



Body Rights and Autonomy: Gender equality and women's reproductive decision-making

ShiJing Zhu

University College London (UCL), London, United kingdom

Email: shijingz200@gmail.com

Abstract. In the present context, the issue of whether women possess independent and autonomous reproductive rights warrants examination. This study employs data from the China General Social Survey to investigate the relationship between gender equality and women's reproductive decision-making authority. The findings indicate that, apart from age, household size, and socio-economic status, the acceptance of traditional gender norms significantly and positively influences Chinese women's reproductive decision-making rights. Given the prevailing advocacy for gender equality in society, it becomes imperative to mitigate any adverse effects of traditional gender norms on women's individual reproductive rights. Therefore, it is crucial for society to value and regulate traditional discourses surrounding reproductive behavior, fully respecting women's autonomy in reproductive matters and fostering the formation of women's reproductive desires within a more liberated and egalitarian gender context.

Keywords: women; self-efficacy; job-search reshaping

1 Introduction

Gender equality plays a crucial role in women's reproductive decision-making. It encompasses the notion that women should have the same rights and opportunities as men to make decisions regarding their reproductive health and family planning. Numerous factors influence women's ability to exercise their reproductive decision-making rights. Fertility intentions represent individuals' attitudes and expectations towards having children, typically encompassing desired gender and number of children, desired fertility level, intensity of fertility intentions, and reproductive plans. Previous research has indicated that economic factors are the primary determinants of fertility intentions. Martha S. Hill coined the term "motherhood penalty" to describe the negative impact of having children on women's wage income^[1, 2]. Consequently, working mothers often suppress their fertility intentions as they weigh the trade-off between work and childbearing. Various economic theoretical models have been widely referenced in the field of fertility economics, including cost-benefit models, rational choice models of marginal children, supply-demand models, and intergenerational wealth flow models. Among the numerous influencing factors on women's

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fertility intentions in domestic research, economic factors have also been confirmed as fundamental reasons for changes in fertility intentions. With the continuous increase in the cost of raising children, childbearing behavior negatively affects the economic status of professional women and their families, thereby reducing women's fertility intentions. Research by Bean and Swicegood found that social mobility resulting from changes in social status, relative economic conditions, social isolation, stress, and confusion all contribute to variations in fertility intentions^[3]. In terms of the interactive decision-making process between spouses regarding fertility, Laurie concluded that men exercise control over women's reproductive autonomy through kinship systems and marital patterns, and this power structure is not undermined by women's educational influence^[4]. Furthermore, women's fertility intentions are also influenced by collective and regional factors.

From the aforementioned review, it can be observed that current research on the influence of gender equality beliefs on women's fertility decision-making and autonomy, while attracting some scholars' attention, remains limited in quantity. Furthermore, the discussions on women's fertility decision-making and autonomy mostly revolve around the dimension of fertility gender preference and are predominantly qualitative studies conducted in specific regions or villages, focusing on the qualitative research of the village population regarding the impact of gender norms on women's fertility decision-making and autonomy. As a result, quantitative research on the influence of gender equality beliefs on women's fertility decision-making is relatively scarce. From the transition of the national fertility policy from the "one-couple, one-child" policy to the "universal two-child" policy, women's childbearing choices have always been regulated by the state's fertility policies, and there are certain patterns in the trends and influencing factors of fertility intentions. In light of the current emphasis on gender equality in society, exploring the relationship between gender equality beliefs and the desired number of children holds significant theoretical and practical implications. In contrast to existing research, this study utilizes data from a questionnaire survey in China and employs Poisson regression models with fertility intentions, gender norms, and other variables as indicators to investigate how women's own gender equality beliefs affect their fertility decision-making and autonomy.

2 Literature review

2.1 Women's fertility intentions

Examining the evolution of women's fertility preferences over the past few decades globally, research indicates an overall decline in women's fertility intentions, attributed to the increasing participation of women in education and the labor market^[5]. However, a discernible gap exists between women's inclination to delay childbearing and their actual fertility behavior, which is influenced by various factors, including personal choices, economic considerations, and societal context^[6].

