, in implementing the strict one-child policy, couples have to obtain birth license to for child giving on the condition that they are legally married. Thus marriage is only legitimate social institution for child giving in China, which has significant implications for

social safety for elderly parents. Therefore, this complex institutional and cultural context is the key to understand early and universal marriage in a rapidly industrializing China, whose young men and women feel tremendous social and family pressure/responsibility to marry and marry early.

Therefore, in the Chinese context, particularly for women and early cohorts of people, it is not a choice to marry or not, but is a choice regarding whom to marry and when to marry. With respect of marriage timing, the problem is thus, whether timing of marriage is the individual's choice or reflecting his/her attractiveness on the marriage market. For example, if a college educated woman marries much later than the normative marriage time, is this her personal choice or is it because men tend to shun away from highly educated women?

Changing Times and Different Generations

We include men and women who were born between 1936 and 1985, dividing them into five birth cohorts, each representing a group growing up in different cultural, institutional contexts and during different major historical events that could shape young people's lives. These cohorts and the historical contexts that they grew up in are described below and in Table 1.

[Table 1 about here]

Early Communist Year Cohort (1936-45). The oldest cohort, born between 1936 and 1945, spent their transitioning years during the post revolution and early communist years. As Chinese government attempted to promote gender equality, some remarkable changes in Chinese women's status occurred as the slogan "women hold up half of the sky" suggests. The Marriage Law in 1950 set the minimum legal age for marriage at 20 for males and 18 for females and granted women the right to own land, choose their partners, and to divorce. During this period of

time, women's education and labor force participation increased significantly. However, they were born right before the Communist Party came into power, who likely still experienced much influence of the lingering historical Chinese culture, predominantly, Confuciusm.

Cultural Revolution Cohort - the "Lost Generation" (1946-55). The second birth cohort in our sample, born between 1946 and 1955, spent their early adulthood years during the Culture Revolution, from 1966-1976. This cohort was often referred to as the "lost generation" because most of them grew up in turmoil and many lost the opportunity to receive proper education, marry, or have children (Hung and Chiu 2003). During this period, many "educated urban youth" were sent down to rural areas to be "reeducated" (Bernstein 1977; Zhou and Hou 1999). College Admissions stopped for six years, with a limited number of students allowed to enter college (Tsang 2000).

Young adults who grew up during this period of time were likely to have considerably delayed or even foregone marriage and parenthood. However, the Lost Generation witnessed the rising socio-economic status of women and was fully exposed to the communist ideological propaganda on gender equality.

The Early Reform Year Cohort (1956-65). This cohort entered their young adulthood years at the beginning of the economic reform. The marriage law was revised again in 1980, increasing the legal age of marriage to 20 for females and 22 for males. Higher education was resumed in 1978 and the one-child policy was initiated in 1979.

The socialist institutions and ideology began to weaken as the command economy transition to market economy. However, the social norms of gender equality were still widely accepted and economic opportunities were expanding. It is likely that economic prospect can still

have a positive effect on women's marriage formation, but had weakened as people speed up their entry into marriage.

The Mid Reform Year Cohort (1966-75). This generation spent their transitioning years in the late 1980s and the 1990s when economic reform proceeded in greater force. As a result of economic reform, poverty rates declined dramatically from 65 percent in 1981 to about 33 percent in 1986, as measured by the World Bank poverty standard of a dollar-a-day.[i] The government continued to invest in the education system. In 1986, the Nine-year Compulsory Education Law was passed. At the same time, this cohort also experienced a collapse of the old socialist welfare system and Marxist ideology as the mainstream, legitimate ideology in China.

Rapid Growth and Globalization Cohort (1976-1985). The youngest cohort, born in 1976-1985, grew up, many as the single child due to the one-child policy, during a period of rapid economic growth and social transformation in the mid-1990s to the first decade of the twenty-first century. Private enterprises took off in earnest while the state-owned enterprises started laying off millions of workers. Higher education was being expanded dramatically, especially after the 1999 college expansion policy. A consequence of this expansion is that college graduate unemployment rates increased in recent years.[ii] With market becoming more competitive, gender discrimination and penalty in salary and promotion are widely reported (Cao and Hu, 2007; Zhang, Hannum and Wang, 2008). As social safety nets in urban areas continue to become privatized, out-of-pocket cost of health care, education and housing continue to climb, posing significant financial challenges to young people in China.

When China's economy becomes increasingly open, this cohort of Chinese youth is also increasingly exposed to western lifestyles, ideas, and values. Meanwhile, the Marxist ideology

promoting egalitarian gender ideology further loses its ground to the returning Confucius tradition that endorses hierarchical gender relationship.

Research Question and Hypotheses

Our research questions are, thereby, to investigate whether timing of marriage among Chinese men and women has changed through time, and to what extent the relationships between men's and women's economic prospect and their propensity of family formation are different. We further scrutinize to what degree this gender discrepancy has changed over time.

Given the different historical life circumstances, we expect to see distinct trajectories across cohorts as young Chinese transitioned to first marriage formation. We expect timing of marriage increases across cohort, with the exception of the Cultural Revolution cohort. Due to their life opportunities being interrupted by historical time, their timing of marriage would be later than other cohorts.

Further, following Becker's gender specialization approach, we expect women with better economic prospect would postpone entering marriage, while their male counterparts would speed up entering marriage. In contrast, following Oppenheimer's mate searching and career entry approach, we expect human capital investment will delay men and women's delay marriage formation, considering marriage is still relatively early in China and that time invested in human capital can be in conflict with marriage formation. Note here, according to Oppenheimer, human capital investment eventually will increase men and women's marriage formation. Because we investigate timing of marriage in this study, we expect a negative effect here.

Moreover, as the Chinese society is transforming from more gender egalitarian society to less so after the economic reform, Oppenheimer's model may be more relevant to the early two cohorts and Becker's model can be more relevant to the three younger cohorts.

Methods

Data and Sample

Analysis in this paper is based on pooled data from the 2006 and 2008 waves of the Chinese General Social Survey (CGSS). This study covers households in both rural and urban areas in 30 provinces/districts (excluding Tibet, Taiwan, Hong Kong, and Macau). The 2006 wave include 10,151 households and the 2008 wave includes 6,000 households. The study interviews one randomly chosen adult per household and collects data on basic socioeconomic and demographic information for respondents and family members, including family composition, education, ethnicity, health, and psychological well-being, as well as community administration data for the residence where the respondent resided at the time of the interview. These data allow us to examine trends of family formation among subgroups of the population across birth cohorts.

