Rushed to the altar:
Social interactions of migrant workers and early marriage

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ABSTRACT: This paper provides novel evidence that social interactions of rural-to-urban migrants enforce traditional gender norms. Using variation of social pressure to conform to rural norms from migrants from the same hometown in the workplace, I find that the concentration of same-origin co-workers substantially increases the likelihood of early marriage for female rural-to-urban migrants in China, but not for male migrants. Consistent with the norm-based explanation for the association between social interactions and early marriage, the effect is more pronounced for migrants from regions with more traditional gender norms. The effect is not driven by matching or self-selection into social interactions.

Key words: social interactions, social norms, marriage, rural-to-urban migrants
JEL classification: D91, J12, J16, R23

1. Introduction

China's rapidly growing cities have attracted a large number of rural migrants, creating unprecedented labour market opportunities for female rural-to-urban migrant workers. These opportunities challenge the traditional gender norms rooted in agricultural society. However, previous studies have found that gender norms can remain persistent despite changes in socio-economic conditions (e.g., Fernández and Fogli, 2006; Fernández and Fogli, 2009; Blau, Kahn and Papps, 2011). At the same time, research highlights the potential for peers to influence and reshape gender norms (e.g., Maurin and Moschion, 2009; Nicoletti, Salvanes and Tominey, 2018; Olivetti, Patacchini and Zenou, 2018).

This paper provides novel evidence that social interactions among rural-to-urban migrants can reinforce traditional gender norms by examining the marriage decisions of migrant workers in China. I examine how variation in social pressure from co-workers originating from the same hometown influences conformity to the rural norm of female early marriage. Given the strong ties based on kinship and common origin in Chinese society, co-workers from the same hometown may pressure migrant workers to abide by rural norms even when they now live in an urban setting. By examining rural-to-urban migrants, the effect of cultural norms can be isolated from that of rural occupations. Compared to friendship, co-workers are less subject to selection bias as individuals have less control over the origin of their co-workers and self-selection into co-workers, if any, is unlikely to be driven primarily by a preference for early marriage.[1] Because the social norm of early marriage is much more pronounced for females in agricultural societies than for males, I examine the effect separately by gender.

Using a discrete-time hazard model, I find that intensive social interactions (with more than 30% co-workers from the same hometown) pressure female into early marriage, particularly increasing their probability of getting married before age 25 from 0.4 to 0.67.[2] In contrast, social interactions with same-origin co-workers have little effect on the distribution of marriage ages for men. I show the robustness of the result using a simple linear probability model with an extensive set of controls including individual characteristics, job-related factors, and origin and destination fixed effects.[3]

Individuals may select into same-origin co-workers based on unobservable characteristics that reflect certain private preferences or tendencies for early marriage. A pertinent concern is

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[1]As expected, the paper finds that same-origin co-workers do not pick up women's preference or tendency to marry early, whereas friendships with same-origin individuals are correlated with women's propensity to marry early.

[2]To put the number into perspective, extending the use of contraceptive pills to young unmarried women in the U.S. contributed to a reduction in the proportion of married college graduate women before age 26 from 0.7 for the cohort born in 1950 to 0.54 for the cohort born in 1957 (Goldin and Katz, 2000).

[3]The controls include individual characteristics such as educational attainment and birth cohort, as well as job-related factors, including occupation, industry, salary, whether it is the individual's first job, whether the job was obtained through referral, and the age at which the individual started the job. Additionally, I include origin and destination province fixed effects, as well as characteristics of the individual's home prefecture: population density, rural-to-total population ratio, GDP per capita, and distance to the destination.

that individuals with traditional values might have a preference for a workplace with same-origin co-workers and an inclination towards early marriage at the same time. I provide several pieces of evidence that this is unlikely to be the case. First, if the concentration of same-origin co-workers has no real impact on marriage behaviour but instead captures these private preferences for early marriage, we would expect a correlation between early marriage and current same-origin co-workers present even for female migrants who were married prior to entering the workplace. Reassuringly, both the significance level and point estimate drop to zero when we examine females who have been married before migration.[4] Second, while migrant workers' identification with their rural origin predicts early female marriage and serves as a plausible proxy for a preference for early marriage, it is not correlated with having more same-origin co-workers. Lastly, I exploit quasi-random variation in demand and preference for same-origin employees, driven by idiosyncratic success and presence of same-origin employers in particular locations. The effect of same-origin co-workers on the probability of being married before age 25 is robust under instrumental variables estimation.

In line with the norm-based explanation, I find that the gender-differential effect of social interactions on early marriage is primarily concentrated among female migrants from regions that strongly adhere to traditional gender norms. Examining a different outcome—whether the spouse works in the same workplace—also reveals a gender-differential effect of same-origin co-workers. Having more than 30% co-workers from the same hometown increases the likelihood that the spouse is in the same workplace, but this effect is only observed among female migrant workers, not male workers, and only among those originally from regions with traditional gender norms. This indicates that when pressured into early marriage by same-town co-workers, female migrants are more likely to marry someone in the workplace, regardless of whether that person is from the same hometown. The gender-biased effects on earlier marriage and spouse also suggest that the effects of social interactions do not work through an increased likelihood of marriage match between individuals from the same hometown.

The gendered effect of social interactions on early marriage mirrors the gendered norms surrounding marriage that originated in agricultural societies. Throughout the extended era of agrarian economy in China, the practice of early marriage for females was prevalent, fostering the formation and transmission of the norm across generations.[5] According to the 2010 Chinese General Social Survey, people from rural areas, compared to urban dwellers, are more likely to approve of traditional gender roles, where men should prioritise their careers and women should prioritise family (Table A1). These norms, in turn, are reflected in behaviour. Individuals in

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[4]This contrasts with friendships formed in the current location with individuals from the same hometown. Such friendships are found to be correlated with early marriage among female migrants who were already married before migration.

[5]Historical records date back to the Western Zhou period (1046 BC–771 BC), during which the dynasty stipulated the maximum marriage age of 30 for males and 20 for females, requiring obligatory parental consent. During the reign of Emperor Hui (194 BC–188 BC), unmarried women between 15 and 30 years of age faced a tax equivalent to one year's consumption of crops.

rural areas tend to marry at an earlier age, particularly before age 25, compared to their urban counterparts. This distinction is more pronounced for females than for males (Figure A1). As individuals migrate from rural to urban China, the socio-economic environment that historically facilitated early marriage ceases to operate. Despite this change, I find that female migrants are more likely to marry early if they continue to identify with their rural origins. More importantly, this paper shows that the presence of same-origin co-workers pressures individuals to conform to traditional gender norms, even when they personally reject them.

This paper primarily contributes to two strands of literature. First, it adds to the literature on the persistent effects of gender norms and their transmission (e.g., Fernández and Fogli, 2006; Fernández and Fogli, 2009; Blau, Kahn and Papps, 2011; Tur-Prats, 2019). Traditional gender norms are strongly linked to agriculture (e.g., Alesina, Giuliano and Nunn, 2013; Hansen, Jensen and Skovsgaard, 2015), with idealised gender roles where men "work outside the home in the fields, while women specialised in activities within the home." I provide evidence of the persistence of traditional gender norms through social interactions. In contrast to Munshi and Myaux (2006), where individuals update their beliefs about contraceptive prevalence through social interactions, close social interactions in this case reinforce traditional norms by pressuring individuals to adhere to pre-existing ones.[6][7]

Second, this paper contributes to a small but growing body of literature on how women's expanding economic opportunities clash with traditional gender roles. Urbanisation offers unprecedented job opportunities for female migrants. Previous studies have shown that improved labour market opportunities for women are associated with delayed marriage and childbearing (e.g., Jensen, 2012; Heath and Mobarak, 2015). However, social interactions with co-workers from the same hometown pressure female migrants into early marriage—a choice that may no longer be optimal given their enhanced career prospects. This is closely related to the study by Bertrand, Cortes, Olivetti and Pan (2020), which finds heterogeneity in women's responses to economic opportunities across different countries, measured by the marriage gap between skilled and unskilled women. They show that this heterogeneity is driven by society's varying attitudes toward working women. The stickiness of gender norms challenges policy interventions aimed at tackling gender inequalities with economic incentives alone, as individual responses are mediated by conservative norms (Olivetti, Pan and Petrongolo, 2024; Ichino, Olsson, Petrongolo and Skogma-Thoursie, Forthcoming).

The remainder of this paper is organised as follows. Section 2 introduces the institutional background of the emergence of a large number of migrant workers in China. Section 3 describes the data. Section 4 presents the estimation methods and results. Section 5 provides evidence for the underlying mechanism. Section 6 rules out alternative explanations. Section 7 concludes.

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[6]Relatedly, Fogli and Veldkamp (2011); Fernández (2013) model the evolution of gender norms through learning and show that their models can match patterns in female labour force participation over time.

[7]See Giuliano (2021) for a review of the literature on gender and culture, and Olivetti, Pan and Petrongolo (2024) on social norms.

2. Institutional background

In this section, I provide an overview of the causes and consequences of rural-to-urban migrant workers in China.

The economic reforms of China since 1978 set in motion large-scale migration from rural to urban areas, driven by a surge in employment opportunities in urban manufacturing and service industries. Rural reforms also freed farmers from the land, further facilitating their migration into cities. In 2011, the number of migrant workers in China totalled 252 million, with 43.2% concentrated in the Pearl River and Yangtze River Deltas (Figure A2).[8]

The *hukou* system acts as an institutional catalyst that leads to the economic and social isolation of migrant workers in cities. This housing registration system mandates individuals to be registered under their place of origin and classified as either rural or urban residents, which, in turn, is used to link individuals to local public welfare programs. For rural-to-urban migrants, the conversion to local *hukou* remains extremely difficult (Song, 2014). Without *hukou* status in their cities of residence, migrant workers have limited access to local public goods, which reduces their bargaining power in the labour market (Song, 2014).[9]

Due to their disadvantaged positions in cities, most migrant workers take on jobs that are unappealing to local residents, characterised by long hours, poor working conditions, and low and unstable pay (Wang and Zuo, 1999). Migrant workers are also distinguished by their appearance and accent, a result of the pre-existing developmental disparities between rural and urban China, which further contributes to their social exclusion within cities.[10] Migrant workers may stay close to their *tongxiang*—a Chinese term referring to people from the same hometown—to share networks, information, and resources. Occasionally, successful migrant workers rise to managerial positions, enabling them to hire others from the same hometown. This sometimes leads to a concentration of same-origin co-workers within a particular workplace.

Intensive interactions with individuals from the same hometown can influence marriage behaviour through several channels. First, social interactions can increase the likelihood of finding a partner through increased opportunities for a marriage match. Additionally, social interactions can exert peer pressure to marry. China's rural communities are characterised by strong ties of kinship and shared origins, which often result in individual behaviour being strongly influenced by the social norms of the group.[11] This paper finds evidence for the latter

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[8]Source: the Chinese National Bureau of Statistics.

[9]Studies find that rural migrants face severe labour market discrimination and the estimates range from 28% to 60% income differentials even after controlling for observable characteristics (Liu, 2005; Deng, 2007; Gravemeyer, Gries and Xue, 2011; Lee, 2012).

[10]According to the 2010 survey on migrant workers, over 50% of the migrant workers reported discrimination by local residents and approximately 60% lacked of a sense of belongingness in the cities.

