Mate selection in China: Trends and determinants

Hao Liu[1] | Zheng Mu[2]

[1] Strategic Planning Office, Renmin University of China, Beijing, China

[2] Department of Sociology and Anthropology, National University of Singapore, Singapore

Correspondence

Zheng Mu, Department of Sociology and Anthropology, National University of Singapore,

11 Arts Link, AS1 #04-16, Singapore 117573.

Email: socmuz@nus.edu.sg

Funding information

This research was financially supported by the NUS FASS start-up grant to Zheng Mu.

Final working paper version, July 11th, 2022
To cite:
Liu, H., & Mu, Z. (2022). Mate selection in China: Trends and determinants. *Family Relations*, 1–19. https://doi.org/10.1111/fare.12718.

Abstract

Objective: Using pooled data from the 2010, 2012, and 2014 China Family Panel Studies, this paper elucidates the internal heterogeneity among non-arranged marriages by examining changing patterns and determinants of mate selection in China from 1950 to 2014.

Background: Previous research has documented a decline in arranged marriages and a rise in self-initiated marriages in the Asian context.

Methods: This study uses two measures to capture the nuanced nature of mate selection, namely, arranged versus non-arranged marriages among all couples, and introduced versus self-initiated marriages among non-arranged couples.

Results: While arranged marriages declined rapidly and were replaced mostly by introduced marriages before 1980, after 1980, self-initiated marriages began to increase. Urbanization and better education led to more non-arranged marriages, particularly through self-initiated means. The influence of county-level per capita GDP on mate selection is quadratic.

Conclusion: The two-stage transitions in mate selection reflect the importance of accounting for both structural and ideational factors in explaining these changes.

Implications: We challenge the assumed unilinear change from arranged marriages to self-initiated marriages along the processes of economic development. The intensified economic pressures may have driven some young adults back to introduced, even arranged, marriages.

KEYWORDS: Mate Selection, Arranged Marriage, Introduced Marriage, Self-initiated Marriage, China

Social context shapes mate selection, which, in turn, influences patterns of assortative mating, a crucial mechanism of social stratification with profound implications for the general level of social openness (Kalmijn, 1991; Qian, 1998; Smits & Park, 2009). Yet, previous research on mate selection has primarily documented the transition from arranged marriages to love matches. Most of them focused on the decline of parental control and the rise of romantic love and premarital intimacy without granting adequate consideration of the nuances in the search process and the implications for assortative mating (Rosenfeld & Thomas, 2012).

Specifically, the extant literature on mate selection concentrates on the evolutions of arranged marriages. In these unions, parents dictate marital decisions. The bride and the groom have limited opportunities to develop romance. In contrast, in love matches, spouses develop intimacy and romantic relationships before marriage (Cherlin, 2012). Arranged marriages emphasize the institutional aspects of marriage, such as continuing family lineages and sustaining family businesses. With the help of go-betweens or professional matchmakers, parents or elderly family members select spouses for their children based on family backgrounds and other socioeconomic considerations. In comparison, a love match is often initiated by the couple and prioritizes emotional attachment and romantic feelings between the two young adults (Allendorf & Pandian, 2016; Mitterauer & Sieder, 1983). Previous research on this binary categorization has documented a decline in arranged marriages and a rise in love matches in the Asian context (for example, Thornton & Lin, 1994, and X. Xu & Whyte, 1990 in China; Allendorf & Pandian, 2016, and Ghimire et al., 2006, in India; and Nedoluzhko & Agadjanian, 2015, in Kyrgyzstan).

However, this binary distinction between arranged marriages and love matches only accounts for changes in the role of parents and the couples' participation in mate selection. It ignores the potential roles of other parties and the complex interactions among parents, couples, and go-betweens during the search process, which is driven by diverse motivations to pursue assortative mating. Assortative mating, defined as the extent to which marital couples are matched on various characteristics, is associated with social openness and the degree to which individualistic values are realized (Schwartz, 2013; Smits & Park, 2009). In arranged marriages, parents and extended families are keen to ensure that the couple is matched on ascribed characteristics—particularly family backgrounds such as family wealth and social class. The other half of the picture, non-arranged marriages, can be heterogeneous in both the ways of encounter and the implications for assortative mating. Non-arranged marriages can be realized in ways other than self-initiated encounters and can be contracted based on a combination of instrumental and romantic factors. For example, young people may first get to know each other via introductions by friends, relatives, and acquaintances, who tend to match two young people based on instrumental factors, such as family background and education. After their initial meeting, the couple may develop romantic love and premarital intimacy.

China presents a unique case study for considering changes in mate selection. In ancient China, parents made marital decisions for their children. But in 1950, after the foundation of the People's Republic of China, arranged marriages against the couple's will were formally forbidden by the Marriage Law, which required legal marriages to be based on the consent of both partners. Since the late 1970s, along with economic reforms, China has

experienced economic growth, educational expansion, and globalization (Mu & Xie, 2014). According to the developmental idealism framework, individuals, particularly policy makers in less developed countries, tend to associate family patterns prevalent in industrialized Western societies with economic development (Thornton, 2005). An enthusiastic promoter of modernization campaigns, the Chinese government has fervently promulgated modern family ideals through policy making, public propaganda, and public education during the post-reform era (Greenhalgh, 2010). Family practices, such as self-initiated marriages, have gained rising endorsement at the grassroot level over China's recent past. These social changes may have promoted individual independence and Westernized family ideologies and facilitated the transition from arranged marriages to self-initiated marriages.

Yet, besides the rapid economic growth and Westernized family ideologies, China's post-reform era has also witnessed a dramatic rise in consumer aspirations and costs of living and household establishments (Davis, 2005; Mu & Xie, 2014; J. Yu & Xie, 2015). Therefore, the same period of economic development may have exerted counteracting social forces. Although the ideational change may increase young people's marital autonomy and self-initiated marriages, the intensified economic pressures may divert young people from self-initiated marriages and revert to introduced or even arranged marriages.

After a review of the literature, we found only four studies that have empirically investigated mate selection transition in China: X. Xu and Whyte (1990) studied the Chengdu region, Thornton & Lin (1994) studied Taiwan, A. Xu (1997) studied Shanghai and Gansu, and Zang (2008) studied Urumchi. These researchers focused on the binary distinction between arranged marriages and self-initiated matches (X. Xu & Whyte, 1990; Thornton &

Lin, 1994; Zang, 2008) or exclusively documented categories of introduced marriages (A. Xu, 1997) in respective regions of China.

In this paper, we move beyond the dyad of arranged marriages and love matches. As such, aside from arranged marriages, we bring into consideration *introduced marriage*, in which young adults meet via introductions through friends, relatives, and acquaintances and make the final marital decisions on their own; and *self-initiated marriages*, in which young adults get to know each other and make marital decisions by themselves. For the first time, we reveal temporal and regional variations in mate selection and their social determinants at both the individual and the contextual levels. We use nationally representative data from the 2010, 2012, and 2014 China Family Panel Studies (CFPS) to cover marriage cohorts from 1950 to 2014 and draw on structural and ideational factors to guide theoretical insights.

THEORETICAL ISSUES

In agricultural societies, extended families are institutions that organize production, arrange childbearing and childrearing, and protect family members from illness, accidents, and natural disasters (Mitterauer & Sieder, 1983). Accordingly, individuals depend on their extended families for survival and prosperity. In this context, marriages are contracted largely for institutional and functional purposes, such as to carry on the ancestral lineage, sustain family businesses, and merge the interests of two families. In the hopes of maximizing the utility of the extended family, parents or authoritative family members prefer to dictate their children's marital decisions without considering the opinions of young adults (Meekers,1995; Allendorf & Pandian, 2016). Thus, in agricultural societies, young adults are segregated by gender and engaged and married at young ages. To prevent their individual or romantic

preferences from interfering with family interests, potential marital partners are forbidden from engaging in private or romantic interactions (Parish & Whyte, 1978). In some cases, prospective marital partners do not even meet each other in person before the wedding (Lang, 1946).