We include men and women who were born between 1936 and 1985 in the analyses. Sample size is 13,154. We created five birth cohorts based on individuals' year of birth, those born in 1936-45,1946-55, 1956-65, 1966-75 and 1976-85, respectively, representing those who were born in the unique historical contexts noted above.

Dependent Variable

The dependent variable is the tempo of young women's transition to marriage. All women are exposed to the risk of first marriage beginning at age 15 until they get married, or the time at interview, whichever comes first. Those who have not yet married at the time of interview are right censored and those who were married before age 15 are excluded from the analytical sample.

Independent and Control Variables

Our main independent variables are the respondent's premarital educational attainment, and first occupation before marriage. Respondent's education level is measured by years of schooling before timing of marriage. Occupation is measured by two variables: 1) The International Socioeconomic Index (ISEI) is used to rank the respondent's occupation from low to high, which approximates his/her socioeconomic status; 2) A dummy variable is constructed to measure those who did not have a job vs. those with a job before marriage.

Factors that are relevant to young adults' transitioning to marriage are included in the analyses. Age is measures in years and gender is coded as 1 for female and 0 for male. Hukou is measured by whether one is urban or rural Hukou at time of marriage. Family background, measured by ethnicity (Han=1), father's education, and whether the respondent's father is a Communist Party member (representing a family's political capital), are included in the models. Father's education is collapsed into three categories: illiterate and primary school, junior middle school, and high school and above. We furthered control for region: East, Central and West, because the three different regions represent different socioeconomic development levels in the current Chinese society.

Analytic Strategy

First, we describe the characteristics of the analysis sample by cohort and residence. Then we estimate survival curves to show trends for first marriage formation by birth cohort. Finally, we conduct event history analysis, using Cox proportional hazard models to estimate the impact of factors on the timing of marriages. All the analyses are stratified by cohort for further scrutiny of potential cohort difference in patterns of marriage timing. Considering variations in socioeconomic development level and local culture at the provincial level in China, we also cluster the analysis by province.

Results

Descriptive Statistics

Table 2 presents the weighted descriptive statistics for the entire sample and gender and cohort stratified ones. There are 95 percent of woman married and 91 percent of men by the time of interview. The average age of marriage is about 22 for women and 24 for men. Not much cohort difference is shown, but average age of marriage is slightly older for the Cultural Revolution Cohort.

[Table 2 about here]

Average years of schooling are about 7 and 8 years for women and men respectively. The two early cohorts have average years of schilling about 5 while the youngest cohort has almost 10 years. The ISEI score for occupation is about 30 for both men and women and the youngest cohort have a somewhat higher score than previous cohorts. There are 10 percent of people who did not have job before marriage while women have higher percentage than men: 14 vs 7.

Thirty percent of the sample has urban Hukou at the time of marriage and a larger portion the youngest cohort has urban Hukou than previous cohorts. In terms of family background, slightly more than 90 percent are ethnic Han. Father's education level is low: only 9 percent of the respondents whose father have a high school or above education and the proportion for the youngest cohort is 21 percent. One third of the sample lives in the East, around 40 percent in the Central, and about one fourth in the West.

Transition to Marriage

Figures 1-2 show the percentage of individuals who had not married at a specific age across cohorts and by gender. We can see that the onset of age at marriage had become later over time, as expected, because of the marriage law and the longer period of time men and women spend in schooling. The oldest cohort had the earliest age at marriage and the least concentrated marriage pattern (a flatter curve). For those who grew up during the Cultural Revolution years, they have a late onset and did not catch up with others until age 30. The Early Reform cohort had a later start than the Mid Reform cohort, but sped up subsequently (a sharper curve), indicative of a compensation of late marriage of their previous cohort.

[Figures 1-2 about here]

It is clear that for the youngest cohort, their marriage formation is later than any other cohorts, and by the time of interview, still about 40% have not got married. This is a contrast to almost universal and early marriage to all the other cohorts. It merits note that about 10 percent of this cohort is 21 or 22 years old who are below 23, the average marriage age of all the previous cohorts. The implication is that cohort will have a much later marriage than their older counterparts and it is yet to know if a substantial proportion will forgo marriage eventually.

Marriage was near universal in China during the period of time examined in this paper. The Red Flag Cohort experiences a very fast entry into first marriage, which is not surprising considering there was likely still a heavy Confucius influence lingering then. The Cultural Revolution Generation experienced significantly later entry into marriage, because the nationwide social movement dramatically interrupted ordinarily people's social, economic and private lives. However, this cohort speeds up their marriage entry around age thirty. The Early Reformation cohort seems to have caught up with the lost time. The Mid Reform Cohort experiences a relatively later entry while the youngest cohort has a much delayed one. Expansion of mass education and an increasingly competitive market economy are likely reasons for the later transition to marriage.

Multivariate Analysis

Table 3 presents results from the Cox Proportional Hazard models estimating interactions between education and occupation and gender, stratified by cohort. There are significant interactions between education and gender across cohorts. Because it is not intuitive to interpret interactions directly from the hazards in the table, we will explain these terms later. There are no constant significant interactions between occupation and gender. Occupation has a negative effect for the three economic reform cohorts and it is weak or even disappearing for the youngest cohort. For example, for the Early Reform Cohort, a respondent with lowest occupation ranking score of 26 has a hazard of marrying one fourth higher than one with the top occupation ranking score of 80; one has no job has a hazard 17 percent higher than those with a job. For the youngest cohort, for those with a job, the effect of occupation ranking is similar, but there is no difference between those with a job and those having no job before marriage.

[Table 3 about here]

Interestingly, as one ages, the hazard of getting married increases for the Cultural Revolution and Mid Reform cohort, and decreases for the Early Reform and the youngest cohort. The positive effect for the former two cohorts reflects their relatively late age of marriage. Whereas, the negative effect of the Early Reform cohort suggests this cohort catches up by marrying early to compensate for late marriage of their immediate previous Cultural Revolution Cohort. And the negative effect of the youngest cohort may reflect the heterogeneity of marriage timing of this group: those who have already married marry relatively young and those have not yet married may postpone it a lot. There is no effect for the oldest cohort, which is likely indicative of universal marriage and heterogeneity of marriage timing for this group of people. Urban residents tend to marry later than their rural counterparts with a 30 percent different of hazard. However, there is no difference for the oldest and the youngest cohort. Because the Hukou system was not implanted until 1958, the influence had not begun or was weak on the oldest cohort regarding their marriage timing; whereas, rapid urbanization and loosening of Hukou system in recent years may contribute to no effect for the youngest cohort. The effects of ethnicity and father's education and party membership do not seem to be stable. It is worth noting here that for the youngest cohort, those whose father has high school or above education has a hazard of marrying 20 percent lower than those with a father having no education. Those living in the Central and West regions tend to marry earlier than those from the East, but the effect disappears for the youngest cohort.