[11]While co-workers or friends from the same town or county may not be biologically related to an individual, they can report that individual's behaviour to the closely connected rural community back home. This places the individual's behaviour under the scrutiny of their same-origin co-workers.

channel—that social interactions influence migrant workers' marriage decisions through social pressure to conform to the gender norms of agricultural society.

3. Data

The main analysis of this paper is based on survey data from interviews of a cross-sectional 4157 rural-to-urban migrant workers in China in 2010.[12] It took a representative sample of migrant workers working in the Yangtze and Pearl River Deltas in 2010.[13] The quota sampling method was used to correct for representativeness in gender, occupation, and regional distribution of migrants, based on official statistical yearbooks. The data were used by Zhang and Xie (2016) to study the effect of the *tongxiang* network on migrant workers' wages. Consequently, in the 2010 wave of the survey, they incorporated questions regarding relations with *tongxiang*, or people from the same hometown, information that had not been covered in previous surveys in China.

3.1 Measures of social interactions

The survey data contain information regarding the percentage of co-workers from the same province, county, and town, which are respectively first-, third- and fourth-level administrative units in China. In addition, we know whether the migrant worker's best friends in their current location are from the same hometown, as identified by the respondents. In the survey, individuals were asked the following question:

Q1 On the production line (team) that you work, what is the proportion of people from the same town, county, or province?
(1) None, (2) Very few (<10%), (3) A few (10%–20%), (3) Some (20%–30%), (4) Many (30%–50%), (5) A lot (> 50%), (6) Do not know.

Table 1 reports the percentage of same-origin co-workers in the same production line/team, defined by co-workers from the same town, county, or province, respectively. A sizeable proportion of people have over 30% of co-workers from the same region.

The concentration of same-origin co-workers is my preferred measure of social interactions because it is a less endogenous choice than friendships. Moreover, the concentration of co-workers is a good proxy for social interactions because migrant workers spend a substantial amount of time with their co-workers. According to the same survey, the average working hours are 9.3 hours per day on an average 6-day working schedule. In addition, 32% of total migrant workers even work 7 days a week. The intensity of the working schedule results in the intensity

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[12]The survey was part of a research project sponsored by the Ministry of Education in China with the aim of studying the status-quo of migrant workers and protecting their rights.

[13]According to the Chinese National Bureau of Statistics, the two regions have the highest concentration of migrant workers in China and together assimilated over 40% of total migrant workers in 2011. Figure A2 depicts the migration outflows to the Pearl and Yangtze River Deltas based on the same survey data.

Table 1: Proportion of *tongxiang* co-workers

	None	Very few <10%	A few 10%–20%	Some 20%–30%	Many 30%–50%	A lot >50%
Town	0.483	0.265	0.091	0.072	0.040	0.050
County	0.412	0.265	0.117	0.091	0.053	0.061
Province	0.140	0.201	0.137	0.137	0.153	0.233

Notes: Based on the 2010 survey on migrant workers. The table presents the levels of the concentration of co-workers (in columns) from the same town, county, and province (in rows).

and closeness of social interactions within the workplace. Migrant workers have numerous opportunities to socialise (Fang, 2012). For example, 36% of total migrant workers live in the dormitory provided by their employers and the percentage increases to 49% for individuals who are single; 62% of workers dine in the canteen of the workplace.

Another potential measure of social interactions is migrant workers' self-perceived friendship with *tongxiang*. In the survey, respondents were asked to identify three of their best friends in their current location and whether each friend is from the same hometown. The data indicate that a considerable proportion of people have *tongxiang* as their best friends. The proportion of individuals whose first best friend is *tongxiang* is 0.37. If we consider three best friends, for 13% of the individuals, all their best friends are *tongxiang*, and for 44% of the individuals, at least one of their best friends is *tongxiang*.

Friendships are more susceptible to selection bias since people choose their friends. Specifically, individual with more traditional values may be more likely to form friendships with *tongxiang*. On the other hand, individuals have less control over the composition of their co-workers, and even if they do, such selection is unlikely to be driven by a preference for early marriage, conditional on observable individual characteristics. In fact, the paper shows that *tongxiang* co-workers are not corrected with a preference for early marriage, while *tongxiang* friendships are associated with such a preference. Therefore, the main analysis focuses on the concentration of *tongxiang* co-workers to study the effect of social interactions on marriage age.

3.2 Individual characteristics

The sample consists of 1895 females and 2252 males. After excluding observations that are either widower or divorced, a sample of 4093 individuals remains.

The average migrant worker in the sample has 9 years of education and migrated at an age of 19. The migration is typically temporary. Less than 25% migrant workers express a desire to convert to local *hukou*, not to mention the practical barriers to acquire one. The majority of individuals work in manufacturing and service industries with an almost equal number of male and female workers. There are significantly more males in construction than females although the total employment is only 308, which also makes up for the difference between the total

number of females and males in the sample.[14] Transportation assimilates the fourth largest employment with a balanced gender representation. The other sectors are relatively small and assimilate approximately 2% of workers (see Figure A3).

3.3 Complementary data

I use the 2010 Chinese General Social Survey which enquires about individual attitudes towards gender roles in society to measure regional variation in the strength of traditional gender norms. If social interactions with same-origin co-workers pressure females into early marriage through cultural norms, this effect is likely to be stronger among individuals from regions with more traditional gender norms.

Additionally, I use Yuen (2020) and the China City Statistical Yearbook to construct measures of migrant workers' origin characteristics, such as population density, the proportion of the rural population, and GDP per capita.

4. Estimation methods and results

In this section, I present the estimation methods and results. First, I use a discrete-time duration model to examine the effect of social interactions on the distribution of marriage age, quantifying the effect by translating the hazard rates into cumulative distribution functions. The analysis shows that female migrants are more likely to marry at an early age, particularly before 25, if their co-workers are from the same town. In contrast, same-origin co-workers have little impact on the distribution of marriage age for male migrants. Then, I show that the gender-differential effect of social interactions is robust when using a linear probability model specification, which controls for an extensive set of individual characteristics.

4.1 Estimation of hazard rate

I examine the effect of social interactions on the probability of getting married at different ages. While one could alternatively estimate this effect by comparing average marriage ages, such a comparison would overlook individuals who remain unmarried in the sample. The absence of marriage, particularly among those without same-origin co-workers, also provides valuable information into the impact of social interactions on marriage. Additionally, analysing the probability of marriage at different ages, rather than focusing solely on average marriage age, can provide more detailed insights into the underlying mechanisms at play.

Hence, I employ a duration framework to model the probability of getting married at different ages. This approach incorporates information on individuals who have not yet married within the sample. It also facilitates a detailed examination of the effect of social interactions on the entire distribution of marriage age, beyond just the mean. Following the specification of the logistic

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[14]Estimation results in Section 4 are robust to exclusion of the construction sector.
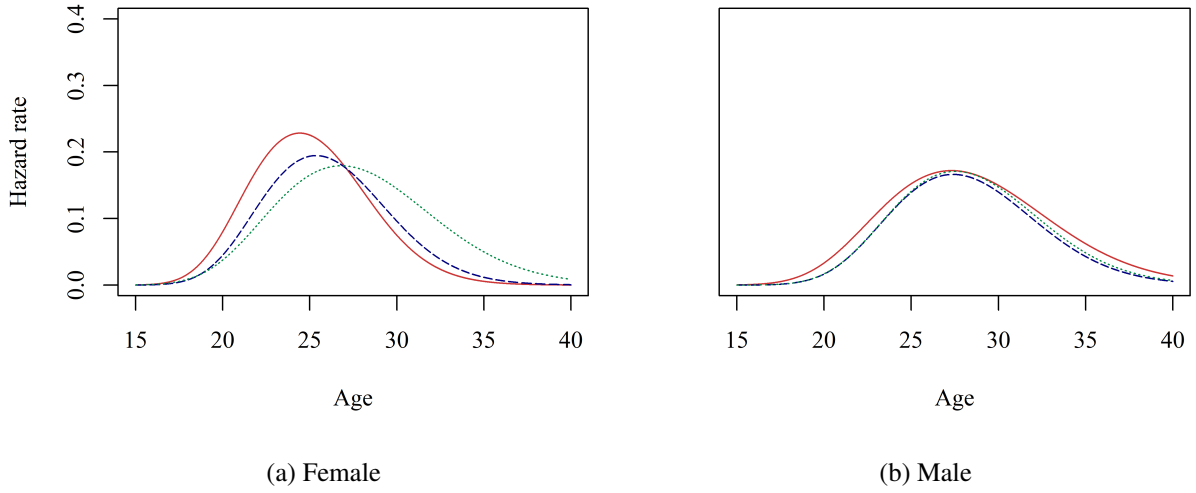
(a) Female   (b) Male

Figure 1: Estimated hazard rate: pc_town

...... none of the co-workers come from the same town

- - - 0−30% of the co-workers come from the same town

—— >30% of the co-workers come from the same town

discrete-time duration model by Bover, Arellano and Bentolila (2002), I define the hazard rate of marriage $h(t)$ as a function of the natural logarithm of age t.

$$h(t) = Pr(T_i = t | T_i \geq t) = G(\gamma_0 + \gamma_1(\ln t) + \gamma_2(\ln t)^2) \,, \tag{1}$$

where

$$G(x) = \frac{e^x}{1 + e^x} \,. \tag{2}$$

The duration here is years to marriage. The hazard rate $h(t)$ is the conditional probability of getting married at age t, given that one has not been married before age t. The specification here allows the hazard rate to vary with age t.

I examine marriage hazard rates at different ages and also examine how they vary with the concentration of co-workers from the same hometown, separately for male and female migrant workers. Panel (a) of Figure 1 shows the estimated hazard rates for female migrant workers with different levels of concentration of co-workers from the same town (the fourth-level administrative unit in China). As the proportion of same-town co-workers increases, there is a shift and intensification of exit rate from singlehood at early ages. The probability of marriage is particularly heightened just before the age of 25. This indicates that female migrant workers are more likely to marry early when a higher proportion of co-workers are from the same hometown. In contrast, the concentration of same-town co-workers does not appear to affect the distribution of marriage age for male migrant workers, as shown in the right panel of Figure 1.

Similar gender-differentiated patterns emerge when examining co-workers from the same county, and the results are presented in the Appendix (Figure A4). The effect of co-workers

from the same province is less clear (Figure A5). Given that the average area of a province in China is comparable to that of Germany, and its average population is similar to that of Spain, there is substantial heterogeneity within a province. Consequently, individuals may not always identify people from the same province as *tongxiang*.[15]

4.2 Estimation of cumulative distribution function

The estimated hazard rates offer an intuitive overview of the effect of social interactions on marriage age. To quantify this effect, I translate the hazard rate into a cumulative distribution function, calculated as follows:

$$F(t) = 1 - \prod_{t=1}^{T}(1 - h(t)) \, , \tag{3}$$

where $F(t)$ represents the probability that an individual gets married at or before age t. This probability can be compared between individuals with more or less same-origin co-workers.