With the rise of industrialized societies, institutions, such as factories, public schools, and insurance programs, replaced some of the traditional activities and responsibilities of extended families, which led young couples to become increasingly independent, both socially and economically (Becker, 1991; Goode, 1963; Mitterauer & Sieder, 1983). Under these circumstances, parental control over children's marital decisions declined, and conjugal families became increasingly crucial for individuals' well-being. Couples began to nurture their marital partnerships and to share childrearing, rather than relying on extended families for these needs. Individuals became more inclined to choose marital partners based on romantic love, which is more likely to happen through self-initiated mate selection based on non-familial social networks and in public spheres, such as schools, workplaces, neighborhoods, nightclubs and cinemas, and on the internet (Becker, 1991; Bozon & Heran, 1989; Goode, 1963; Kalmijn & Flap, 2001; Rosenfeld & Thomas, 2012).

In Asia and Africa, arranged marriages were still the norm until the early 20th century not only because economic development took place later in these regions, but also because ideational changes shaped transitions in mate selection, which take time to happen. According to the developmental idealism framework, family patterns in industrialized Western societies are regarded positively and seen as promoting economic development, particularly by policy makers in less developed countries (Thornton, 2005). Consequently, these stakeholders have

promoted modern family ideals through the educational system, mass media, and propaganda. The rejection of arranged marriages and adoption of self-initiated mate selection have become a developmental idealism that benefits individuals and society at large and important markers of a modern family (Thornton, 2005). For example, Nepalese couples who endorsed Western developmental trajectories as a model were more likely to initiate their own mate selections based on romantic feelings (Allendorf, 2017).

Previous research on mate selection has focused on the transition from arranged marriages to love matches, maintaining that modernization indicates the decline of parental control and the rise of romantic love and premarital intimacy (Ghimire et al., 2006; Nedoluzhko & Agadjanian, 2015; X. Xu & Whyte, 1990). However, focusing exclusively on this binary distinction discounts the potential role of parties other than the parents and the couples and the nuanced interactions among parents, couples, and go-betweens. Non-arranged marriages can be realized in ways other than self-initiated encounters. More importantly, by factoring marriage introducers into the picture, we can capture the subtle and dynamic processes in mate selection involving both romantic and instrumental considerations and, in turn, their implications for assortative mating.

Assortative mating can be based on a range of ascribed characteristics—such as properties an individual attained at birth, by inheritance, or through the aging process—and on achieved characteristics, that is, those acquired on the basis of merit or effort. Types of assortative mating are crucial indicators of the level of social openness (Kalmijn, 1991), and are also reflected in various mate selection approaches.

In arranged marriages, parents, or extended families, try to match the couple on ascribed characteristics such as family backgrounds and wealth. Conversely, because self-initiated marriages often evolve outside of familial circumstances, such as at schools and workplaces where young people share achieved characteristics, self-initiated marriages are more likely to lead to assortative mating in achieved characteristics.

Introduced marriages can be more complex and dynamic. Extant literature on mate selection with introducers or matchmakers has largely focused on online dating or commercial matchmaking (Agrawal, 2015; Chee et al., 2012; Huang et al., 2012Lu, 2005; Xiao & Qian, 2020). Due to the often commercial nature, many marriages brokered by those professional matchmaking agencies tended to be socioeconomically targeted and involve refined screening and matching on ascribed characteristics. Research on the patterns and mechanisms of introduced marriages through personal social networks, such as relatives and friends, has been rare (A. Xu, 1997). A. Xu's (1997) study on introduced marriages through relatives and friends showed the complex matching mechanisms on both ascribed and achieved characteristics. Given the overlapped social circles between the couple, the parents, and the introducers, although the introducers may try to match the young couple based on ascribed characteristics, they may also consider potential matching on achieved characteristics that are not directly socioeconomically relevant. Moreover, given the autonomy couples gain in dating and getting to know each other after the initial introduction, the relationship can achieve further basis in achieved characteristics. Therefore, incorporating introduced marriages through personal social networks into the binary understanding between arranged marriages and self-initiated marriages may further reveal the nuanced interplays

between parental influences and individual autonomy in the process of mate selection and the resulting implications for assortative mating and social inequality.

THE CHINESE CONTEXT

Embedded in a traditionally agricultural society, Chinese families have long been characterized as patriarchal, patrimonial, patrilineal, and patrilocal (Thornton & Lin, 1994). In this system, each generation perpetuates the family lineage, with little regard for individual preferences and interests (Parish & Whyte, 1978). To adhere to norms of early and universal marriage, parents proactively sought suitable mates for their children through relatives, neighbors, friends, and professional matchmakers, who acted as go-betweens (X. Xu & Whyte, 1990). The Chinese saying, "Matched by go-betweens and decided by parents" (*fu mu zhi ming, mei shuo zhi yan*) reflects parental control over adult children's marital decisions (Cohen, 1992; Thornton & Lin, 1994; X. Xu & Whyte, 1990).

Not surprisingly, then, young people were discouraged and even forbidden to seek their own mate or voice their opinions. Physical and emotional contact between unmarried men and women was strictly prohibited to prevent their individual or romantic preferences from interfering with family interests. Particularly, given the taboo against people from the same village or with the same lineage marrying, locating potential spouses away from natal communities was crucial. However, the dominance of agricultural production and constraints in migration restricted opportunities for young people to meet eligible "outsiders." This lack of access further strengthened adult children's reliance on parental arrangements (Parish & Whyte, 1978). In some cases, prospective marital partners did not even meet each other in person before the wedding. According to Lang's (1946) research conducted in the 1930s,

about half of interviewed male college students had never seen their brides before the wedding.

In 1950, along with other Communist advances to promote social equality and reject traditional lifeways, the Marriage Law officially prohibited arranged marriages that were against the will of the couple, which highlighted a radical revision to perceptions of arranged marriages and greatly weakened parental control. Arranged marriages were no longer seen as necessary contracts but rather as violations of individual freedom that produced marital conflict and instabilities, lowered individuals' subjective well-being, and hindered gender equality (Whyte & Parish, 1984). At the same time, women in both urban and rural areas began to work outside of the home (Ji et al., 2017) and opportunities to meet potential partners in the workplace increased.

Nevertheless, during this period, under the Communist regime, the organization of labor and social administration shifted from familial control to communal control (Wu & Treiman, 2004). Although no longer constrained by parental control over marital decisions, Chinese youth were constrained by the state's socialist authorities and discouraged from engaging in premarital and intimate contact on their own.

Collectivization and nationalization of China's economies allowed the state to gain tremendous influence over young people's private lives, including mate selection. In urban China, state-owned and collectively owned work units (*danwei*) replaced the roles of extended families, providing employment opportunities and social services, even in the private sphere. For example, many work units performed matchmaking services for coworkers, and marriage registration required a letter of approval from one's work unit (Xie

& Wu, 2008). In rural areas, labor force organization and social administration transitioned from the aegis of extended families to the hands of communes (Wu & Treiman, 2004).

In 1958, the establishment of the residential registration system, also known as *hukou*, restricted rural-to-urban migration and transfer between different work units, thereby limiting opportunities for young people to self-initiate mate selection. As a result, during this period, most young people met potential spouses through friends, relatives, or other acquaintances. Because the introducers often conducted initial matching of the two young adults based on their objective or ascribed characteristics—such as family background—mate selection through this approach involved both instrumental and romantic considerations (Whyte & Parish, 1984). Yet, unlike arranged marriages, after a formal introduction, young people could contact and date each other, act on romantic feelings, and eventually make their own marital decisions.

Since the economic reforms starting in 1978, economic development, industrialization, urbanization, and exposure to Western cultures and family behaviors through trade, mass media, travel, and studying abroad all facilitated transitions in mate selection in China. As posited by the developmental idealism framework, state and local authorities in China believed that family behaviors that were prevalent in Western countries were beneficial to development and to individual well-being (Thornton, 2005). Since self-initiated marriage dominated in Western countries, single Chinese people began to initiate mate selection by themselves. The rural and urban divide indicated significant differences. As urban areas became more exposed to Western notions of economic development, love-based

marriage and other “modern” ideologies became more prominent than in rural areas, where traditional family ideologies were more persistent.

