

Willingness enhanced, fertility reduced? — the dual effects of employment quality on migrant women's fertility under urbanization

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Abstract. Against the backdrop of accelerating urbanization and persistently low fertility rates, this paper constructs a composite Employment Quality Index based on data from the 2018 China Migrants Dynamic Survey (CMDS) and empirically examines the impact of migrant women's employment quality on their fertility desires and actual number of children. The findings reveal a dual effect of employment quality: on one hand, it significantly enhances migrant women's fertility desires; on the other hand, it suppresses the actual number of children born. This dual effect is more pronounced among younger women of childbearing age and those with prominent mobility characteristics. Further analysis shows that employment quality primarily boosts the intention to have a first child, but has no significant effect on the intention to have a second child. Moreover, if a migrant woman's first child is a boy, higher employment quality is associated with a lower willingness to have a second child. Employment quality affects second-child fertility desires through different mechanisms: longer working hours and inflexible occupations inhibit second-child fertility desires, while employment in stable organizations and access to social security promote them. These findings offer practical insights for understanding the relationship between employment quality and fertility among migrant women, and provide guidance for the design and improvement of urbanization and fertility-related policies.

Keywords: migrant women, employment quality, fertility desire, number of children, CMDS

1. Introduction

With the accelerating process of urbanization and the deepening trend of population aging, a significant institutional mismatch has emerged between public policy mechanisms and demographic structural transformations. The structural tension between the inherent rigidity of demographic transitions and the instrumental rationality of fertility support policies has become a core institutional dilemma hindering the high-quality development of urbanization in China. According to the Seventh National Population Census, the size of the floating population reached 376 million in 2020 — a surge of 70% compared to a decade earlier — with women of childbearing age accounting for over 48% of this group¹. However, despite policy shifts from the "universal two-child" policy (2016) to the "three-child" policy (2021), only 11.35% of migrant women expressed an intention to have children within the next two years, and merely 6.08% indicated a willingness to have a second child (2018 CMDS). This indicates a serious disjunction between economic rationality and traditional fertility culture. Consequently, improving the fertility rate among the floating population has become an urgent issue in the urbanization process.

As a core driver of urbanization, labor mobility has not only reshaped the spatial distribution of the population, but also, through differentiated employment quality, profoundly influenced the economic conditions, social security coverage, and career development paths of migrant populations. During the process of external employment, employment quality emerges as a key factor affecting the life stability and development prospects of migrant workers, potentially exerting systematic influence on their fertility decisions through mechanisms such as income levels, job stability, social security coverage, and working time arrangements [1-5]. Data show that among migrant women working or engaging in business (accounting for 77.55% of the total), only 11.26% exhibited clear fertility desires, suggesting that employment quality may play a pivotal role. Therefore, exploring

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how employment quality affects fertility desires and behaviors among migrant populations holds significant implications for optimizing urbanization policies and population development strategies.

Existing studies have explored the relationship between employment and fertility decisions from different single dimensions, suggesting that employment not only shapes individuals' expectations for the future but also profoundly influences fertility decisions through factors such as income, social security, working hours, and job stability. A review of the relevant literature reveals the following areas that require further exploration: First, existing studies overlook the effect of the multidimensional concept of employment quality on fertility desires, and the methods for measuring employment quality lack certain rationality. Second, there is a research gap regarding the fertility decision-making mechanisms of migrant women, a unique demographic group. Third, most studies focus on the second-child fertility perspective and only examine fertility desires or the number of children in isolation, rarely incorporating first- and second-child fertility as well as fertility desires and actual behavior within the same analytical framework.

To address these gaps, this paper constructs a composite Employment Quality Index using data from the 2018 Migrant Population Dynamic Monitoring Survey, and further investigates the relationship between migrant women's employment quality, fertility desires, and actual fertility outcomes. The empirical results reveal a dual effect of employment quality. On one hand, high employment quality somewhat suppresses the number of children, but on the other hand, it significantly increases the overall fertility desires of migrant women, mainly by increasing the intention to have a first child. Furthermore, heterogeneity analysis shows that the effect of employment quality on fertility desires varies across different age groups and migrant subgroups with distinct mobility characteristics. Additionally, women with high employment quality who already have a son are more likely to reduce their intention to have a second child, whereas for women who already have a daughter, employment quality does not show a significant effect. Further analysis reveals that flexible employment options, maternity subsidies, and comprehensive social security systems provided by employers can alleviate the inhibitory effect of employment quality on second-child fertility desires.

The potential contributions of this paper are as follows: First, it constructs a multidimensional employment quality index system using a combination weighting method that integrates equal weighting and entropy weighting. Compared with most existing studies on employment quality that rely solely on either equal weighting or entropy weighting, this combined approach offers a more reasonable and balanced assessment. Second, while distinguishing between fertility desires and actual number of births, this study further disaggregates fertility desires into first-birth and second-birth intentions. This enables a comprehensive and multidimensional analysis of how employment quality among migrant women affects fertility behavior. Third, the paper focuses on the underlying mechanisms that influence second-birth intentions among the migrant population, revealing the logic behind their formation. This provides important insights for understanding the intrinsic link between population structure optimization and high-quality development in the context of urbanization.

2. Theoretical analysis and research hypotheses

2.1. Theoretical analysis

2.1.1. *Research on employment quality*

Early research on employment quality primarily focused on the exploration of its conceptual framework. For example, Nadler & Lawler (1983) were among the first to introduce the concept of "quality of work life," emphasizing the balance between work and life [6]. Later, in 1995, the International Labour Organization (ILO) proposed the concept of "employment quality" and, in 1999, introduced the notion of "Decent Work," which covers dimensions such as freedom, fairness, safety, and dignity [7]. In 2002, the European Commission and the European Foundation outlined employment quality as comprising four dimensions—job security, health and welfare, skills development, and work-life balance—along with 16 indicators.[8] Subsequent scholars recognized the need to establish a scientific and reasonable system of indicators to effectively evaluate employment quality. At the macro level, Chinese scholars such as Lai Desheng et al. (2011) proposed a six-dimensional model (employment environment, capability, conditions, rewards, protection, and labor relations), which was later simplified by Qi Yudong et al. (2020) to four dimensions (employment environment, capability, rewards, and protection) [9,10]. At the micro level, Liu Suhua (2005) focused on individual characteristics, using indicators across four dimensions—employment conditions, work environment, labor relations and social security, and working hours—each assigned different scores. Leschke & Watt (2014) developed a six-dimensional indicator system (wages, non-standard employment, working hours, working conditions, skills development, and union participation), which became an important reference for international studies [11]. Although the system of indicators for employment quality has been continuously refined, few studies have systematically constructed an employment quality index specifically for migrant populations. As a special group, migrants face unique employment characteristics, such as lower overall income levels compared to local populations, a high prevalence of informal employment, and generally lower social security coverage, particularly against the backdrop of rapid urbanization and the division of household registration systems [1,12]. Therefore, compared to traditional employment quality research, measuring the employment quality of migrant populations will provide a comprehensive understanding of sustainable high-quality development in the context of urbanization.

Considering the characteristics of China's labor market, current research on the employment quality of migrant populations mainly focuses on the factors influencing their employment quality. Existing literature indicates that the employment quality of migrant populations is closely related to individual factors such as gender, age, education level, household registration status,

income level, and social security, as well as factors like the distance of migration, job transitions, self-reported health, fertility costs, accompanying children, willingness to stay, and regional economic development levels [1,2,13-20]. It is noteworthy that most studies treat employment quality as a dependent variable, with few studies examining the impact of employment quality on the life and behavioral decisions of migrant populations.

2.1.2. Research on fertility willingness

Fertility willingness is not entirely equivalent to actual fertility behavior; rather, it is a complex decision-making process that unfolds in stages. It typically includes factors such as fertility motivation, fertility willingness, fertility planning, and the final fertility behavior, which together determine the overall fertility rate [21]. This paper focuses on fertility willingness and actual fertility behavior. Numerous studies, both domestic and international, have shown that fertility levels are closely related to people's fertility willingness, and in some cases, fertility willingness can predict actual behavior. However, the discrepancy between fertility levels and fertility willingness has become a common phenomenon, occurring in both developed and developing countries. The extent and direction of this divergence vary according to socio-economic development levels, gender preferences, and fertility policies [22-29].