Leibenstein (1957) elucidated the reasons behind household childbearing through a cost-benefit model, positing that when the expected benefits outweigh the expected costs, households tend to choose childbearing. The costs involved comprise the ex-

penses related to a child's livelihood, education, entertainment, as well as the opportunity costs stemming from reduced income due to child-rearing. The benefits encompass economic utility, insurance utility, and the utility derived from children shouldering the family's economic risks^[7]. Mu Guangzong (1993) further delineated the costs and benefits of childbearing in Chinese households, which include economic, psychological, and opportunity costs, as well as economic, anticipated insurance, lineage continuation, and familial joy utilities. Becker (1960) introduced the Quantity-Quality trade-off theory, contending that both the quality and quantity of children are crucial determinants of household fertility preferences, with families often inclined to reduce the number of children while enhancing their quality in order to maximize utility. Caldwell (1970) proposed the Intergenerational Wealth Flow theory, emphasizing how wealth flows across generations within families, thereby influencing people's fertility desires. Easterlin (1985) applied economic supply-demand theory to the study of fertility behavior, identifying demand, supply, and contraceptive costs as the three major factors influencing fertility rates. Tian Xueyuan put forth the theory of social externality-costs and benefits, arguing that in addition to considering the costs and benefits of child-rearing within families, one should also consider the costs society incurs for the child's development and the benefits the child brings to society^[8].

2.2 Women's reproductive decision-making and rights

The Declaration of the International Women's Year Conference in 1975 firmly stated that the human body is inviolable, and the respect for the bodies of both men and women is directly related to human dignity and freedom. Bodily integrity is interpreted as an individual and societal right, signifying the right to reproductive health and sexual behavior. Women must be ensured the autonomy to make decisions, not only being seen as objects but as means to achieve social goals such as population control. Providers of family planning and healthcare services must trust and respect women's desires and experiences. Favorable conditions such as the provision of daycare or transportation to medical facilities empower women and offer them support. Coercive incentives and restraints have negated individuality. Gender relations and relationships among women must embody equality^[9, 10]. Article 16(e) of the United Nations Convention emphasizes equal rights for men and women regarding family size and spacing, and according to this covenant, women as primary caregivers will lose fairness. Addressing gender equity issues must address the evident disparities in power and resources between men and women as well as within nations. Population policies that provide women with the freedom of choice, high-quality services and supplies without geographical barriers, and economic support are considered uncompromising. The principle of diversity requires respecting differences among women in values, culture, religion, sexual orientation, family, or medical conditions. International declarations of human rights, particularly those framed within the Western liberal tradition, have different applications and meanings in various social and cultural contexts. For example, for Yoruba women, the concept of women's individual rights is foreign; they highly value fertility and perceive women's fertility as belonging to the collective welfare^[11]. Partners and family members have influence over women's reproductive deci-

sion-making rights. Supportive partners and a familial environment enhance women's autonomy and decision-making rights. Research has found that certain personality traits such as responsibility, confidence, and stability are associated with men's fertility, indicating the increasing importance of individual traits in reproductive decision-making^[12]. Cultural, religious, societal beliefs, and gender role expectations also significantly influence women's reproductive decision-making^[13]. For instance, traditional notions of women as wives and mothers may limit their autonomy in making reproductive decisions.

3 Research design

The data used in this study is derived from the 2020 Chinese General Social Survey (CGSS2013), which covers both rural and urban areas in 28 provinces (regions, municipalities) of China, with a total of 13,256 samples. From this dataset, a sample of 5,682 individuals who identified as female was selected for this study. Among them, 13.8% were between 18 and 28 years old, 18.2% were between 28 and 38 years old, 25.4% were between 38 and 48 years old, and 42.6% were 48 years old or above. In the following sections, we will introduce the dependent variable, control variables, and the selection and operationalization of the main explanatory variable, namely the gender equality belief variable, which were used in this study.