Table 2 compares individuals with over 30% or 50% of their co-workers from the same town to those without any co-workers from the same town. The sample is restricted to individuals who get married after migration. For presentation purposes, the table only reports the probability of getting married between the ages of 20 and 30.[16] In columns (1) and (4), I show the probability of getting married at or before a certain age for the baseline group of female and male migrants, respectively. The baseline group comprises migrant workers who have no co-workers from the same hometown. The differences in columns (2) and (3) for females, and columns (5) and (6) for males, yield the effect of social interactions, which is the increase relative to the baseline group in the probability of getting married for migrant workers with more than 30% and 50% of their co-workers from the same hometown. Bootstrap standard errors with 500 replicates are reported in parentheses.[17]

A female migrant without any same-town co-workers has a 21% probability of being married at or before age 22 (column 1). If the majority of her co-workers are from the same hometown, this likelihood increases by 23 percentage points (column 3). In contrast, the effects on male workers are significantly smaller (columns 5 and 6). The largest effect for females is observed at age 24, specifically in the probability of being married before 25. For female migrants whose majority of co-workers are from the same hometown, this probability increases by 26.5 percentage points.

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[15]The average area of a province in mainland China is 352,033 km^2, excluding provincial level municipalities (i.e., Beijing, Shanghai, Tianjin, and Chongqing). The average population of a province was 46 million in 2010.

[16]The probability of marriage can be calculated for all ages starting from 16, which is set to be the minimum marriage age.

[17]The estimation of duration model generates t-15 (the minimum marriage age is set to be 16) observations for individuals who get married at age t and generates the number of observations that equals one's age minus 15 if the individuals is not married. The bootstrap error is calculated by clustering at the individual level. Clustered bootstrapping is equivalent to taking a random sample of individuals from the original sample (with replacement) and generates the above-mentioned expanded sample each time.

Table 2: Marriage age and same-town co-workers—main analysis

| | Probability of being married at or before a certain age | | | | | |
| | Female | | | Male | | |
Age	Baseline 0 same origin (1)	Difference >30% (2)	Difference >50% (3)	Baseline 0 same origin (4)	Difference >30% (5)	Difference >50% (6)
20	0.070	0.069* (0.039)	0.101 (0.079)	0.027	0.035* (0.019)	0.046 (0.025)
21	0.128	0.122** (0.048)	0.167** (0.081)	0.060	0.054** (0.026)	0.067* (0.032)
22	0.207	0.174*** (0.057)	0.227*** (0.084)	0.114	0.072** (0.031)	0.084** (0.038)
23	0.302	0.208*** (0.065)	0.261*** (0.089)	0.190	0.083** (0.036)	0.093** (0.046)
24	0.404	0.217*** (0.071)	0.265*** (0.093)	0.283	0.086** (0.041)	0.092* (0.054)
25	0.503	0.204*** (0.077)	0.245** (0.095)	0.385	0.081* (0.046)	0.082 (0.063)
26	0.591	0.177** (0.081)	0.212** (0.097)	0.483	0.071 (0.049)	0.069 (0.068)
27	0.664	0.145* (0.083)	0.174* (0.098)	0.571	0.060 (0.050)	0.056 (0.069)
28	0.722	0.114 (0.084)	0.139 (0.099)	0.644	0.050 (0.050)	0.046 (0.068)
29	0.767	0.087 (0.084)	0.109 (0.099)	0.701	0.042 (0.049)	0.038 (0.065)
30	0.801	0.064 (0.084)	0.084 (0.100)	0.745	0.037 (0.047)	0.034 (0.062)

Notes: The estimation is based on the sample of individuals married after migration. The baseline group is migrants without any co-workers from the same town. The difference is the increase in probability relative to the baseline group for migrants with over 30% or 50% of the co-workers from the same town. Bootstrap standard errors with 500 replicates are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

As a placebo test, we can make the identical calculation for individuals who have already been married before migration. If social interactions have no real impact on marriage behaviour, but instead capture certain tendencies for early marriage, we would expect a correlation between early marriage and social interactions with same-origin co-workers even among females who were already married before entering a workplace with same-town co-workers. In Table 3, I estimate the effect of current same-town co-workers, but look at individuals who were already married before migrating into a city. Now, the effect of social interactions disappears for females (columns 2 and 3). Not only does the significance level fall to zero but so do the point estimates. This suggests that social interactions have a real impact on marriage behaviour rather than

merely reflecting spurious correlations.[18]

Table 3: Marriage age and same-town co-workers—placebo analysis

| | Probability of being married at or before a certain age | | | | | |
| | Female | | | Male | | |
Age	Baseline 0 same origin (1)	Difference >30% (2)	Difference >50% (3)	Baseline 0 same origin (4)	Difference >30% (5)	Difference >50% (6)
20	0.285	−0.039 (0.054)	−0.063 (0.228)	0.159	0.084* (0.044)	0.100* (0.056)
21	0.437	−0.036 (0.064)	−0.032 (0.190)	0.267	0.096* (0.055)	0.102 (0.070)
22	0.594	−0.028 (0.070)	0.011 (0.144)	0.398	0.093 (0.063)	0.087 (0.081)
23	0.731	−0.021 (0.070)	0.040 (0.104)	0.536	0.079 (0.066)	0.061 (0.086)
24	0.835	−0.016 (0.063)	0.046 (0.073)	0.662	0.059 (0.063)	0.034 (0.083)
25	0.904	−0.013 (0.051)	0.038 (0.047)	0.765	0.040 (0.055)	0.011 (0.076)
26	0.946	−0.011 (0.038)	0.026 (0.029)	0.841	0.025 (0.046)	−0.003 (0.065)
27	0.971	−0.010 (0.028)	0.016 (0.018)	0.895	0.014 (0.037)	−0.011 (0.054)
28	0.984	−0.008 (0.020)	0.009 (0.011)	0.930	0.008 (0.029)	−0.014 (0.044)
29	0.991	−0.007 (0.015)	0.005 (0.007)	0.953	0.004 (0.022)	−0.014 (0.035)
30	0.995	−0.006 (0.011)	0.003 (0.005)	0.967	0.002 (0.017)	−0.012 (0.028)

Notes: The estimation is based on the sample of individuals married before migration. The baseline group is migrants without any co-workers from the same town. The difference is the increase in probability relative to the baseline group for migrants with over 30% or 50% of the co-workers from the same town. Bootstrap standard errors with 500 replicates are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

In Table A4, I present additional results using alternative thresholds for the concentration of same-town co-workers. Specifically, female migrants with more than 10% or 20% of co-workers from the same hometown also have a higher probability of early marriage compared to females without any same-town co-workers. As expected, the effects are more modest than those observed at higher thresholds (i.e., 30% and 50% same-town co-workers). Consistent with Figure 1, the effect of social interactions intensifies with the fraction of same-town co-workers.

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[18]Note that for male migrant workers who were married before migration, the association between social interactions and early marriage is slightly positive but very similar to the results for migrants who marry after migration. This implies positive sorting for male migrants. A closer look reveals that this relationship is primarily driven by the negative correlation of education with both same-origin co-workers and early marriage.

The estimation results using same-county co-workers (Table A5, Table A6, and Table A7) show similar patterns: (1) female migrant workers with same-origin co-workers are more likely to marry early; (2) the effect is strongest for marriages occurring before age 25; (3) the effect increases with a higher fraction of same-origin co-workers; (4) the effect is much smaller for male migrants; and (5) the association between same-origin co-workers and early marriage is absent for female migrants who were married prior to migration.

By comparison, Tables A2 and A3 present estimates using the friendship measure. The gender-differentiated effects of social interactions are similar to those observed with co-workers. For a female migrant worker who marries after migration, she is more likely to marry early if her best friend in her current location is from the same hometown. The effect is smaller for male migrants.[19] Interestingly, even among individuals who were married before migration, there is a positive association between early marriage and having same-origin best friends for female migrant workers. This suggests that, unlike with co-workers, friendships with *tongxiang* are subject to selection in the same direction as early marriage for female migrants. In other words, female migrants with a tendency toward early marriage are more likely to form friendships with other migrants from the same hometown in their current location.

4.3 Estimation of linear probability model

The analysis using the discrete-time hazard model reveals that a higher concentration of co-workers from the same hometown increases the probability of early marriage for female migrant workers, especially before the age of 25. This finding aligns with the social pressure faced by many rural-to-urban female migrants to conform to traditional gender roles in agricultural societies, where age 25 often serves as a pivotal reference point for marriage. Figure A1 illustrates this pattern using data from the 2010 Chinese General Social Survey, showing the hazard rates of marriage at different ages for both rural and urban populations. Among the rural population, hazard rates intensify notably at ages 24 and 25 for females, consistent with age 25 serving as a benchmark for marriage among women in rural communities.

I show the robustness of the gender-differential effect of same-origin co-workers using an alternative specification. Specifically, I employ the linear probability model to predict marriage before age 25.[20] Table 4 presents the estimation results. Column (1) shows the effect of having more than 30% of co-workers from the same town on female migrants without any controls.

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[19]Note that the estimated effect of best friends from the same hometown is smaller than the effect of having 50% of co-workers from the same hometown and is comparable to the effect of having 10% of co-workers from the same hometown.

[20]The linear probability model treats individuals who are unmarried and under the age of 25 as missing, since we do not know whether they will marry before age 25. In contrast, the hazard model can still use these observations to estimate the hazard rates. The similarity in the effect of social interactions on the probability of marrying before age 25 across the two methods suggests that individuals for whom we do not observe the entire marriage history are not systematically different from those for whom we do.

The results indicate a similarly 25.2 percentage point increase (21.7 in the discrete-time duration model) in the probability of being married before age 25.

Table 4: Married before age 25 and same-town co-workers

| | Dep. var.: $\mathbb{1}$ (Married before age 25) | | | | | |
| | Female | | | Male | | |
	(1)	(2)	(3)	(4)	(5)	(6)
Same-town co-worker	0.252***	0.263***	0.193**	0.050	0.071	−0.079
	(0.069)	(0.077)	(0.091)	(0.053)	(0.060)	(0.061)
Education			−0.170***			−0.101***
			(0.044)			(0.028)
Age at start of work			−0.007			−0.021***
			(0.009)			(0.005)
First job			−0.073			−0.131**
			(0.097)			(0.059)
Referral			0.006			0.040
			(0.068)			(0.047)
Log(salary)			−0.120			−0.006
			(0.100)			(0.055)
Occupation FE			✓			✓
Industry FE			✓			✓
Birth cohort FE			✓			✓
Origin prefecture controls			✓			✓
Origin and destination province FE			✓			✓
Observations	334	258	258	617	504	504
R-squared	0.028	0.032	0.396	0.001	0.003	0.214

Notes: The estimation uses a linear probability model to predict whether an individual marries before age 25. The sample includes individuals who married after migrating and either have no co-workers from the same town or have more than 30% of their co-workers from the same town. *Same-town co-worker* is an indicator for having over 30% of co-workers from the same town. *Education* is a categorical variable that increases with the level of education (0: less than or equal to primary school; 1: junior high school; 2: senior high school; 3: more than high school). *Age at start of work* is the age at which the individual began working in their current job. *First job* is an indicator for whether the current job is the individual's first job. *Referral* indicates whether the job was obtained through a referral. *Log(salary)* calculates the natural logarithm of the individual's monthly salary. Origin prefecture controls include the individual's home prefecture's population density, log GDP per capita, the ratio of rural population over total population, and log distance to the destination. Robust standard errors are given in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

Column (3) includes an extensive set of controls, encompassing individual characteristics such as educational attainment and birth cohort, as well as job-related factors, including occupation, industry, salary, whether it is the individual's first job, whether the job was obtained through referral, and the age at which the individual started the job. Additionally, I include origin and destination province fixed effects, as well as characteristics of the individual's home prefecture: population density, rural-to-total population ratio, GDP per capita, and distance to the destination. The effect remains robust, showing a slightly smaller 18.7 percentage point increase in the

probability of being married before age 25 for female migrants. The sample size in column (3) is smaller than in column (1) due to missing information on industry and the origin prefecture for some individuals. In column (2), I estimate the effect without controls using the same sample as in column (3), and the results show a very similar effect to that in column (1).

