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**Does Communism Change Gender Norms in China?** 

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Double spaced, typed. Maximum 6,000 words\* (as a guideline this is 14-21 double spaced pages). Abstract, footnotes, references and appendices do not count toward the word count, provided such additions are brief and do not contain information that rightly belongs in the body of the essay. Equations are included in the word count and counted as the page equivalent (i.e., as the number of words that would occupy the same amount of space in text). Examiners are recommended to penalise excessively long essays (+ 10% of word count) by adjusting the marks by 6000/x, where x is the word count. Pages are to be numbered. Binding is not necessary, however it is crucial that all pages are secure, i.e. stapled.

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## Does Communism Change Gender Norms in China?

An EC465 Extended Essay

Candidate Number: 29938

May, 2024

#### Abstract

This extended essay examines the impact of communism on gender norms in China, providing a quantitative analysis of the relationship between communist ideology and societal attitudes toward gender roles. The study utilises data from the 2014 China Family Panel Studies (CFPS 2014) and China's Sixth National Population Census, employing cross-sectional and Difference-in-Differences (DID) regression approaches. Findings indicate a significant negative correlation between the density of the Communist Party of China (CPC) members and the traditionality of gender norms, particularly pronounced before the 1978 economic reforms. Post-reform, the influence of the CPC on gender norms appears diminished. This research highlights the complex interplay between state-led ideological shifts and entrenched cultural traditions, contributing to the broader understanding of how political regimes can effect lasting social change.

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"A woman follows others: in her youth, she follows her father and brothers; when married, she follows her husband; after her husband dies, she follows her son."

Liji [Book of Rites]

"Women hold up half the sky."

Mao Zedong

## 1 Introduction

Gender norms originate from various historical sources. Social attitudes towards women can differ significantly across countries, even with similar institutions or levels of economic development (Giuliano, 2017). Literature has highlighted how persistent cultural beliefs can influence gender norms today. Factors such as female participation in agriculture (Alesina et al., 2013; Xue, 2016; Qian, 2008), grammatical gender-marking, pre-industrial societal characteristics, and religion can all contribute to gender norms (Giuliano, 2017).

However, historical shocks can alter the relative position of women in society and, consequently, change prevailing views about their role. For example, the low sex ratio caused by the slave trade in Africa led to increased female participation, resulting in a shift in local gender norms (Manning, 1990).

Communism can be considered the largest natural experiment in history, profoundly impacting gender norms. Campa and Serafinelli (2019) found that women from East Germany were about 11 percentage points more likely to consider career success important compared to their counterparts from West Germany following reunification. Friedman-Sokuler and Senik (2020) studied female immigrants to Israel from the Soviet Union following its collapse, discovering an unconventional gender norm prioritising science and technology and a strong attachment to paid work. Beloshitzkaya and Reilly (2023) examined former communist countries in Europe and found that communist cohorts exhibit more progressive attitudes than the post-transition cohort. Growing up under communism serves as a protective factor against reverting to traditional gender norms.

China also experienced a communist revolution, which significantly altered its traditional gender norms. The Communist Party of China (CPC) implemented various policies aimed at promoting gender equality, challenging deeply entrenched patriarchal norms rooted in Confucianism. However, there has been relatively less quantitative research on this topic compared to studies on European and other socialist countries. Much of the prior research on communist gender regimes in China has focused on narratives and accounts (Zheng, 2016; Jin et al., 2006; Jiang, 2000). My research aims to quantitatively analyse the relationship between communism and gender norms in China.

Inspired by the observed negative correlation between CPC membership density and the conservativeness of respondents on gender norm-related questions (Figure 1), my empirical strategy involves measuring the intensity of communism's influence through the density of CPC members and gauging people's attitudes toward gender norms using micro-level surveys. I utilise data from the 2014 China Family Panel Studies (CFPS 2014) and China's Sixth National Population Census. I construct variables such as CPC member density, gender norm scores, and sex ratios for different age groups. By leveraging this data, I aim to provide a quantitative understanding of how communist ideology has influenced gender norms in China.

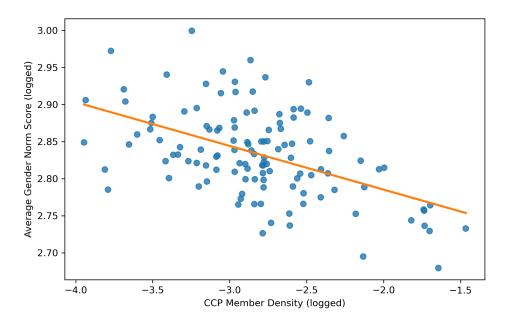


Figure 1: Correlation between CPC Influence and Conservativeness of Gender Norms

I employ two identification strategies: Instrumental Variables (IV) and Difference-in-Differences (DID) approaches. These methodologies allow for robust analysis by accounting for potential endogeneity and temporal changes. I run regressions on data from different sources to cross-validate my findings. Both identification strategies consistently report a negative relationship between CPC member density and the traditionality of gender norms. However, this relationship waned after China's economic reform in 1978. These findings align with Beloshitzkaya and Reilly's (2023) research on former communist countries in Europe, suggesting a broader pattern where communist influence on gender norms diminishes with the shift towards market-oriented reforms.

# 2 A Brief History of Communist Feminism in Modern China

### 2.1 Feminism during the New Democratic Revolution

Traditional Chinese gender norms were dictated by a patriarchal system deeply entrenched in feudal China. Men were considered strong, rigid, and superior, while women were seen as weak, soft, and inferior. This feminine inequality value system shapes not only the perceptions and behaviours of both genders but is also reinforced by the very social norms and regulations that arise from these perceptions. Women were relegated to the family, managing the home and producing male heirs, who were valued more for the patrilineal continuation of the family (Lau, 1996). This ideology, developed by Confucian scholars during the Han dynasty, peaked in the late Ming and early Qing dynasties (Chiao, 1992).

At the dawn of the twentieth century, feminism was one of the numerous ideologies adopted by educated Chinese as they strove for modernity and rejected the old dynastic system. Anarchists, socialists, liberals, evolutionists, eugenicists, and nationalists, irrespective of their political views, concurred on the need to alter the gender hierarchy ingrained in ancient Chinese philosophy and Confucian ideals of gender differentiation

and segregation. This change was deemed essential for transforming their ancient civilisation, which was in deep crisis during a period of imperialist and colonial expansion (Liu, 1992). They regarded gender equality as a badge of modernity, embraced by various social groups and political parties to assert a progressive identity.

Informed by global socialist and feminist movements, the CPC endorsed "equality between men and women" from its inception in 1921 (Li, 2001). By 1931, the Chinese Soviet Republic had promulgated laws in Soviet areas to promote gender equality, such as the Constitutional Outline, the Election Rules, the Land Law, the Marriage Law, and the Labour Law. These laws proclaimed gender equality in voting rights, land distribution, freedom of marriage, and labour remuneration (Yu and Sun, 2021).

#### 2.2 Feminism in Socialist China

Following the establishment of the People's Republic of China (PRC), the influence and numbers of Chinese socialist state feminists were arguably unprecedented in the history of global feminism (Zheng, 2016). The CPC's victory enabled its feminists to leverage state power to achieve their feminist objectives. The first National Women's Congress, organised by the CPC in March 1949, founded the All-China Democratic Women's Federation (ACDWF), which was later renamed the All-China Women's Federation (ACWF). This organisation unified all pro-CPC women's groups and extended its reach to women across the nation, from rural villages to urban neighbourhoods (Ni, 2018).

In 1950, the PRC promulgated its first Marriage Law, which abolished the feudal marriage system characterised by forced marriages and male dominance. The new democratic marriage system promoted freedom of marriage, monogamy, and equal rights for both men and women (Liu, 2021). The ACDWF collaborated with various government branches to transform the promulgation and enforcement of the Marriage Law into a mass campaign advocating for women's equal rights and personal freedom (Zheng, 2016). Slogans such as "equality between men and women" and "women's liberation" became widely known, associating gender equality with the authority of the new socialist state. The feminist legislation, enforced through socialist state power, effectively transformed

not only the institution of marriage but also gendered cultural practices and discourses<sup>1</sup>.

By the late 1950s, significant women's movements had emerged, transforming gender norms and roles. During the Great Leap Forward (GLF), women were mobilized on an unprecedented scale to participate in labour, moving out of the domestic sphere into collective fields and construction projects. Between 1957 and 1960, the number of women workers in nationally owned units rose significantly<sup>2</sup>, and women's participation in heavy industry and propaganda teams became common (Tang, 2013). The GLF encouraged women to become economically independent, elevating their economic status and self-worth.

Indeed, the transformation of the gendered division of labour resulted from mobilisation efforts rather than primary objective. While women were initially mobilised to fulfil state needs, government encouragement created opportunities for the professional development of urban women (Jiang, 2000). During the GLF, women's involvement in heavy labour and leadership roles showcased their capability to contribute equally to economic production, marking a significant shift in traditional gender roles. Women were expected to undertake tasks traditionally reserved for men, thereby challenging established gender norms.

The Iron Girl campaign<sup>3</sup> of the 1960s, prominent during the Cultural Revolution, further encouraged women to take on roles in heavy industry and agriculture, like ploughing and threshing, that even rural women began to achieve ostensible equality with their male counterparts. The campaign's slogan, "Times have changed, men and women are

<sup>&</sup>lt;sup>1</sup>The May Fourth agenda of anti-feudalism, which emphasised women's equal rights and independent personhood, became widely disseminated during this period. Consequently, the Chinese term "feudalism" evolved into a gender-inflected keyword encompassing what we today refer to as sexism: masculinism, patriarchy, male chauvinism, and misogyny.

<sup>&</sup>lt;sup>2</sup>The most frequently cited figure is that between 1957 and 1960, the number of women workers in nationally owned units rose from 3,286,000 (13.4 percent of the total number of male and female workers) to 10,087,000 (20 percent of the total number of male and female workers). The number of women entering the collective economy was even more impressive: according to statistics from 22 provinces, municipalities, and autonomous regions at the time, in more than 730,000 private industrial enterprises established in 1958, more than 85 percent of the workers were women (Chen, 2006).

<sup>&</sup>lt;sup>3</sup>The Iron Girl campaign, known as "tie niangzi yündong" in Chinese, was a significant movement in China, aiming to promote gender equality and women's empowerment, emphasizing the ability of women to perform traditionally male-dominated labor tasks, especially in heavy industries and agriculture. The campaign emerged in the context of Mao Zedong's ideology, which advocated for the liberation of women as an essential part of the socialist revolution. Mao famously stated that "women hold up half the sky", indicating the crucial role women should play in society.

the same", was significantly accepted by grassroots women, with them embracing the spirit of the movement even when not formally organized into brigades (Jin et al., 2006).

The gender discourse of equality during this period was promoted from the top down by the will of the state in the form of politicisation, supplemented by long-term institutional guarantees and high-profile publicity support (Li, 1997). This kind of 'state feminism' did not really build up gender awareness and failed to achieve women's emancipation in the true sense of the word (Zuo, 2005).

#### 2.3 Feminism after the Chinese Economic Reform

Following Mao Zedong's death in 1976, criticism of the Cultural Revolution became widespread. The previous era's gender ideology and practices, which promoted equality between men and women, were criticised for imposing gender sameness, distorting women's natural femininity, and masculinising them. Redefining gender practices became a key theme in elite proposals aiming to undo socialism. These proposals either embraced Western capitalist modernity, symbolised by the sexualisation and commodification of women in advertisements, or sought to revive Confucian traditions by reclaiming "Oriental women's traditional virtues" (Zheng, 2016).

Profound societal changes have also impacted gender norms. During the replacement of the danwei<sup>4</sup> system by the enterprise system, the government's dominance of gender discourse gave way to the market (Yang, 2017). Enterprises often restructured female workers based on personal qualities and abilities, citing women's reproductive functions as detrimental to production efficiency. This led to female workers being "transferred," "laid off," or "eliminated", in the so-called "optimization of labour force composition" (Song, 2011). The call for "letting women go home" has gained attention, and the saying "it is better to work well than to marry well" is recognised by highly educated women. The resurgence of traditional gender concepts has become a helpless acknowledgment by

<sup>&</sup>lt;sup>4</sup>The work unit system, known as "danwei" in Chinese, was a fundamental organizational structure in China during the era of planned economy, particularly from the 1950s to the 1980s. A work unit (danwei) referred to a place of employment, which could be a state-owned enterprise, government agency, research institute, educational institution, or any other state-run organization. These units were more than just workplaces; they were comprehensive communities that provided various services and benefits to their members.

women of their disadvantaged position in the market economy (Gu, 2013).

## 3 Empirical Strategy

### 3.1 Cross-sectional Regression

Referencing the research by Jiang et al. (2019), I measure the intensity of communism influence through the density of CPC members. In terms of the gauge of people's attitudes toward gender norms, there are many s which we can turn to, where interviewees respond to relevant questions. The most suitable micro-level survey for this research is the 2014 China Family Panel Studies (CFPS 2014)<sup>5</sup>. CFPS 2014 includes an individual-level database that contains the critical variables I need: a binary variable indicating CPC membership and a five-point scale on gender norms.

To be specific, The CFPS 2014 questionnaire includes five statements related to gender norms, to which respondents are asked to indicate their level of agreement:

- M1004: In order to continue the family lineage, women should give birth to at least one boy.
- M1101: Men should focus on careers while women should focus on family.
- M1102: Marrying well is more important for women than doing well.
- M1103: Women should have at least one child.
- M1104: Men should do half of the housework.

Following Xu and Xie (2023), I negatively scored the fifth indicator and summed the scores of these five questions to obtain my dependent variable, *gendernorm*, with a score range of [5, 25]. A higher score indicates more traditional gender norms. Subsequently, I aggregate the data at the prefecture-level and calculate the average.

My key explanatory variable of interest is *cpcdensity*, which is the number of CPC members normalized by the total number of respondents.

<sup>&</sup>lt;sup>5</sup>The CFPS is funded by Peking University and the Nationl Natural Science Foundation of China. The CFPS is maintained by the Institute of Social Science Survey of Peking University

Following Chen et al.'s (2020) setting, I transform the variables to their natural logarithms to reduce skewness. I estimate the following econometric model:

$$\ln(gendernorm_i) = \alpha + \beta \ln(cpcdensity_i) + \gamma \mathbf{X}_i + \varepsilon_i, \tag{1}$$

where  $X_i$  represents control variables which I will introduce later.

To differentiate the impact of the CPC across different historical periods, I use 1978 as a dividing line and separately calculate the key variables for different samples of those born before and after the Reform and Opening Up.

Figure 2 illustrates how the key variables of the whole sample are distributed across China. Only one-third of the prefecture-level cities have data, as CFPS sampling includes only 162 prefectures, and matching with actual prefectures consumed some observations. However, the CFPS's stratified multi-stage sampling design makes the CFPS sample representative of about 95% of China's population (Xie, 2012). From the graph, we can see that the similarity in colour intensity between the red and blue shapes across regions is high.

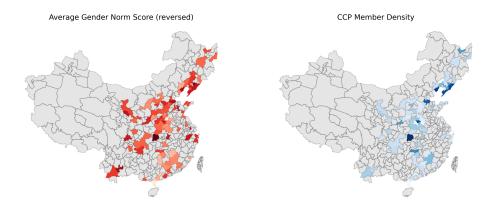


Figure 2: Choropleth Map of Key Variables

Additionally, the unexpectedly disclosed CFPS county codes allow me to match the

sample with real prefectures, enabling the use of prefecture-level rich variability and the addition of prefecture-level control variables. To address omitted variable bias, I control for potential covariates related to gender norms using Chen et al.'s (2020) replication package, which includes a series of geographical and historical variables.

Firstly, I control for economic development as measured by the average satellite light density at night in 2010. Secondly, I control for the average years of schooling, as both factors affect women's productivity, leading to more job opportunities for women and influencing people's views on gender (Hiller, 2014; Kleven and Landais, 2017).

I also control for the distance to tea centres during the Ming-Qing period. As Qian (2008) mentioned, changes in relative income between men and women can alter gender preferences, and tea can increase women's income relative to men, thereby reducing aversion towards women. Therefore, proximity to the tea centres may have more positive effects on women.

Moreover, I control for the distance to the coast. Prefectures located on the coast were likely early beneficiaries of Western technology, knowledge, and trade, thus altering gender norms earlier. Given that modern international exchanges are not limited to coastal proximity, I further control for the degree of openness proxied by foreign-trade dependence, which is the quotient of import and export totals divided by gross regional product, with data from the National Bureau of Statistics on prefecture-level in 2017 (the earliest available year).

I also control for the historical proportion of *jinshi* (the highest attainment in ancient China's imperial examination system) to the total population, reflecting the prevalence and depth of Confucian culture in a region, which in turn affects the conservatism of gender norms.

I further control for the strength of clan or lineage organisation, measured by the number of genealogy editions (the stronger the clan, the more editions). Zhang and Ma's (2017) research found that the strength of clan culture is significantly related to regional boy preference and female development, that the stronger the clan culture, the more severe the gender imbalance and the greater the education gap between men and women.

The descriptive statistics of all the variables are summarised in Table 1.

Table 1: Descriptive Statistics

| Variable   | Obesrvation | Mean  | SD   | Minimum | Maximum |
|--|-------------|-------|------|---------|---------|
| Average gender norm score of all surveyed  | 96          | 16.14 | 1.04 | 13.64   | 19.07   |
| Average gender norm score of interviewees born before the reform                 | 96          | 16.77 | 1.05 | 13.79   | 19.30   |
| Average gender norm score of interviewees born after the reform                  | 96          | 14.38 | 1.29 | 12.00   | 18.77   |
| Average gender norm score of all surveyed (logged)                               | 96          | 2.84  | 0.06 | 2.68    | 3.00    |
| Average gender norm score of interviewees born before the reform (logged)        | 96          | 2.88  | 0.06 | 2.69    | 3.01    |
| Average gender norm score of interviewees born after the reform (logged)         | 96          | 2.73  | 0.08 | 2.56    | 2.98    |
| CPC member ratio of all surveyed (×100)  | 96          | 16.67 | 7.27 | 5.08    | 42.00   |
| CPC member ratio of interviewees born before the reform (×100)                   | 96          | 17.40 | 7.42 | 5.23    | 44.30   |
| CPC member ratio of interviewees born after the reform $(\times 100)$            | 96          | 14.81 | 8.73 | 0.00    | 46.75   |
| CPC member ratio of all surveyed (×100, logged)                                  | 96          | 2.80  | 0.39 | 1.80    | 3.76    |
| CPC member ratio of interviewees born before the reform (×100, logged)           | 96          | 2.84  | 0.38 | 1.83    | 3.81    |
| CPC member ratio of interviewees born after the reform $(\times 100, \log \log)$ | 96          | 2.59  | 0.66 | 0.00    | 3.87    |
| Nighttime Light Luminosity (logged)  | 96          | 1.12  | 1.03 | -1.67   | 3.26    |
| Distance to Tea Centers in Ming-Qing (logged)                                    | 96          | 11.21 | 4.11 | 0.00    | 14.14   |
| Distance to Coast (logged)   | 96          | 12.44 | 1.22 | 9.83    | 14.06   |
| Years of Education (logged)  | 96          | 2.20  | 0.10 | 1.88    | 2.46    |
| Jinshi Density (logged)  | 96          | 1.14  | 0.86 | 0.04    | 3.96    |
| Number of genealogy editions (logged)  | 96          | 0.07  | 0.69 | -3.61   | 3.08    |
| Degree of foreign trade dependence ( $\times 100$ , logged)                      | 96          | 1.48  | 0.78 | 0.07    | 3.41    |

Despite controlling for as many omitted variables as possible, the complexity of gender norms means endogeneity issues may still exist. For example, there might be some unobservable natural endowments that make people in certain regions more willing to accept new ideas about equality, making them simultaneously more inclined to embrace communism and gender equality. To address this issue, I use the instrumental variable (IV) method.

The revolutionary base areas, including Soviet Zones (1927–1937) and Anti-Japanese Base Areas (1937–1946) were armed enclaves established by the CPC before ruling the mainland. Guided by Mao Zedong's "encircling the cities from the countryside" strategy, the Party established revolutionary bases in various parts of China. Due to the war period, the locations of these base areas were often chosen based on military geography, established in areas where imperialist and warlord control was weak, and where there were vast battlegrounds and complex mountainous terrains suitable for guerrilla warfare (Shen and Zhang, 1992), such as the Jinggang Mountains in Hunan and Jiangxi, the Wuyi Mountains in southern Jiangxi and western Fujian, and the Dabie Mountains between Hubei, Henan, and Anhui. Therefore, the geographical location of revolutionary base

areas is inherently exogenous concerning the issue of gender norms. These areas were under Communist control for long periods, fostering a strong "red culture" atmosphere that radiated outward, making regions closer to revolutionary base areas more likely to be influenced by them and more likely to recognise the Communist Party. Under this logic, the distance to the nearest revolutionary base area can serve as an instrumental variable that satisfies both exclusion restriction and relevance.

I took the prefectures where the Soviet governments of the 32 revolutionary base areas were located as the centroids of these areas (Table 5). After retrieving the latitudes and longitudes of the prefectures from Amap API<sup>6</sup>, I calculated the distance from each sample to each centroid using the geopy package of Python and took the minimum value. To achieve higher relevance in practice, I took the square of this value as the instrumental variable. Subsequently, I tested the correlation between this instrumental variable and the key explanatory variable and found a significant correlation in the first-stage regression (Table 6).

### 3.2 Panel Regression Using a Difference-in-Differences Approach

Apart from cross-sectional data, I also utilise panel data to leverage information from the time dimension.

The sex ratio can reflect underlying gender norms. Under natural conditions, the birth sex ratio is stable, but parents with a preference for boys may use sex-selective practices such as prenatal sex determination and selective abortion or infanticide (Hesketh and Xing, 2006). Some literature attributes the imbalance in sex ratios to government birth control policies. However, Hesketh and Xing (2006) found that Asian immigrants in Canada still have significantly higher birth sex ratios, even among second-generation immigrants. This suggests that this sex ratio selection might stem from underlying cultural reasons.

China's 2010 census data provides sex ratio data by prefecture and age group. Inspired by Cheng and Zhang (2011) and Qian (2008), I realised that birth cohorts could serve

<sup>6</sup>https://lbs.amap.com

as the time dimension for Difference-in-Differences (DID). However, the challenge here is that there is not a policy shock to study, so an intervention point is absent.

Due to population migration and differing mortality rates between genders, the sex ratios of various regions converge to 100 as age increases (Ritchie and Roser, 2024). It can also be witnessed in Figure 3.

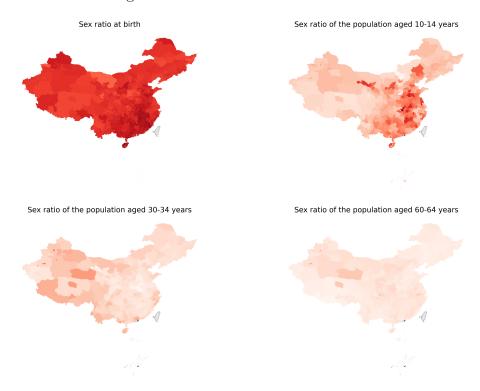


Figure 3: Sex Ratio Convergence as Age Increases

Consider the following logic: children's residence is subject to parental constraints before adulthood, so the sex ratio of minors reflects the impact of the selection of parents, and thus gender norms, while adults can freely choose their residence. Due to mechanisms like partial migration sex-ratio balancing (Ohms et al., 2019), adults enter a parallel trend after they grow up. I use the 15-19 age group as the intervention point, as parental control over children begins to wane at this age, and individuals gradually gain the freedom to choose their location. Note that it is essential to reverse the time logic. Thus, the post-treatment variable should be assigned to the 15-19 and younger age groups, while the pre-treatment variable should be assigned to the 19 and older age groups.

Figure 4 divides prefectures into two groups based on the median of *cpcdensity*. It shows that after age 19, the sex ratios of the two groups converge. In contrast, before age

19, the group with a higher density of CPC members has a significantly lower sex ratio.

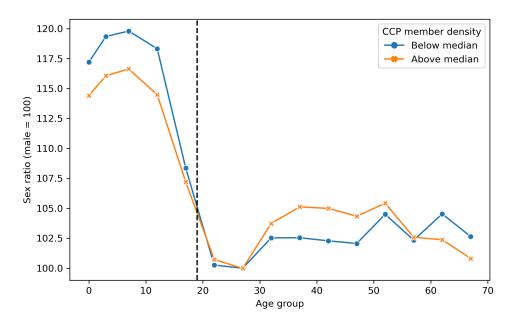


Figure 4: Sex Ratio Trend under Different CPC Member Density

As there are no treated and untreated groups, I leverage a DID approach with a continuous treatment intensity variable, which in this case is *cpcdensity*. Thus, I estimate the following econometric model:

$$sexratio_{it} = \alpha + \beta(cpcdensity_i \times post_t) + \gamma \cdot cpcdensity_i + \delta \cdot post_t + \epsilon_{it}, \qquad (2)$$

A negative treatment effect  $\beta$  is expected to lower the sex ratio "after" the treatment.

Compared to directly regressing the birth sex ratio in cross-section, DID leverages panel data, allowing us to remove unobservable heterogeneity through differencing. Furthermore, DID utilises more time information; for instance, some literature indicates deliberate underreporting or misreporting of female infants (Johansson and Arvidsson, 1990; Yi et al., 1993), leading to a potential overestimation of the birth sex ratio. As age increases, the likelihood of "hidden" girls decreases, reducing measurement error. We can control for prefecture fixed effects and age group fixed effects for this purpose.

$$sexratio_{it} = \beta(cpcdensity_i \times post_t) + \gamma \cdot cpcdensity_i + \delta \cdot post_t + \sum_{s=1}^{T} \phi_s R_s^t + \sum_{j=1}^{N} \theta_j Q_j^i + \epsilon_{it}.$$
 (3)

## 4 Empirical Results

### 4.1 Results for Cross-section Regression

The ordinary cross-sectional regression results are reported in Table 2. All the OLS results show the expected negative relationship between CPC member density and the average gender norm score (the traditionality and conservativeness of the gender norm). This implies that the influence of communism can promote a change in the gender norm in favour of equality between men and women.

I begin with the full set results in Columns (1) and (2). Column (1) does not include control variables to serve as a benchmark. A negative coefficient of -0.0640 is observed at the 0.1% significance level. This suggests that, overall, a 1% increase in the density of CPC members is associated with a 0.064% reduction in traditional gender norms. The coefficient becomes -0.0477 in the full set model with controls (Column 2), still significant at the 1% level, indicating the robustness of the result even after including various control variables.

For the pre-1978 subset, the negative impact is even stronger, with coefficients of -0.0734 and -0.0527 in Columns (3) and (4), respectively, both significant at the 0.1% level. This indicates that the influence of the CPC on gender norms was particularly pronounced before the economic reforms of 1978. In contrast, the post-1978 subset shows an insignificant relationship, as seen in Columns (5) and (6). This divergence suggests a temporal shift in the CPC's influence on gender norms, consistent with the backslide of gender norms after Mao's death. The result also align with Beloshitzkaya and Reilly's (2023) research on former communist countries in Europe.

The inclusion of control variables provides additional insights. The distance to the coast is marginally significant and negative in all three subsets, indicating regions closer

Table 2: Impact of CPC Density on Gender Norms: OLS Estimates

|  |                          |                       |                        | $\ln(gendernorm)$       |                          |                         |
|--|--------------------------|-----------------------|------------------------|-------------------------|--------------------------|-------------------------|
|  | (1)<br>Full Set          | (2)<br>Full Set       | (3)<br>Pre-1978 Subset | (4)<br>Pre-1978 Subset  | (5)<br>Post-1978 Subset  | (6)<br>Post-1978 Subset |
| $\ln(cpcdensity)$                                | -0.0640***<br>(0.0147)   | -0.0477**<br>(0.0143) | -0.0734***<br>(0.0143) | -0.0527***<br>(0.0140)  | -0.00111<br>(0.0129)     | $0.00363 \\ (0.0125)$   |
| Foreign trade dependence                         |                          | -0.00964 $(0.00835)$  |                        | -0.00934 $(0.00792)$    |                          | -0.00930 $(0.0130)$     |
| Nighttime light luminosity                       |                          | -0.0108 $(0.00863)$   |                        | -0.00485 $(0.00816)$    |                          | -0.00496 $(0.0134)$     |
| Distance to tea centers                          |                          | 0.00243 $(0.00143)$   |                        | 0.00261 $(0.00135)$     |                          | 0.00271 $(0.00221)$     |
| Distance to coast                                |                          | -0.0136* $(0.00600)$  |                        | $-0.0118^*$ $(0.00573)$ |                          | $-0.0194^*$ $(0.00917)$ |
| Years of education                               |                          | 0.0200 $(0.0956)$     |                        | -0.0660                 |                          | 0.0391 $(0.147)$        |
| Jinshi density                                   |                          | -0.0105 $(0.00882)$   |                        | -0.00377 $(0.00836)$    |                          | -0.0203 $(0.0137)$      |
| Clan power                                       |                          | -0.0208* $(0.00805)$  |                        | -0.0193* $(0.00765)$    |                          | $-0.0252^*$ $(0.0125)$  |
| Constant   | $3.019^{***}$ $(0.0414)$ | $3.111^{***}$ (0.196) | $3.084^{***}$ (0.0408) | $3.314^{***}$ (0.186)   | $2.732^{***}$ (0.0346)   | $2.889^{***}$ (0.303)   |
| Observations Adjusted R <sup>2</sup> F-statistic | 96<br>0.160<br>19.09     | 96<br>0.308<br>6.297  | 96<br>0.212<br>26.53   | 96<br>0.351<br>7.425    | 96<br>-0.0106<br>0.00736 | 96<br>0.0966<br>2.271   |

Standard errors in parentheses \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

to the coast may have more traditional gender norms. This is counterintuitive, given their earlier exposure to Western influences and trade. This may be due to the fact that commercial culture was stronger in these areas, and communism was not fully embraced during the socialist period. Combined with the insignificance of the coefficient for foreign trade dependence in any specification, one might postulate that there was no significant importation of gender norms from external sources after the New Democratic Revolution.

Interestingly, the coefficient for years of education is insignificant, contrasting with the common expectation that higher education levels lead to more progressive gender norms. The proxy for economic development also shows an insignificant relationship, indicating that higher levels of development do not necessarily correlate with less traditional gender norms.

The coefficient for clan power is consistently negative and significant, indicating that stronger clan cultures, often associated with traditional values, correlate with more traditional gender norms. However, the coefficient for jinshi density is insignificant. An interpretation could be that local governments can easily exert influence on cultural at the community level but have difficulty controlling culture within the family. Chinese Confucian culture has been significantly weakened by successive political and cultural movements since the founding of the PRC. For example, the Criticize Confucius Campaign<sup>7</sup> has destroyed many Confucian temples and related cultural relics and monuments. Still, it is more difficult to control whether households hold family genealogies (Zhang and Ma, 2017).

To address potential endogeneity issues, the IV estimates in Table 3 use the square of the distance to the nearest revolutionary base area as an instrument for CPC membership density. As shown in Table 6, the instrument is irrelevant in the post-1978 case, so I only ran the 2SLS regression for the full set and the pre-1978 subset. The first-stage results in Columns (1) and (2) show that this instrument is significantly correlated with CPC

<sup>&</sup>lt;sup>7</sup>The Criticize Lin (Biao), Criticize Confucius Campaign was a political and intellectual movement initiated by Mao Zedong and his wife, Jiang Qing. It spanned from 1973 until the conclusion of the Cultural Revolution in 1976. Maoist theorists cited the recurring patterns of peasant revolts throughout Chinese history as evidence that the common people had consistently opposed both feudalism and the Confucian ideology that upheld it.

density, with coefficients of 0.151 and 0.152 at significance level of 10% and 5% for the full set and pre-1978 subset, respectively. The second-stage results in Columns (3) and (4) confirm the negative impact of CPC density on gender norms, with coefficients of -0.204 and -0.217, respectively, both significant at the 5% level. This further validates the robustness of the initial OLS findings. Check Appendix A for more diagnostic statistics.

Table 3: Impact of CPC Member Density on Gender Norms: IV Estimates

|  | First Stage $\ln(cpcdensity)$ |                        |                      | cond Stage<br>gendernorm) |
|--|-------------------------------|------------------------|----------------------|---------------------------|
|  | (1)<br>Full Set               | (2)<br>Pre-1978 Subset | (3)<br>Full Set      | (4)<br>Pre-1978 Subset    |
| Squared distance to nearest base area $(\mathrm{km}^2/100000)$ | $0.151^*$ $(0.0578)$          | 0.152**<br>(0.0556)    |                      |                           |
| $\ln(cpcdensity)$  |                               |                        | -0.204**<br>(0.0785) | -0.217**<br>(0.0762)      |
| Controls   | Yes                           | Yes                    | Yes                  | Yes                       |
| Observations<br>Kleibergen-Paap F-Stat.                        | 96<br>6.804                   | 96<br>7.458            | 96                   | 96                        |

Standard errors in parentheses

To summarise, the consistent and significant negative coefficients for CPC membership density across the full sample and pre-1978 subset highlight the CPC's influential role in shaping gender norms. Before the economic reforms, the CPC actively promoted gender equality as part of its ideological commitment to socialism. The fact that the coefficient is not significant post-1978 suggests a weakening of this influence, possibly due to the shift towards market-oriented reforms which reintroduced traditional gender norms in some contexts.

#### 4.2 Results for DID Regression

Table 4 reports the DID regression results. The interaction term  $cpcdensity \times post$  is negative and significant across all specifications. Specifically, the coefficients are -0.196 in all Columns, significant at the 5% level in Columns (1) and (2), and significant at the 1% level in Columns (3) and (5). This indicates that higher CPC density is associated with lower sex ratios (fewer males relative to females) post-intervention (before

<sup>\*</sup> p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

minors become adults). Regions with more intensive communist influences experienced a more pronounced shift "towards" balanced sex ratios, reflecting less traditional gender preferences.

Table 4: Impact of CPC Member Density on Sexratio: DID Estimates

|                                 |                             | sextatio               |                      |                      |  |  |
|---------------------------------|-----------------------------|------------------------|----------------------|----------------------|--|--|
|                                 | (1)                         | (2)                    | (3)                  | (4)                  |  |  |
| cpcdensity                      | 0.0501 $(0.0746)$           | 0.253<br>(0.216)       | 0.0501 $(0.0619)$    | 0.253<br>(0.171)     |  |  |
| post                            | $0.0900^{***}$<br>(0.00852) | 0.0900***<br>(0.00807) | 0.155***<br>(0.0115) | 0.155***<br>(0.0104) |  |  |
| $cpcdensity \times post$        | -0.196*<br>(0.109)          | $-0.196^*$ $(0.103)$   | -0.196**<br>(0.0907) | -0.196**<br>(0.0820) |  |  |
| Prefecture fixed effect         | No                          | Yes                    | No                   | Yes                  |  |  |
| Age group fixed effect          | No                          | No                     | Yes                  | Yes                  |  |  |
| Observations Adjusted R-squared | 1,830<br>0.148              | 1,830<br>0.236         | 1,830<br>0.413       | 1,830<br>0.520       |  |  |
| Adjusted R-squared F-statistic  | $0.148 \\ 107.2$            | $0.236 \\ 5.603$       | 0.413<br>81.36       | 0.52 $15.5$          |  |  |

Standard errors in parentheses

The post-treatment indicator post is positive and significant across all models, indicating an overall increase in sex ratios post-intervention. This reflects a general trend towards more balanced sex ratios as children gain independence and the influence of parental gender preferences wanes (pre-intervention). The treatment intensity term cpcdensity without the interaction with the post-treatment indicator is insignificant across all specifications, suggesting that the treatment does not have any effect pre-intervention. This finding is also consistent with the observed trend towards sex ratio balancing.

Including prefecture and age group fixed effects (Columns (2) to (4)) improves the model fit, as indicated by higher adjusted R-squared values. These fixed effects account for unobserved heterogeneity across regions and age groups, providing a more precise estimate of the treatment effect and strengthening the validity of the findings.

Furthermore, I can examine whether the treatment has any effects "before" it occurs and wheter its effects for each age group by regressing the dependent variable on the interaction terms of the treatmentment intensity variable and age group dummy variables

<sup>\*</sup> p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

for all age groups:

$$sexratio_{it} = \sum_{s=1}^{T} \beta_s(cpcdensity_i \times R_s^t) + \sum_{s=1}^{T} \phi_s R_s^t + \sum_{j=1}^{N} \theta_j Q_j^i + \epsilon_{it}.$$
 (4)

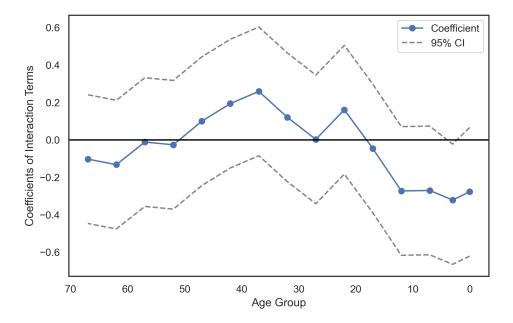


Figure 5: Sex Ratio Trend under Different CPC Member Density

As shown in Figure 5, the coefficients reveal an interesting pattern. Although the coefficients are only statistically significant for the 1-4 years old age group, a clear downward trend emerges when examining the data starting from 15-19 years old age group towards younger age groups. Older than this age, the coefficients remain relatively close to zero, suggesting little to no impact of CPC density on gender norms.

In summary, the negative and significant coefficient of the DID term highlights the CPC's role in reducing gender bias in sex ratios, which likely influenced parental preferences and practices.

## 5 Conclusion

The profound transformation of gender norms in China under the influence of communism reveals a complex interplay between ideological state policies and entrenched cultural traditions. Historically, the CPC has been instrumental in promoting gender equality through various policies and campaigns, challenging the deep-rooted patriarchal norms established during feudal and Confucian eras. The implementation of laws such as the Marriage Law of 1950 and mass mobilisation campaigns like the Iron Girl campaign significantly altered societal perceptions of gender roles.

Our empirical analysis, utilising both cross-sectional and DID approaches, provides robust evidence supporting the significant impact of the CPC on gender norms. The cross-sectional regression results highlight a strong negative correlation between CPC membership density and traditional gender norms, especially pronounced before the economic reforms of 1978. This suggests that during the era of strong state control, the CPC's policies effectively promoted gender equality. However, the weakening of this relationship post-1978 indicates a shift in gender norms influenced by the transition to a market-oriented economy, which reintroduced some traditional gender preferences. Furthermore, the DID analysis, examining sex ratios as a proxy for gender norms, underscores the CPC's role in reducing gender bias. Regions with higher densities of CPC members showed more balanced sex ratios, reflecting less traditional gender preferences among parents. The fact that this effect is also observed in the birth population of 2010 suggests a persistent influence of the CPC's policies on gender norms.

These findings present a paradox regarding the persistence of the CPC's influence. While the cross-sectional analysis indicates a diminishing impact of the CPC post-1978, the DID results suggest a lasting effect on gender preferences. This apparent contradiction warrants further research and discussion to understand the nuanced dynamics of how political and economic transitions interact with social norms. Future studies could explore the mechanisms driving these divergent outcomes and assess the long-term sustainability of state-led social interventions in transforming cultural attitudes. I have conducted some preliminary explorations in Appendix B (Table 7, Table 8), which provide some insights into these dynamics.

In conclusion, the CPC's historical efforts to reshape gender norms have had lasting, albeit evolving, impacts. While the intensity of these impacts has wanted with economic

reforms, the foundational shifts in gender attitudes initiated by the CPC continue to influence contemporary Chinese society. These findings contribute to a deeper understanding of how state-led initiatives can transform social norms, highlighting both the potential and limitations of political institutions in achieving long-term cultural change.

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## A Additional Tables

Table 5: Locations of Revolutionary Bases

| Revolutionary Base Area                             | Centroid          | Longitude  | Latitude  |
|---|-------------------|------------|-----------|
| Jinggangshan Revolutionary Base                     | Ji'an City        | 114.992509 | 27.113443 |
| Central Revolutionary Base                          | Ruijin City       | 116.027135 | 25.885555 |
| Xiang-E-Xi Revolutionary Base                       | Yongxin County    | 114.243096 | 26.945002 |
| Hailufeng Revolutionary Base                        | Shanwei City      | 115.375278 | 22.786211 |
| E-Yu-Wan Revolutionary Base                         | Lu'an City        | 116.521854 | 31.733699 |
| Qiongya Revolutionary Base                          | Haikou City       | 110.198293 | 20.044001 |
| Min-Zhe-Gan Revolutionary Base                      | Nanping City      | 118.177708 | 26.641768 |
| Xiang-E-Gan Revolutionary Base                      | Ganzhou City      | 114.935029 | 25.831829 |
| Xiang-Gan Revolutionary Base                        | Ji'an City        | 114.992509 | 27.113443 |
| Zuo-Youjiang Revolutionary Base                     | Baise City        | 106.618201 | 23.902333 |
| Chuan-Shan Revolutionary Base                       | Suining City      | 105.592898 | 30.532847 |
| Shan-Gan Revolutionary Base                         | Yan'an City       | 109.489727 | 36.585455 |
| Xiang-E-Chuan-Qian Revolutionary Base               | Guiyang City      | 106.630153 | 26.647661 |
| Dongjiang Revolutionary Base                        | Huizhou City      | 114.416196 | 23.111847 |
| Shan-Gan-Ning Border Area                           | Yan'an City       | 109.489727 | 36.585455 |
| Jin-Cha-Ji Anti-Japanese Democratic Base Area       | Taiyuan City      | 112.548879 | 37.870590 |
| Jin-Ji-Yu Anti-Japanese Democratic Base Area        | Handan City       | 114.538961 | 36.625657 |
| Jin-Sui Anti-Japanese Democratic Base Area          | Taiyuan City      | 112.548879 | 37.870590 |
| Ji-Lu-Yu Anti-Japanese Democratic Base Area         | Shijiazhuang City | 114.514859 | 38.042306 |
| Shandong Anti-Japanese Democratic Base Area         | Jinan City        | 117.119999 | 36.651216 |
| Northeast Anhui Anti-Japanese Democratic Base Area  | Suzhou City       | 116.964356 | 33.646373 |
| Central Anhui Anti-Japanese Democratic Base Area    | Anqing City       | 117.063754 | 30.543494 |
| Eastern Anhui Anti-Japanese Democratic Base Area    | Chuzhou City      | 118.317106 | 32.301556 |
| Southern Anhui Anti-Japanese Democratic Base Area   | Huangshan City    | 118.337481 | 29.714655 |
| Southern Jiangsu Anti-Japanese Democratic Base Area | Suzhou City       | 120.585315 | 31.298886 |
| Central Jiangsu Anti-Japanese Democratic Base Area  | Xuzhou City       | 117.284124 | 34.205768 |
| Northern Jiangsu Anti-Japanese Democratic Base Area | Xuzhou City       | 117.284124 | 34.205768 |
| Yu-Wan-Su Anti-Japanese Democratic Base Area        | Hefei City        | 117.227239 | 31.820586 |
| Qiongya Anti-Japanese Democratic Base Area          | Haikou City       | 110.198293 | 20.044001 |
| Henan Anti-Japanese Democratic Base Area            | Zhengzhou City    | 113.625368 | 34.746599 |
| Northeast Anti-Japanese Guerrilla Area              | Changchun City    | 125.323544 | 43.817071 |

Table 6: Diagnostic Statistics for First-Stage Regression

First-stage regression summary statistics

| The stage regression summary statistics |        |                |               |         |          |  |  |
|---|--------|----------------|---------------|---------|----------|--|--|
| Sample used                             | R-sq.  | Adjusted R-sq. | Partial R-sq. | F(1,87) | Prob > F |  |  |
| All                                     | 0.1530 | 0.1059         | 0.0703        | 6.80439 | 0.0106   |  |  |
| Born before 1978                        | 0.1765 | 0.1308         | 0.0765        | 7.45844 | 0.0076   |  |  |
| Born after 1978                         | 0.0399 | -0.0134        | 0.0266        | 2.45476 | 0.1207   |  |  |
|   |        |                |               |         |          |  |  |

| Critical Values  | 10% | 15% | 20% | 25% |  |
|--|-----|-----|-----|-----|--|
| 2SLS size of nominal 5% Wald test<br>LIML size of nominal 5% Wald test |     |     |     |     |  |

Table 6 presents the diagnostic statistics for the first-stage regression. For the full sample, the F-statistic is 6.804 with a p-value of 0.0106, and for the subsample of individuals born before 1978, the F-statistic is 7.458 with a p-value of 0.0076, indicating statistical significance of the instrument in this two groups. However, for the subsample of individuals born after 1978, the F-statistic is 2.45476 with a p-value of 0.1207, showing that the instrument is not significant in this group. Although the F-statistics for the full sample and the pre-1978 subsample are below 10, which is typically used as a threshold for strong instruments, they are above the 20% threshold and statistically significant. Overall, these results demonstrate that while my instrument is not particularly strong, it does exhibit strength and significance to some extent. Therefore, considering these results as a reference is still reasonable.

## **B** Additional Regressions

To further investigate the persistence of the CPC Party's influence on gender norms, I conducted two additional regressions.

Table 7: Impact of Pre-1978 CPC Density on Post-1978 Gender Norms

|                         | $\ln(gender)$ | norm) post-1978 |
|-------------------------|---------------|-----------------|
|                         | (1)           | (2)             |
|                         | OLS           | Instrumented    |
| ln(cpcdensity) pre-1978 | -0.0265       | -0.183          |
|                         | (0.0227)      | (0.0983)        |
| Controls                | Yes           | Yes             |
| Observation             | 96            | 96              |
| Adjusted R-squared      | 0.110         |                 |

Standard errors in parentheses

The first regression used the density of party members before 1978 to predict the gender norms of individuals born after 1978. The results showed no significant relationship (Table 7), suggesting a potential lack of persistence.

<sup>\*</sup> p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table 8: Individual-level Regression

|   | gende         | rnorm        |
|---|---------------|--------------|
|   | (1)           | (2)          |
| CPC membership                          | -0.257*       | -0.299**     |
|   | (0.102)       | (0.107)      |
| CPC member in family                    | -0.0934       | -0.0716      |
|   | (0.0686)      | (0.0685)     |
| Male                                    | 0.268***      | 0.274***     |
|   | (0.0420)      | (0.0420)     |
| Education years                         | -0.181***     | -0.179***    |
|   | (0.00556)     | (0.00556)    |
| Age                                     | 0.0433***     | 0.0288***    |
|   | (0.00149)     | (0.00212)    |
| Income                                  | 0.000000360   | -0.000000175 |
|   | (0.00000118)  | (0.00000118) |
| Born after 1978                         |               | -0.700***    |
|   |               | (0.0725)     |
| CPC membership $\times$ Born after 1978 |               | 0.265        |
|   |               | (0.226)      |
| Constant                                | $14.95^{***}$ | 15.83***     |
|   | (0.254)       | (0.270)      |
| Prefecture fixed effect                 | Yes           | Yes          |
| Obeservation                            | 26812         | 26812        |
| F-statistic                             | 43.42         | 43.61        |
| Adjusted R-squared                      | 0.204         | 0.207        |

Standard errors in parentheses

Using party membership density as a proxy for Communist influence could introduce measurement error. To address this, I performed a micro-level regression analysis. Table 8 presents two models. The variable "CPC membership" is a binary indicator of whether the individual is a party member, and its coefficient is significantly negative, suggesting that party members tend to hold more egalitarian gender norms. The variable "CPC member in family", indicating whether there is a party member in the family, is negative but not significant, implying a potential positive influence on gender norms within families with party members.

In Column (2), I interacted "CPC membership" with "Born after 1978." The interac-

<sup>\*</sup> p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

tion term was not significant, indicating that being a party member post-1978 does not significantly alter gender norms. This further supports the idea that there may be no persistence of the CPC's influence on gender norms beyond the 1978 economic reforms.