In the early stages, influenced by economic development levels and family planning policies, scholars suggested that China's actual fertility behavior was higher than fertility willingness.[30] In recent years, as the two-child policy gradually opened up, scholars have found that China's fertility level has significantly dropped below the replacement level. Actual fertility behavior is now lower than the desired number of children, with the possibility of further decline [25,31,32]. Research has shown that the factors preventing fertility willingness from translating into actual fertility behavior primarily include family characteristics (marriage, family support, grandparental care, child-rearing costs) [28,31,33-36] and individual characteristics (education level, health status, gender preferences, migration status, nature of employment, socio-economic status) [37-41]. Notably, compared to developed countries, fertility willingness in China is more strongly influenced by gender. The preference for sons leads to more non-willed births, resulting in an imbalanced sex ratio at birth.[29] Additionally, the overall willingness of migrant populations to have a second child is low. In the context of "fewer children," the rigid demand for sons is particularly pronounced [42]. It is thus speculated that employment may have different directional impacts on fertility willingness and behavior, and that the willingness of migrant women to have a second child is significantly influenced by the gender of the first child. If the first child is a boy, the willingness to have a second child tends to be lower.

In recent years, scholars both domestically and internationally have mainly explored fertility willingness, fertility behavior, and the influencing factors for migrant populations from perspectives such as social integration, cultural identity, fertility costs, gender equality, and reproductive autonomy [43,44] Research has shown that the higher the degree of social integration of migrants, the closer their fertility behavior is to that of the local population. The second generation is more influenced by the norms of the host country, especially regarding gender concepts and family planning. Gender equality and women's economic independence play significant roles in fertility decision-making [45,46]. Based on this, this paper will not only study the overall fertility willingness but also focus on the differences in fertility willingness at different stages of fertility for migrant women, further exploring the role of employment quality in this process.

In contrast, domestic research has been influenced by China's unique urban-rural dual structure, fertility policies, and household registration system. It mainly focuses on how urban adaptation, fertility support policies, and cultural concepts shape the fertility willingness of migrant populations. Existing studies generally agree that economic factors such as housing prices and income levels [4,47-49], as well as non-economic factors like individual characteristics, family support, social environment, and migration characteristics, jointly influence the fertility decisions of migrant populations [50-54].

Although existing research has revealed various factors influencing the fertility decisions of migrant populations, there is still a lack of systematic exploration regarding how employment factors shape the fertility decisions of migrant women.

2.1.3. Research on employment quality and fertility willingness of migrant populations

Employment quality directly affects an individual's expectations and assessments about the future. It profoundly impacts important life decisions, such as migration, marriage, and fertility, by shaping family life, social interactions, and economic activities. Among the migrant population, employment quality not only influences fertility willingness but may also, to some extent, determine the extent to which fertility behavior is realized. Therefore, exploring the relationship between employment quality and fertility willingness and behavior in migrant populations has significant theoretical and practical implications.

Research on the relationship between employment and fertility among migrant populations is influenced by socio-economic background, policy environment, and cultural factors, leading to differences in research priorities between domestic and international studies. International research tends to focus more on the cultural adaptation process of immigrants and the role of welfare systems, emphasizing how employment among migrant populations influences fertility within the context of multicultural integration. Existing studies show that immigrant women, due to the dual discrimination of being "female + immigrant," generally have lower employment rates than native women, and the degree of integration into the labor market significantly impacts their fertility willingness [45,55]. However, under specific institutional arrangements, such as Singapore's flexible work model, the fertility willingness of young couples, especially immigrant women, can be effectively increased. This conclusion, however, may not be applicable to rural or low-population-density countries [56]. In contrast, domestic research primarily focuses on fertility

willingness under the backdrop of the household registration system and social security segregation. It examines the conflict between traditional fertility culture and modern urban concepts, with a focus on how employment stability, income levels, and social security influence fertility willingness. Du (2024) pointed out that informal employment, as a low-quality form of employment, is often characterized by income instability, low wages, lack of social security, and long working hours. These factors result in migrant workers in cities lacking an appropriate environment for childbearing, thus lowering their willingness to have a second child [5]. This study defines informal employment as employees who do not have a labor contract or do not participate in health insurance, as well as employers with employees or self-employed laborers. However, this definition does not fully consider the impact of flexible employment. In fact, certain forms of flexible employment, although classified as informal, may reduce the opportunity cost of women's fertility, thereby promoting fertility willingness to some extent.

In summary, existing literature largely focuses on single dimensions of employment—such as income, stability, or job type—while the comprehensive impact of multidimensional employment quality on fertility desires remains underexplored [5,57-59]. Given that employment quality inherently encompasses multiple dimensions—including income, job stability, social security, working hours, and career development—relying on a single indicator may fail to fully capture the mechanisms through which it influences fertility decisions. Therefore, employing a composite index to measure employment quality and conducting an in-depth analysis of its multidimensional impact on fertility decisions can provide a more comprehensive and accurate understanding of the relationship between employment quality and fertility choices among migrant women. This, in turn, supports the long-term, balanced development of the migrant population.

2.2. Research hypotheses

Through a review of the literature, it has been found that there is a complex relationship between employment quality and women's fertility willingness and behavior. In the migrant population, factors such as social adaptability, migration characteristics, and gender equality mean that high-quality employment does not necessarily suppress fertility willingness, especially first-child fertility willingness. Although traditional views emphasize the role conflict between employment and fertility, under conditions of gender equality and improved family division of labor, high-quality employment may also enhance women's fertility willingness [60-65]. At the same time, there is no consistent conclusion on the impact of formal and informal employment on fertility [5,56,61,66]. Modernization and the "one-child norm" continue to weaken multi-child fertility behavior [67-71].

Based on the above analysis, the following main hypotheses are proposed:

H1: Improving the employment quality of migrant women can promote fertility willingness.

H2: Improving the employment quality of migrant women may suppress actual fertility numbers.

3. Research design

3.1. Data sources

The data for this study comes from the 2018 National Migrant Population Health and Family Planning Dynamic Monitoring Survey. The migrant population questionnaire includes three sections: household members and income/expenditure, employment status, and health and public services. This dataset provides a unique advantage for exploring the relationship between migrant women's employment and their fertility willingness and choices. Additionally, considering China's legal marriage age and the fact that most fertility occurs within marriage, this study only retains samples of women aged 20–49 (born between May 1968 and April 1998) who have ever given birth. Missing and outlier data were excluded, resulting in a final valid sample of 52,897 individuals.

3.2. Measurement of employment quality

1. Indicators for measuring employment quality

This study primarily references the employment quality indicators for migrant populations constructed by Liang Haiyan (2019) and Shen Ke et al. (2014). It selects four dimensions—nature of employment, job benefits, job security, and work intensity—comprising seven factors (employment status, employment identity, type of employer, occupation, income, social security, and work hours) to construct the "Employment Quality Indicator System." Specific explanations of these factors are provided in Appendix 1 [14,20,72].

Method for measuring employment quality indicators

Currently, scholars at home and abroad mainly use methods such as entropy weighting [14,73-75], principal component analysis [76,77], and equal-weighted average methods [1,2,11,13,15-17,78-80] to measure employment quality. This study refers to the most widely used methods for measuring migrant population employment quality indicators, adopting a combination of equal-weighting and entropy weighting.