After the enactment of the Compulsory Education Law in 1986 and college enrollment expansion in 1999, public education quickly expanded, which may have influenced patterns of mate selection. Women’s education improved dramatically and, in some cases, surpassed that of men (Ji, 2015). Using the census data, from 1980 to 2010, among the population 25 to 29 years of age, illiteracy rates went from 3.7% to 0.6% for men and 11.6% to 0.9% for women; the percentage of postsecondary education completion rose from 5.0% to 20.7% for men and 2.6% to 20.4% for women. This trend may have turned the postsecondary institutions into a main venue of mate selection. Moreover, higher education may have promoted acceptance of Western ideologies about family and increased the economic independence of young adults from their parents, in turn facilitating self-initiated mate selection. Particularly in China, postsecondary institutions remain unevenly distributed across regions. Many young people attend college in locations that are far from parental supervision, which provides opportunities for them to meet potential spouses on their own (Blossfeld & Timm, 2003; Goode, 1963).

However, China’s economic development may bring about complex and convoluting social changes. Besides the rapid economic growth and more liberal and Westernized family ideologies, the past decades have also witnessed a dramatic rise in consumer aspirations accompanied by increasingly severe market competition (Mu & Xie, 2014; J. Yu & Xie, 2015). In the pre-reform era, social inequality was low as almost all domains of life including marital and family life were largely regulated by the state toward the Communist egalitarian

ideology. Yet, along with economic growth, consumer aspirations and costs of living have soared (Davis, 2005). A particularly salient example is China's skyrocketing housing prices, especially in those more developed cities where more and better employment opportunities are available. Therefore, post-reform China's rising costs of household establishments may have widened social inequality and reignited young people's emphasis on their potential spouses' ascribed characteristics (Chen & Qiu, 2011) and their dependence on parental resources (Mu & Yeung, 2020). These social changes may divert young people from self-initiated marriages and revert to introduced or even arranged marriages. Therefore, the patterns of change in mate selection warrant systematic empirical examinations given the counteracting social forces that have driven China's ideational and structural changes.

In this paper, we include measures of both structural factors (such as economic development and urbanization) as well as ideational factors (such as education) to fully understand the changes and determinants of mate selection in China.[1] In the following analyses, we first examine the transition and determinants of mate selection based on the categorization between arranged marriages and non-arranged marriages. We then further distinguish between introduced marriages and self-initiated marriages among non-arranged marriages.

[1] We are aware that some of the direct measures of structural changes such as economic development and urbanization may also shape the ideational landscapes of the individuals. The purpose of the distinction between structural and ideational influences is mainly conceptual, rather than empirical. We will pursue comprehensive interpretations of each of the variables in the results section.

DATA, VARIABLES, AND METHODS

Data

This paper uses pooled data from three waves (2010, 2012, and 2014) of the China Family Panel Studies (CFPS), the country's first nationally representative surveys with information on mate selection. The survey used multistage probability proportional to size sampling (PPS) with implicit stratification and covered 25 provinces or their administrative equivalents. Because of their unique sociocultural characteristics, the CFPS oversampled Shanghai, Liaoning, Henan, Gansu, and Guangdong to allow representativeness at the province level.

In this study, we focused on mate selection in first marriages and restricted the sample to adult respondents who were born between 1920 and 1997 and who provided information about their first marriages. The final sample included 15,798 men and 16,366 women. All estimates were weighted using the cross-sectional weights to better reflect national patterns.

Variables

The key dependent variables are based on the survey question, "How did you get to know your first spouse?" Respondents were asked to choose from the following options: (1) *met on our own at school*, (2) *met on our own at work*, (3) *met on our own where we live*, (4) *met on our own somewhere else*, (5) *introduced by relatives or friends*, (6) *introduced by dating agencies*, (7) *arranged marriage by parents*, or (8) *met on the internet.*

We created two binary variables to capture the nuanced nature of mate selection. The first variable measures whether the marriage was arranged, which reflects the extent of

parental intervention in mate selection. Specifically, we coded Category 7 as 1 and all other responses as 0. The second variable is among non-arranged marriages. As aforementioned, whereas arranged marriages are initiated and finalized by parents, non-arranged marriages are not necessarily initiated by the couple itself and are often based on diverse decisions by the bride and groom. Therefore, we further divided non-arranged marriages into introduced marriages, specifically referring to those belonging in Categories 5 and 6, and self-initiated marriages, referring to those belonging in Categories 1, 2, 3, 4, and 8.

We used birth cohort, marriage cohort, and residential status to capture the processes of economic development and ideational change over time and across the urban/rural divide. Regarding residential status, we accounted for both original residential status and change of residential status, either due to migration or reclassification. Since the early 1980s, restriction on residential migration had been relaxed. Consequently, a sizable and ever-growing group of rural-to-urban migrants is less controlled by parents and more exposed to modern dating cultures than its rural counterparts. Accordingly, we divided residential status into three categories based on both *hukou* status at age 12 years and their current place of residence: living in urban areas, referring to respondents who had urban *hukou* at age 12 years[2]; rural to urban, referring to those who had rural *hukou* at age 12 years but lived in urban areas when interviewed; and living in rural areas, including those who had rural *hukou* at age 12 years and lived in rural areas when interviewed.

[2] Due to China's urban/rural inequality, individuals who hold an urban *hukou*, even though they live in rural areas, still hold advantageous status, and are exposed to urban cultures. Therefore, we combined all individuals with an urban *hukou* at age 12 in one category, regardless of their current place of residence.

We respectively used respondents' personal and parental education to measure their socioeconomic statuses and family backgrounds. Note that educational system may also be a mechanism to impart the Western values and ideologies. Thus, we expected education to influence individuals' mate selection behaviors through ideational beliefs as well. Specifically, we divided education into four categories: primary school or below, middle school, high school, and college or above. This categorization of education reflects variations in the accumulated human capital and returns to education and has been widely used in other published studies (e.g., Hu & Qian, 2019; Mu & Yeung, 2020; J. Yu & Xie, 2015). For missing values of parental education, we used hot-deck imputations, where a missing value was imputed by variable values of a randomly selected respondent with a comparable profile. Among various strategies of handling missing data, hot-deck imputation is a strategy that can be both valid under most conditions and simultaneously easy to use (Myers, 2011; Roth, 1994). Between the original and imputed data, the difference of proportion at each educational level was less than 0.5%, which indicates that the imputed data approximated the actual data at an acceptable level. We also controlled for an interviewer-reported scale of physical appearance, ranging from 1 to 7, where higher values indicated more attractive physical appearance, which may also influence mate selection (Johnston, 2006).

We further included several aggregate-level characteristics, including the logarithm of county-level per capita GDP to measure economic development and county-level percent of urban population to measure the level of urbanization. Also note that because GDP increased almost monotonically from 1950 to 2014 in China, GDP in the year of the first marriage is highly collinear with the cohort variables, which may lead to unreliable estimates. Therefore,

given that regional hierarchies of economic development and urbanization remained relatively stable (Xie & Wu, 2008), we used GDP and percent of urban population in 2010 to reflect the regional differences in economic development and urbanization.

Table 1 shows descriptive statistics for all variables. As indicated, respondents were born between 1920 to 1997, with one quarter born after 1980. Half of the sample was rural respondents, similar to the distribution in the 2010 census data. Respondents' education, on average, was higher than that of their parents, and women received less education than men.

RESULTS

Changing patterns of mate selection

In Figures 1A and 1B, we show the proportion of arranged marriages among all marriages, respectively by birth cohort and first-marriage cohort. As shown, for the 1930–1959 birth cohorts, the percentage of arranged marriages fell sharply from 20% for women and 15% for men to about 5% for both women and men. For the 1950–1979 first-marriage cohort, the percentage of arranged marriages dropped from 20% to 5%, after which it took 30 years to fall close to zero. This finding indicates that, to this day, some adult children still accept their parents' marriage arrangements.

In Figures 2A and 2B, we further show the percentage of self-initiated marriages among non-arranged marriages, respectively by birth cohort and by first-marriage cohort. As shown, from 1950 to 2014, based on both cohorts, the majority of non-arranged marriages were based on introduction. Specifically, for birth cohorts before 1960 and marriage cohorts before 1980, only around 20% were self-initiated marriages, with most being introduced marriages. Starting in the early 1980s, the proportion of self-initiated marriages increased

rapidly, which may be attributed to social changes brought about by the economic reforms, including economic development; exposure to Western dating cultures; educational expansion; gender-mixed workplaces; and increases in nonfamilial social activities. By the 2010s, half of the couples met through self-initiated approaches. This finding indicates that introduced marriages were the main approach for mate selection, and that self-initiated marriages were yet to become the mainstream even for some time after the economic reforms.