Figures 3-7 present interactions between education and gender for all the five cohorts. It merits noting here that for the three oldest cohorts (Figures 3-5), less than 7% of respondents

have years of schooling longer than 12 (equivalent to high school), with the Cultural Revolution Cohort being the worst. In both Figures 3 and 4, education has no effect for men, but delays women's marriage formation. For example, for the oldest cohort, a woman with no education has a hazard of marrying 1.2 times than one with a high school education; for the Cultural Revolution Cohort, the difference is 80%.

[Figures 3-7]

There is a crossover of education effects on education for men and men of the Early and Mid Reform cohorts: education delays women's but accelerates men's marriage formation. The crossover points are 14 years of education for the Early Reform Cohort and 12 for the Mid Reform Cohort: for the Early Reform Cohort, comparing to a college graduate, a woman with no education has a hazard of marrying about 1.1times higher, while an uneducated man has an 80-percent lower hazard. For the Mid Reform Cohort, Comparing to their counterparts with a college education, an educated woman's hazard of marrying is 1.4 times higher, while an educated man has a hazard of marrying 25% lower.

Figure 7 shows a distinguished converging pattern for the youngest cohort: education shows a negative effect for both men and women, although the slope for women is much steeper. Comparing to their counterparts with a college education, an uneducated woman's hazard of getting married is close to 4 times higher, while a man with no education has a hazard of marrying 40 percent higher.

Discussion and Conclusion

Our findings suggest a general picture that those with less economic resources are more likely to marry early, and it is the same for men and women: those with less education (although education has a more nuanced, gendered pattern and a detailed discussion will be conducted later), those beginning with no job or lower ranked occupation, those with rural Hukou, those with less educated parents, and those from the Central and West in China. Further, education has different effects for men and women across cohort. It is different from either current Western contexts where economic resources is associated with high likelihood for both men's and women, or Western contexts two decades ago where economic resources have a gendered pattern on marriage formation, encouraging it for men while discouraging it for women. Therefore, we argue that, neither the gender specialization nor the career entry approach can be uncritically, directly applied to fully explain this Chinese puzzle, considering the universal and early marriage and prevailing dual income families in the Chinese context.

Hence, we modify the gender specific economic independence hypothesis in the Western context to a general economic independence hypothesis in the Chinese context. First, it is likely that in this universal, early marriage context, young people individuals may negotiate to extend their ‘free time’ before marriage if possible. Because universal marriage is still the norm in the Chinese society, marriage means the beginning of adulthood, economic independence, and fulfilling more filial piety duty to parents, whereas unmarried adult children may feel socially accepted to live in parents' household and even accept financial as well as other support from parents.

Second, Chinese women have relatively high socioeconomic status, including educational attainment and labor force participation. Dual income families are the norm. Hence, both

Chinese men and women have the economic resources to buy freedom from the ultimate universal marriage package. Although the society, cultural norms and parents may push their adult children to enter marriage early, the children themselves may employ various means to buy out.

This general economic independence hypothesis is also in consistence with Oppenheimer's career entry approach. The normative marriage age is still early and to marry eventually is not a choice, but a necessity. Yong men and women beginning with better job or more financial resources, thus may invest more in human capital for career development. And at the same time, they afford to and are also willing to wait for a little longer time to find a more compatible mate. In contrast, their disadvantaged counterparts may not have sufficient resources or promising future. They cannot afford, and likely do not need a long time search, faced with the pressure of universal marriage.

Comparing to other economic indicators, education has a clear gendered pattern across cohort through time. Education indicates the long term economic prospect and probably is less direct measure compared to other variables concerning economic resources. Further, it also has a strong cultural root in the Confucius society where education is highly values, primarily for men.

For the two pre-economic-reform cohorts, jobs are assigned by the socialist state and this is likely why education does not have much effect on men. For women, this scenario is more nuanced here. First, women had much lower education than men. Second, the Communist Party sturdily promoted gender equality in the early time. As a result, the small number of educated women usually had a relatively good career prospect: education as human capital is easily transformed to be social-political capital. Therefore, these women likely postponed their

marriage for a better career development. That is why education has a negative effect on women's but no effect on men's marriage formation. Here, Oppenheimer's career entry approach applied in the Capitalist market economy appears to be more relevant here when considering the context of the early socialist regime in China.

The Early and Mid Reform Cohorts show a cross-over of education effects on marriage formation for men and women and this seems to well fit in the gender specialization model. During this period of time, the gender egalitarian ideology encounters the return of the Confucius hierarchical gender role norm. Further, women experience much discrimination and penalty on the labor market. As a result, women's high socioeconomic status in the early socialist regime seems to be falling down. And they tend to have less returns from their education than men's, comparing to previous socialist cohorts. However, men's education as indicator of human capital seems to be well paid in the market economy. Therefore, for these two cohorts of men and women in China, the gender specialization model seems to have some relevance to understand this family formation pattern. However, the nuance is that it is not necessarily women seem specialization in the family. It is because women still have lower education than men and they do not obtain equal returns as men. Further, women are usually devalued for having education in the for Confucius tradition.

It should be noted that the negative effect of women's education on marriage formation should be interpreted differently for the two early socialist cohorts and the two economic reform cohorts: for the former, small number of relatively advantaged women postponed their marriage for better career, mostly social, political gains; for the latter, in the more gender specialized family mode, educated women are less valued on both labor market and marriage market.

The youngest cohort then lives in a very different time than their previous counterparts. Higher education is further expanded and women's educational attainment has outpaced men's. This likely boosters the more egalitarian gender ideology rather the traditional gender role norms. Unemployment rate becomes high among college graduates, directly related to the rapid expansion of higher education, particularly after 1999 in China. The labor market is thus highly competitive for the highly educated young men and women, which again makes the dual income family a necessity. In this context, the career entry approach tends to be more relevant here. Both men and women with better education have to postpone their marriage formation facing difficult job market. And the situation seems to be more severe for women, considering their education face double devaluing by both the traditional Chinese culture and the labor market.

The above analyses suggest that both gender specialization and career entry approaches can be relevant in interpreting marriage formation in China. However, it will be pointless and misleading if we don't have complex, nuanced understanding of the cultural and institutional contexts in China of different times. It is necessary to note here that an important Chinese context when applying career entry model is that marriage is still universal and early. That is why economic prospect has a delaying effect on marriage timing. If the normative marriage age is postponed largely, it is likely we will find positive effect of education and occupation on marriage timing.