(1) Equal weight method

Following the research of Leschke and Watt (2014) [11], the study first applies standard deviation normalization to the four secondary indicators of job nature:

$$X_{ij}^{nor} = (X_{ij} - Min_j) / (Max_j - Min_j) \quad (1)$$

Where X_{ij}^{nor} is the standardized score of the indicator, i represents the individual sample, j refers to each measurement indicator (e.g., employment status, employment identity, employer type, occupation), and Min_j and Max_j are the minimum and maximum values of indicator j , respectively. The employment nature index (Employment_Nature_Index) is then calculated using the equal-weighted average method:

$$ENI_i = \frac{1}{4} \sum_{j=1}^4 X_{ij}^{nor} \times 100 \quad (2)$$

Secondly, the four primary indicators of employment quality were standardized using the deviation standardization method, applying the same formula as Equation (1). In the standardized scores X_{ij}^{nor} , iii denotes the individual sample, and jjj corresponds to the original values of the primary indicators (job characteristics, job compensation, job security, and work intensity). Since work hours is a negative indicator (i.e., long working hours reflect low job quality), it is inversely processed by subtracting from 1. On the basis of the standardized scores for these four indicators, the overall employment quality index (Quality_Index1) for the migrant population is calculated as:

$$QI_i = \frac{1}{4} \sum_{j=1}^4 X_{ij}^{nor} \times 100 \quad (3)$$

(2) Entropy weighting method

After performing positive transformation and standardization for each indicator, the entropy value of each indicator was calculated. Let p_{ij} represent the characteristic proportion of the j -th indicator for sample i , based on the standardized score X_{ij}^{nor} , where i refers to the individual sample and j corresponds to the various measurement indicators (employment status, employment identity, employer type, occupation, job compensation, job security, and work intensity). Then, the entropy value e_j for indicator j and the entropy weight w_j are given by the formulas:

$$p_{ij} = \frac{X_{ij}^{nor}}{\sum_{i=1}^n X_{ij}^{nor}} \quad (4)$$

$$e_j = \frac{1}{\ln n} \sum_{i=1}^n p_{ij} \ln p_{ij} \quad (5)$$

$$w_j = \frac{1-e_j}{\sum_{j=1}^4 (1-e_j)} \quad (6)$$

Finally, the employment quality index (Quality_Index3) for migrant women i is calculated using the following formula:

$$QI_i = \sum_{j=1}^4 w_j X_{ij}^{nor} \times 100 \quad (7)$$

3.3. Variables introduction and descriptive statistics

1. Dependent variable

Fertility desires: The survey asked participants, "Do you have any plans to have children in the next two years?" Responses of "No" or "Undecided" were coded as 0, while a response of "Yes" was coded as 1. This formed a binary variable representing the fertility desires of migrant women.

2. Independent variable

Employment Quality of Migrant Women: Employment quality is a multidimensional concept. Based on existing studies on migrant population employment quality, this study uses four dimensions to measure employment quality: job nature, job benefits, job security, and work intensity.

3. Control variables

Based on studies by Liang (2019), Luo et al. (2020), and Song (2025) on women's employment quality [15, 20, 73], the study selects control variables considering the unique characteristics of the migrant population and the availability of data. These include: Individual Characteristics: Age, ethnicity, education level, household registration type, health status, and willingness to stay locally. Family Characteristics: Family income, family size, and whether family members have migrated with the individual. Migration Characteristics: Duration of migration, migration range, and migration region. For specific variable definitions, please refer to Appendix 2.

Table 1 below summarizes the descriptive statistics of the key variables. From the table, we can see that: The mean fertility desire is 0.118 with a standard deviation of 0.323, indicating that a relatively low proportion of the sample has fertility desires, and there is a small overall variation, showing a clear trend of not intending to have children. The average number of children is 1.438, which is below the replacement level, highlighting that the issue of second-child births still needs to be addressed. The mean employment quality score is 4.855 with a standard deviation of 1.892, showing significant variation, with the maximum score close to 10 and the minimum at 1.54, suggesting considerable differences in employment quality among migrant women.

Table 1. Descriptive statistics of key variables

Variable Name	Mean	Standard Deviation	Maximum	Minimum
Dependent Variables				
Fertility desire	0.118	0.323	0.000	1.000
Number of Children	1.438	0.725	0.000	7.000
Independent Variables				
Employment Quality	4.855	1.892	1.540	9.319
Control Variables				
Age	34.624	7.380	20.000	49.917
Ethnicity	0.911	0.284	0.000	1.000
Education Level	2.419	0.987	1.000	4.000
Household Registration Type	1.539	0.931	1.000	5.000
Party Membership	0.036	0.187	0.000	1.000
Health Status	0.987	0.113	0.000	1.000
Willingness to Stay Locally	0.874	0.332	0.000	1.000
Log of Family Income	8.849	0.550	3.689	13.710
Family Size	3.498	0.885	2.000	11.000
Family Migration Family Migration	0.139	0.346	0.000	1.000
Migration Duration	2.531	0.936	1.000	4.000
Migration Range	1.686	0.755	1.000	3.000
Migration Region	1.946	0.985	1.000	4.000

3.4. Model specification

1. Logit regression model specification

Since migrant women's fertility desire is a binary variable, this study uses a Logit model to examine the effect of the employment quality index on fertility desire. The model is specified as follows:

$$\log \left(\frac{Pfd_{ij}}{1-Pfd_{ij}} \right) = \beta_0 + \beta_1 QI_{ij} + \beta_2 controls_{ij} + p_j + \mu_{ij} \quad (8)$$

Where: i denotes individuals, and j denotes counties. Pfd_{ij} is the probability that migrant woman i in county j has fertility desire. QI_{ij} represents the employment quality of migrant woman i . β_1 measures the effect of employment quality on fertility desire. $controls_{ij}$ represents the set of control variables. p_j indicates the province fixed effects added to control for unobserved, time-invariant regional characteristics. μ_{ij} is the random disturbance term. Given that individuals within the same region may have correlated error terms, robust standard errors clustered at the county level are used in the regressions.

2. Poisson Regression Model Specification

Since migrant women's number of children is a count variable, a Poisson regression model is applied to investigate the effect of employment quality on fertility behavior. The model is specified as follows:

$$fq_{ij} = \beta_0 + \beta_1 QI_{ij} + \beta_2 controls_{ij} + p_j + \mu_{ij} \quad (9)$$

$$P(fq_{ij} = n) = \exp(-\lambda_{it}) \lambda_{it}^n / n! \quad (10)$$

$$E(fq_{ij} | controls_{ij}, p_j) = \exp(\beta_0 + \beta_1 QI_{ij} + \beta_2 controls_{ij} + p_j) \quad (11)$$

Where: fq_{ij} (fertility quality) represents the number of children, and the meanings of other variables are consistent with those in model (8).

4. Empirical results

4.1. Baseline regression analysis

1. Logit regression of employment quality on fertility desires

Columns (1) – (4) of Table 2 report the baseline regression results regarding the impact of employment quality on the fertility desires of migrant women. The results show that employment quality significantly increases the fertility desires of migrant women. Specifically, a one-unit increase in employment quality is associated with a 2%–6.3% increase in fertility desires, consistent with Hypothesis 1. This relationship remains robust after controlling for various covariates.

Table 2. Logit regression results of the effect of employment quality on fertility desires of migrant women