Overall, based on both birth cohorts and first-marriage cohorts, we observed two stages of transitions in mate selection. In the first stage, for the 1930–1959 birth cohorts and the 1950–1979 first-marriage cohorts, arranged marriages declined from 20% to 5% and remained at a very low level as the roles of parents in mate selection diminished and introduced marriages were on the rise. Because introducers often conduct screening processes based on matching ascribed characteristics of the bride and the groom, introduced marriages continued to be structured around instrumental considerations, though romantic feelings may develop after the two meet. In the second stage, from the 1960 birth cohort and the 1980 first-marriage cohort on, self-initiated mate selection played an increasingly important role, indicating emphases on individual autonomy and romantic love in mate selection.

Determinants of mate selection

Table 2 shows the proportion of arranged marriages in the full sample and the proportion of self-initiated marriages among non-arranged marriages, broken down by main explanatory variables, respectively for women and men. As shown, the percentage for arranged marriage is negatively associated with urban residential status, respondent's education, and parental

education, and the percentage for self-initiated marriage is positively associated with these three variables. Moreover, Guangdong and Shanghai have high proportions of self-initiated marriages, possibly due to their higher levels of economic development and ideological openness. By contrast, in Gansu, a less-developed inland province with a rural population of 80%, arranged marriages accounted for more than 10% of marriages, which is much higher than that in other large provinces.

We then use two sequential binomial logistic models to examine the determinants of mate selection, and the results are shown in Table 3. Specifically, Model 1 shows determinants of arranged marriages, with non-arranged marriages as the reference among all marriages. Model 2 shows determinants of self-initiated marriages, with introduced marriages as the reference among non-arranged marriages.

As shown, for both genders, compared to birth cohorts before 1939, people born after 1940 were much less likely to be in arranged marriages. The younger the birth cohort, the lower the probability of arranged marriage. Regarding other independent variables, based on Model 1, rural individuals were more likely than migrants to be in arranged marriages, although the coefficient is only significant for women. Moreover, respondents' education is negatively correlated with the likelihood of an arranged marriage. For example, the probability of an arranged marriage for those who had received middle school education was 57% lower for women and 37% lower for men, compared to those with a primary school education. The effect of parental education was more nuanced across gender. For men, the effect was not significant. For women, respondents whose parents had received a high school

education were less likely to be in arranged marriages than their counterparts whose parents had received only a primary school education.

To further elucidate the impact of economic development, in Model 1, we include county-level logarithm of per capita GDP and percentage of urban population. Results show that the coefficients on per capita GDP variable are negative, although only marginally significant. This prediction is for those who were born after 1980, live in urban areas, are college-educated and with high-school-educated parents, live in areas where 50% of the population are urbanites, and have medium levels of physical appearance. Moreover, respondents in counties with a higher percentage of urban population were less likely to be in arranged marriages than those in counties with a lower percentage of urban population.

In Model 2, we focused on non-arranged marriages and examined determinants of self-initiated marriages versus introduced marriages. As shown, the likelihood of self-initiated marriages is higher among the 1960 birth cohorts onward than among older cohorts. Compared to the cohorts born before 1939, the odds of getting married through self-initiated means were higher among women born on or after 1970 and among men born on or after 1960. For those born before 1951, the odds of being in self-initiated marriages were not significantly different from those of being in introduced marriages. These patterns are consistent with those of the aforementioned two-stage transition as shown in Figures 1 and 2.

Specifically, rural-to-urban migrants and urban locals were more likely than rural locals to select mates through self-initiated means than through introduced marriages. In comparison to rural locals, the odds of being in self-initiated marriages were 39% higher for women and 26% higher for men living in urban areas, and 19% for rural-to-urban migrant

men. Respondents with more education were more likely to be in self-initiated marriages, especially women. Among respondents with college degrees, the odds of a self-initiated marriage were 117% higher for women and 101% higher for men, compared to respondents who had received only primary school educations. However, parental education had no significant effects on the likelihood of self-initiated marriages.

For regional differences, results show that the coefficient on per capita GDP is negative and the coefficient on its quadratic term is positive, which means the relationship between per capita GDP and the likelihood of self-initiated marriages is not unilinear but quadratic. To demonstrate how the likelihood of self-initiated marriages changes across levels of economic development, in Figure 3, we plotted the predicted probabilities of self-initiated marriages for respondents who were born after 1980, live in urban areas, are college-educated and have high-school educated parents, live in areas where 50% of people are urbanites, and have medium levels of physical appearance. As shown, there is a U-shaped relationship between per capital GDP and the likelihood of self-initiated marriages. This pattern may echo the inverted U-shaped relationship between economic growth and inequality (Kim & Lin, 2011). Specifically, when economic development is low, as indicated by a very low per capital GDP, overall social inequality is also low, and most families are comparably poor. In this case, ascribed characteristics could be easily matched, and young people can search for spouses by themselves. However, at the early stage of economic development, social inequality rises, and young people resort to introducers to facilitate better matches on ascribed characteristics so as to avoid downward mobility and even to realize upward mobility. When the society develops further, social inequality wanes, and people may better

afford romantic considerations in marriage and self-initiated matches, accordingly. Moreover, as shown, the odds of being in a self-initiated, rather than introduced, marriage were higher for respondents living in counties with a larger urban population.

In Models 1 and 2, due to data limitations, the county-level data are both for 2010, rather than at the time of the first marriage. In order to show the robustness of the results and the plausibility of the contextual influences, we conducted robustness analyses by restricting the sample to those who entered their first marriage between 2004 and 2014. The results are consistent with those shown in Table 3 (the results are available upon request).[3]

CONCLUSION AND DISCUSSION

Using data from the 2010, 2012, and 2014 China Family Panel Studies, this paper for the first time systematically documents China's changing patterns of mate selection and examines key determinants underlying these patterns from 1950 to 2014. Different from previous studies on mate selection in China, which focused on the binary distinction between arranged marriages and self-initiated matches or exclusively on introduced marriages in specific regions (Thornton & Lin, 1994; X. Xu & Whyte, 1990; Zang, 2008), results in this paper, based on nationally representative data, show that changes in mate selection patterns in China can be divided into two stages. In the first stage, from 1950 to 1979, after enactment of a new marriage law, arranged marriages dramatically declined and were replaced mostly by introduced marriages. In the second stage, from 1980 to 2014, the proportion of self-initiated marriages increased from 15% to 50%, due to economic development, urbanization, and

[3] Due to the low prevalence of arranged marriages between 2004 and 2014, robustness analysis cannot be conducted for the outcome of arranged marriages versus non-arranged marriages.

educational expansion. Our multivariate analyses reveal the underlying determinants of the transitions. We found that individuals who were born later, held urban *hukou*, migrated to urban areas, lived in areas with a higher percentage of urban population, and were more educated were less likely to have arranged marriages and more likely to search for mates by themselves. Particularly, findings show quadratic relationships between per capita GDP and likelihoods of self-initiated marriages.

The stage-wise transitions in mate selection reflect the importance of accounting for both structural and ideational factors in explaining these changes. Specifically, economic development, urbanization, and educational expansion have promoted non-arranged marriages and self-initiated marriages. More importantly, by drawing on China's unique social contexts, we challenge the assumed unilinear change from arranged marriages to self-initiated marriages along the processes of modernization and economic development. As described by the developmental idealism framework, individuals, particularly policy makers in less developed countries, tend to positively associate family patterns prevalent in industrialized Western societies, such as self-initiated marriages, with modernization and economic development (Thornton, 2005). However, the stage-wise transitions shown in this paper highlight the complex interplay of various contextual factors that shape patterns of mate selection along with China's counteracting social forces. Although changes in China's legal regulation have facilitated individual autonomy in mate selection, rises in market competition, costs of living, and overall social inequality along with economic development have raised young people's financial dependency on their parents and increased the

importance of finding spouses with favorable objective and ascribed characteristics, such as family background.