To better understand family formation in China, contextually relevant theories and hypotheses should be developed. Such theoretical construction have to consider the following important cultural and institutional components of China: 1) universal and early marriage; 2) one-child policy and weak social safety net and possible policy changes in the future; 3)

women's high educational attainment and labor force participation; 4) prevalence of dual income family; 5) conflicting gender ideology: egalitarian vs. hierarchical; 6) the capacity to incorporate potential changes in the future.

Reference

Becker, Gary S. 1991. *A treatise on the family*. Cambridge, MA.: Harvard University Press.

Bernstein, Thomas P. 1977. *Up to the mountains and down to the villages: the transfer of youth from urban to rural China*. New Haven: Yale University Press.

Bloom, David E., and Neil G. Bennett. 1990. Modeling American marriage patterns. *Journal of the American Statistical Association* 85 (412):1009-17.

Cao, Y, and Hu, C. (2007). Gender and Job Mobility in Postsocialist China: A Longitudinal Study of Job Changes in Six Coastal Cities. Social Forces, 85(4):1535-1560.

Fukuda. S. 2013. Changing Roles of Women's Earnings Potential in Marriage Formation in Japan. Forthcoming with *Transitioning to Adulthood in Asia: Courtship, Marriage and Work: a special issue in American Academy of Political and Social Sciences* 646.

Goldstein, Joshua R., and Catherine T. Kenney. 2001. Marriage delayed or marriage forgone? New cohort forecasts of first marriage for U.S. women. *American Sociological Review* 66 (4): 506-19.

Goldscheider, Frances Kobrin, and Linda J. Waite. 1986. Sex differences in the entry into marriage. *The American Journal of Sociology* 92 (1):91-109.

Hung, E. P. W., and Stephen W. K. Chiu. 2003. The lost generation: life course dynamics and xiagang in China. *Modern China* 29(2):204-36.

Ji, Y.C.. 2013. Negotiating Marriage and Schooling: Nepalese Women's Transition to Adulthood. Forthcoming with *Transitioning to Adulthood in Asia: Courtship, Marriage and Work: a special issue in American Academy of Political and Social Sciences* 646.

Jones, G. W. and Gubhaju, B., (2009) Emerging trends in marriage in the low fertility countries of East and Southeast Asia. Asian Population Studies, 5(3): 237-265.

Lichter, Daniel T., Diane K. McLaughlin, George Kephart, and David J. Landry. 1992. Race and the retreat from marriage: a shortage of marriageable men? *American Sociological Review* 57: 781-99.

Oppenheimer, Valerie Kincade. 1988. A theory of marriage timing. *American Journal of Sociology* 94:563-91.

Oppenheimer, Valerie Kincade. 1994. Women's rising employment and the future of the family in industrial societies. *Population and Development Review* 20 (2):293-342.

Park, H. 2013. Transition to Adulthood among Korean Youth: Transition Markers in Productive and Reproductive Spheres. Forthcoming with *Transitioning to Adulthood in Asia: Courtship, Marriage and Work: a special issue in American Academy of Political and Social Sciences* 646.

Sweeney, Megan M. *2002*. Two Decades of Family Change: The *Shifting* Economic Foundations *of* Marriage. *American Sociological Review* 67:132-147

Thornton, Arland. 2005. *Reading history sideways: The fallacy and enduring impact of the developmental paradigm on family life*. Chicago, IL: University of Chicago Press.

Thornton, Arland, William G. Axinn, and Jay D. Teachman. 1995. The influence of school enrollment and accumulation on cohabitation and marriage in early adulthood. *American Sociological Review* 60 (5):762-74.

Thornton, Arland, and Thomas E. Fricke. 1987. Social change and the family: comparative perspectives from the West, China, and South Asia. *Sociological Forum* 2 (4) :746-79.

Tsang, Mun C. 2000. Education and national development in China since 1949: oscillating policies and enduring dilemmas. *China Review* 2000:579-618

Yeung, W.J., and Hu, S. 2013. Coming of Age in Times of Change: Transition to Adulthood in China. Forthcoming with *Transitioning to Adulthood in Asia: Courtship, Marriage and Work: a special issue in American Academy of Political and Social Sciences* 646.

Zhang,Y., Hannum, E. and Wang, M. (2008).Gender-Based Employment and Income Differences in Urban China: Considering the Contributions of Marriage and Parenthood. Social Forces. 86(4):1529-1560.

Zhou, Xueguang, and Liren Hou. 1999. Children of the Cultural Revolution: the state and the life course in the People's Republic of China. *American Sociological Review* 64(1):12-36.

Table 1. Definition of Cohorts.

Cohort	Year when 23 years old	Historical Background during transitioning years
1936-1945	1959-1968 Early Communist Year Cohort)	1950 Marriage Law (Male: 20; Female: 18); 1958 Household Registration System; 1958-62 Great Leap Forward and Great Famine; Women hold up half the sky.
1946-1955	1969-1978 Cultural Revolution Cohort)	1966-76 Cultural Revolution; 1968 "up to the mountains and down to the villages" began; basic education expanded; higher education institutions closed.
1956-1965	1979-1988 Early Reform Year Cohort)	1978 Deng came to power; college entrance exam resumed, economic reform started; 1979 One-child policy; 1980 new Marriage Law (Male: 22; Female: 20)
1966-1975	1989-1998 Mid Reform Year Cohort)	1986 nine-year compulsory education law; early period of economic reform
1976-1985	1999-2008 Rapid Growth & Globalization Cohort)	Large-scale and deepened economic reform; State-owned enterprises laid off workers; higher education expansion; rising housing prices; 2001 WTO member; globalization.

Note: Modified from Yeung and Hu (2013).

Table 2. Weighted Means of Covariates by Gender, CGSS, 2006 and 2008.