Columns (4)-(6) present the estimated effects for male migrant workers. Consistent with Table 2, the effect of having same-town co-workers on the probability of being married before age 25 is much smaller for male migrants. While men generally marry later than women, Table 2 also shows that this effect is absent for later ages among male migrants.

The results in this section, using both the hazard model and the linear probability model, indicate that a higher concentration of co-workers from the same town increases the likelihood of early marriage among female rural-to-urban migrants. This relationship does not appear to be driven by spurious correlations, unlike the patterns observed in friendships. The next sections explore the underlying mechanism.

5. Effect of social interactions through traditional gender norms

Anecdotal evidence suggests that female migrant workers in the workplace experience considerable social pressure to marry from their co-workers. Fang (2012) vividly pictures social interactions within an electronic factory in Shenzhen, Pearl River Delta:

> *On the factory floor, women have plenty chances to compare themselves to one another...Married women gossip aggressively about the unmarried, especially the "old" ones, and the gossiping does not take into account any career performance. No matter how well an unmarried woman performs in her job or how high the job position she attains, she will still be singled out for her embarrassing unmarried status. In other words, she has simply "failed" to marry.*

Co-workers from the same hometown can exert much stronger social pressure than those from other equally rural origins.[21] This is because relationships with same-origin co-workers tend to be closer, and these co-workers can also report individual behaviour back home, making the traditional norms more salient or enforceable.[22]

I provide two sets of evidence to support the idea that the effect of social interactions on early marriage operates through social pressure to conform to the traditional gender roles in agricultural society. First, I show a gender-differentiated response to rural identity in the age at

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[21]Although the data do not contain information about the composition of co-workers, it is likely that these co-workers are mostly migrant workers from other rural regions, given the segregated labour market for local residents and migrant workers (Wang and Zuo, 1999). The comparison, therefore, involves more same-origin co-workers versus those from other rural origins rather than the comparison between same-origin co-workers and local co-workers.

[22]Alternatively, this may also stem from systematic misperceptions of peer group social norms, assuming that peers still adhere to traditional gender views, as shown in Miyajima and Yamaguchi (2017); Bursztyn, González and Yanagizawa-Drott (2020); Cortés, Koşar, Pan and Zafar (2024).

marriage. Female migrants who identify more strongly with their rural origin are significantly more likely to marry early, whereas the association between rural identity and early marriage is much weaker for male migrants. This suggests that the rural norm of early marriage, proxied by self-identification with a rural origin, is more binding for females than for males. Importantly, self-identification with a rural origin is not correlated with the concentration of same-origin co-workers, which also suggests that there is no selection into *tongxiang* workplaces based on a preference for early marriage.

Second, I show that the effect of same-origin co-workers on early marriage is significantly stronger for individuals from regions with more conservative views on women's roles in society. It is important to note that this second test should not be confused with a narrative suggesting that female migrant workers from more traditional regions are both more likely to sort into workplaces with same-town co-workers and more inclined to marry early. Rather, it examines, conditional on having same-origin co-workers, whether the effect is stronger when traditional norms are more pronounced, as captured by an interaction between having same-origin co-workers and a measure of the strength of the norm. The correlation between hailing from a traditional region and having same-origin co-workers, or sorting, will be accounted for by including both variables separately in the linear regression.

5.1 Farmer v.s. Worker Identity

One's identity prescribes how people belonging to that group should behave (Akerlof and Kranton, 2000). Thus, migrant workers' identification with their rural origins subjects them to the social norms of agricultural society, which may continue to shape their behaviour even after migrating to cities. In this section, I explore this possibility as supporting evidence that the gendered effect of social interactions arises from gendered marriage norms in agricultural society.

Although less than 1% of individuals in the sample work in the agriculture sector in cities, many migrants still identify as farmers due to their rural origins and rural *hukou*. In the same 2010 survey of migrant workers, individuals were asked the following question:

Q2 Which of the following do you believe to be your identity?
    (1) Farmer, (2) Worker, (3) Others, (4) Do not know.

Table 5 calculates the probability of getting married at or before a certain age by self-identity, separately for males and females, and only for individuals who get married after migration. The baseline groups are migrant workers who identify themselves as workers for females in column (1) and for males in column (3). I show the increase relative to the baseline in the probability of getting married for individuals who identify themselves as a farmer for females in column (2) and for males in column (4). Female migrants who identify themselves as farmers are more likely to get married early (column 2). For males, the association between rural origin and marriage age is much weaker (column 4). Similar to the effect of same-origin co-workers, the

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Table 5: Marriage age and identity

	Probability of being married at or before a certain age			
	Female		Male	
Age	Baseline Worker (1)	Difference Farmer (2)	Baseline Worker (3)	Difference Farmer (4)
20	0.076	0.035	0.035	0.003
		(0.029)		(0.011)
21	0.135	0.060	0.070	0.009
		(0.037)		(0.018)
22	0.214	0.086*	0.124	0.020
		(0.045)		(0.026)
23	0.307	0.105**	0.197	0.034
		(0.053)		(0.034)
24	0.406	0.113*	0.283	0.048
		(0.058)		(0.041)
25	0.502	0.108*	0.376	0.059
		(0.062)		(0.045)
26	0.588	0.095	0.466	0.065
		(0.063)		(0.047)
27	0.660	0.077	0.547	0.067
		(0.063)		(0.047)
28	0.718	0.058	0.616	0.064
		(0.064)		(0.045)
29	0.763	0.041	0.672	0.059
		(0.065)		(0.044)
30	0.798	0.026	0.716	0.053
		(0.067)		(0.044)

Notes: The estimation is based on the sample of individuals married after migration. The baseline group is individuals who identify themselves as workers. The difference is the increase in probability relative to the baseline group for migrants who identify themselves as farmers. Bootstrap standard errors with 500 replicates are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

impact of self-identity is strongest at age 24, or in the probability of being married before 25, for female migrants.

One concern is that individuals who strongly identify with their rural origin may be more likely to work with same-origin co-workers. As a result, the correlation between the prevalence of same-town co-workers and early marriage may instead reflect the effect of self-identity on marriage behaviour. In Table A9, I regress the indicator for self-identification as a farmer on the concentration levels of same-town co-workers and find little correlation between them. This also indicates that individuals do not self-select into same-origin co-workers based on their

self-identification with a rural origin.[23]

Interestingly, among individuals who marry before migration, females identifying with their rural origins (as responded in the survey after migration and marriage) also tend to marry early, whereas their male counterparts do not (Table A8). This supports the idea that self-identity remains stable over time and is linked to persistent norms. Female migrants who identify with their rural origins act according to gender norms prescribed by their rural identity, leading to early marriage. For males, however, the rural norm of early marriage is not as strong, so self-identification with a rural origin does not result in early marriage. Notably, the effect of farmer identity is weaker than the effect of same-origin co-workers. This may be due to either (1) farmer identity being a proxy for the social norm of early marriage, or (2) the intensifying and multiplying effects of social pressure on marriage behaviour.

5.2 Traditional v.s. Non-traditional Provinces

If rural norms pressure females into early marriage in the presence of same-origin co-workers, we would expect a stronger effect of social pressure when the norm is stronger. The strength of the norm can be proxied by views regarding women's role in society. I use the response in the 2010 Chinese General Social Survey to the following question:

Q3 Do you agree that men should prioritise their careers and women should prioritise their families?
(1) Completely disagree, (2) Disagree, (3) Indifferent, (4) Agree, (5) Strongly agree, (6) Do not know.

I divide provinces into two equal groups and code them as traditional and non-traditional provinces depending on the proportion of rural respondents who agree or strongly agree with the above proposition (high proportion defined as traditional province, see Figure A6 for the classification). I classify provinces as traditional or non-traditional along this dimension because the question reflects the value placed on family over career for females, which closely aligns with preferences for early female marriage. I then compare the gendered effects of social interactions on early marriage between individuals from traditional and non-traditional provinces.

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[23]Another possibility is that self-identification with rural origin is correlated with occupations, which lead to early marriage. However, in the sample, less than 1% of individuals work in the agriculture sector. Self-perceived identity does not appear to be related to the actual jobs migrants take up. 64.06% of people who regard themselves as farmers work in manufacturing compared to 62.61% of people who self-identify as workers. For service, the second largest category, the comparison is 22.51% v.s. 23.92%.

Table 6: Married before age 25 and same-town co-workers: Heterogeneity

| | Dep. var.: $\mathbb{1}$ (Married before age 25) | | | |
| | Female | | Male | |
	(1)	(2)	(3)	(4)
Same-town co-worker	0.102	0.027	0.086	−0.088
	(0.125)	(0.135)	(0.095)	(0.093)
Same-town co-worker × Traditional	0.273**	0.368**	−0.062	0.014
	(0.137)	(0.172)	(0.115)	(0.114)
Traditional	0.072		0.073*	
	(0.060)		(0.043)	
Controls		✓		✓
Occupation FE		✓		✓
Industry FE		✓		✓
Birth cohort FE		✓		✓
Origin prefecture controls		✓		✓
Origin and destination province FE		✓		✓
Observations	334	258	617	504
R-squared	0.047	0.408	0.006	0.214

Notes: The estimation uses a linear probability model to predict whether an individual marries before age 25. The sample includes individuals who married after migrating and either have no co-workers from the same town or have more than 30% of their co-workers from the same town. *Same-town co-worker* is an indicator for having over 30% co-workers from the same town. *Traditional* is an indicator of whether an individual hails from a province with traditional gender norms, as determined by responses to Q3. The control variables are defined in the same manner as in Table 4 and they are educational attainment, log salary, an indicator for whether it is the individual's first job, an indicator for whether the individual was referred to the job, the age at which the individual started the job. Origin prefecture controls include the individual's home prefecture's population density, rural-to-total population ratio, log GDP per capita, and log distance to the destination. Robust standard errors are given in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

I investigate whether the effect of social interactions on early marriage is heterogeneous in Table 6. Similar to Table 4, I predict whether an individual is married before age 25 using a linear probability model. In addition to the indicator for having more than 30% same-town co-workers, I include an interaction term between same-town co-workers and an indicator for being from a province with traditional gender norms. Column (1) shows that having more than 30% same-town co-workers and being from a traditional province are both associated with a higher probability of being married before age 25 among female migrants, although the effects are not statistically significant. The coefficient on the interaction term is large and statistically significant, showing that the influence of same-town co-workers on early marriage likelihood is substantially strong for individuals from provinces with traditional gender norms. In column (2), I include the extensive set of controls. Now the direct effect of being from a traditional province is absorbed by the fixed effects for the origin provinces. The coefficient on same-town co-workers captures the effect for individuals from non-traditional provinces and the estimate is small. The interaction term captures the additional effect of same-town co-workers

for individuals from provinces with traditional gender norms. The coefficient estimate indicates that if a female migrant hails from a province with traditional gender norms, the presence of same-town co-workers increases the probability of being married before 25 by approximately 38 percentage points (3.2 plus the additional 34.6 percentage points). If we turn to male migrant workers in columns (3) and (4), the effects of having same-town co-workers on those originating from both non-traditional and traditional provinces, captured by the coefficient on same-origin co-workers and the interaction term, are largely absent.