Our findings are consistent with previous research on relevant social changes. For example, Ji's (2015) study showed that educated professional women in Shanghai, a metropolis in China, were caught in the modern-traditional mosaic and constrained by the norm to find spouses with comparable family backgrounds. Mu and Xie (2014), using the Chinese census data, showed that the rising costs of household establishment have influenced young people's marital decisions. In their study of India, Allendorf and Pandian (2016) demonstrated that patterns of mate selection have been shaped by both the tradition of arranged marriages and love-based marriages and that parents and couples differentially participate in this process on an interactive basis, so that Indian women would make marital decisions on their own but still follow the convention of caste endogamy.

This study underscores the inequality-generation process of assortative mating. Previous studies on assortative mating's implications for social inequality often directly examined the associations between matching on various sociodemographic characteristics and social inequality within and across generations (e.g., Beck & González-Sancho, 2009; Beller, 2009; Schwartz, 2010; Torche, 2010). This study, by investigating the trends in and determinants of mate selection approaches, reveals how the complex interactions between parental authority, individual autonomy, and social contexts jointly shape the patterns of assortative mating and in turn, social inequality. While arranged marriages are often driven by assorting on ascribed characteristics, such as age, ethnicity, and family background, self-initiated marriages are more likely to be based on spousal similarities in achieved

characteristics and less structural factors such as taste, preference, and emotional attractions. Introduced marriages, on the other hand, can be even more complex in the nature of assortative mating involved.

Thus, the transition from arranged to introduced then to self-initiated marriages indicates a prioritization of individualistic values and personal growth and a more open and achievement-oriented society at large. In the meantime, the specific social contexts may add to the complications of the implications. For example, as aforementioned, post-reform China's rising costs of household establishments may have widened wealth inequality and, in turn, strengthened young people's emphasis on their potential spouses' objective characteristics, such as family background and socioeconomic status (Chen & Qiu, 2011), and their dependence on parental resources (Mu & Yeung, 2020). The progress toward more liberal ideals of mate selection may be greatly circumvented by China's recent economic contexts. Mate selection, despite greater matches based on romantic feelings and individual autonomy, may involve rising parenting influences and instrumental considerations. These intertwined social changes in mate selections likely lead to less social fluidity and mobility and rising inequality. Particularly given the imbalanced sex ratio in China, men of lower socioeconomic status may face increasingly constrained marriage markets.

We acknowledge the limitations of this study. First, our sample includes respondents born between 1985 and 1990, who may not be married by 2014. For these respondents, our estimation is based on those who married at young ages. However, this issue should not invalidate our results. People who marry young may be more traditional and thus more likely to be in arranged and introduced marriages. In this way, the level of self-initiated marriages

should be higher than those shown by our results, and our findings may underestimate the level of individual autonomy in mate selection. Second, mate selection through the internet is a newly emerging and increasingly popular phenomenon (W.-H. Yu & Hertog, 2018). Yet, this approach has a low prevalence in China. In our sample, only 0.37% of respondents had met spouses through the internet. These limitations can serve as directions for further development on related topics when relevant data become available.

REFERENCES

Allendorf, K. (2017). Conflict and compatibility? Developmental idealism and gendered differences in marital choice. *Journal of Marriage and Family*, *79*(2), 337–355. https://doi.org/10.1111/jomf.12339

Allendorf, K., & Pandian, R. K. (2016). The decline of arranged marriage? Marital change and continuity in India. *Population and Development Review*, *42*(3), 435–464. https://doi.org/10.1111/j.1728-4457.2016.00149.x

Agrawal, A. (2015). Cyber-matchmaking among Indians: Re-arranging marriage and doing 'kin work'. *South Asian Popular Culture*, *13*(1), 15–30. https://doi.org/10.1080/14746689.2015.1024591

Beck, A., & González-Sancho, C. (2009). *Educational assortative mating and children's school readiness* (Working Paper No. 2009-05-FF). Center for Research on Child Wellbeing.

Becker, G. (1991). *A Treatise on the family*. Harvard University Press.

Beller, E. (2009). Bringing intergenerational social mobility research into the twenty-first century: Why mothers matter. *American Sociological Review*, *74*(4), 507–528. https://doi.org/10.1177/000312240907400401

Blossfeld, H., & Timm, A. (Eds.). (2003). *Who marries whom? Educational systems as marriage markets in modern societies*. Springer Netherlands.

Bozon, M., & Heran, F. (1989). Finding a spouse: A survey of how French couples meet. *Population: An English Selection*, *44*(1), 91–121.

Chee, H. L., Yeoh, B. S., & Vu, T. K. D. (2012). From client to matchmaker: Social capital in the making of commercial matchmaking agents in Malaysia. *Pacific Affairs*, *85*(1), 91–115. https://doi.org/10.5509/201285191

Chen, Y., & Qiu, Z. (2011). How does housing price affect household saving rate and wealth inequality? *Economic Research Journal*, *10*, 25–38.

Cherlin, A. (2012). Goode's world revolution and family patterns: A reconsideration at fifty years. *Population and Development Review*, *38*(4), 577–607. https://doi.org/10.1111/j.1728-4457.2012.00528.x

Cohen, M. (1992). Family management and family division in contemporary rural China. *The China Quarterly*, *130*, 357–377. https://doi.org/10.1017/S0305741000040777

Davis, D. (2005). Urban consumer culture. *The China Quarterly*, *183*, 692–694. https://doi.org/10.1017/S0305741005000421

Ghimire, D., Axinn, W., Yabiku, S., & Thornton, A. (2006). Social change, premarital nonfamily experience, and spouse choice in an arranged marriage society. *American Journal of Sociology*, *111*(4), 1181–1218. https://doi.org/10.1086/498468

Goode, W. (1963). *World revolution and family patterns*. Free Press of Glencoe.

Greenhalgh, S. (2010). *Cultivating global citizens: Population in the rise of China*. Harvard University Press.

Hu, Y., & Qian, Y. (2019). Educational and age assortative mating in China: The importance of marriage order. *Demographic Research*, *41*, 53–82. https://doi.org/10.4054/DemRes.2019.41.3

Huang, F., Jin, G. Z., & Xu, L. C. (2012). Love and money by parental matchmaking: Evidence from urban couples in China. *American Economic Review*, *102*(3), 555–560. https://doi.org/10.1257/aer.102.3.555

Ji, Y. (2015). Between tradition and modernity: "Leftover" women in Shanghai. *Journal of Marriage and Family*, *77*(5), 1057–1073. https://doi.org/10.1111/jomf.12220

Ji, Y., Wu, X., Sun, S., & He, G. (2017). Unequal care, unequal work: Toward a more comprehensive understanding of gender inequality in post-reform urban China. *Sex Roles*, *77*(11), 765–778. https://doi.org/10.1007/s11199-017-0751-1

Johnston, V. (2006). Mate choice decisions: The role of facial beauty. *Trends in Cognitive Sciences*, 10(1), 9-13.

Kalmijn, M. (1991). Status homogamy in the United States. *American Journal of Sociology*, *97*(2), 496–523. https://doi.org/10.1086/229786

Kalmijn, M., & Flap, H. (2001). Assortative meeting and mating: Unintended consequences of organized settings for partner choices. *Social Forces*, *79*(4), 1289–1312. https://doi.org/10.1353/sof.2001.0044

Kim, D. H., & Lin, S. C. (2011). Nonlinearity in the financial development–income inequality nexus. *Journal of Comparative Economics*, *39*(3), 310–325. https://doi.org/10.1016/j.jce.2011.07.002

Lang, O. (1946). *Chinese family and society*. Yale University Press.

Lu, M. C. W. (2005). Commercially arranged marriage migration: Case studies of cross-border marriages in Taiwan. *Indian Journal of Gender Studies*, *12*(2-3), 275–303. https://doi.org/10.1177/097152150501200206

Meekers, D. (1995). Freedom of partner choice in Togo. *Journal of Comparative Family Studies*, *26*(2), 163–178.

Mitterauer, M., & Sieder, R. (1983). *The European family*. Basil Blackwell.

Mu, Z. & Xie, Y. (2014). Marital age homogamy in China: A reversal of trend in the reform era? *Social Science Research*, *44*, 141–157. https://doi.org/10.1016/j.ssresearch.2013.11.005

Mu, Z., & Yeung, W. J. J. (2020). Internal migration, marriage timing and assortative mating: A mixed-method study in China. *Journal of Ethnic and Migration Studies*, *46*(14), 2914–2936. https://doi.org/10.1080/1369183X.2019.1585009

Myers, T. A. (2011). Goodbye, listwise deletion: Presenting hot deck imputation as an easy and effective tool for handling missing data. *Communication Methods and Measures*, *5*(4), 297–310. https://doi.org/10.1080/19312458.2011.624490

Nedoluzhko, L., & Agadjanian, V. (2015). Between tradition and modernity: Marriage dynamics in Kyrgyzstan. *Demography*, *52*(3), 861–882. https://doi.org/10.1007/s13524-015-0393-2

Parish, W., & Whyte, M. (1978). *The village and family in contemporary China.* University of Chicago Press.

Qian, Z. (1998). Changes in assortative mating: The impact of age and education, 1970–1990. *Demography*, *35*(3), 279–292. https://doi.org/10.2307/3004036

Rosenfeld, M., & Thomas, R. (2012). Searching for a mate: The rise of the internet as a social intermediary. *American Sociological Review*, *77*(4), 523–547. https://doi.org/10.1177/0003122412448050

Roth, P. L. (1994). Missing data: A conceptual review for applied psychologists. *Personnel Psychology*, *47*(3), 537–560. https://doi.org/10.1111/j.1744-6570.1994.tb01736.x

Schwartz, C. R. (2010). Earnings inequality and the changing association between spouses' earnings. *American Journal of Sociology*, *115*(5), 1524–1557. https://doi.org/10.1086/651373

Schwartz, C. R. (2013). Trends and variation in assortative mating: Causes and consequences. *Annual Review of Sociology*, *39*, 451–470. https://doi.org/10.1146/annurev-soc-071312-145544

Smits, J., & Park, H. (2009). Five decades of educational assortative mating in 10 East Asian societies. *Social Forces*, *88*(1), 227–255. https://doi.org/10.1353/sof.0.0241Thornton, A. (2005). *Reading history sideways: The fallacy and enduring impact of the developmental paradigm on family life.* University of Chicago Press.

Thornton, A., & Lin, H. (1994). *Social change and the family in Taiwan.* University of Chicago Press.

Torche, F. (2010). Educational assortative mating and economic inequality: A comparative analysis of three Latin American countries. *Demography*, *47*(2), 481–502. https://doi.org/10.1353/dem.0.0109

Whyte, M., & Parish, W. (1984). *Urban life in contemporary China.* University of Chicago Press.

Wu, X., & Treiman, D. J. (2004). The household registration system and social stratification in China: 1955-1996. *Demography*, *41*(2), 363–384. https://doi.org/10.1353/dem.2004.0010

Xiao, S., & Qian, Y. (2020). Mate selection among online daters in Shanghai: Why does education matter? *Chinese Journal of Sociology*, *6*(4), 521–546. https://doi.org/10.1177/2057150X20957422

Xie, Y., & Wu, X. (2008). Danwei profitability and earnings inequality in urban China. *The China Quarterly*, *195*, 558–581. https://doi.org/10.1017/S0305741008000775

Xu, A. (1997). Sijizhijao zhongguoren de aiqing he hunyin [The Chinese love and marriage at the turn of the century]. Chinese Social Science Press.

Xu, X., & Whyte, M. K. (1990). Love matches and arranged marriages: A Chinese replication. *Journal of Marriage and Family*, *52*(3), 709–722.

https://doi.org/10.2307/352936
Yu, J., & Xie, Y. (2015). Cohabitation in China: Trends and determinants. *Population and Development Review*, 41(4), 607–628. https://doi.org/10.1111/j.1728-4457.2015.00087.x
Yu, W.-H., & Hertog, E. (2018). Family characteristics and mate selection: Evidence from computer-assisted dating in Japan. *Journal of Marriage and Family*, *80*(3), 589–606. https://doi.org/10.1111/jomf.12473
Zang, X. (2008). Gender and ethnic variation in arranged marriages in a Chinese city. *Journal of Family Issues*, *29*(5), 615–638. https://doi.org/10.1177/0192513X07308039

TABLE 1 Descriptive statistics of explanatory variables (unit: %)

	Weighted		Unweighted	
	Women	Men	Women	Men
Birth cohort				
Before 1939	5.94	5.39	6.00	6.51
1940-1949	8.85	9.61	11.00	12.63
1950-1959	15.99	16.96	19.69	20.41
1960-1969	21.97	23.31	24.20	24.01
1970-1979	23.02	24.40	21.30	20.96
After 1980	24.23	20.34	17.81	15.48
Marriage cohort				
Before 1959	5.73	3.76	5.79	4.37
1960–1969	8.23	7.12	9.83	9.37
1970–1979	11.70	11.89	14.44	14.72
1980–1989	22.56	23.48	26.12	25.92
1990–1999	21.18	22.38	20.76	21.21
After 2000	30.61	31.37	23.07	24.41
Urban or Rural				
living in Rural area	47.15	47.65	51.67	53.42
living in Urban area	16.25	17.25	15.55	15.76
Rural to urban	36.60	35.10	32.79	30.83
Region				
Small provinces	77.02	77.60	50.42	50.79
Liaoning	3.61	3.78	9.12	8.82
Shanghai	2.16	2.18	9.12	8.64
Henan	7.18	6.74	11.51	11.54
Guangdong	8.02	7.84	9.19	8.93
Gansu	2.01	1.85	10.64	11.28
Respondent's education				
Primary school	53.05	41.15	57.96	44.93
Middle school	26.36	32.90	24.29	31.32
High school	12.51	15.75	11.37	15.14
College	8.08	10.20	6.38	8.61
Parents' highest education				
Primary school	72.10	72.13	74.96	75.13
Middle school	16.91	16.70	15.32	14.86
High school	8.85	8.94	7.77	7.95
College	2.15	2.23	1.95	2.05
County-level Per Capita GDP in 2010 (yuan)	39931.27	40267.90	42832.30	41509.88
County-level percentage of urban population in 2010	30.47	30.11	32.01	31.04
Observations	16366	15798	16366	15798

Note. Cross-sectional weights were used to calculate weighted summary results. Pooled data from the 2010, 2012, and 2014 China Family Panel Studies.

TABLE 2 Proportion of arranged marriages among all marriages and proportion of self-initiated marriages among non-arranged marriages, by explanatory variables and gender (unit: %)

	arranged marriages among all marriages		self-initiated marriages among non-arranged marriages	
	Women	Men	Women	Men
Total	3.86	2.79	26.70	28.96
Urban or Rural				
Rural	5.58	3.93	22.13	24.50
Urban	1.78	1.18	38.84	37.91
Rural to urban	2.58	2.02	26.96	30.46
Region				
Small provinces	4.27	3.03	26.69	28.82
Liaoning	0.80	0.51	20.72	22.94
Shanghai	1.84	2.36	35.08	34.88
Henan	1.61	1.18	15.63	16.91
Guangdong	2.02	1.42	38.39	42.56
Gansu	11.13	9.34	23.57	25.62
Respondent's education				
Primary school	6.45	5.04	18.29	20.92
Middle school	1.19	1.49	29.89	29.19
High school	0.69	1.01	38.96	35.22
College	0.41	0.58	49.68	49.52
Parents' highest education				
Primary school	4.88	3.44	22.66	24.93
Middle school	1.24	1.08	34.52	37.82
High school	0.80	0.94	38.35	40.33
College	2.80	1.79	47.92	44.48
County-level per capita GDP in 2010				
Lower than 15000 RMB	6.09	5.06	24.97	27.26
15001-35000 RMB	3.25	1.88	24.14	26.24
Higher than 35000 RMB	2.27	1.53	27.71	30.41
County-level percentage of urban population in				
Lower than 15%	5.68	4.51	22.99	26.09
15%-30%	3.54	2.71	23.11	24.35
Higher than 30%	2.27	1.08	30.37	33.06
Observations	16366	15798	15573	15163

Note. All descriptive results were weighted using cross-sectional weights. Pooled data from the 2010, 2012, and 2014 China Family Panel Studies.

TABLE 3 Logistic model predicting likelihood of arranged marriages and self-initiated marriages, by gender

	Arranged marriage (reference: non-arranged marriage)		Self-initiated marriage (reference: introduced marriage)	
	Model 1		Model 2	
	Women	Men	Women	Men
Birth cohort (reference: before 1939)				
1940–1949	-1.15 ***	-0.92 ***	0.00	-0.07
	(0.22)	(0.23)	(0.21)	(0.17)
1950–1959	-1.48 ***	-1.17 ***	-0.06	0.00
	(0.21)	(0.25)	(0.17)	(0.16)
1960–1969	-1.69 ***	-1.64 ***	0.23	0.29 †
	(0.23)	(0.30)	(0.16)	(0.16)
1970–1979	-2.09 ***	-2.11 ***	0.79 ***	0.76 ***
	(0.24)	(0.32)	(0.17)	(0.17)
After 1980	-2.33 ***	-2.25 **	1.26 ***	1.39 ***
	(0.55)	(0.67)	(0.18)	(0.16)
Urban or Rural (reference: living in rural areas)				
Living in urban areas	0.10	0.04	0.33 *	0.23 †
	(0.26)	(0.28)	(0.13)	(0.12)
Rural to urban	-0.32 †	-0.16	0.08	0.17 †
	(0.18)	(0.24)	(0.11)	(0.10)
Respondent's education (reference: primary school)				
Middle school	-0.84 **	-0.47 **	0.26 **	0.15 *
	(0.29)	(0.15)	(0.08)	(0.07)
High school	-1.24 ***	-0.78 **	0.62 ***	0.42 ***
	(0.37)	(0.27)	(0.10)	(0.10)
College	-1.47	-0.89 *	0.75 ***	0.70 ***
	(0.90)	(0.38)	(0.14)	(0.12)
Parents' highest education (reference: primary school)				
Middle school	-0.45	-0.27	-0.04	0.02
	(0.28)	(0.37)	(0.08)	(0.08)
High school	-0.68 †	-0.20	-0.03	-0.06
	(0.35)	(0.43)	(0.10)	(0.11)
College	0.70	0.53	0.22	0.08
	(0.46)	(0.77)	(0.19)	(0.18)
Logarithm of county-level per capita GDP	-4.34 †	-6.03 †	-3.95 **	-3.71 **
	(2.29)	(3.10)	(1.33)	(1.42)
(Logarithm of county-level per capita GDP)^2	0.19 †	0.28 †	0.19 **	0.17 **
	(0.11)	(0.15)	(0.06)	(0.07)
County-level percentage of urban population in 2010	-0.01 †	-0.01 **	0.004	0.01 †
	(0.00)	(0.01)	(0.00)	(0.00)
Observations	16226	15555	15466	14946

Note. Logistic coefficients are shown in the main entries of the table, with standard errors in parentheses. Sample sizes slightly differ from those in Tables 1 and 2 due to listwise deletion on variables other than parental education. Coefficients on physical appearance are omitted. *** p<.001, ** p<.01, * p<.05, † p<.10.

FIGURE 1A Percentage of arranged marriages among all marriages, by gender and birth cohort

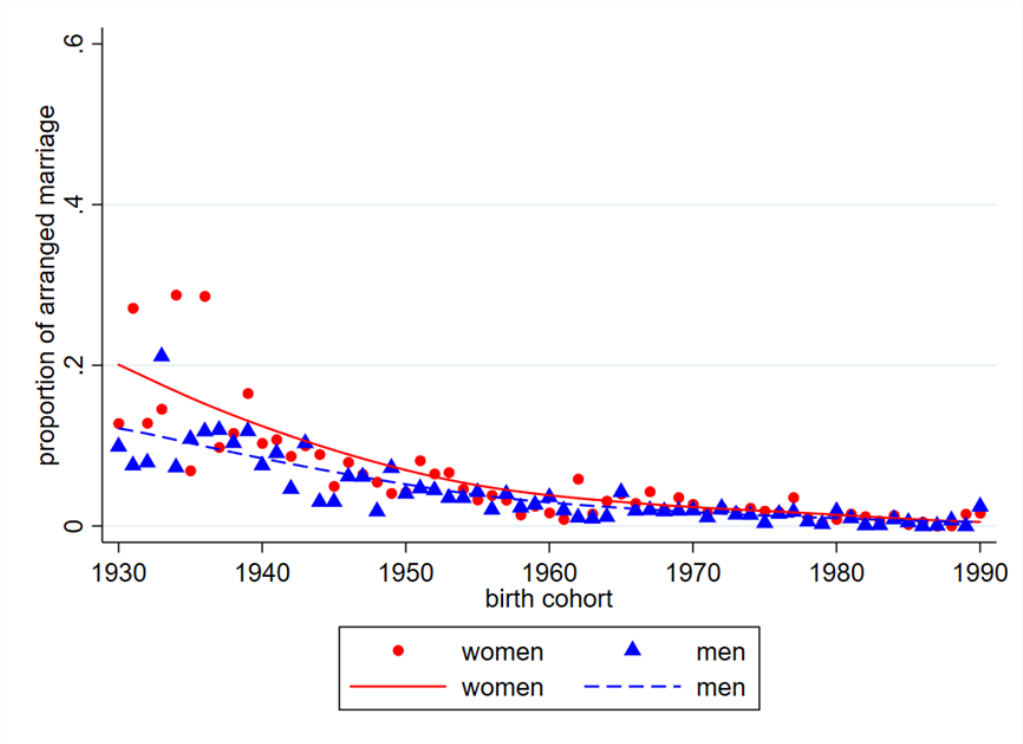
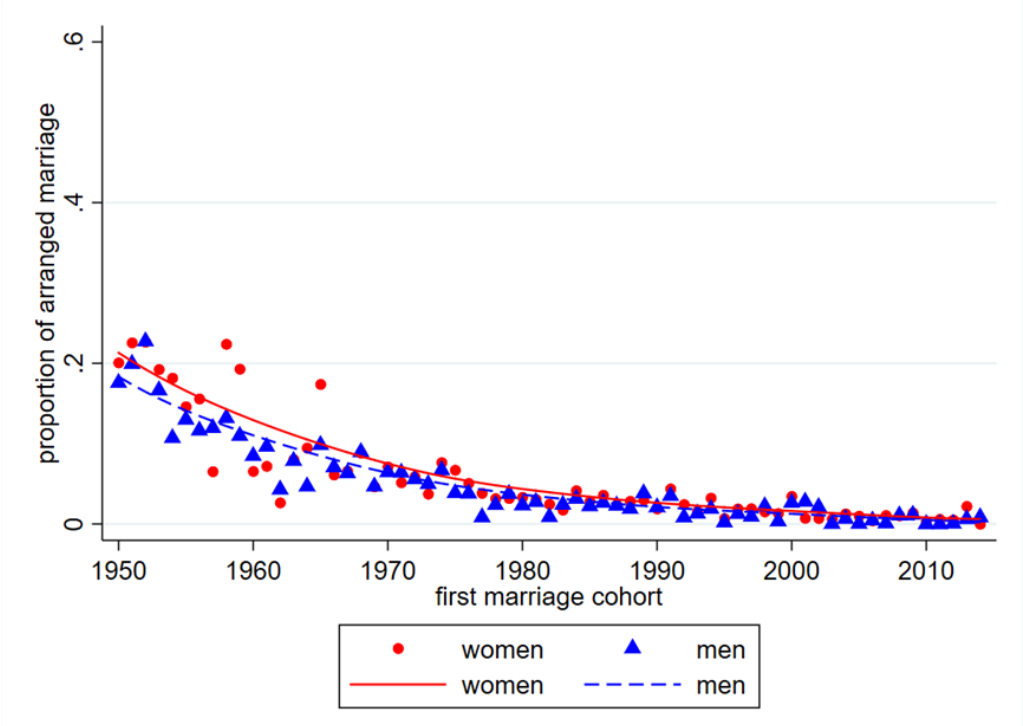


FIGURE 1B Percentage of arranged marriages among all marriages, by gender and first-marriage cohort



Note: Curves are drawn using locally weighted scatter plot smoothing with a bandwidth of 0.8. Pooled data from the 2010, 2012, and 2014 China Family Panel Studies.