Variables	Entire Sample (N=13,154)	Women (N=7,039)	Men (N=6,115)	1936-45 (N=1267)	1946-55 (N=2,592)	1956-65 (N=3,192)	1966-75 (N=3,548)	1976-85 (N=2,555)
Marital Status at Interview (Married=1)	0.93	0.95	0.91	0.99	0.99	0.99	0.98	0.71
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	-(0.01)
Age at First Marriage	23.31	22.49	24.23	23.27	23.43	23.35	23.33	23.03
	(0.04)	(0.05)	(0.06)	-(0.16)	-(0.09)	-(0.07)	-(0.07)	-(0.09)
Premarital Years of Schooling	7.22	6.57	7.92	5.33	5.37	7.00	7.77	9.73
	(0.05)	(0.07)	(0.06)	(0.14)	-(0.09)	-(0.08)	-(0.08)	-(0.11)
Occupation (ISEI)	30.22	30.15	30.29	30.46	27.62	28.68	30.41	34.83
	(0.12)	(0.16)	(0.19)	(0.43)	-(0.21)	-(0.21)	-(0.24)	-(0.34)
Having no Job before Marriage	0.10	0.14	0.07	0.14	0.10	0.10	0.09	0.11
	(0.00)	(0.00)	(0.00)	(0.01)	-(0.01)	-(0.01)	-(0.01)	-(0.01)
Cohort								
1936-45	0.09	0.07	0.11					
	(0.00)	(0.00)	(0.00)					
1946-55	0.22	0.20	0.23					
	(0.00)	(0.01)	(0.01)					
1956-65	0.25	0.26	0.24					
	(0.00)	(0.01)	(0.01)					
1966-75	0.26	0.28	0.24					
	(0.00)	(0.01)	(0.01)					
1976-85	0.19	0.19	0.18					
	(0.00)	(0.01)	(0.01)					
Age at Interview	43.66	42.82	44.56	65.16	55.77	46.04	36.47	26.50
	(0.14)	(0.18)	(0.21)	(0.09)	(0.07)	(0.07)	(0.06)	(0.08)
Gender	0.52			0.40	0.49	0.53	0.56	0.53

(Female=1)								
	(0.01)			(0.02)	-(0.01)	-(0.01)	-(0.01)	-(0.01)
Hukou (Urban=1)	0.31	0.30	0.32	0.31	0.25	0.29	0.31	0.40
	(0.00)	(0.01)	(0.01)	(0.02)	-(0.01)	-(0.01)	-(0.01)	-(0.01)
Ethnicity (Han=1)	0.92	0.92	0.91	0.95	0.93	0.92	0.91	0.90
	(0.00)	(0.00)	(0.01)	(0.01)	-(0.01)	-(0.01)	-(0.01)	-(0.01)
Father's Education								
Illiterate and Primary School (ref)	0.77	0.76	0.77	0.94	0.91	0.83	0.72	0.49
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Middle School	0.15	0.15	0.14	0.03	0.06	0.11	0.18	0.30
	(0.00)	(0.01)	(0.01)	(0.01)	-(0.01)	-(0.01)	-(0.01)	-(0.01)
High School and above	0.09	0.09	0.09	0.02	0.03	0.06	0.11	0.21
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	-(0.01)	-(0.01)
Father's Party Membership (Party Member=1)	0.09	0.09	0.09	0.02	0.07	0.10	0.12	0.12
	(0.00)	(0.00)	(0.00)	(0.00)	-(0.01)	-(0.01)	-(0.01)	-(0.01)
Region								
East (ref)	0.33	0.33	0.32	0.33	0.33	0.32	0.29	0.38
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)
Central	0.41	0.41	0.41	0.40	0.43	0.43	0.41	0.36
	(0.01)	(0.01)	(0.01)	(0.02)	-(0.01)	-(0.01)	-(0.01)	-(0.01)
West	0.26	0.25	0.27	0.27	0.25	0.24	0.29	0.26
	(0.01)	(0.01)	(0.01)	(0.02)	-(0.01)	-(0.01)	-(0.01)	-(0.01)

Note: For age at first marriage, N=11,980 (sample), 6,575 (female), 5,405 (male), 1,251 (36-45), 2,559 (46-55), 3,135

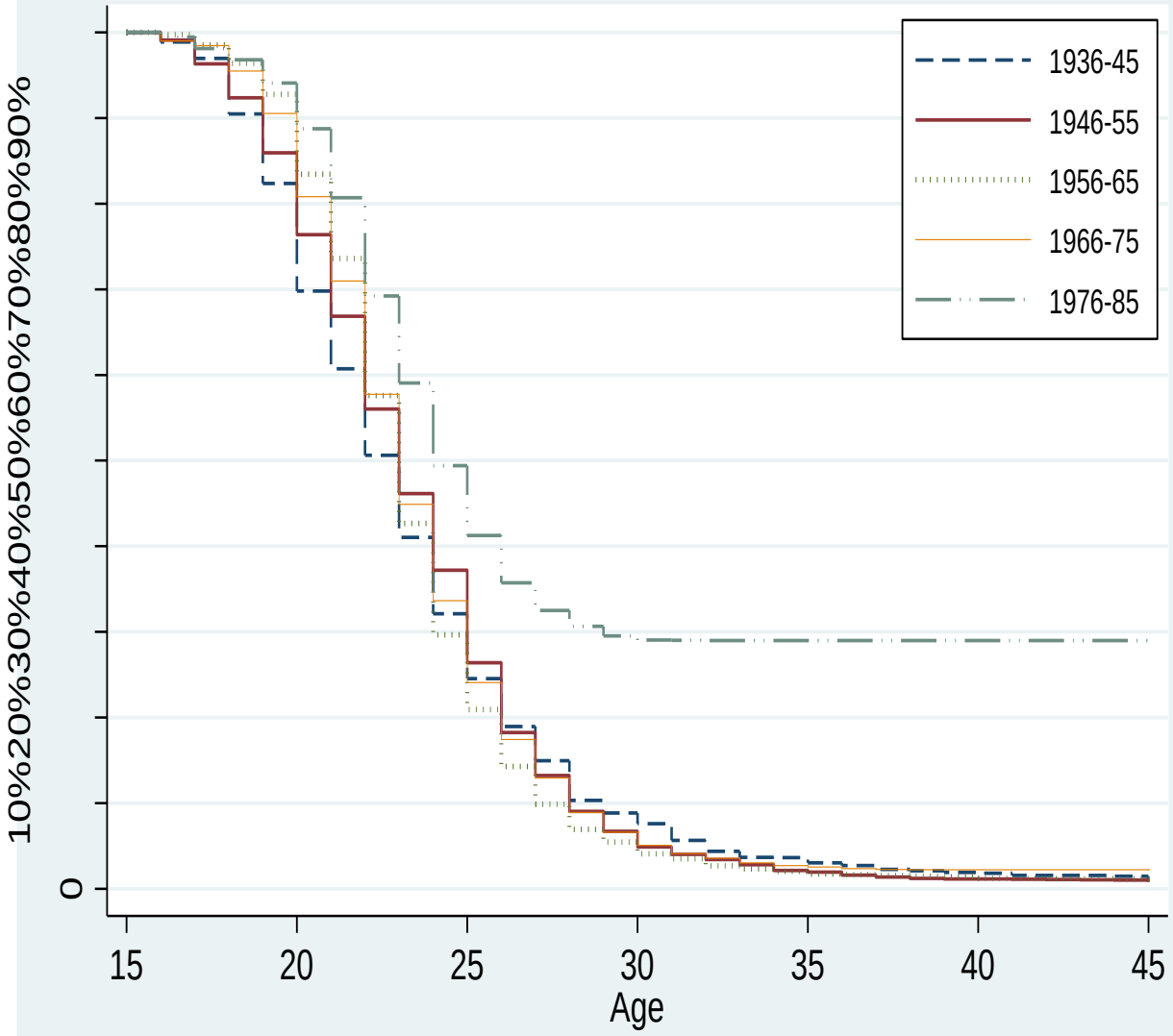
(56-65), 3,440 (66-75), and 1,595 (76-85); Std. errs in parentheses.

Table 3: Hazards of First Marriage for Respondents Born between 1936 -85, Stratified by Cohort.

Variables	Cohort				
	1936 -45	1946 -55	1956 -65	1966 -75	1976 -85
Premarital Years of Schooling	0.997	0.989	1.036*	1.014	0.971
	-(0.01)	-(0.01)	-(0.01)	-(0.01)	-(0.02)
Premarital Occupation (ISEI)	0.999	1.002	0.993***	0.993**	0.993+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
No Job before Marriage	1.13	1.03	1.404**	1.568**	0.993
	-(0.18)	-(0.17)	-(0.16)	-(0.25)	-(0.14)
Gender (female=1)	2.836***	1.895***	2.645***	2.321***	4.285***
	-(0.57)	-(0.34)	-(0.34)	-(0.19)	-(0.80)
Interaction Terms					
Schooling * Gender	0.957**	0.965+	0.933***	0.933***	0.915***
	-(0.01)	-(0.02)	-(0.01)	-(0.01)	-(0.02)
ISEI * Gender	0.994	1	1.002	1.006+	1.001
	-(0.01)	(0.00)	(0.00)	(0.00)	-(0.01)
No Job * Gender	1.438+	1.081	0.774*	0.888	1.16
	-(0.28)	-(0.24)	-(0.09)	-(0.12)	-(0.21)
Age	0.992	1.039***	0.954***	1.020**	0.976*
	-(0.02)	-(0.01)	-(0.01)	-(0.01)	-(0.01)
Hukou (Urban=1)	0.879	0.679***	0.687***	0.696***	0.846
	-(0.09)	-(0.03)	-(0.04)	-(0.04)	-(0.09)
Ethnicity (Han=1)	0.832	0.800**	0.893	1.272***	1.05
	-(0.17)	-(0.06)	-(0.09)	-(0.09)	-(0.14)
Father's education (ref=Illiterate and Primary School)					
Middle School	0.925	0.891+	0.895*	1.039	0.991
	-(0.11)	-(0.06)	-(0.04)	-(0.05)	-(0.06)
High School and above	1.13	0.724***	0.922	0.906	0.780***
	-(0.23)	-(0.07)	-(0.06)	-(0.08)	-(0.06)
Father's Party Membership (Party Member=1)	1.127	1.162*	1.058	1.068	1.017
	-(0.18)	-(0.07)	-(0.04)	-(0.07)	-(0.15)
Region (ref=East)					
Central	1.196*	1.300***	1.177***	1.315**	1.167
	-(0.10)	-(0.08)	-(0.06)	-(0.12)	-(0.14)
West	1.200***	1.437***	1.190**	1.247**	1.199
	-(0.07)	-(0.08)	-(0.06)	-(0.10)	-(0.14)
Observations	1,267	2,592	3,192	3,548	2,555
ll	-7776	-17790	-22593	-25235	-12580

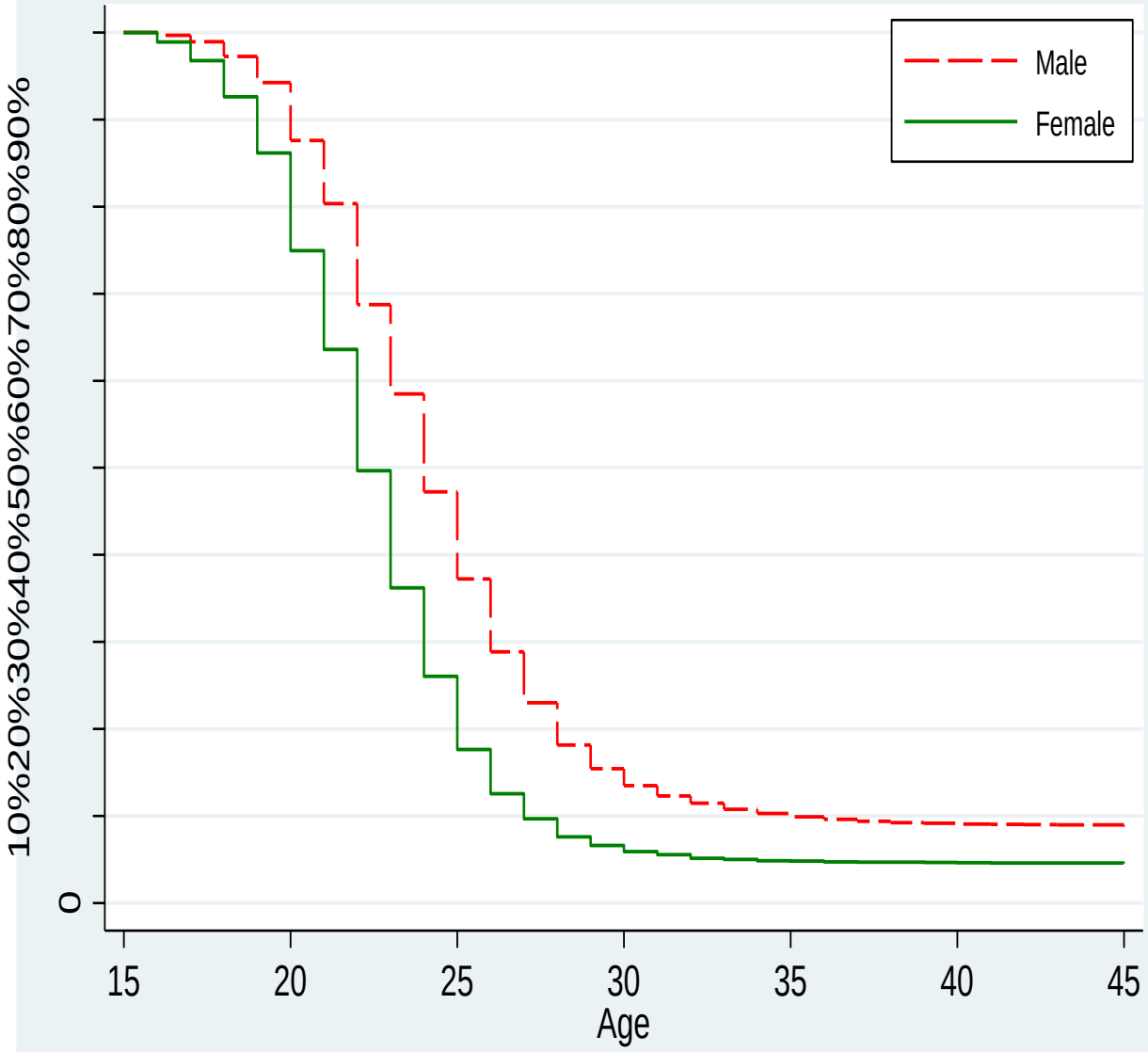
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Figure 1. Percent of Respondents Having Not Married by Cohort



Data from 2006 and 2008 CGSS

Figure 2. Percent of Respondents Having Not Married by Gender



Data 2006 and 2008 CGSS

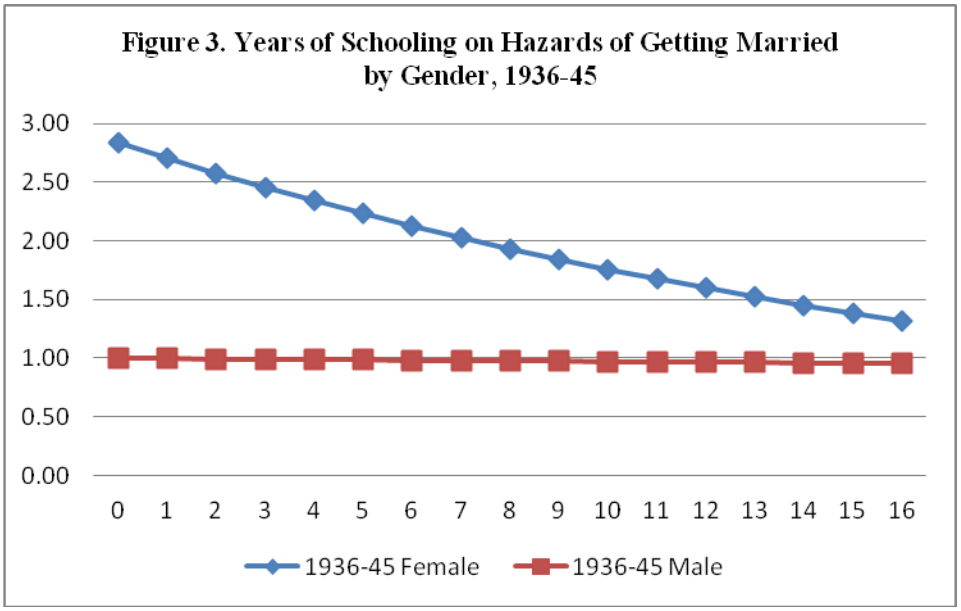


Figure 3. Years of Schooling on Hazards of Getting Married by Gender, 1936-45
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
1936-45 Female
1936-45 Male

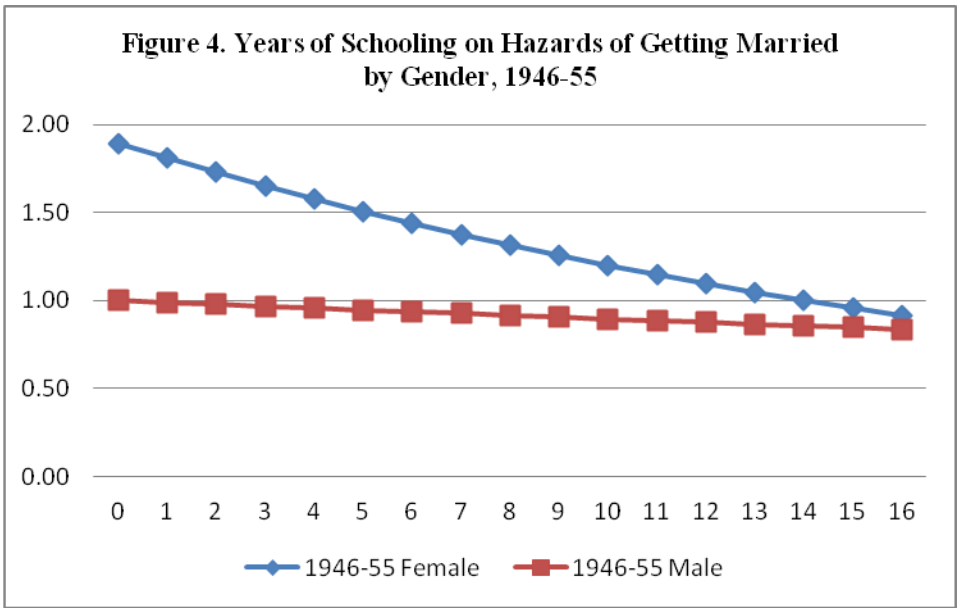


Figure 4. Years of Schooling on Hazards of Getting Married by Gender, 1946-55
2.00
1.50
1.00
0.50
0.00
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
1946-55 Female
1946-55 Male

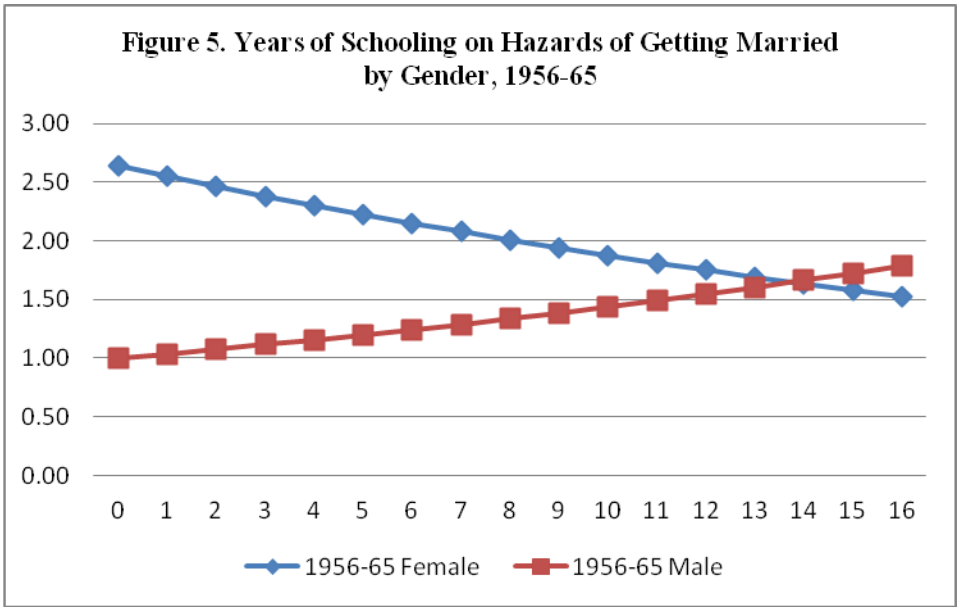


Figure 5. Years of Schooling on Hazards of Getting Married by Gender, 1956-65
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
1956-65 Female
1956-65 Male