The findings indicate that the effect of same-origin co-workers on early female marriage is primarily driven by traditional gender norms. Female migrant workers from provinces with traditional gender norms are more likely to marry before the age of 25 when surrounded by a substantial share of same-town co-workers, compared to female migrants from similar provinces without same-town co-workers. In contrast, the effect of same-origin co-workers is much smaller for females from non-traditional provinces and for males, where early marriage norms are less pronounced.

6. Alternative explanations

In this section, I rule out alternative mechanisms that can generate the gendered effect of social interactions.

6.1 Matching

Migrant workers originating from the same hometown often share customs, language, and similar socio-economic backgrounds. The concentration of same-origin co-workers can create opportunities for individuals to connect with others who share these similarities, thereby increasing the likelihood of meeting a potential partner and facilitating a quicker transition into marriage.

However, matching alone cannot account for the impact of social interactions on marriage, as the effect is much more pronounced for female migrants than for their male counterparts. While it is true that men generally marry later than women, we do not observe a comparable effect of same-origin co-workers on male migrants at later ages either. Moreover, the effect primarily concerns early marriage, particularly before the age of 25, rather than an increased likelihood of marriage across all ages. This aligns more closely with social pressure to conform to traditional gender norms. If the mechanism were better matching, the effect would likely be more evenly distributed across all age groups.

In addition, I explore a testable implication of the matching story. If workplace matching takes place, the likelihood of a migrant worker's spouse being in the same workplace may increase with a higher fraction of same-origin co-workers. To investigate this, I regress the indicator of the spouse being in the same workplace on the indicator for having more than 30% same-town

co-workers, separately for male and female migrant workers who married after migration. The results, presented in Table 7, indicate that female migrants working in environments with sizeable same-origin co-workers is significantly more likely to have their spouse within the same workplace (column 1). However, this effect is not observed among male migrant workers (column 3). If matching between same-origin co-workers took place, similar effects would be expected for both male and female migrant workers.[24] The gender-asymmetrical effect instead indicates that female migrants with co-workers from the same town are more likely to marry someone from their workplace, regardless of whether that person is from the same hometown.

Table 7: Spouse workplace and same-town co-workers

| | Dep. var.: $\mathbb{1}$ (Spouse in the same workplace) | | | |
| | Female | | Male | |
	(1)	(2)	(3)	(4)
Same-town co-workers	0.209**	−0.001	0.089	0.073
	(0.089)	(0.114)	(0.062)	(0.096)
Same-town co-workers $\times$ Traditional		0.469***		0.023
		(0.169)		(0.115)
Observations	208	208	365	365
R-squared	0.300	0.337	0.254	0.255

Notes: The estimation uses the linear probability model to predict whether the spouse is in the same workplace for migrant workers who married after migration. The sample includes individuals who married after migrating and either have no co-workers from the same town or have more than 30% of their co-workers from the same town. *Same-town co-worker* is an indicator for having over 30% co-workers from the same town. *Traditional* is an indicator of whether an individual hails from a province with traditional gender norms, as determined by responses to Q3. All specifications include the following controls as defined in Table 4: education attainment, birth cohort fixed effects, occupation fixed effects, industry fixed effects, log salary, an indicator for whether it is the individual's first job, an indicator for whether the individual was referred to the job, the age at which the individual started the job, origin and destination province fixed effects, and characteristics of the individual's home prefecture (including population density, rural-to-total population ratio, log GDP per capita, and log distance to the destination). Robust standard errors are given in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

In columns (2) and (4), I further interact the indicator for same-town co-workers with an indicator for originating from a province with traditional gender norms. The direct effect of coming from a traditional province is absorbed by the origin province fixed effect. After including the interaction term in column (2), the coefficient of same-town co-workers drops to zero, capturing the effect of having more than 30% of co-workers from the same town for individuals from non-traditional provinces. The interaction term captures the additional effect of

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[24]Since same-sex marriage is not legalised in China, the matching hypothesis assumes that marriages involve a male and a female from the same origin. Therefore, the matching story would predict a similar positive association between same-town co-workers and the presence of a spouse in the same workplace for male migrants. Note that an alternative scenario, where female migrants seek and work in their husband's workplace—potentially leading to more same-origin co-workers—would also be inconsistent with the results. Such a scenario would require a similar positive correlation between the concentration of same-origin co-workers and the presence of a spouse in the same workplace for male migrants.

same-origin co-workers on individuals from traditional provinces, showing an approximately 47 percentage point increase in the likelihood of having spouse in the same workplace. Column (4) indicates that the effect of same-origin co-workers is absent for male migrants, regardless of whether they originate from more or less traditional provinces. This indicates that having same-town co-workers increases the probability of having spouse in the same workplace exclusively for female migrant workers from provinces with traditional gender norms.

In addition to the findings on the probability of early marriage presented in Table 6, examining a distinct outcome—whether the spouse is in the same workplace—reveals a similarly gender-asymmetric pattern. Both results align with the possibility that female migrant workers are pressured to conform to traditional norms of early marriage through close interactions with same-origin co-workers, leading them to marry someone from their workplace, regardless of whether the spouse is from the same hometown.

6.2 Selection

The concentration of same-origin co-workers may correlate with factors that affect the timing of marriage. For example, people who are less educated may be more likely to rely on the *tongxiang* network and, simultaneously, are more likely to marry early. Moreover, people who are more resourceful can join the *tongxiang* network and are also more capable of finding a marriage partner. It is also possible that even if male and female migrant workers sort into *tongxiang* networks similarly based on certain characteristics, these characteristics may influence their marriage behaviour differently, thus resulting in the gendered effect of social interactions.

To the extent that selection is based on observable characteristics, these can be explicitly accounted for. In Tables 4 and 6, I control for an extensive set of variables, including individual characteristics such as educational attainment and birth cohort, as well as job-related factors like occupation, industry, salary, whether it is the individual's first job, whether the job was obtained through referral, and the age at which the individual started the job. Additionally, I include fixed effects for both the origin and destination provinces, as well as characteristics of the individual's home prefecture, including population density, rural-to-total population ratio, GDP per capita, and distance to the destination. The gender-differentiated effect of same-origin co-workers remains robust.

Unobservable individual characteristics may also influence both the presence of same-origin co-workers and the likelihood of early marriage. Specifically, one concern is that individuals with a private preference for early marriage may be more inclined to join workplaces with same-origin co-workers. This paper provides several strands of evidence to show that this scenario is unlikely. First, there is no association between early marriage and same-origin co-workers among women who married before migration (Table 3). If having same-origin co-workers reflected certain private preferences or tendencies for early marriage, we would expect to see a correlation between early marriage and having same-origin co-workers among

women who were already married before meeting same-origin co-workers. However, this is not the case.[25] Second, while migrant workers' identification with their rural or farmer origin predicts early female marriage and serves as a plausible proxy for the preference for early marriage, it is not correlated with the concentration of co-workers from the same town (Table A9). Taken together, there does not appear to be sorting into a workplace with same-origin co-workers based on private preferences or tendencies for early marriage.

Lastly, I present results of instrumental variable estimation, using same-prefecture employer as an instrument predicator for the concentration of co-worker from the same town. The idea is to exploit the quasi-random variation in the composition of co-workers from employer's place of origin. Migrant workers rarely rise to the position of employers. Conditional on an extensive set of workplace and employer-origin characteristics, this creates plausibly exogenous variation in the co-worker composition for migrant workers, driven by the employer's idiosyncratic success story. The exclusion restriction requires that the employer's place of origin has no direct bearing on an individual worker's probability of getting married before age 25, except through its effect on the composition of their co-workers, conditional on controls, which include, among other factors, job characteristics, the employer's origin prefecture's characteristics, and the (log) distance to the destination city.

Table 8 presents the instrumental variable estimation results. As previous findings (Table 6 and 7) show that the effect of same-origin co-workers is primarily observed among individuals from provinces with traditional gender norms, the sample is restricted to include only these individuals. All specifications include the full set of controls. Columns (1) and (3) present the OLS results, showing that having more than 30% same-town co-workers increases the probability of being married before age 25 for female migrants but not for male migrants. Columns (2) and (4) report the instrumental variable estimation results for female and male migrant workers, respectively. The IV-estimated effect of same-origin co-workers is modestly larger than the OLS estimate for female migrants. For male migrants, the effect remains small and insignificant.

A concern remains that individuals may self-select into same-origin employers. Even when same-origin employers are present in a city, some migrants are employed by them while others are not, and they may differ in their tendencies toward early marriage. Additionally, if a city has many employers originating from a particular prefecture, there may be unique characteristics associated with those prefectures. To fully exploit the idiosyncratic nature of employer origins, columns (3) and (6) exclude individuals from an origin prefecture with multiple employers from that prefecture.[26] For female migrants, the effect of same-town co-workers in column (3) is very similar to that in column (2), while the effect for male migrants remains insignificant. Given

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[25]Note that this contrasts with the findings related to same-origin friends in the current location or self-identification with a rural origin, both of which reflect a preference for early marriage. Table A3 and A8 show that among female migrants who married before migration, those who later form same-origin friendships or identified with their rural origin, tend to have married at younger age.

[26]This also eliminates, in the sample, cases where a city has an employer from a particular prefecture, with some migrants from that prefecture working for the employer and others not.

the extensive set of controls, particularly the indicator for whether an individual found their job through a referral, having a same-origin employer is more likely driven by the supply of such employers rather than the demand for them, suggested by the similarity of results in columns (2) and (3).

Table 8: Married before age 25 and same-town co-workers: IV

	Dep. var.: $\mathbb{1}$ (Married before age 25)					
	Female			Male		
	OLS	IV	IV	OLS	IV	IV
	(1)	(2)	(3)	(4)	(5)	(6)
Same-town co-worker	0.284**	0.501**	0.553**	−0.052	−0.096	0.070
	(0.124)	(0.220)	(0.258)	(0.077)	(0.131)	(0.203)
Observations	141	130	107	290	270	227
F-statistic (first-stage)		38.316	24.249		134.388	55.818

Notes: The estimation uses a linear probability model and instrumental variable estimation to predict whether an individual marries before age 25. The sample comprises individuals who married after migrating, originate from provinces with traditional gender norms, and either have no co-workers from the same town or have more than 30% of their co-workers from the same town. *Same-town co-worker* is an indicator for having over 30% co-workers from the same town. It is instrumented using an indicator for whether the individual's employer is originally from the same prefecture. Columns (3) and (6) include only observations with less than or equal to one same origin employer for each origin destination city pair. All specifications include the following controls: education attainment, birth cohort fixed effects, occupation fixed effects, industry fixed effects, log salary, an indicator for whether it is the individual's first job, an indicator for whether the individual was referred to the job, the age at which the individual started the job, origin and destination province fixed effects, and characteristics of the individual's home prefecture (including population density, rural-to-total population ratio, log GDP per capita, and log distance to the destination). ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

Overall, the results from this section indicate that social interactions with co-workers from the same hometown have an actual impact on marriage behaviour instead of capturing spurious correlations. The evidence presented in the previous sections reveals that the channel is social pressure and not matching.

7. Conclusion

This paper provides novel evidence that social interactions among rural-to-urban migrants can pressure individuals to conform to traditional gender norms. When women migrate from rural to urban areas, the economic conditions favouring early marriage no longer exist, yet their behaviour may still align with traditional norms due to social pressure. I find that the presence of co-workers from the same hometown significantly increases the probability of early marriage for female migrants, with no comparable effect observed for male migrants.