Variable	Fertility desires			
	(1)	(2)	(3)	(4)
Employment Quality (QI)	1.0634*** (6.312)	1.0272** (2.491)	1.0200* (1.806)	1.0285** (2.495)
Individual Characteristics				
Age	1.0544 (1.612)	1.4636*** (10.656)	1.4643*** (10.576)	1.4711*** (10.571)
Age Squared	0.9968*** (-6.315)	0.9922*** (-14.307)	0.9921*** (-14.252)	0.9921*** (-14.222)
Ethnicity (Reference: Han)	0.7568*** (-4.672)	0.6848*** (-5.855)	0.7098*** (-5.220)	0.7874*** (-3.494)
Education Level (Reference: Primary School and Below)				
Junior High School	1.2277** (2.463)	1.0481 (0.524)	1.0659 (0.707)	1.0347 (0.377)
High School	1.7774*** (6.645)	1.1741* (1.720)	1.1692* (1.656)	1.1360 (1.337)
College and Above	3.1900*** (12.982)	1.5867*** (4.713)	1.5561*** (4.455)	1.5512*** (4.373)
Household Registration Type (Reference: Agricultural and Others)				
Non-agricultural	1.0671 (1.294)	0.9363 (-1.237)	0.9587 (-0.791)	0.9651 (-0.654)
Agricultural to Resident	1.0793 (1.564)	1.1518*** (2.767)	1.0634 (1.168)	1.0148 (0.225)
Non-agricultural to Resident	1.0410 (0.381)	0.9116 (-0.813)	0.8782 (-1.138)	0.8601 (-1.224)
Resident	0.8068* (-1.792)	0.7713** (-2.009)	0.7578** (-2.151)	0.7584** (-2.127)
Health Status	1.1919 (0.448)	1.5435 (1.159)	1.6144 (1.268)	1.5471 (1.178)
Local Settlement Willingness	1.0949 (1.563)	1.2554*** (3.657)	1.2560*** (3.639)	1.2709*** (3.796)
Family Characteristics				
ln(Family Monthly Income)		1.1848*** (4.397)	1.1921*** (4.322)	1.2416*** (5.055)
Family Size		0.2116*** (-38.854)	0.2047*** (-38.474)	0.1940*** (-38.350)
Family Accompaniment		1.1014 (1.088)	1.1201 (1.270)	1.1332 (1.380)
Migration Characteristics				
Migration Duration			1.0275 (1.176)	1.0445* (1.860)
Migration Scope (Reference: Interprovincial)				

Table 2. Continued

Intercity within Province			1.2800*** (5.472)	1.1475*** (2.804)
Interdistrict within City			1.2075*** (3.307)	1.1274* (1.942)
Migration Region (Reference: Eastern Region)				
Central Region			0.8071*** (-3.890)	1.5423*** (3.084)
Western Region			0.9743 (-0.531)	1.8637*** (3.643)
Northeast Region			0.4876*** (-8.302)	0.7419 (-1.553)
Provincial Fixed Effects				Controlled
Constant	0.3023* (-1.88)	0.0411*** (-4.43)	0.0380*** (-4.43)	0.0162*** (-5.46)
Observations	39538	39509	39509	39509

*Notes: ***, *, and * denote significance at the 1%, 5%, and 10% levels, respectively. Values in parentheses are t-values. Unless otherwise noted, the coefficients represent odds ratios. The same as below.

2. Poisson Regression of Employment Quality on Number of Children

To further verify whether employment quality affects the actual number of children born to migrant women, we apply a Poisson regression model. The results are presented in Table 3.

Table 3. Poisson regression results of the effect of employment quality on number of children

Variable	(1)	(2)	(3)	(4)
	Number of Children			
QI	0.9773*** (-15.530)	0.9855*** (-13.066)	0.9835*** (-14.731)	0.9844*** (-13.730)
Individual Characteristics	Controlled	Controlled	Controlled	Controlled
Family Characteristics		Controlled	Controlled	Controlled
Migration Characteristics			Controlled	Controlled
Provincial Fixed Effects				Controlled
Constant	-2.1910*** (-30.83)	-2.2770*** (-33.58)	-2.1188*** (-30.97)	-2.1452*** (-31.11)
Observations	39538	39509	39509	39509

The regression results indicate that the coefficients of employment quality are consistently less than 1 and are statistically significant at the 1% level, suggesting that higher employment quality significantly reduces the number of children born to migrant women. Specifically, a one-unit increase in employment quality is associated with a reduction of approximately 1.45%–2.27% in the expected number of children. Furthermore, when employment quality rises from the lowest to the highest level, the expected number of children decreases by approximately 20%. The coefficient remains significantly negative after sequentially controlling for family characteristics, migration characteristics, and provincial fixed effects, indicating strong robustness of the results.

4.2. Endogeneity correction

1. Heckman Two-Step Procedure

To avoid introducing endogeneity through the inclusion of too many control variables, this paper incrementally incorporates individual and household characteristics into the regression to reflect factors at the personal and family level. Considering the particular characteristics of the migrant population and regional disparities in economic development, the model also controls for migration-related factors and province fixed effects. Even with these variables controlled, the coefficient estimates in Model (8) may still face potential omitted variable bias. When examining the impact of employment quality on fertility desires, restricting

the sample to only employed individuals may introduce sample selection bias, thereby compromising the validity of the estimates. To mitigate the endogeneity threat arising from selection bias and to ensure the consistency of the coefficient estimates, this paper employs the Heckman two-step method.

In the first stage, a Probit model was employed with employment status as the dependent variable to regress individual characteristics, household characteristics, migration characteristics, and provincial fixed effects, thereby constructing the Inverse Mills Ratio (IMR). In the second stage, the IMR obtained from the first step was added to the control variables to re-examine the impact of employment quality on the fertility desire of migrant women. Column (1) of Table 4 reports the second-stage regression results. It can be observed that the IMR coefficient is not statistically significant, indicating that sample selection bias is not a concern and that the baseline regression results are robust.

Table 4. Endogeneity correction and robustness test

Variable	(1)	(2)	(3)	(4)
	Fertility desire			
	Heckman Two-Step	IVProbit Two-Stage	Alternative Dependent Variable	Alternative Sample Selection
Employment Quality (QI)	1.0289**	0.2168*		1.0299**
	2.53	1.88		2.44
Standardized QI (QI_std)			1.0546**	
			2.50	
IMR	1.9713			
	1.29			
Other Controls	Controlled	Controlled	Controlled	Controlled
Provincial Fixed Effects	Controlled	Controlled	Controlled	Controlled
Constant	0.0020*** (-3.54)	-1.0734*** (-2.62)	0.0185*** (-5.25)	0.3406 (-0.75)
Observations	39,509	39,506	39,509	21,023

*Notes: The coefficients in column (2) are from Probit regressions.

2. IVProbit Two-Stage Model

A more significant endogeneity concern facing Model (8) is the potential issue of reverse causality between the dependent and key explanatory variables. Theoretically, not only can employment influence fertility desires, but fertility desires and choices may also affect labor force participation. Recent studies have confirmed that fertility has a significant impact on employment decisions [61,81,82]. To address the problem of reverse causality between fertility and employment, it is necessary to identify an instrumental variable that is correlated with employment quality but does not directly affect fertility desires. In this paper, we use the logarithm of the average monthly household income under the same sample ID as the instrumental variable for employment quality.

An instrumental variable must satisfy three conditions: First, relevance—that is, average monthly household income in the same region must be highly correlated with employment quality. Numerous studies have demonstrated that regional household income reflects local economic conditions and is positively associated with employment quality. [83–85] Therefore, regional household income satisfies the relevance criterion. Second, exogeneity—average household income should be uncorrelated with unobserved confounding factors that influence fertility desires (i.e., the model's error term). As a macro-level statistical indicator, household income is conceptually distinct from the micro-level determinants that typically drive individual fertility desires. The use of macro-level variables to construct instrumental variables for micro-level empirical analysis has been widely accepted in the empirical literature [86–88]. Third, the exclusion restriction—that is, average household income should affect the fertility desires of migrant women only through its influence on employment quality. Since average household income serves as a proxy for regional economic and labor market conditions, its primary effects are reflected in employment-related indicators such as income and social security benefits. Once employment quality is controlled for, regional household income is unlikely to exert an additional direct effect on fertility desires. Thus, the exclusion restriction appears to be satisfied.

The second-stage regression results using the instrumental variable method are reported in Column (2) of Table 4. The Probit regression result is significantly positive, consistent with the result from the Logit regression, further confirming the robustness of the baseline findings. To ensure the reliability of the instrumental variable estimation, this paper evaluates the instrument from three perspectives: relevance, exogeneity, and exclusion restriction. Specifically, we draw on the imperfect instrumental variable (IIV) approach proposed by Nevo & Rosen (2012) and the informal auxiliary regression test developed by Angrist et al. (2010). Detailed results are presented in Appendix Table 3 [89, 90].

4.3. Robustness test

1. Age

Many scholars argue that age is an important factor influencing fertility desires, and that the effect of employment on fertility desires may vary across different age groups [57]. Therefore, this study further investigates whether the impact of employment quality on fertility desires differs by age group. The results presented in Table 5 show that the impact of employment quality on fertility desires is more pronounced among younger women aged 20–29. A possible explanation is that younger individuals are still balancing career development and family planning, making them more responsive to improvements in employment quality. In contrast, older women may have already completed their family planning or face additional constraints such as health issues and higher child-rearing costs, which may diminish the marginal effect of employment quality on fertility desires.

Table 5. Age group heterogeneity

Variable	(1)	(2)	(3)	(4)	(5)
	Fertility desire				
	20-24	25-29	30-34	35-39	40-49
Employment Quality (QI)	1.0710** (2.064)	1.0459*** (2.605)	1.0002 (0.009)	1.0455 (1.270)	0.9969 (-0.049)
Observations	2,323	9,061	9,623	7,220	10,348

Note: Other relevant control variables and provincial fixed effects are Controlled in the heterogeneity analysis, and this applies throughout unless otherwise specified. The same as below.

2. Migration characteristics

Among the migrant population, significant differences exist in migration characteristics. Factors such as the duration, scope, and regional economic development level of migration are closely related to the stability of employment and living conditions [5]. To further explore the heterogeneity in the relationship between employment quality and fertility desires among migrant women, this study conducts separate Logit regressions based on migration duration, migration scope, and migration region.

Table 6. Migration characteristics heterogeneity

Migration duration heterogeneity

Variable	(1)	(2)	(3)	(4)
	Fertility desire			
	<1 Year	1-5 Years	5-10 Years	>10 Years
Employment Quality (QI)	1.0549* (1.711)	1.0171 (1.055)	1.0026 (0.116)	1.1063*** (2.855)
Observations	4,802	15,983	10,887	7,826

Migration scope heterogeneity

Variable	(1)	(2)	(3)
	Fertility desire		
	Inter-Provincial	Intra-Provincial (Inter-City)	Intra-City (Inter-District)
Employment Quality (QI)	1.0348** (2.016)	1.0233 (1.255)	1.0269 (0.948)
Observations	20,094	12,859	6,556

Migration region heterogeneity

Variable	(1)	(2)	(3)	(4)
	Fertility desire			
	Eastern Region	Central Region	Western Region	Northeastern Region
Employment Quality (QI)	1.0140 (0.893)	1.0507* (1.853)	1.0263 (1.149)	1.1026* (1.931)
Observations	19,071	7,829	10,525	2,015

The results presented in Table 6 indicate that the impact of employment quality on fertility desires is more significant among women who have migrated for a short period (<1 year) and those with long-term migration experience (>10 years). Short-term migrants are still in the early stages of adapting to the new environment, and improvements in employment quality can positively influence their fertility desires. Long-term migrants, having established a relatively stable socioeconomic foundation in their new location, may not only have a stronger intention to settle but also face reduced uncertainty regarding child-rearing costs, thus further enhancing their fertility desires. Moreover, the impact of employment quality on fertility desires is more pronounced among inter-provincial migrants, who often encounter greater adaptation challenges and are therefore more sensitive to employment conditions. Finally, while employment quality has a statistically significant effect on fertility desires in the central and northeastern regions (at the 10% significance level), this suggests that in the more economically developed eastern region—where job opportunities are abundant but housing and education costs are high—improvements in employment quality may not significantly boost fertility desires.

5. Further analysis

5.1. Fertility desires for first and second births

Currently, most studies on women's fertility desires focus on second-birth intentions, while comparative research on first- and second-birth intentions remains relatively limited. Given the evolution of China's fertility policies, there may be significant differences between first- and second-birth fertility desires. Moreover, existing research indicates that the traditional preference for sons among rural migrants in urban areas has significantly weakened. Therefore, this study separately examines the impact of employment quality on migrant women's first- and second-birth fertility desires to uncover potential differences in effects.

Table 7. The differential impact of employment quality on first- and second-birth fertility desires

Variable	(1)	(2)	(3)
	Overall Fertility desire	First-Birth Fertility desire	Second-Birth Fertility desire
Employment Quality (QI)	1.0285** (2.495)	1.1129*** (3.897)	0.9768 (-1.580)
Observations	39,509	3,053	18,644

The results in Table 7 show that employment quality has a significant positive effect on overall fertility desires, primarily driven by its promoting effect on first-birth fertility desires. This suggests that higher employment quality helps enhance migrant women's willingness to have their first child. However, when it comes to the decision to have a second child, the influence of employment quality is no longer significant and may even have a suppressing effect, potentially due to concerns about career development and increased time costs. This finding aligns with the "lowest-low fertility" theory and the "quantity-quality trade-off" theory.

5.2. Further analysis of employment quality and second-birth fertility desires

1. Differential Impact Based on the Gender of the First Child

Extensive research has shown that gender preferences significantly influence family fertility decisions, and the gender of the first child can affect second-birth fertility desires [53, 81-83]. In light of this, this study further investigates the relationship between the gender of the first child and second-birth fertility desires.

Table 8. Gender differences of the first child

Variable	(1)	(2)
	Second-Birth Fertility desire	
	First Child: Male	First Child: Female
Employment Quality (QI)	0.9507** (-2.404)	0.9998 (-0.009)
Observations	11,470	7,113

The regression results in Table 8 further reveal the moderating effect of gender preference on second-birth fertility desires. Column (1) shows that among women whose first child is a boy, higher employment quality significantly reduces their intention

to have a second child. In contrast, Column (2) indicates that for women whose first child is a girl, employment quality has no statistically significant effect, suggesting that traditional cultural norms continue to influence the fertility decisions of some women. However, even in the case where the first child is a girl, employment quality does not significantly increase the intention to have a second child, reflecting a weakening trend in gender-based fertility preferences to some extent [94].

2. Pathways Through Which Employment Quality Affects Second-Birth Fertility desires

Existing research suggests that employment quality not only directly influences fertility desires but may also indirectly affect fertility decisions through multiple mechanisms [11,95]. To further explore how employment quality affects second-birth fertility desires among migrant women, this study employs the KHB method to conduct a mediation effect analysis, examining six potential pathways: working hours, work income, employer type, employment status, occupation, and social security.

Table 9. Mediation Effect Test Based on the KHB Method

Mediator / Effect Type	(1) Working Hours	(2) Work Income	(3) Employer Type	(4) Employment Status	(5) Occupation	(6) Social Security
Total Effect	-0.0238 (-1.61)	-0.0235 (-1.58)	-0.0231 (-1.56)	-0.0246* (-1.67)	-0.0232 (-1.56)	-0.0247* (-1.67)
Direct Effect	-0.0109 (-0.69)	-0.0239 (-1.61)	-0.0410** (-2.41)	0.0113 (0.67)	-0.0177 (-1.17)	-0.1869*** (-3.79)
Indirect Effect	-0.0129** (-2.28)	0.0004 (0.96)	0.0179** (2.12)	-0.0359*** (-4.22)	-0.0055** (-1.96)	0.1622*** (3.48)

The results presented in Table 13 show that the total effect of employment quality on second-birth fertility desires is approximately -0.02, but this effect is not statistically significant, consistent with the previous regression results. However, when mediators are introduced, the pathways show distinct differences. Specifically, working hours, employment status, and occupation serve as full mediators and are the primary channels through which employment quality suppresses second-birth fertility desires. In particular, migrant women who work longer hours, are employed by fixed employers, or engage in occupations with lower autonomy and flexibility—such as civil servants—are significantly less likely to express second-birth fertility desires compared to other migrant women. It is important to note that although women in higher-status occupations may enjoy stable and formal employment, the low time flexibility of these professions means that the career penalties resulting from childbirth outweigh the fertility-enhancing effects of employment stability. In other words, professional women tend to weigh the perceived benefits of having additional children against the associated reproductive costs when making fertility decisions. Previous research has similarly indicated that women with one child working in professional occupations generally show weak willingness to have a second child. Shifts in fertility concepts and increased costs associated with additional childbearing constitute dual roots of low fertility enthusiasm among career women [86]. This finding is consistent with the "career development and fertility conflict" hypothesis proposed by Begall & Mills (2011), which suggests that women with greater job autonomy and flexibility are more likely to express stronger fertility desires. Greater job control is believed to facilitate better work-family balance and reduce career risks associated with childbearing [97].

Conversely, employer type and social security act as partial mediators that significantly promote second-birth fertility desires. This indicates that employment in more stable institutions (such as public institutions or state-owned enterprises) enhances migrant women's sense of security regarding childbearing, thereby increasing their willingness to have a second child. This finding aligns with existing research that highlights how stable employment promotes fertility decisions [5,57,58,66,98].

6. Conclusion and implications

Drawing on data from the 2018 China Migrant Dynamic Monitoring Survey, this study systematically examines the impact of employment quality on fertility decisions among migrant women using Logit regression and Poisson regression models. Based on empirical analysis, the following main conclusions are reached: First, employment quality exerts a dual effect on migrant women's fertility desires. On the one hand, higher employment quality significantly promotes first-birth fertility desires. On the other hand, women with higher employment quality may experience decreased second-birth fertility desires due to factors such as career advancement pressures and increased childcare burdens, ultimately suppressing the overall number of children born. Second, the effect of employment quality on fertility desires varies with age and migration characteristics. Specifically, among younger women and those exhibiting more pronounced migration traits, the positive impact of employment quality on fertility desires is more significant. Third, high employment quality affects second-birth fertility desires through multiple mechanisms: it exerts a suppressive effect via working hours, employment status, and occupation, while exerting a promotive effect through employer type and social security.

Based on these findings, this study suggests that balancing women's career development and fertility decisions is critical to avoiding intensified work-family conflicts, which could otherwise undermine women's economic participation and social advancement. In the context of rapid urbanization and demographic shifts, it is essential to establish a systematic framework of employment and fertility support for the migrant population, encompassing social security systems, improved working conditions, and gender equality policies, to enable better reconciliation between family and work responsibilities. Furthermore, the design of related policies in China should take a coordinated approach, simultaneously advancing employment support, fertility benefits, and gender equality initiatives. Only under such a systemic framework can the country effectively promote the coordinated development of its population, economy, and society.

References

- [1] Ming, J., & Zeng, X. (2015). Job change and employment quality of employed migrant workers: Impact effects and transmission mechanisms. *Economic Dynamics*, (12), 22–33.
- [2] Liu, T., & Wang, D. (2021). Educational level, work experience, and employment quality of floating population. *Population Research*, 45(4), 85–99.
- [3] Liu, C., Qi, Y., & Ding, S. (2022). How does flexible work in the digital economy era affect youth employment quality? *Macroeconomic Quality Research*, 10(6), 43–60.
- [4] Zhou, D., & Liu, Y. (2024). The impact of income inequality on the fertility willingness of migrant women in the context of high-quality population development. *Journal of Xi'an University of Finance and Economics*, 1–13.
- [5] Du, S., Cai, W., & Wang, S. (2024). Employment quality and the fertility willingness of migrant workers with two children. *World Economic Review*, (1), 36–50.
- [6] Nadler, D. A., & Lawler, E. E. (1983). Quality of work life: Perspectives and directions. *Organizational Dynamics*, 11(3), 20–30.
- [7] Schroeder FK. (2007) Workplace issues and placement: what is high quality employment? *Work*, 29(4):357-8. PMID: 18236611.
- [8] European Foundation for the Improvement of Living and Working Conditions. (2015). *Quality of work*. <https://www.eurofound.europa.eu/en/resources/article/2015/quality-work>
- [9] Lai, D., Su, L., Meng, D. (2011). Employment quality measurement and evaluation in different regions of China. *Economic Theory and Economic Management*, (11), 88–99.
- [10] Qi, Y., Liu, C., & Ding, S. (2020). Digital economy development, employment structure optimization, and employment quality improvement. *Economic Dynamics*, (11), 17–35.
- [11] Leschke, J., & Watt, A. (2014). Challenges in constructing a multi-dimensional European job quality index. *Soc Indic Res* 118, 1–31. <https://doi.org/10.1007/s11205-013-0405-9>
- [12] Zhao, X. (2012). Human capital, market segmentation, and wage determination of migrant workers. *Agricultural Economic Issues*, 33(4), 49–54+111.
- [13] Tong, D., & Wang, Y. (2025). The impact of equalization of basic public services on employment quality of migrant workers: Based on CMDS special data. *Macroeconomic Quality Research*, 1–13.
- [14] Shen, K., & Zhang, G. (2024). The impact and mechanism of family migration on employment quality of floating population. *Population Journal*, 46(4), 99–112.
- [15] Luo, E., & Fang, D. (2020). Family migration, residence willingness, and employment quality of floating population: Based on analysis of 2016 national floating population dynamic monitoring data. *Population and Development*, 26(3), 117–128.
- [16] Li, Z., & Yuan, L. (2017). The impact of working distance on employment quality of migrant workers. *China Rural Economy*, (6), 70–83.
- [17] Zhu, P. (2021). The impact of children's migration on youth employment quality: A gender difference perspective. *Southern Population*, 36(3), 41–55.
- [18] Deng, R., & Ran, G. (2018). The impact of children's migration on employment quality of migrant parents: Empirical evidence from floating population dynamic monitoring. *Zhejiang Social Sciences*, (1), 66–75.
- [19] Liang, W., & Zhong, R. (2023). “Meng Mu” in the city: How children's migration affects mothers' employment decisions and gender income gaps. *Quarterly Journal of Economics*, 23(5), 2042–2060.
- [20] Liang, H. (2019). A study on employment quality of migrant population in China and its influencing factors: Based on analysis of 2016 national floating population dynamic monitoring survey data. *Population and Development*, 25(4), 44–52.
- [21] Zheng, Z. (2011). A study on fertility willingness and its practical significance: An example from Jiangsu Province. *Xuehai*, (2), 10–18.
- [22] Morgan, S., & King, R. (2001). Why have children in the 21st century? Biological predisposition, social coercion, rational choice. *European Journal of Population*, 17(1), 3–20.
- [23] Bongaarts, J. (1998). *Fertility and reproductive preferences in post-transitional societies*. Population Council. Retrieved April 5, 2025, https://knowledgecommons.popcouncil.org/departments_sbsr-pgy/253
- [24] Bongaarts, J. (2002). The end of the fertility transition in the developed world. *Population and Development Review*, 28(3), 419–443.
- [25] Song, J., & Chen, F. (2010). The discrepancy between fertility willingness and behavior of urban youth and its influencing factors: A survey from four cities. *China Population Science*, (5), 103–110+112.
- [26] Gu, B. (2011). Fertility willingness, fertility behavior, and fertility level. *Population Research*, 35(2), 43–59.
- [27] Mao, Z. (2009). Empirical analysis of the difference between fertility willingness and fertility behavior. *Population and Economics*, (2), 16–22.
- [28] Zheng, Z. (2021). The framework of fertility willingness research under new circumstances: A family and gender perspective. *Population and Society*, 37(5), 1–12.
- [29] Yang, J. (2008). The discrepancy between willingness and behavior: A review of fertility willingness and behavior in developed countries and its implications for China. *Xuehai*, (1), 27–37.

- [30] Chen, W., & Jin, Y. (2011). Differences between fertility willingness and fertility behavior of Chinese women and its influencing factors. *Population Journal*, (2), 3–13.
- [31] Song, J., & Alimire, A. (2021). The deviation between fertility willingness and behavior of women of childbearing age and the role of family fertility support. *Population Research*, 45(4), 18–35.
- [32] Wang, J., & Wang, G. (2016). A study on the differences between fertility willingness and fertility behavior under low fertility levels in China. *Population Journal*, 38(2), 5–17.
- [33] Ren, Y., & Jin, Y. (2022). The impact of marriage quality on the intention of multi-child fertility and fertility plan for the second child. *Population Journal*, 44(2), 32–43.
- [34] Yu, X., & He, J. (2023). The impact of childcare on female fertility willingness for the second child: Based on analysis of fertility status survey in the three northeastern provinces. *Population Journal*, 45(3), 17–28.
- [35] Luo, Z., Wu, R., & Jia, Z. (2022). The impact of family child-rearing costs on fertility willingness of couples who have already given birth to one child: Based on analysis of survey data from five districts in Xi'an City in 2019. *Population and Economics*, (3), 97–112.
- [36] Nie, Y., & Feng, X. (2022). Can grandparents' childcare improve fertility willingness? — A qualitative study based on 23 cities. *Jianghuai Forum*, (6), 128–134+142.
- [37] Qi, J., & He, D. (2025). The study of unfulfilled fertility willingness and its causes: Based on the 2022 China marriage and fertility status survey. *Population and Society*, 1–18.
- [38] Gong, S., Ma, M., & Zhao, M. (2023). The inconsistency of fertility attitudes and behavior among contemporary Chinese youth. *Chinese Youth Social Sciences*, 42(5), 95–103.
- [39] Kuhnt, A. K., Minkus, L., & Buhr, P. (2021). Uncertainty in fertility desires from a life course perspective: Which life course markers matter? *Journal of Family Research*, 33(1), 184–208.
- [40] Berrington, A., & Pattaro, S. (2014). Educational differences in fertility desires, intentions and behaviour: A life course perspective. *Advances in Life Course Research*, 21, 10–27.
- [41] Ma, Z., & Wang, J. (2020). The choice between having children or not: From fertility willingness to fertility behavior — Evidence from 2017 national fertility status sample survey data in seven northern provinces and cities. *Lanzhou Journal*, (1), 144–156.
- [42] Yang, J. (2015). A preliminary analysis of the fertility willingness of floating population under the "single two-child policy". *China Population Science*, (1), 89–96+128.
- [43] Algan, Y. (2008). Cultural diversity and the global economy. *Oxford Economic Papers*, (1), 18–21.
- [44] Algan, Y., Dustmann, C., Glitz, A., & Manning, A. (2010). The economic situation of first- and second-generation immigrants in France, Germany, and the United Kingdom. *The Economic Journal*, 120(542), F4–F30.
- [45] Milewski, N. (2010). *Fertility of immigrants: A two-generational approach in Germany*. Springer.
- [46] McDonald, P. (2000). Gender equity in theories of fertility transition. *Population and Development Review*, 26(3), 427–439.
- [47] Hou, J., Yue, N., & Zhang, L. (2023). Housing prices and the fertility desires of the floating population: A perspective of social integration. *Journal of Hunan University (Social Sciences Edition)*, 37(5), 54–63.
- [48] Li, J. (2019). Do high housing prices reduce birth rates? — An analysis based on new household economics theory. *Nankai Economic Studies*, (4), 58–80.
- [49] Luo, Z., Wu, R., & Jia, Z. (2022). The impact of child-rearing costs on the fertility desires of couples with one child: An analysis based on survey data from five urban districts in Xi'an in 2019. *Population and Economy*, (3), 97–112.
- [50] Liang, T. (2018). Urban adaptation: Influencing factors and policy implications for the fertility desires of the floating population. *Journal of Dalian University of Technology (Social Sciences Edition)*, 39(6), 82–90.
- [51] Wu, H., Li, S., & Yue, Z. (2006). Fertility concepts and behaviors of rural migrants in urban areas: Findings from a survey in Shenzhen. *Population Research*, (1), 61–68.
- [52] Zhang, S., & Yan, Y. (2024). The impact of family migration on the fertility behavior of the floating population: An analysis based on dynamic monitoring data of the floating population. *Henan Social Sciences*, 32(10), 97–107.
- [53] Yang, J. (2018). Research on the second-child fertility desires of the floating population. *Chinese Journal of Population Science*, (1), 72–82+127–128.
- [54] Guo, W., & Cai, Z. (2024). Perceived time costs of childbirth and fertility desires among migrant women of childbearing age. *Journal of Zhejiang Gongshang University*, (5), 129–142.
- [55] Schieckoff, B., & Sprengholz, M. (2021). The labor market integration of immigrant women in Europe: Context, theory, and evidence. *SN Social Sciences*, 1(11), 276.
- [56] Wang, S., & Dong, H. (2024). Flexible working arrangements and fertility desires: A survey experiment in Singapore. *European Journal of Population*, 40(1), 33.
- [57] Li, Z., & Jiang, J. (2024). The impact of job stability on second-child fertility desires: An empirical analysis based on Chinese General Social Survey (CGSS) data. *Journal of Beijing University of Chemical Technology (Social Sciences Edition)*, (1), 42–55.
- [58] Li, H. (2022). The impact of informal employment on the fertility desires of married women: Based on CHNS data. *Finance and Economics Review*, (1), 3–14.
- [59] Lu, H., Qiu, H., & Zheng, Y. (2017). A study on the influencing factors of women's second-child fertility desires: From the perspective of employment types and elderly care concepts. *Southern Population*, 32(3), 55–68.
- [60] Zhong, X., Li, H., & Wang, Z. (2024). Does high employment density reduce fertility desires?—An empirical study based on CGSS micro-data. *Journal of Statistics*, 5(1), 61–70.
- [61] Xu, L., & Chen, Y. (2024). Family fertility decisions, child care methods, and female employment: An analysis based on micro household survey data. *Public Administration Review*, 17(2), 157–175.
- [62] Li, Y., Cheng, Q., & Yan, X. (2020). Does female labor participation reduce fertility desires? — A study from the perspective of childcare needs. *Population and Society*, 36(2), 90–99.
- [63] Yang, J. (2019). The "gender–motherhood double burden" and gender differences in labor market participation. *Population Research*, 43(1), 36–51.
- [64] Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, 10(1), 76–88.

- [65] Becker, G. S. (1973). A theory of marriage: Part I. *Journal of Political Economy*, 81(4), 813–846.
- [66] Liu, C., & Zheng, L. (2022). The impact of informal employment on fertility desires: Theory and empirical evidence. *Finance and Economics Science*, (9), 107–122.
- [67] Kohler, H.P., Billari, F. C., & Ortega, J. A. (2002). The emergence of lowest-low fertility in Europe during the 1990s. *Population and Development Review*, 28(4), 641–680.
- [68] Becker, G. S., & Lewis, H. G. (1973). On the interaction between the quantity and quality of children. *Journal of Political Economy*, 81(2, Pt. 2), S279–S288.
- [69] Van de Kaa, D. J. (1987). Europe's second demographic transition. *Population Bulletin*, 42(1), 1–59.
- [70] Zaidi, B., & Morgan, S. P. (2017). The second demographic transition theory: A review and appraisal. *Annual Review of Sociology*, 43(1), 473–492.
- [71] Lesthaeghe, R. (2014). The second demographic transition: A concise overview of its development. *Proceedings of the National Academy of Sciences*, 111(51), 18112–18115.
- [72] Zhou, C., Zheng, X., & Xu, W. (2024). County-level new urbanization construction and the employment quality of agricultural migrants. *The World Economy*, (4), 212–240.
- [73] Song, Q., & Xiong, F. (2025). The impact of the number of children on women's employment quality: An empirical analysis based on CFPS 2020. *Shandong Social Sciences*, (1), 136–146.
- [74] Zhang, K., & Li, S. (2015). A study on the evaluation of employment quality in China: Based on macro data from Liaoning (2000–2012). *Population and Economy*, (6), 62–72.
- [75] Wang, R., & Zhou, D. (2021). Can migrant workers achieve high-quality employment through “voting with their feet” between cities?—An analysis based on floating population monitoring survey data. *Journal of Shanxi University of Finance and Economics*, 43(12), 42–54.
- [76] Zhou, C., Zheng, X., & Xu, W. (2024). County-level new urbanization construction and the employment quality of agricultural transfer populations. *The World Economy*, 47(4), 212–240.
- [77] Yang, C., & Zhang, Z. (2022). Research on the employment quality differences between migrant and local populations: Status, sources, and causes. *Journal of Financial Research*, 48(4), 19–33.
- [78] Zhou, C., & Su, Q. (2018). Differences and decomposition of employment quality between migrant workers and urban employees in China: Based on RIF unconditional quantile regression decomposition. *Journal of Agrotechnical Economics*, (6), 32–43.
- [79] Mao, Y., & Hu, W. (2020). The impact of artificial intelligence applications on the employment quality of human resources practitioners. *Economic Management*, 42(11), 92–108.
- [80] Deng, R. (2020). How relational resources in social capital mobilization affect the employment quality of migrant workers? *Economic Perspectives*, (1), 52–68.
- [81] Zhang, K., & Gu, J. (2020). A study on the impact of childbirth on women's employment. *Population and Economics*, (5), 19–29.
- [82] Zhang, K., & Wang, Y. (2021). A study on the impact of childbirth on employment choices of married women. *Public Administration Review*, 3(3), 53–75.
- [83] Zhu, Q., Liu, S., & Li, J. (2022). The impact of household income on farmers' entrepreneurial decision-making. *Hubei Agricultural Sciences*, 61(22), 209–214.
- [84] Zhou, Y., & Cui, Y. (2001). Correlation analysis between rural laborers' education, employment, and household income. *China Rural Economy*, (4), 60–67.
- [85] Yang, W., & Li, Z. (2024). New quality productivity in agriculture, farmers' income growth, and income distribution effects. *Journal of Zhengzhou University (Philosophy and Social Sciences Edition)*, 57(6), 56–63.
- [86] Almond, D. (2006). Is the 1918 influenza pandemic over? Long-term effects of in utero influenza exposure in the post-1940 U.S. population. *Journal of Political Economy*, 114(4), 672–712.
- [87] Currie, J., & Moretti, E. (2003). Mother's education and the intergenerational transmission of human capital: Evidence from college openings. *Quarterly Journal of Economics*, 118(4), 1495–1532.
- [88] Li, W., & Zhang, K. (2019). The impact of air pollution on firm productivity: Evidence from Chinese industrial enterprises. *Management World*, 35(10), 95–112.
- [89] Angrist, J., Lavy, V., & Schlosser, A. (2010). Multiple experiments for the causal link between the quantity and quality of children. *Journal of Labor Economics*, 28(4), 773–824.
- [90] Nevo, A., & Rosen, A. (2008). Identification with imperfect instruments (NBER Working Paper No. 14434). National Bureau of Economic Research. Retrieved April 1, 2025, <http://www.nber.org/papers/w14434.pdf>
- [91] Jin, Y., Zhao, M., & Song, J. (2018). How do parents influence women's second-child fertility plans: Evidence from Chinese cities. *Population Research*, 42(5), 17–29.
- [92] Tian, L., Rong, T., Zhang, X., et al. (2017). Research on the factors influencing rural residents' willingness to have a second child under the “universal two-child” policy: A case study of Tianjin. *Population and Development*, 23(4), 104–112.
- [93] Ji, Y., & Zheng, Z. (2018). China's low fertility rate from the perspective of gender and development. *Social Sciences in China*, (8), 143–161.
- [94] Tian, H., Sun, H., Zhao, X. (2022). Low fertility desires under the three-child policy: Realistic constraints and cultural concept restrictions. *Youth Studies*, (4), 77–86.
- [95] Shreffler, K. M., & Johnson, D. R. (2013). Fertility desires, career considerations, and subsequent births: The moderating effects of women's work hours. *Journal of Family and Economic Issues*, 34(3), 285–295.
- [96] Li, J. (2017). A study on second-child fertility desires among employed women with one child: An empirical analysis based on fertility utility and cost of childbearing. *Collection of Women's Studies*, (3), 27–39.
- [97] Begall, K., & Mills, M. (2011). The impact of subjective work control, job strain, and work–family conflict on fertility desires: A European comparison. *European Journal of Population*, 27(4), 433–456.
- [98] Kreyenfeld, M. (2010). Uncertainties in female employment careers and the postponement of parenthood in Germany. *European Sociological Review*, 26(3), 351–366.

Appendix 1

Table 1. Detailed description of employment quality indicators for migrant population

Primary Dimension	Secondary Dimension	Survey Question Description	Specific Indicator Description	Attribute
Nature of Work	Employment Status	Did you work for at least one hour with income during the week before the May Day holiday this year? (including family or self-operated business)	1 = Worked for income in the week before May Day; 0 = No	+
	Employment Identity	What is your current employment status?	3 = Employee with a fixed employer; 2 = Employer or self-employed; 1 = Worker without a fixed employer or others	+
	Employer Type	What type of organization is your current employer?	6 = State sector (including government agencies, public institutions, and state-owned or state-controlled enterprises); 5 = Foreign-funded enterprises (including Hong Kong, Macao, and Taiwan sole proprietorships, foreign sole proprietorships, and Sino-foreign joint ventures); 4 = Joint-stock enterprises (including collective enterprises, joint-stock, and joint ventures); 3 = Private enterprises (including self-employed businesses, private enterprises, and NGOs); 2 = Other units; 1 = No employer	+
	Occupation	What is your current primary occupation?	7 = Civil servants, clerical staff, and heads of government agencies, party organizations, or enterprises; 6 = Professional and technical personnel; 5 = Service workers (e.g., catering, housekeeping, cleaning, security, decoration, courier, and other service industries); 4 = Business operators and vendors; 3 = Production, transportation, construction, and related workers; 2 = Agricultural, forestry, animal husbandry, fishery, and water conservancy workers; 1 = No fixed occupation	+
	Income	What was your personal income last month (or from your most recent employment)?	Monthly income (in RMB), logarithmically transformed	+
	Social Security	Are you currently participating in any of the following types of medical insurance?	1 = Enrolled in employee medical insurance; 0 = No	+
	Working Hours	How many hours did you work this week?	Number of working hours per week	–

Appendix 2

Table 2. Variable description

Variable Name	Variable Description
Dependent Variables	
Fertility desire	1 = Planning to have a child within the next two years; 0 = No
Number of Children	Discrete variable; 0 = minimum, 7 = maximum
Independent Variable	
Employment Quality	Specific indicator construction detailed in Appendix A1
Control Variables	
Age	Actual age of the migrant individual as of May 2018
Ethnicity	1 = Han nationality; 0 = Ethnic minorities
Education Level	1 = Primary school and below; 2 = Junior high school; 3 = Senior high school/Technical secondary school; 4 = College degree and above
Household Registration Type (Hukou)	1 = Agricultural and others; 2 = Non-agricultural; 3 = Agricultural converted to resident; 4 = Non-agricultural converted to resident; 5 = Resident

Table 2. Continued

Party Membership	1 = Communist Party member; 0 = No
Health Status	1 = Healthy or basically healthy; 0 = No
Willingness to Stay Locally	1 = Intends to continue residing locally; 0 = No
Household Income	Household income of the migrant individual (in RMB); logarithmically transformed
Household Size	Number of family members in the household
Family Accompaniment	1 = Family members migrated together; 0 = No
Duration of Migration	Time span from arrival at the current destination to May 2018: 1 = Less than 1 year; 2 = 1–5 years; 3 = 5–10 years; 4 = Over 10 years
Migration Range	1 = Inter-provincial migration; 2 = Intra-provincial (cross-city) migration; 3 = Intra-city (cross-county) migration; 4 = Cross-border migration
Migration Region	1 = Eastern region; 2 = Central region; 3 = Western region; 4 = Northeastern region

Appendix 3

Table 3. IVProbit two-stage robustness check results

Variable Name	(1)	(2)	(3)	(4)
	QI	Lower bound(CI)	LB(estimator)	fd
	Relevance		Exogeneity	Exclusion Restriction
lnmean_income	0.2864*** (9.88)			1.0982 (1.35)
QI		-0.0092	0.2110	1.0277** (2.42)
Other Variables	Controlled			Controlled
Province Fixed Effects	Controlled			Controlled
Constant	-1.1434*** (-3.77)			0.0093*** (-5.41)
Observations	39,506			39,506

Note: The coefficient in column (1) is the OLS regression coefficient. Robust t-statistics are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.