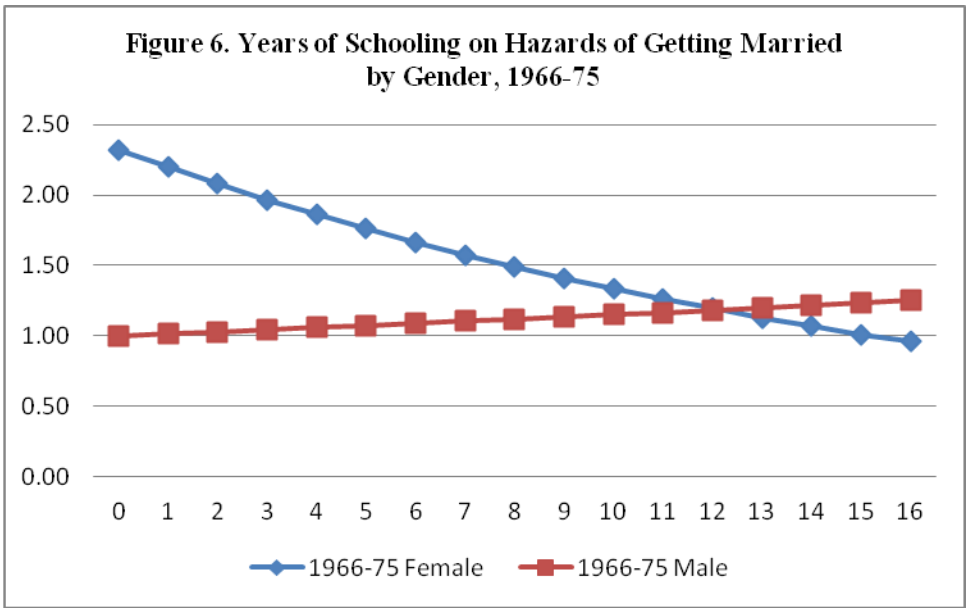


Figure 6. Years of Schooling on Hazards of Getting Married by Gender, 1966-75
2.50
2.00
1.50
1.00
0.50
0.00
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
1966-75 Female
1966-75 Male

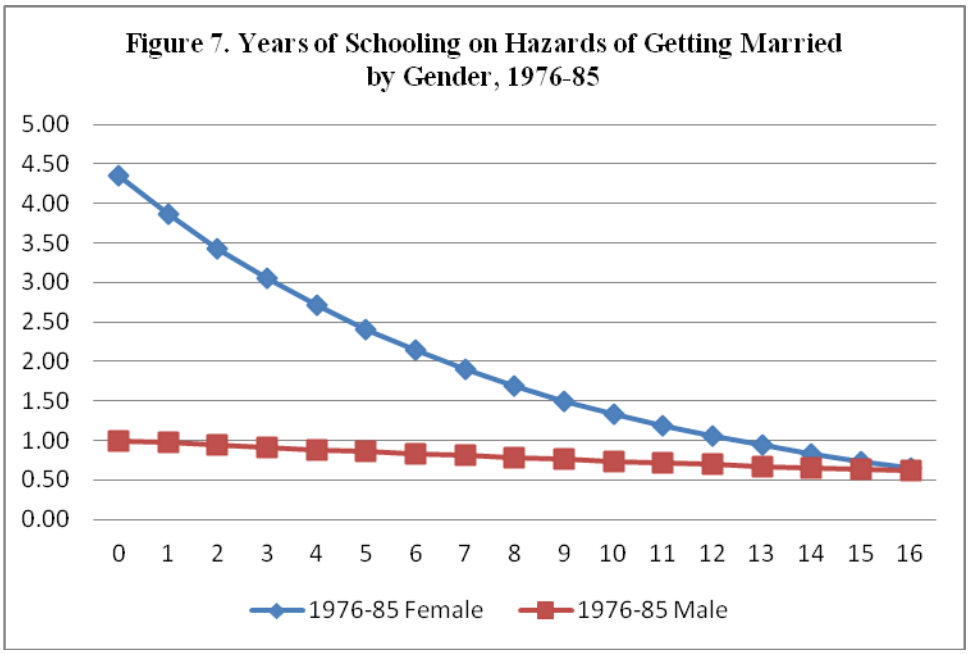


Figure 7. Years of Schooling on Hazards of Getting Married by Gender, 1976-85
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
1976-85 Female
1976-85 Male

[i]. See World Bank. 2009. *From poor areas to poor people: China's evolving poverty reduction agenda*. Poverty Reduction and Economic Management Department,

East Asia and Pacific Region, World Bank.

[i]. See http://www.businessweek.com/globalbiz/content/jun2007/gb20070605_780984.htm; http://www.businessweek.com/magazine/content/10_37/b4194008546907.htm; http://www.forbes.com/2010/09/07/china-economy-unemployment-leadership-managing-rein.html; Bai, L. (2006). Graduate unemployment: dilemmas and challenges in China's move to mass higher education. *The China Quarterly* 185(1):128-44.

[1]See http://www.labournet.com.cn/lilun/fileview.asp?title=%CE%D2%B9%FA%B8%BE%C5%AE%BE%CD%D2%B5%B5%C4%CE%CA%CC%E2%D3%EB%B6%D4%B2%DF&number=al015743.txt. Retrieved on September 2nd, 2012.

[ii]. See http://www.businessweek.com/globalbiz/content/jun2007/gb20070605_780984.htm; http://www.businessweek.com/magazine/content/10_37/b4194008546907.htm; http://www.forbes.com/2010/09/07/china-economy-unemployment-leadership-managing-rein.html; Bai, L. (2006). Graduate unemployment: dilemmas and challenges in China's move to mass higher education. *The China Quarterly* 185(1):128-44.