3.1 Dependent variable

The dependent variable of this study is women's reproductive decision-making power. Currently, the central indicator used in the academic field to measure reproductive decision-making power is whether the family accepts a woman's own reproductive intentions. This refers to the subjective and optimal judgment of a woman regarding childbirth, without considering any other influencing factors. Therefore, this study aims to analyze and explore the dependent variable. The question in the questionnaire related to reproductive intentions is: "If there were no policy restrictions, would your family accept your own reproductive intentions?" Based on the research objectives, samples with incomplete responses, invalid information, and samples that did not specify gender were excluded, resulting in a final sample size of 5583. Among the total sample selected under the ideal condition of no policy restrictions, 16.81% of women perceive their reproductive intentions as not being accepted, 61.42% of women perceive their reproductive intentions as being accepted, and 21.77% of women are uncertain about the acceptance of their reproductive intentions.

3.2 Explanatory Variables

The main explanatory variable in this study is the concept of gender equality. In the operationalization process, the concept of gender equality was operationalized using the following question: "Do you agree with the following statements: 1. Men prioritize their careers while women prioritize their families; 2. Men are naturally more capable

than women; 3. It is better to marry well than to succeed in one's career; 4. In times of economic recession, female employees should be laid off first; 5. Spouses should share household chores equally." The options range from "strongly disagree" to "strongly agree" with five different attitudes, assigned values from "1" to "5" in sequential order, and missing values were removed individually. Subsequently, factor analysis was conducted on these five questions using principal component analysis (KMO validity = 0.707, reliability coefficient = 0.549). After rotation using the maximum variance method, two factors were extracted and named the "gender equality" factor and the "traditional gender norms" factor, [As shown in table 1].

Table 1. Factor analysis

Items	Factor analysis			mean value	standard deviation
	Traditional Gender Norms	Gender Equality Beliefs	Communalities		
Men should be breadwinners, women should focus on the household	0.786	0.011	0.358	3.37	1.152
Men are naturally more capable than women	0.799	-0.145	0.344	2.92	1.183
It's better for a woman to marry well than to have a successful career	0.726	0.031	0.478	3.13	1.135
When the economy is in a downturn, women should be the first to be laid off	0.536	-0.426	0.517	2.14	0.992
Household chores should be equally shared between spouses	0.039	0.894	0.117	3.81	0.965
Eigenvalues	2.046	1.111	3.148		
Explained Variance	43.62%	20.54%	64.26%		

3.3 Control Variables

To control for the influence of other factors on the dependent variable, this study selected age, marital status, household registration status, socioeconomic status, and household population size as control variables. Previous research has indicated that women's reproductive decision-making is primarily influenced by individual factors such as age, marital status, agricultural household registration, and family-related

factors. In this study, age was transformed into age and age squared to confirm the U-shaped relationship between age and reproductive decision-making as suggested by previous studies. Marital status was categorized as "unmarried" and "married" and treated as a dummy variable. Household registration type was initially handled by excluding missing values and then transformed into a dummy variable with rural household registration. Previous research has shown that women's reproductive intentions may be shaped by family decision-making and the cultural context of family reproduction. The question in the survey regarding the "number of people living together in your family" was renamed as "household population size" after excluding missing values.

In addition to individual factors, socioeconomic status (SES) is another significant factor that affects women's reproductive decision-making. SES refers to an individual's access to resources or prestige in relation to others, including income, wealth, education, and social class or status. In terms of operationalization, the measurement of SES variables typically includes three aspects: educational attainment, social class, and income level. Educational attainment was categorized into three levels: no education (reference category), primary school, middle school, and college or above, and treated as dummy variables. The social class variable was derived from a gradient scale in the questionnaire ranging from 1 to 10, with "10" representing the highest level and "1" representing the lowest level. Scores were assigned based on the respondents' answers, and missing values were excluded. A social class mobility variable was created by subtracting the current social class from the social class 10 years ago. The income level variable was measured using the question "Which income bracket does your family's economic status fall into in your locality?" Responses were assigned values from "1" to "5" corresponding to the options "far below average," "below average," "average," "above average," and "far above average," and missing values were excluded. Descriptive statistical analysis is shown in Table 2.