I show that the effect of same-origin co-workers on early marriage is concentrated among individuals from provinces with traditional gender norms. Further, examining a distinct

outcome—whether the spouse is more likely to be located in the same place—also reveals a gender-differentiated effect of same-origin co-workers, present exclusively for female migrants from provinces with traditional gender norms. This suggests that under social pressure from same-origin co-workers, female migrants are more likely to marry someone in the workplace, regardless of whether the spouse is from the same hometown.

The findings carry important policy implications: the economic independence of female migrant workers does not necessarily translate into the freedom to choose when to marry, potentially influencing their decisions about childbearing and career paths. Policies aimed at reducing gender gaps through equal access to education and employment should account for the powerful influence of traditional norms to enhance their effectiveness.

References

Akerlof, George A and Rachel E Kranton, "Economics and identity," *The Quarterly Journal of Economics*, 2000, *115* (3), 715–753.

Alesina, Alberto, Paola Giuliano, and Nathan Nunn, "On the origins of gender roles: Women and the plough," *The Quarterly Journal of Economics*, 2013, *128* (2), 469–530.

Bertrand, Marianne, Patricia Cortes, Claudia Olivetti, and Jessica Pan, "Social norms, labor market opportunities, and the marriage gap between skilled and unskilled women," *The Review of Economic Studies*, 2020.

Blau, Francine D, Lawrence M Kahn, and Kerry L Papps, "Gender, source country characteristics, and labor market assimilation among immigrants," *The Review of Economics and Statistics*, 2011, *93* (1), 43–58.

Bover, Olympia, Manuel Arellano, and Samuel Bentolila, "Unemployment duration, benefit duration and the business cycle," *The Economic Journal*, 2002, *112* (479), 223–265.

Bursztyn, Leonardo, Alessandra L González, and David Yanagizawa-Drott, "Misperceived social norms: Women working outside the home in Saudi Arabia," *American economic review*, 2020, *110* (10), 2997–3029.

Cortés, Patricia, Gizem Koşar, Jessica Pan, and Basit Zafar, "Should mothers work? how perceptions of the social norm affect individual attitudes toward work in the us," *Review of Economics and Statistics*, 2024, pp. 1–28.

Deng, Quheng, "Earnings differential between urban residents and rural migrants: Evidence from Oaxaca-Blinder and quantile regression decompositions," *Chinese Journal of Population Science*, 2007, *2*, 8–16.

Fang, I-Chieh, "Keen to get married: Why marriage is so important to "independent" female migrant workers in Shenzhen, China," Working Paper 78, FREIA - Feminist Research Center in Aalborg, Institut for Kultur og Globale Studier 2012.

Fernández, Raquel, "Cultural change as learning: The evolution of female labor force participation over a century," *American Economic Review*, 2013, *103* (1), 472–500.

    and Alessandra Fogli, "Fertility: The role of culture and family experience," *Journal of the European Economic Association*, 2006, *4* (2-3), 552–561.

Fernández, Raquel and Alessandra Fogli, "Culture: An empirical investigation of beliefs, work, and fertility," *American Economic Journal: Macroeconomics*, January 2009, *1* (1), 146–77.

Fogli, Alessandra and Laura Veldkamp, "Nature or nurture? Learning and the geography of female labor force participation," *Econometrica*, 2011, *79* (4), 1103–1138.

Giuliano, Paola, "Gender and culture," *Oxford Review of Economic Policy*, 01 2021, *36* (4), 944–961.

Goldin, Claudia and Lawrence F Katz, "Career and marriage in the age of the pill," *American Economic Review*, 2000, *90* (2), 461–465.

Gravemeyer, Stefan, Thomas Gries, and Jinjun Xue, "Income determination and income discrimination in Shenzhen," *Urban Studies*, 2011, *48* (7), 1457–1475.

Hansen, Casper Worm, Peter Sandholt Jensen, and Christian Volmar Skovsgaard, "Modern gender roles and agricultural history: the Neolithic inheritance," *Journal of Economic Growth*, 2015, *20*, 365–404.

Heath, Rachel and A Mushfiq Mobarak, "Manufacturing growth and the lives of Bangladeshi women," *Journal of Development Economics*, 2015, *115*, 1–15.

Ichino, Andrea, Martin Olsson, Barbara Petrongolo, and Peter Skogma-Thoursie, "Taxes, childcare and gender identity norms," *Journal of Labor Economics*, Forthcoming, *0* (ja), null.

Jensen, Robert, "Do labor market opportunities affect young women's work and family decisions? Experimental evidence from India," *The Quarterly Journal of Economics*, 03 2012, *127* (2), 753–792.

Lee, Leng, "Decomposing wage differentials between migrant workers and urban workers in urban China's labor markets," *China Economic Review*, 2012, *23* (2), 461–470.

Liu, Zhiqiang, "Institution and inequality: the hukou system in China," *Journal of Comparative Economics*, 2005, *33* (1), 133–157.

Maurin, Eric and Julie Moschion, "The social multiplier and labor market participation of mothers," *American Economic Journal: Applied Economics*, January 2009, *1* (1), 251–72.

Miyajima, Takeru and Hiroyuki Yamaguchi, "I want to but I won't: Pluralistic ignorance inhibits intentions to take paternity leave in Japan," *Frontiers in Psychology*, 2017, *8*, 1508.

Munshi, Kaivan and Jacques Myaux, "Social norms and the fertility transition," *Journal of Development Economics*, 2006, *80* (1), 1–38.

Nicoletti, Cheti, Kjell G. Salvanes, and Emma Tominey, "The family peer effect on mothers' labor supply," *American Economic Journal: Applied Economics*, July 2018, *10* (3), 206–34.

Olivetti, Claudia, Eleonora Patacchini, and Yves Zenou, "Mothers, peers, and gender-role identity," *Journal of the European Economic Association*, 12 2018, *18* (1), 266–301.

___ , **Jessica Pan, and Barbara Petrongolo**, "The evolution of gender in the labor market," in "Handbook of Labor Economics," Vol. 5, Elsevier, 2024, pp. 619–677.

Song, Yang, "What should economists know about the current Chinese hukou system?," *China Economic Review*, 2014, *29*, 200–212.

Tur-Prats, Ana, "Family types and intimate partner violence: A historical perspective," *The Review of Economics and Statistics*, 12 2019, *101* (5), 878–891.

Wang, Feng and Xuejin Zuo, "Inside China's cities: Institutional barriers and opportunities for urban migrants," *American Economic Review*, 1999, *89* (2), 276–280.

Yuen, Scarlett, "China Prefecture Map with 2000-2010 Population Census Data," 2020.

Zhang, Chunni and Yu Xie, "Ethnic enclaves revisited: Effects on earnings of migrant workers in urban China," *Society: Chinese Journal of Sociology/Shehui*, 2016, *2* (2), 214–234.
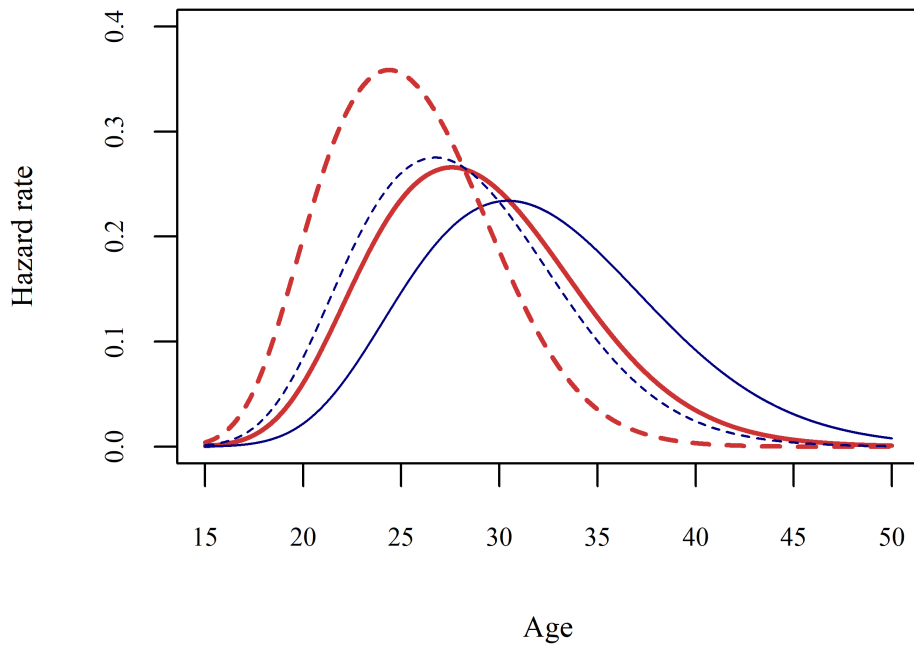
8. Appendix

Figure A1: Marriage hazard rate in rural and urban China
—— : urban female ----: rural female —— : urban male - - - : rural male

Notes: Based on the 2010 Chinese General Social Survey. *Rural* is defined as individuals who are born in rural regions and have never left. *Urban* is defined as individuals who are born with urban *hukou* and currently hold urban *hukou*.
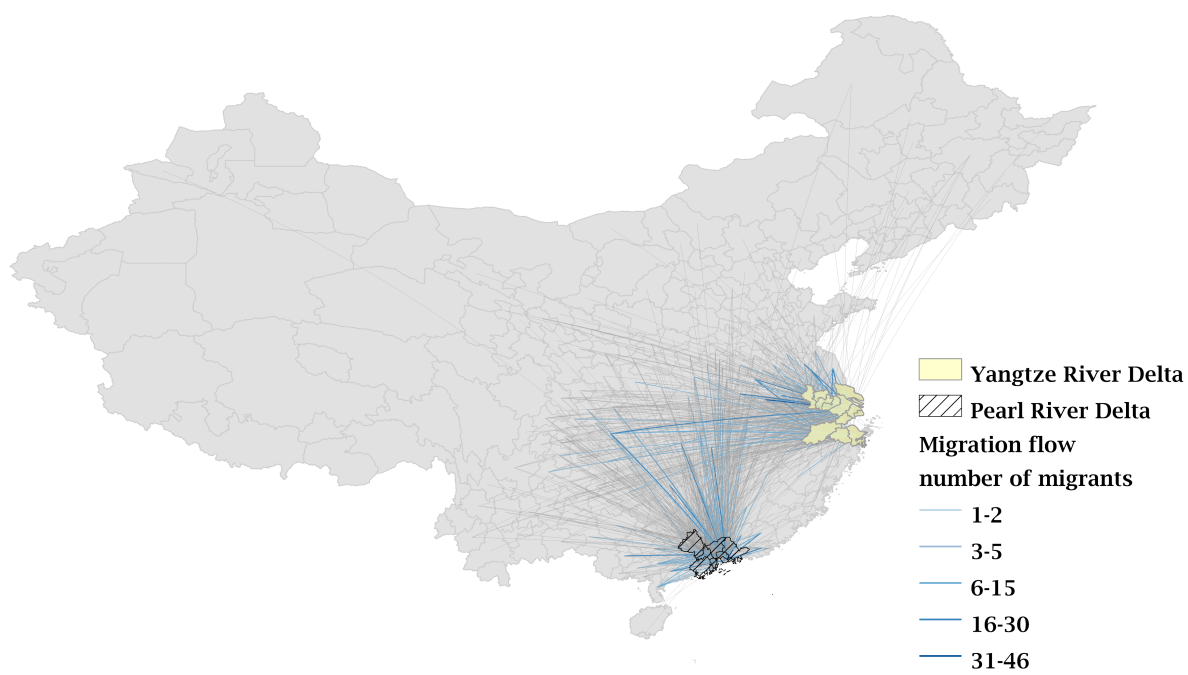
Figure A2: Migration flows to the Yangtze and Pearl River Deltas