FIGURE 2A Percentage of self-initiated marriages among non-arranged marriages, by gender and birth cohort

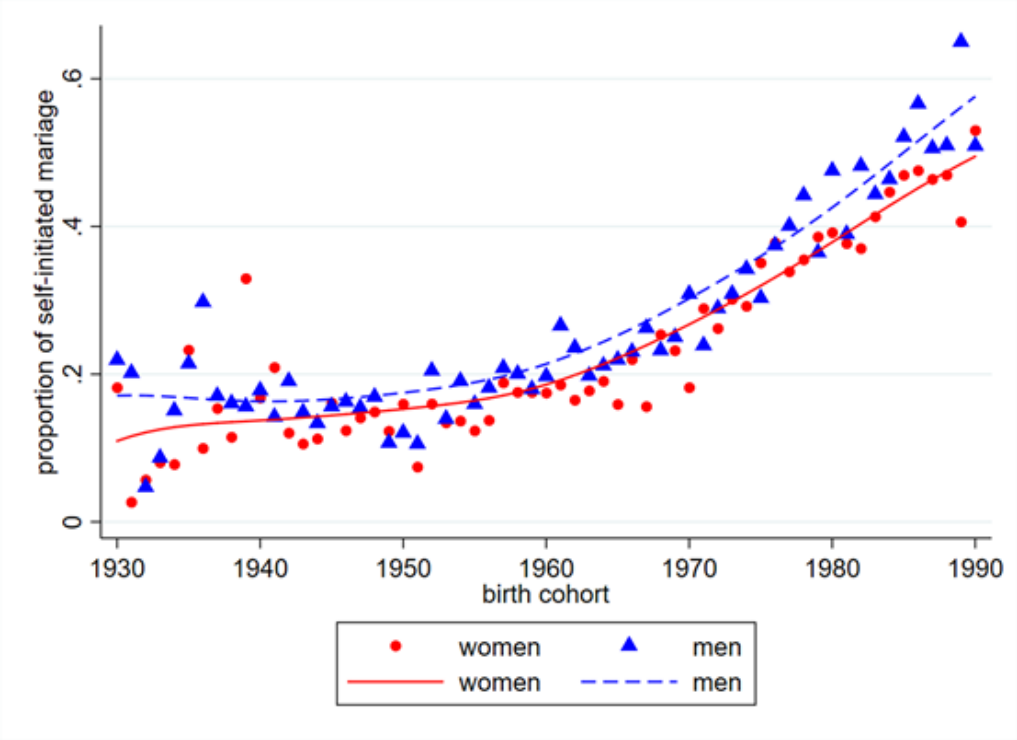
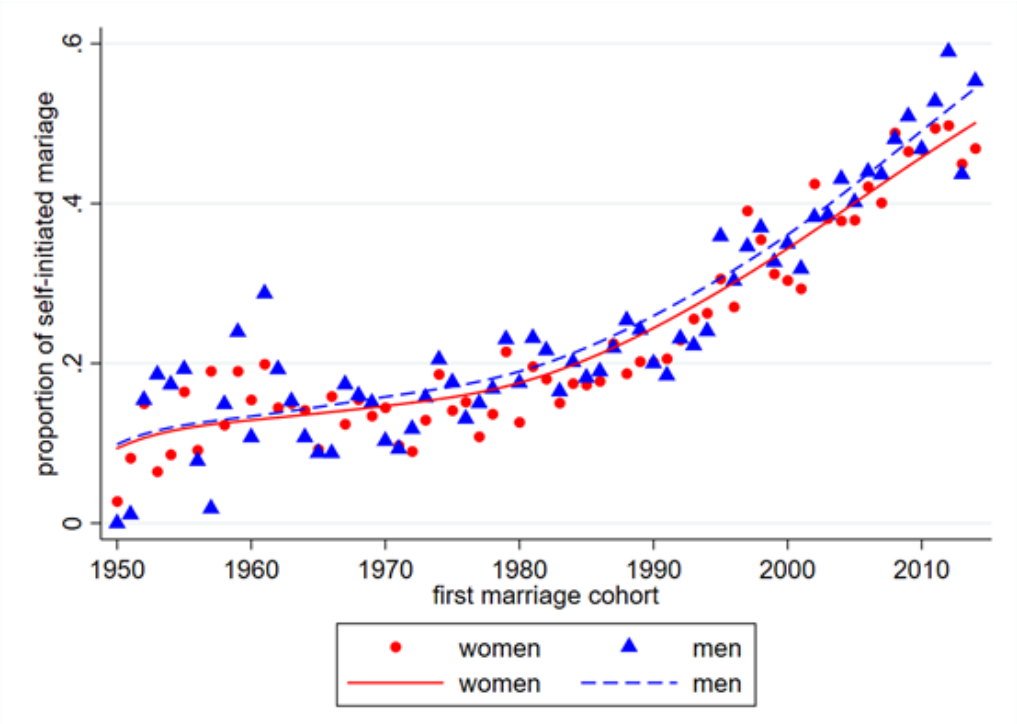
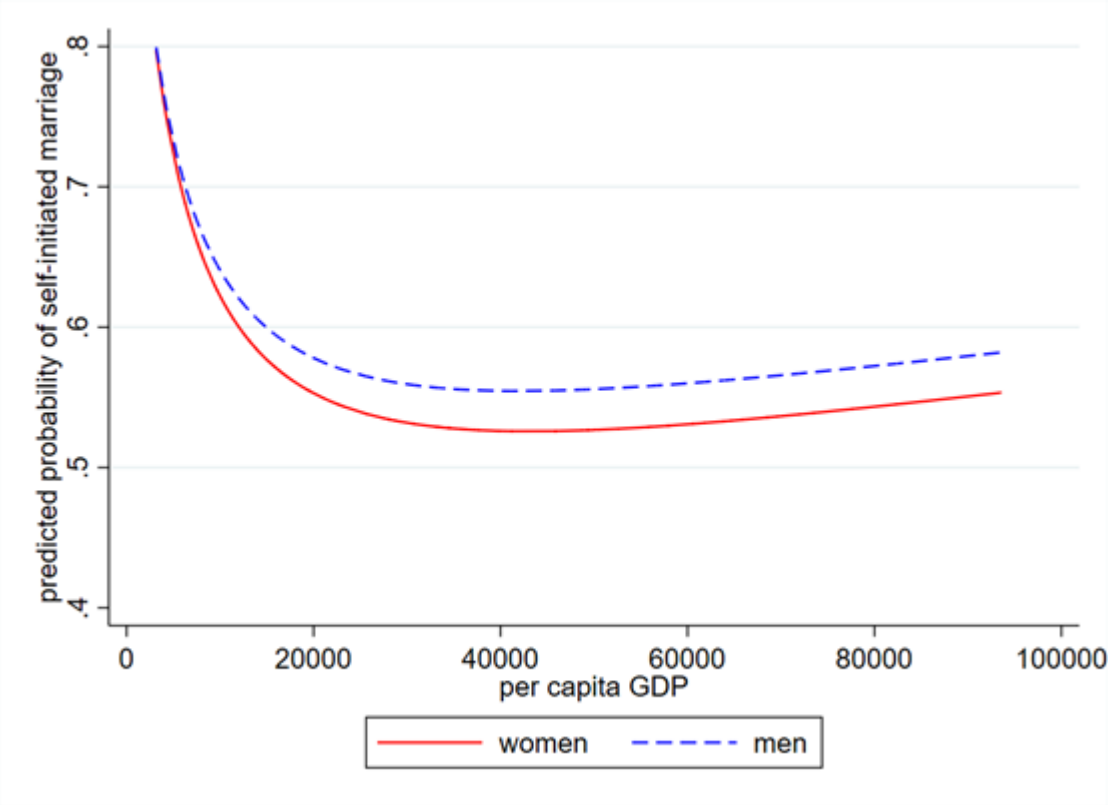


FIGURE 2B Percentage of self-initiated marriages among non-arranged couples, by gender and first-marriage cohort



Note: Curves are drawn using locally weighted scatter plot smoothing with a bandwidth of 0.8. Pooled data from the 2010, 2012, and 2014 China Family Panel Studies.

FIGURE 3 Predicted probability of self-initiated marriages among non-arranged couples, by gender and per capita GDP



Note. This prediction is for those who were born after 1980, live in urban areas, are college-educated and with high-school-educated parents, live in areas where 50% of the population are urbanites, and have medium levels of physical appearance.