Table 2. Descriptive statistics

variable	mean value	standard deviation	span
dependent variable			
The reproductive decision-making	2.037	0.941	0-12
controlled variable			
age	47.164	17.331	18-87
marital status	0.783	0.412	0-1
education level	2.161	1.083	1-4
Class flow	0.831	1.511	-9-9
family economic status	2.678	0.671	1-5
Family population	3.083	1.414	1-11
Predictive variable			
Traditional Gender Norms	0	1	-2.735-2.671
Gender Equality Beliefs	0	1	-3.576-1.943

3.4 Research Strategy

Since reproductive decision-making is a non-negative discrete count variable that does not meet the assumptions of continuous and normally distributed variables required by multiple linear regression^[14], conventional regression estimation would yield significant biases. Currently, Poisson regression is widely used in studies involving random non-negative variables such as fertility rates, mortality rates, and migration rates. Some scholars have also recommended using Poisson regression for estimating fertility intentions. The formula for Poisson regression is as follows:

$$\log(\mu) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n \quad (1)$$

where $\log(\mu)$ represents the logarithm of the mean of the count variable, β_0 represents the intercept, β_1 to β_n represent the regression coefficients, and X_1 to X_n represent the independent variables.

This study formula can be rewritten as:

$$\lambda_{\text{desire}} = \exp(\beta_0 + \beta_1 \text{ gender concepts}) + X_i + \varepsilon \quad (2)$$

$$\ln(\lambda) = (\beta_0 + \beta_1 \text{ gender concepts}) + X_i + \varepsilon \quad (3)$$

Among them, gender concepts was the main predictive independent variable in this study, and X_i refers to the control variables, including age, marital status, rural hukou, socioeconomic status, and number of family population. ε is for the residuals of Eq.

4 Result

We established a Poisson regression model (see Table 2) with women's reproductive decision-making rights as the dependent variable and gender attitudes as the main predictor variable.

In the results controlling for the control variables, age, rural household registration, socioeconomic status, and household population size all have statistically significant effects on the dependent variable. Specifically, the influence of age on women's reproductive decision-making rights is consistent with previous research, showing a positive "U-shaped" relationship. Furthermore, household registration significantly affects women's reproductive decision-making rights, with women with agricultural household registration having more decision-making rights than urban women. Regarding household population size, an increase in household population size is associated with higher reproductive decision-making rights for women. Marital status, however, does not have a significant effect on the dependent variable.

Among the indicators related to socioeconomic status, educational level has a significant negative impact on women's reproductive decision-making rights. This means that higher levels of education are associated with fewer reproductive decision-making rights for women, which is consistent with previous domestic and international research findings. As household economic status improves, women's reproductive decision-making rights gradually increase, [As shown in table 3]. Specifically, for every

unit increase in household economic status, women's reproductive decision-making rights increase by 3.4%. This indicates that improvements in household economic status have a significant positive impact on women's reproductive decision-making rights. Previous research has mainly explained this from a cost-benefit perspective, suggesting that when the overall economic condition of the family is sufficient to afford the costs of raising multiple children, the unilateral economic burden on women in child-rearing is reduced, thereby positively influencing their reproductive intentions.

Table 3. Poisson regression analysis

variable	coefficient
Controlled variable	
age	-0.007 (0.005) *
Age square	0.000 (0.000) ***
marital status	-0.014 (0.023)
education level	0.089 (0.022) ***
primary school	-0.065 (0.027) *
middle school	-0.154 (0.032) ***
College degree or above	-0.142 (0.045) **
Class flow	0.015 (0.006) *
family economic status	0.034 (0.015) *
Family population	0.017 (0.006) **
Predictive variable	
Traditional Gender Norms	0.026 (0.015) **
Gender Equality Beliefs	-0.007 (0.005)
constant term	0.059 (0.122) ***
-2 log likelihood	-7793.0654
Pseudo R ²	0.0267
N	5682
Prob > chi2	0.0000

Note: * P < 0. 1, ** P < 0. 05, and *** P < 0. 001. A. The reference category is "unmarried". B. The reference category is "urban hukou". c. The reference category of primary school, middle school, junior college or above is "no education".

Finally, we focus on the impact of gender equality attitudes on women's reproductive decision-making rights. The more women identify with traditional gender norms, the more likely they are to possess reproductive decision-making rights. Conversely, women who disapprove of traditional gender norms are more inclined to have limited reproductive decision-making rights. For every unit increase in identification with traditional gender norms, there is a 2.6% increase in the likelihood of women having reproductive decision-making rights. However, the factor of gender equality attitudes did not show statistical significance in this study. Several factors may contribute to these results. Firstly, the influence of regional and cultural variations, as well as the unequal access to education and employment opportunities for women, may lead some women to be deeply influenced by traditional gender cultural norms. This may result in a greater acceptance and adherence to traditional gender norms regarding reproductive

decision-making rights, outweighing the influence of opposing traditional gender norms. Secondly, as the level of societal modernization and mainstreaming of gender equality increases, there is a national advocacy for empowering women and safeguarding their gender-related interests. The increasing awareness of women's agency is gradually enhanced. Traditional reproductive norms emphasize the benefits of having multiple children for personal and family interests, often neglecting women's reproductive decision-making rights. Consequently, these norms deviate from the reproductive desires of modern women. The awakening of women's self-awareness has led to a stronger emphasis on self-realization and the value of labor participation. Women are actively cultivating their rights consciousness and no longer conforming to the traditional role of being solely responsible for procreation. Therefore, it can be argued that contemporary women have more rational and autonomous reproductive desires and rights.

5 Discussion

China's gender culture has long been influenced by patriarchal traditions, and as a social narrative shaping gender beliefs, societal gender discourse reflects a tendency to suppress women's interests through knowledge suppression and power regulation within male-dominated cultures^[15]. A careful observation reveals that in the context of rapid socioeconomic development, gender discriminatory discourse, facilitated by modern media tools, unconsciously engenders conformity to traditional gender culture and generates a gaze-like power^[16]. This power structure produces gender hierarchies in women's reproductive behavior, as both men and women tacitly accept this hierarchical thinking, resulting in a complicit arrangement that commodifies women's rights and suppresses their value in the public sphere. Traditional notions such as "men work outside, women manage the household" and "women's bodies are reproductive machines" have become entrenched in the gender beliefs of certain population segments. The enactment of gender inequality in traditional moral norms perpetuates the reproduction of patriarchal power^[17-19]. Women, either voluntarily or involuntarily, comply with norms embedded in a gendered discourse system, giving rise to a reproductive culture that contradicts women's reproductive decision-making. This culture shapes women's reproductive beliefs and enforces desires for multiple children or specific gender preferences, thereby compromising their reproductive autonomy and freedom of choice^[20].

The pursuit of gender equality represents the highest objective at the national level in the context of male-female relationships, and monitoring population sustainability is an essential aspect of China's population development efforts. Drawing insights from the findings of this study on the influences of women's reproductive decision-making rights, it is imperative to reclaim women's agency and autonomy in reproductive decision-making by addressing the protection of women's rights through the lens of societal gender discourse. As Foucault proposed, "discourse is power."^[21]By eradicating the influence of male-centric discourse in reproductive culture and highlighting the affirmative role of gender equality discourse in women's reproductive behavior, we can

avoid the negative impact of traditional and outdated reproductive cultures on women's reproductive desires. This empowerment of women ensures their reproductive rights and freedom of choice.

Lastly, this study acknowledges certain limitations. The measurement of women's reproductive decision-making rights should be multidimensional, considering factors such as gender preferences and desired child gender. This study primarily focuses on subjective perceptions of rights, resulting in a relatively narrow measurement perspective for the dependent variable. Subsequent quantitative research on women's reproductive decision-making rights should aim to address these limitations. Furthermore, further exploration of the key factors influencing women's reproductive decision-making rights is warranted.

6 Conclusion

This study employed data from the CGSS 2020 survey to investigate the mechanisms through which gender norms influence Chinese women's reproductive decision-making rights, while controlling for variables such as age, marital status, rural residence, socioeconomic status, and family size.

The findings demonstrate a notable positive association between the acceptance of traditional gender norms and women's reproductive decision-making rights. Women who hold stronger adherence to traditional gender norms are more likely to possess greater agency in making reproductive decisions. Conversely, those who express disapproval of traditional gender norms tend to have weaker reproductive decision-making rights.

References

1. Hill, M.S., The wage effects of marital status and children. *Journal of Human Resources*, 1979: p. 579-594.
2. Bhattacharjee, U., et al., Effect of in-situ derived sulfur dispersion on dual carbon lithium-ion capacitors. *Journal of Power Sources*, 2022. 542: p. 231768.
3. Bean, F.D. and G. Swicegood, Intergenerational occupational mobility and fertility: A re-assessment. *American Sociological Review*, 1979: p. 608-619.
4. Vos, T., et al., Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *The Lancet*, 2015. 386(9995): p. 743-800.
5. Goldin, C., A grand gender convergence: Its last chapter. *American Economic Review*, 2014. 104(4): p. 1091-1119.
6. Mussino, E., B. Wilson and G. Andersson, The Fertility of Immigrants From Low-Fertility Settings: Adaptation in the Quantum and Tempo of Childbearing? *Demography*, 2021. 58(6): p. 2169-2191.
7. Leibenstein, H., The theory of underemployment in backward economies. *Journal of Political Economy*, 1957. 65(2): p. 91-103.

8. Sun, B., et al., Synthesis and evaluation of alkyl methacrylate-norbornene anhydride copolymers with various pendants as pour point depressants for soybean biodiesel-diesel blends. *Fuel*, 2022. 317: p. 123542.
9. Khurshid, A., Domesticated gender (in) equality: Women's education & gender relations among rural communities in Pakistan. *International Journal of Educational Development*, 2016. 51: p. 43-50.
10. Munive, A., J. Donville and G.L. Darmstadt, Public leadership for gender equality: A framework and capacity development approach for gender transformative policy change. *Eclinicalmedicine*, 2023. 56: p. 101798.
11. Szénássy, E., Reprodukce na okraji: Morální ekonomie romské fertility. 2023.
12. Skirbekk, V. and M. Blekesaune, Personality traits increasingly important for male fertility: Evidence from Norway. *European Journal of Personality*, 2014. 28(6): p. 521-529.
13. Mann, S.K., L.R. Roberts and S. Montgomery, Conflicting cultural values, gender role attitudes, and acculturation: Exploring the context of reproductive and mental health of Asian-Indian immigrant women in the US. *Issues in mental health nursing*, 2017. 38(4): p. 301-309.
14. Green, J.A., Too many zeros and/or highly skewed? A tutorial on modelling health behaviour as count data with Poisson and negative binomial regression. *Health Psychology and Behavioral Medicine*, 2021. 9(1): p. 436-455.
15. Holvino, E., Intersections: The simultaneity of race, gender and class in organization studies. *Gender, Work & Organization*, 2010. 17(3): p. 248-277.
16. Bernstein, E., Carceral politics as gender justice? The "traffic in women" and neoliberal circuits of crime, sex, and rights. *Theory and society*, 2012. 41: p. 233-259.
17. Braam, T. and L. Hessini, The power dynamics perpetuating unsafe abortion in Africa: A feminist perspective. *African journal of reproductive health*, 2004: p. 43-51.
18. Smart, C., *The ties that bind (Routledge revivals): Law, marriage and the reproduction of patriarchal relations*. 2013: Routledge.
19. Cremer, D.J., *Patriarchy, Religion, and Society. Exploring Gender at Work: Multiple Perspectives*, 2021: p. 25-44.
20. Steinfield, L.A., et al., Power logics of consumers' gendered (in) justices: Reading reproductive health interventions through the transformative gender justice framework. 2020, Routledge. p. 100-123.
21. Best, S., et al., *Foucault and the Critique of Modernity. Postmodern theory: Critical interrogations*, 1991: p. 34-75.

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