Notes: The number of rural-to-urban migrant workers (prefecture to prefecture migration) calculated from the 2010 survey data on migrant workers. The data are representative of the regional distribution of migrants.
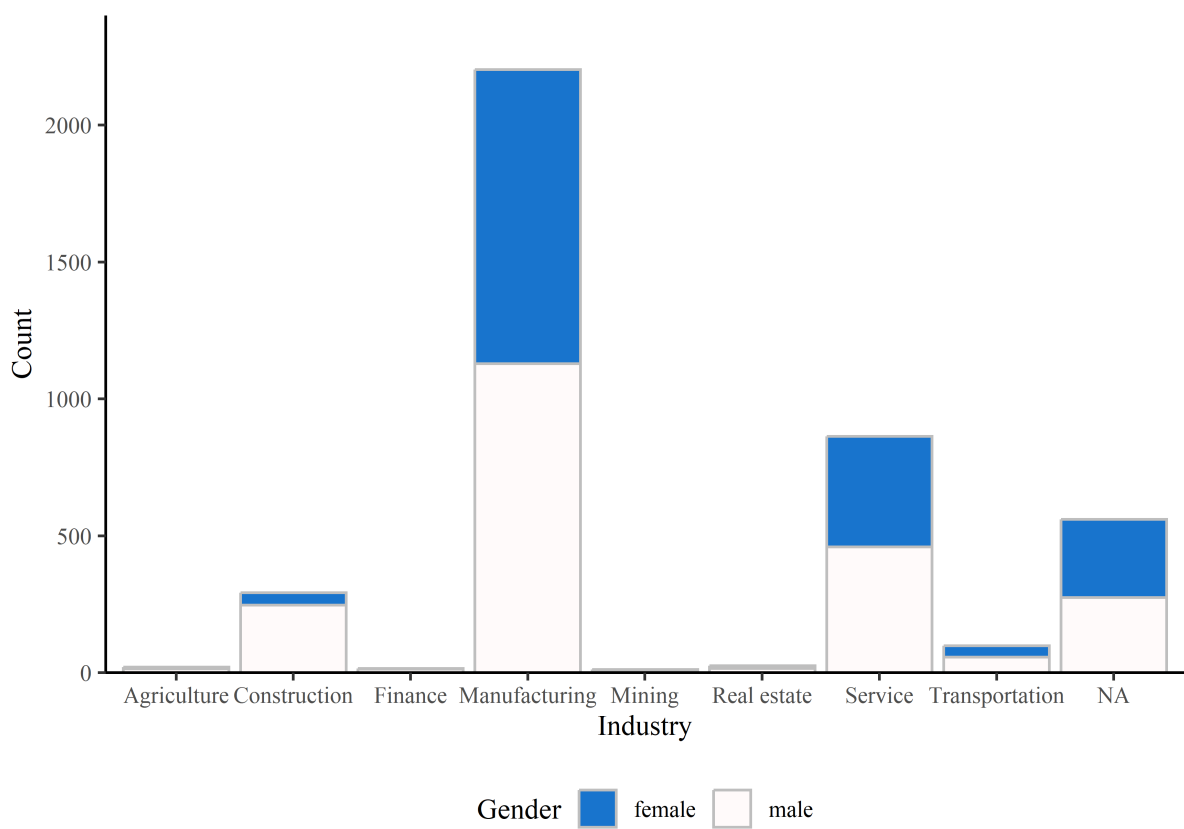
Figure A3: Industrial employment by gender

Source: the 2010 survey data on migrant workers.
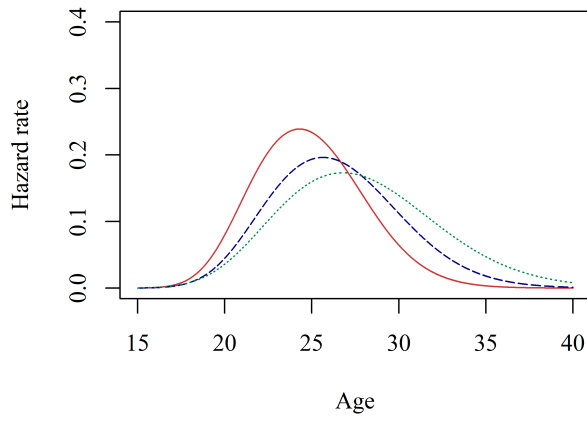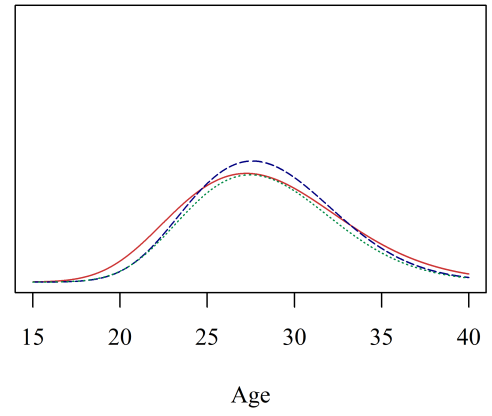
(a) Female   (b) Male

Figure A4: Estimated hazard rate: pc_county

········· none of the co-workers come from the same county

- - - 0−30% of the co-workers come from the same county

——— >30% of the co-workers come from the same county
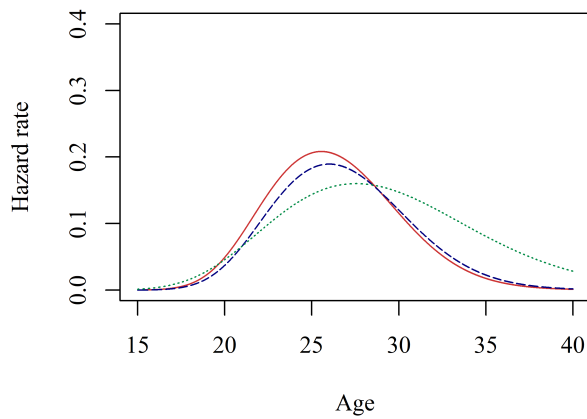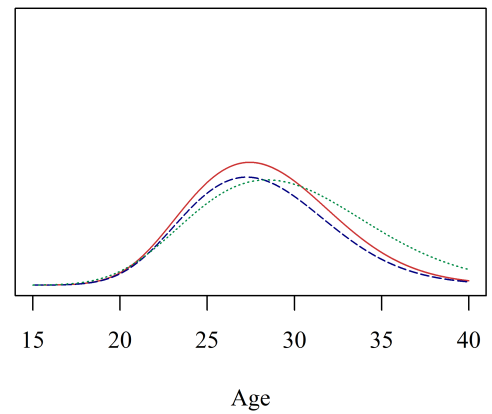
(a) Female   (b) Male

Figure A5: Estimated hazard rate: pc_province

········· none of the co-workers come from the same province

- - - 0−30% of the co-workers come from the same province

——— >30% of the co-workers come from the same province
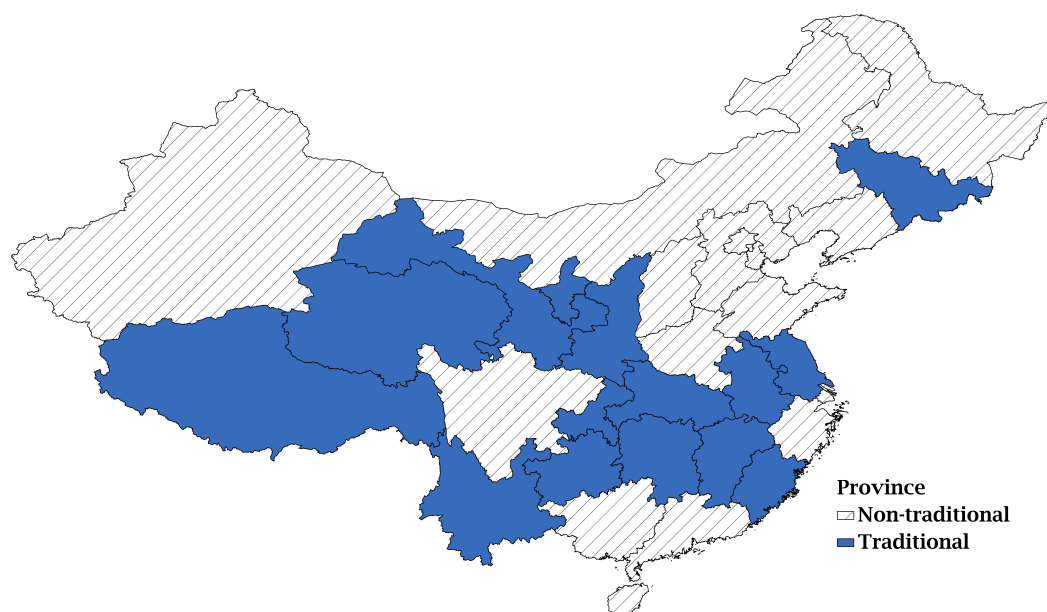
Figure A6: Traditional and non-traditional provinces

Notes: "Traditionalness" is defined by views of gender roles in society, as measured using responses from the 2010 Chinese General Social Survey. I calculate the median proportion of rural individuals in each province who agree with that "Men should prioritise their careers and women should prioritise their families." Provinces with values above the median are categorised as traditional, while those below the median are classified as non-traditional.

Table A1: Perception of gender roles in rural and urban China

	Dep. var.: $\mathbb{1}$ (Traditional gender roles)
	(1)
Rural	0.292***
	(0.016)
Male	0.058***
	(0.019))
Rural×male	−0.074***
	(0.024)
Constant	0.519***
	(0.013)
Observations	6,408
R-squared	0.077

Notes: Based on the 2010 Chinese General Social Survey. The response variable is an indicator for whether the respondent agrees that men should prioritise career and women should prioritise family. The estimation uses the linear probability model to predict whether a respondent agrees with traditional gender roles. *Rural* is an indicator variable that equals one if the respondent was born and has stayed in the rural region and zero if the respondent was born and has stayed in the urban region. *Male* is an indicator that equals one if the respondent is male and zero otherwise. Robust standard errors are given in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

Table A2: Marriage age and friendship—married after migration

	Probability of being married at or before a certain age			
	Female		Male	
	Baseline	Difference *Tongxiang* friend	Baseline	Difference *Tongxiang* friend
Age	(1)	(2)	(3)	(4)
20	0.058	0.049*** (0.015)	0.023	0.014** (0.007)
21	0.114	0.080*** (0.021)	0.053	0.022** (0.011)
22	0.194	0.111*** (0.028)	0.105	0.029* (0.015)
23	0.293	0.132*** (0.034)	0.180	0.033* (0.019)
24	0.399	0.140*** (0.038)	0.274	0.032 (0.024)
25	0.500	0.136*** (0.040)	0.377	0.028 (0.027)
26	0.587	0.125*** (0.040)	0.477	0.021 (0.029)
27	0.658	0.110*** (0.040)	0.566	0.015 (0.030)
28	0.712	0.096** (0.040)	0.640	0.010 (0.030)
29	0.752	0.084** (0.041)	0.698	0.007 (0.030)
30	0.781	0.074* (0.042)	0.741	0.006 (0.029)

Notes: The estimation is based on the sample of individuals married after migration. The baseline group is individuals whose best friend is not from the same hometown. The difference is the increase in probability relative to the baseline group for migrants whose best friend is from the same hometown. Bootstrap standard errors with 500 replicates are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

Table A3: Marriage age and friendship—married before migration

	Probability of being married at or before a certain age			
	Female		Male	
	Baseline	Difference *Tongxiang* friend	Baseline	Difference *Tongxiang* friend
Age	(1)	(2)	(3)	(4)
20	0.288	0.059 (0.037)	0.158	0.041 (0.029)
21	0.438	0.082** (0.039)	0.267	0.059* (0.035)
22	0.594	0.088** (0.040)	0.400	0.073* (0.039)
23	0.731	0.075** (0.038)	0.538	0.078* (0.040)
24	0.834	0.053* (0.032)	0.664	0.074** (0.037)
25	0.904	0.032 (0.025)	0.767	0.064** (0.032)
26	0.947	0.017 (0.018)	0.844	0.052** (0.026)
27	0.971	0.008 (0.012)	0.897	0.040** (0.020)
28	0.984	0.003 (0.008)	0.931	0.030* (0.016)
29	0.991	0.000 (0.006)	0.954	0.022* (0.012)
30	0.995	−0.001 (0.004)	0.968	0.017* (0.010)

Notes: The estimation is based on the sample of individuals married before migration. The baseline group is individuals whose best friend is not from the same hometown. The difference is the increase in probability relative to the baseline group for migrants whose best friend is from the same hometown. Bootstrap standard errors with 500 replicates are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

Table A4: Marriage age and same-town co-workers—additional results

	Probability of being married at or before a certain age					
	Female			Male		
Age	Baseline 0 same origin (1)	Difference >10% (2)	Difference >20% (3)	Baseline 0 same origin (4)	Difference >10% (5)	Difference >20% (6)
20	0.070	0.027 (0.020)	0.050** (0.025)	0.027	0.012 (0.010)	0.028** (0.014)
21	0.128	0.059* (0.026)	0.091*** (0.032)	0.060	0.020 (0.014)	0.043** (0.019)
22	0.207	0.100*** (0.032)	0.135*** (0.040)	0.114	0.029 (0.019)	0.057** (0.024)
23	0.302	0.137*** (0.039)	0.168*** (0.047)	0.190	0.037 (0.024)	0.066** (0.028)
24	0.404	0.161*** (0.045)	0.181*** (0.052)	0.283	0.042 (0.027)	0.069** (0.032)
25	0.503	0.167*** (0.047)	0.176*** (0.055)	0.385	0.044 (0.030)	0.065* (0.036)
26	0.591	0.159*** (0.047)	0.158*** (0.056)	0.483	0.043 (0.032)	0.058 (0.038)
27	0.664	0.143*** (0.047)	0.134** (0.056)	0.571	0.041 (0.033)	0.051 (0.039)
28	0.722	0.124*** (0.046)	0.109* (0.057)	0.644	0.038 (0.033)	0.044 (0.039)
29	0.767	0.105** (0.046)	0.086 (0.058)	0.701	0.036 (0.032)	0.040 (0.038)
30	0.801	0.089* (0.046)	0.067 (0.060)	0.745	0.034 (0.032)	0.037 (0.037)

Notes: The estimation is based on the sample of individuals married after migration. The baseline group is migrants without any co-workers from the same town. The difference is the increase in probability relative to the baseline group for migrants with over 10% or 20% of the co-workers from the same town. Bootstrap standard errors with 500 replicates are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

Table A5: Marriage age and same-county co-workers—married after migration

| | Probability of being married at or before a certain age | | | | | |
| | Female | | | Male | | |
Age	Baseline 0 same origin (1)	Difference >30% (2)	Difference >50% (3)	Baseline 0 same origin (4)	Difference >30% (5)	Difference >50% (6)
20	0.067	0.067* (0.035)	0.106 (0.117)	0.027	0.033* (0.017)	0.029 (0.020)
21	0.122	0.126*** (0.046)	0.180* (0.109)	0.058	0.050** (0.023)	0.044* (0.026)
22	0.199	0.187*** (0.056)	0.252** (0.101)	0.110	0.067** (0.028)	0.057* (0.032)
23	0.292	0.230*** (0.064)	0.298*** (0.095)	0.184	0.078** (0.033)	0.065* (0.038)
24	0.392	0.244*** (0.068)	0.310*** (0.091)	0.273	0.081** (0.037)	0.067 (0.046)
25	0.489	0.232*** (0.070)	0.295*** (0.088)	0.371	0.078* (0.041)	0.064 (0.053)
26	0.576	0.204*** (0.071)	0.263*** (0.085)	0.466	0.069 (0.044)	0.058 (0.058)
27	0.650	0.169** (0.072)	0.225*** (0.082)	0.552	0.059 (0.045)	0.051 (0.060)
28	0.708	0.135* (0.073)	0.189** (0.080)	0.624	0.050 (0.045)	0.046 (0.059)
29	0.754	0.105 (0.074)	0.158** (0.079)	0.681	0.043 (0.044)	0.043 (0.057)
30	0.788	0.080 (0.075)	0.132* (0.079)	0.724	0.039 (0.043)	0.041 (0.055)

Notes: The estimation is based on the sample of individuals married after migration. The baseline group is migrants without any co-workers from the same county. The difference is the increase in probability relative to the baseline group for migrants with over 30% or 50% of the co-workers from the same county. Bootstrap standard errors with 500 replicates are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

Table A6: Marriage age and same-county co-workers—married before migration

	Probability of being married at or before a certain age					
	Female			Male		
Age	Baseline 0 same origin (1)	Difference >30% (2)	Difference >50% (3)	Baseline 0 same origin (4)	Difference >30% (5)	Difference >50% (6)
20	0.314	−0.064 (0.066)	−0.111 (0.113)	0.159	0.031 (0.038)	0.071 (0.051)
21	0.450	−0.025 (0.069)	−0.085 (0.108)	0.268	0.055 (0.047)	0.087 (0.063)
22	0.587	0.023 (0.066)	−0.039 (0.097)	0.400	0.077 (0.052)	0.092 (0.073)
23	0.708	0.055 (0.056)	0.003 (0.084)	0.537	0.091* (0.053)	0.086 (0.077)
24	0.805	0.064 (0.044)	0.026 (0.067)	0.662	0.092* (0.050)	0.072 (0.074)
25	0.874	0.057* (0.032)	0.031 (0.049)	0.764	0.082* (0.043)	0.056 (0.065)
26	0.921	0.043* (0.023)	0.027 (0.034)	0.840	0.068* (0.035)	0.041 (0.054)
27	0.951	0.030* (0.016)	0.020 (0.023)	0.892	0.053** (0.027)	0.029 (0.043)
28	0.970	0.020* (0.011)	0.013 (0.015)	0.927	0.040* (0.021)	0.020 (0.034)
29	0.981	0.013 (0.008)	0.008 (0.010)	0.950	0.030* (0.016)	0.015 (0.026)
30	0.988	0.008 (0.006)	0.005 (0.007)	0.964	0.023* (0.012)	0.011 (0.020)

Notes: The estimation is based on the sample of individuals married before migration. The baseline group is migrants without any co-workers from the same county. The difference is the increase in probability relative to the baseline group for migrants with over 30% or 50% of the co-workers from the same county. Bootstrap standard errors with 500 replicates are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

Table A7: Marriage age and same-county co-workers—additional results

	Probability of being married at or before a certain age					
	Female			Male		
Age	Baseline 0 same origin (1)	Difference >10% (2)	Difference >20% (3)	Baseline 0 same origin (4)	Difference >10% (5)	Difference >20% (6)
20	0.067	0.014 (0.017)	0.033 (0.022)	0.027	0.011 (0.009)	0.019* (0.012)
21	0.122	0.039 (0.024)	0.062** (0.030)	0.058	0.020 (0.013)	0.032* (0.017)
22	0.199	0.072** (0.031)	0.096** (0.038)	0.110	0.031* (0.018)	0.046** (0.022)
23	0.292	0.106*** (0.037)	0.125*** (0.046)	0.184	0.042* (0.022)	0.058** (0.026)
24	0.392	0.131*** (0.042)	0.142*** (0.052)	0.273	0.051** (0.026)	0.066** (0.030)
25	0.489	0.141*** (0.044)	0.145*** (0.055)	0.371	0.055* (0.029)	0.069** (0.032)
26	0.576	0.139*** (0.045)	0.136** (0.056)	0.466	0.056* (0.031)	0.068** (0.034)
27	0.650	0.128*** (0.045)	0.122** (0.055)	0.552	0.053* (0.032)	0.065* (0.035)
28	0.708	0.113** (0.044)	0.105* (0.054)	0.624	0.049 (0.032)	0.061* (0.035)
29	0.754	0.097** (0.045)	0.088 (0.054)	0.681	0.045 (0.031)	0.057* (0.034)
30	0.788	0.083* (0.046)	0.074 (0.054)	0.724	0.041 (0.031)	0.054 (0.034)

Notes: The estimation is based on the sample of individuals married after migration. The baseline group is migrants without any co-workers from the same county. The difference is the increase in probability relative to the baseline group for migrants with more than 10% or 20% of the co-workers from the same county. Bootstrap standard errors with 500 replicates are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

Table A8: Marriage age and identity—married before migration

	Probability of being married at or before a certain age			
	Female		Male	
Age	Baseline Worker (1)	Difference Farmer (2)	Baseline Worker (3)	Difference Farmer (4)
20	0.303	−0.009 (0.059)	0.177	−0.012 (0.038)
21	0.423	0.049 (0.061)	0.293	−0.021 (0.047)
22	0.546	0.102* (0.060)	0.430	−0.030 (0.053)
23	0.660	0.129** (0.056)	0.571	−0.037 (0.058)
24	0.756	0.126** (0.050)	0.695	−0.041 (0.058)
25	0.831	0.106** (0.043)	0.794	−0.041 (0.054)
26	0.886	0.081** (0.037)	0.865	−0.038 (0.046)
27	0.925	0.058** (0.030)	0.914	−0.033 (0.038)
28	0.950	0.040* (0.024)	0.945	−0.028 (0.030)
29	0.967	0.027 (0.019)	0.964	−0.024 (0.024)
30	0.978	0.018 (0.015)	0.976	−0.020 (0.019)

Notes: The estimation is based on the sample of individuals married before migration. The baseline group is individuals who identify themselves as workers. The difference is the increase in probability relative to the baseline group for migrants who identify themselves as farmers. Bootstrap standard errors with 500 replicates are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.

Table A9: Same-town co-workers and identity

	Dep. var.: Farmer identity	
	Female (1)	Male (2)
pc_town	0.013	0.011
	(0.010)	(0.008)
Constant	0.341***	0.327***
	(0.016)	(0.014)
Observations	1,426	1,776
R-squared	0.001	0.001

Notes: The response variable is an indicator for self-identification with farmer or rural origin. The explanatory variable *pc_town* is a categorical variable that increases with the level of concentration of co-workers from the same town (0: none; 1: 0%–10%; 2: 10%–20%; 3: 20%–30%; 4: 30%–50%; 5: more than 50%). Robust standard errors are given in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels.