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Opting Back In: Chinese Women's Professional Success and the Support of Grandparent Caregivers

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Abstract

In Chinese families, child-rearing responsibilities predominantly fall on mothers, reinforcing an unequal gender division of labor within the household and placing women in a vulnerable position in the labor market. To balance work and family, many mothers rely on additional childcare support, with grandparents serving as the most critical source of assistance. This study examines the impact of grandparental childcare on maternal labor market outcomes in China, with a focus on differences between only-child mothers and those with siblings, as only-child mothers often benefit from greater access to support from their own parents due to their unique position as sole offspring. Using data from six waves of the China Family Panel Studies (CFPS), this study reveals three key findings: (a) both maternal and paternal grandparental childcare significantly boost women's labor market outcomes; (b) only-child mothers are more likely to receive childcare support from maternal grandparents; and (c) the positive effects of grandparental childcare on labor market outcomes are particularly pronounced for only-child mothers, especially when the support comes from maternal grandparents. This study underscores the vulnerable position of working mothers, particularly those with young children, while demonstrating how the advantages of being an only daughter extend into adulthood. It offers new insights into how evolving family structures, shaped by China's one-child policy, continue to influence maternal employment and broader labor market dynamics.

Keywords

China; family structure; grandparental childcare; labor market outcomes; only-child mothers in China

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1. Introduction

In most societies, women are traditionally expected to take on primary caregiving responsibilities, while men are more likely to occupy higher-status, paid positions as primary breadwinners (Asi & Williams, 2020; Greenstein, 2000; Shelton & John, 1996). These entrenched gender norms reinforce a division between paid labor and unpaid caregiving, perpetuating unequal distributions of power and status between men and women (Davis & Greenstein, 2009; Syed, 2010). As a result, women's economic opportunities are often constrained, confining many to unpaid domestic work, such as childcare and household management (Davis & Greenstein, 2009). Historically, these norms have also restricted women's participation in the formal economy, with men owning more property and wielding greater economic power, while women are disproportionately represented in informal, lower-paid, or precarious labor sectors (Syed, 2010).

In response to these inequalities, some countries have introduced policies that provide support to caregiving mothers, recognizing the value of unpaid domestic labor. For instance, Germany offers tax breaks and benefits to families where women stay home to care for children (Ondrich et al., 1996; Preisner et al., 2018). While Finland provides significant financial support to mothers who remain at home with their children until the age of three (Gruber et al., 2023). These policies acknowledge the critical contribution of unpaid caregiving labor to the economy. However, their effectiveness remains a topic of debate, as such measures may unintentionally reinforce traditional gender roles rather than advance gender equality (Atal, 2017).

In contrast, financial support for stay-at-home mothers is not universally available in all modernized countries. For example, in the United States, mothers who stay at home to provide childcare and perform domestic work do not receive tax deductions or direct payments for their contributions (Williams & Cooper, 2004). Consequently, their unpaid labor remains undervalued and unrecognized as a financial contribution to households or the broader economy (Asi & Williams, 2020). While the absence of such support may encourage women to remain in the workforce after becoming mothers (Soparkar, 2024), it has not fundamentally disrupted traditional gender divisions of labor. Women continue to bear the dual burden of managing both professional obligations and domestic responsibilities, often at the cost of heightened stress and pressure. The dual burden of paid work and childcare places mothers, particularly those with very young children, in a vulnerable position. Many working mothers face what is often referred to as the "second shift," where a full day of paid work is followed by unpaid caregiving and household responsibilities (Hochschild & Machung, 2012; Johnston & Swanson, 2006; Warren, 2011). This demanding workload imposes significant physical and emotional strain on mothers, while also reinforcing structural inequalities in the labor market. Research consistently demonstrates that childcare responsibilities have a substantial negative impact on the labor market outcomes of young mothers, forcing them to accept reduced job mobility, lower incomes, stalled career progression, or even career breaks. This phenomenon, commonly referred to as the "motherhood penalty," underscores the persistent challenges mothers face in achieving parity in the workplace (Abendroth et al., 2014; Budig & Hodges, 2010; Correll et al., 2007; Gangl & Ziefle, 2009; Liu & Marois, 2023; Meng et al., 2023; Zhao, 2018).

In China, childcare responsibilities have traditionally fallen disproportionately on mothers, reflecting deeply ingrained gendered divisions of labor within households (W. K. Lee, 2002). Unlike in some countries, Chinese women do not receive tax breaks or government benefits for remaining at home to care for their young children. Despite this lack of formal support, the majority of young mothers continue to participate in the



workforce (Wu & Zhou, 2015). Although female labor force participation rates in China have gradually declined since the 1990s, the country still ranks among the highest globally (Short et al., 2002). In urban areas, over 80% of women aged 25–49 are engaged in paid employment (Shen et al., 2012), underscoring the significant presence of women in the labor market despite persistent caregiving responsibilities.

To address these challenges, many young Chinese mothers rely on grandparents for childcare support rather than turning to formal childcare or quitting their jobs. Unlike in many Western contexts, intergenerational caregiving partnerships play a central role in Chinese households (Goh, 2011). Although the traditional extended family model has declined with modernization, grandparents—particularly grandmothers—continue to play a pivotal role in the lives of their adult children and grandchildren. When young children require additional caregiving beyond what their parents can provide, grandparents often step in as preferred caregivers (Deng et al., 2023). They may offer direct childcare by co-residing with their children or provide financial and logistical support while living separately (Hoang & Kirby, 2020; X. Wang & Feng, 2021; Xu et al., 2019). This intergenerational support significantly alleviates the caregiving burden on mothers, allowing them to balance paid employment with family responsibilities, thereby mitigating the challenges of the dual burden (F. Chen et al., 2011; Gu et al., 2021; Y. Wang & Zhao, 2022).

Research consistently highlights the positive role of grandparental childcare in mitigating the "motherhood penalty" by easing labor market disadvantages for mothers (Abendroth et al., 2014; England et al., 2016). However, the extent of this impact varies depending on family structures and grandparental lineage. For instance, maternal grandparents—particularly maternal grandmothers—are often thought to invest more in childcare due to evolutionary factors, such as the certainty of genetic relatedness (Euler & Weitzel, 1996). In contrast, traditional Chinese norms have historically positioned paternal grandparents as primary caregivers, particularly in patrilocal households where co-residence with sons is common (F. Chen et al., 2000, 2011). Yet, shifting social norms and the widespread prevalence of only-child families, particularly as the first generation born under the one-child policy reaches parenthood (X. Wang & Feng, 2021), have blurred these distinctions. These demographic and cultural changes have intensified intergenerational relationships, with grandparents increasingly serving as the primary source of childcare support (Bengtson, 2001; Coall & Hertwig, 2010).

Despite growing research on grandparental involvement in childcare, little attention has been paid to how maternal and paternal grandparents differ in their roles, particularly under the unique circumstances of only-child families. This study addresses this gap by exploring the effects of maternal and paternal grandparental childcare on women's labor market outcomes in China. Specifically, it examines whether the lineage of caregiving grandparents matters and how these dynamics differ for only-child mothers compared to mothers with siblings. The study seeks to answer the following research questions: How does grandparental childcare influence women's labor market outcomes in China? Does the impact differ between maternal and paternal grandparents, particularly for women who are only children?



2. Literature Review and Hypotheses

2.1. Grandparental Childcare's Impact on Mothers' Labor Market Outcomes

The effects of grandparental childcare on maternal labor force participation differ across contexts. Assive et al. (2012) found mixed results in their study of seven European countries between 2003 and 2005: While grandparental childcare significantly boosted maternal employment in some nations, it had no effect in others. In the UK, Kanji (2017) observed that grandparental involvement allowed mothers to enter the labor market but did not necessarily increase the working hours of those already employed. Similarly, in the USA, Compton and Pollak (2014) found that proximity to either maternal or paternal grandparents raised maternal labor force participation by 4 to 10 percentage points.

In Asia, studies also report varying outcomes. Research from China demonstrates positive effects. Deng et al. (2023) found that grandparental childcare increased women's workforce participation and earnings without requiring longer work hours, while Meng et al. (2023) documented fewer career disruptions for mothers receiving grandparental support. In contrast, Japanese research by Asai et al. (2015) noted a declining impact of grandparental care on maternal employment, attributed to the reduced prevalence of multi-generational households and the growing reliance on formal childcare services.

Even among studies reporting positive effects, the magnitude of grandparental childcare's impact varies. For instance, Bratti et al. (2018) found that pension eligibility for maternal grandmothers in Italy increased mothers' labor force participation by 11%. Similarly, H. Yu et al. (2023), using IV-2SLS models, concluded that mothers relying on grandparents for childcare were 20% more likely to be employed compared to those without such support.

Drawing on existing research, particularly from China, the evidence strongly suggests that grandparental childcare positively influences maternal labor market outcomes. Therefore, we propose:

Hypothesis 1: Grandparental childcare positively influences women's labor market participation.

2.2. Differences of Maternal and Paternal Grandparental Childcare on Mothers' Labor Market Outcomes

Variations in the effects of grandparental childcare across different contexts underscore the complexity of these dynamics, which are shaped by both the nature of grandparental involvement and the societal and familial factors that influence its use. One important yet underexplored area is the distinct roles of maternal and paternal grandparents in influencing maternal labor market outcomes. Understanding these differences offers critical insights into the interplay between family structure, intergenerational support, and women's workforce participation.

The roles of maternal and paternal grandparents are deeply rooted in cultural norms but are also influenced by evolving socioeconomic conditions. In patrilineal societies, traditional customs often prioritize paternal grandparents' involvement in childcare, typically facilitated through post-marriage co-residence (Chu et al., 2011). However, economic development and demographic shifts have weakened patriarchal norms,



strengthening women's ties to their natal families (F. Chen et al., 2011; C. Zhang et al., 2019). This cultural shift has reshaped grandparental caregiving, making the comparison between maternal and paternal grandparental support increasingly relevant.

Evidence suggests that maternal grandparents, particularly maternal grandmothers, are more likely to provide intensive childcare compared to paternal grandparents (Coall et al., 2014). This trend has been observed across various cultural and welfare state contexts (Danielsbacka et al., 2011). For instance, Danielsbacka et al. (2011), using a large multinational European survey, found that maternal grandmothers consistently provided the most childcare across all European regions, prioritizing their daughters' children over their sons' children. These findings highlight the pivotal role of maternal grandparents in family decision-making and caregiving.

In China, the lineage of grandparental caregivers strongly influences maternal labor market outcomes. J. Yu and Xie (2018) found that women living with their maternal parents experienced no wage penalties, while those living with paternal parents faced significant wage reductions. C. Zhang et al. (2023) further showed that maternal grandmothers' support reduced mothers' parenting stress, whereas paternal grandmothers' involvement often heightened it.

Over time, intergenerational caregiving dynamics in China have shifted from a strong patrilineal bias to a more balanced bilateral approach. Early studies, such as F. Chen et al. (2000), found that proximity to paternal grandparents reduced mothers' childcare responsibilities, reflecting traditional patrilineal norms. However, economic reforms and the one-child policy have gradually weakened patriarchal traditions, leading to more equitable caregiving arrangements. C. Zhang et al. (2019) observed that childcare decisions now increasingly reflect practical considerations and relationship quality rather than adherence to patrilineal customs.

As maternal and paternal grandparents both play meaningful roles in childcare, we propose the following hypotheses:

Hypothesis 1a: Maternal grandparental childcare positively influences women's labor market participation.

Hypothesis 1b: Paternal grandparental childcare positively influences women's labor market participation.

2.3. The Importance of Family Structure: Only-Child Status and Grandparental Care

The rise of only-child families, driven by declining fertility rates and China's former one-child policy, has reshaped intergenerational dynamics (Feng et al., 2014). This unique family structure offers an opportunity to examine how close, exclusive ties between only children and their parents influence grandparental childcare support and its implications for maternal labor market outcomes (X. Wang & Feng, 2021). Understanding these dynamics sheds light on how family structure affects resource distribution and caregiving arrangements.



The one-child policy has created a generation of urban-only children who are now parents themselves (F. Wang et al., 2013). As these individuals enter parenthood, their status as only children significantly influences grandparental childcare patterns. Only children typically maintain stronger relationships with their parents throughout adulthood (Xu et al., 2019), benefiting from concentrated family resources and support due to their position as their parents' "only hope" (Fong, 2004). According to family resource dilution theory, family resources—such as time, attention, and financial support—are finite and are divided among children. In families with multiple children, these resources are diluted, but only children avoid competition, thereby receiving full access to family support (Blake, 1981).

Empirical studies consistently find a negative relationship between family size and children's attainment, with only children benefiting in areas such as intellectual development and educational achievement (Gibbs et al., 2016; Guo & VanWey, 1999; Sandberg & Rafail, 2014; Steelman et al., 2002). Most of this research, however, focuses on childhood. In the context of China's extended family structure (Fei, 1998), these advantages persist into adulthood. Only children maintain particularly close ties to their parents and receive greater financial and instrumental support compared to those with siblings (J. Chen & Jordan, 2018; Goh, 2011; Xie & Zhu, 2009; Xu et al., 2019). This includes access to grandparental childcare, as only children face no sibling competition for these resources (Laham et al., 2005). Thomese and Liefbroer (2013) confirmed this effect, finding that grandparents with fewer adult children provide more childcare to their grandchildren. Therefore, we propose:

Hypothesis 2: Adult-only children are more likely to receive grandparental childcare support from their own parents.

Specifically: Women who are only children are more likely to receive maternal grandparental childcare support.

In China, traditional patrilineal norms have historically influenced resource allocation, often favoring sons over daughters (Chu et al., 2007; A. Hu & Tian, 2018; Thornton & Lin, 1994). Under these norms, family resources are typically reserved for male heirs, leaving daughters—especially older daughters—at a disadvantage (Chu et al., 2007). However, only daughters occupy a unique position. As sole children, they receive exclusive access to family resources, similar to sons, and enjoy stronger parental support (Fong, 2004). Recent evidence showed that this "only-daughter advantage" had extended into adulthood, as only daughters maintained closer relationships with their parents and received substantial support for themselves and their children (X. Wang & Feng, 2021; W. Zhang, 2009).

Grandparental childcare plays a critical role in alleviating the childcare burden within families, which disproportionately falls on women. For only daughters, their exclusive access to maternal grandparental support provides them with greater flexibility and opportunities to participate in the workforce. Research indicated that women maintained strong emotional bonds with their natal families and placed high levels of trust in their parents for childcare, which reduced stress and enabled career focus (Uttal, 1999; W. Zhang, 2009; C. Zhang et al., 2023). Furthermore, only daughters often experience less gender discrimination within their families, receiving more career-oriented support compared to daughters with brothers (S. Hu & Mu, 2021).

While direct comparisons of labor market outcomes between only children and siblings receiving grandparental childcare are limited, studies on intergenerational support provide valuable insights. Larger



families tend to receive fewer parental financial transfers due to resource competition (Albertini & Kohli, 2013), and only children consistently benefit from greater parental support (Emery, 2013). Lersch (2019) found that additional siblings reduce individual wealth, particularly in affluent families, underscoring how family size influences the availability of resources like grandparental childcare.

Based on these findings, we propose the following hypothesis:

Hypothesis 3: The positive effect of grandparental childcare on labor market outcomes is stronger for women who are only children compared to those with siblings, particularly when receiving maternal grandparental support.

3. Data, Variables, and Methods

3.1. Data

This study utilizes data from the China Family Panel Studies (CFPS), a nationally representative longitudinal survey conducted by Peking University. The CFPS employed multistage probability sampling to collect information on individuals, families, and communities (Xie & Hu, 2014; Xie & Lu, 2015).

The CFPS dataset is well-suited for this research as it provides comprehensive data on childcare arrangements, labor market outcomes, and family structure. Its longitudinal design enables the analysis of changes over time, allowing for a detailed investigation into how grandparental childcare and only-child status influence maternal labor market outcomes in China.

The analysis spans six waves of CFPS data from 2010 to 2020. The sample includes women aged 20 to 50 in the first wave who completed the children questionnaire. Farmers and self-employed individuals are excluded due to their distinct employment and income patterns. After removing observations with missing data for key variables, the final analytical sample comprises 6,352 observations from 2,333 individuals.

3.2. Measures and Variables

3.2.1. Labor Market Outcomes

Maternal labor market outcomes are the dependent variables and include three key measures:

- 1. Employment status: A binary variable coded as 1 if the individual is employed and 0 if unemployed or not in the labor force. This captures women's labor market participation.
- 2. Weekly working hours: This variable measures the intensity of work. For the 2010 wave, weekly hours are calculated by multiplying weekday hours by five and adding twice the reported weekend hours. In subsequent waves (2012–2020), respondents directly reported total weekly working hours. Unemployed individuals are assigned a value of zero.
- 3. Annual income: This variable reflects self-reported personal income. To ensure comparability across survey years, income data are trimmed at the 1st and 99th percentiles, adjusted for inflation using the 2010 Consumer Price Index, and transformed using the natural logarithm.



3.2.2. Only-Child Status

Only-child status is a binary variable coded as 1 for individuals without siblings and 0 for those with one or more siblings.

3.2.3. Grandparental Childcare

The primary independent variable is the type of childcare arrangement, derived from responses to the question: "In the most recent month when the parents were not on vacation, who mainly took care of the child during the daytime?" Childcare is classified into three categories: paternal grandparental care, maternal grandparental care, and other care arrangements (e.g., parental care, daycare centers, or other caregivers).

For families with multiple children receiving different forms of care, households are classified as receiving grandparental care if any child is cared for by grandparents. This approach captures the maximum level of grandparental involvement in the household. The distinction between paternal and maternal grandparental care allows for a nuanced analysis of how intergenerational caregiving patterns influence maternal labor market outcomes.

3.2.4. Control Variables

Several control variables are included at both individual and family levels to account for potential confounders:

- 1. Individual-level controls: Age, age squared, marital status (reference group: separated/divorced/widowed), educational attainment (reference group: below upper secondary), household registration status (reference group: rural hukou), self-rated health, youngest child's age, and the number of children
- 2. Grandparental characteristics: Age of the youngest parent, highest education level (reference group: primary and below), and Chinese Communist Party (CCP) membership status (reference group: no; baseline wave).
- 3. Family-level controls: Geographic region (East, Central, or West China, with East as the reference group) and household income (log of combined wage, business, property, and transfer income).

3.3. Analytical Strategies

The analysis employs random effects models to explore how grandparental childcare impacts maternal labor market outcomes, focusing on differences between maternal and paternal grandparents as well as the role of only-child status. The analysis proceeds in three steps:

- 1. Descriptive statistics: We compare key characteristics across households with different caregiver types (paternal grandparents, maternal grandparents, and other caregivers).
- 2. Caregiving arrangements: Using a random effects multinomial logit model, we analyze the relationship between only-child status and caregiving arrangements.
- 3. Labor market outcomes: Random effects models assess how caregiving arrangements and only-child status influence maternal labor market participation.



For employment status, linear probability models are used within the random effects framework. This approach avoids the incidental parameters problem common in nonlinear panel data models and allows for direct interpretation of marginal effects. Random effects models are also applied to analyze weekly working hours and annual income, as they account for both time-variant and time-invariant predictors, including only-child status.

To address heteroskedasticity and serial correlation in the panel data, robust standard errors clustered at the individual level are employed. Additionally, statistical graphics are used to illustrate the relationships between only-child status, caregiving arrangements, and maternal labor market outcomes.

4. Results

Table 1 highlights distinct patterns in women's labor market participation across different childcare arrangements. Women receiving grandparental support—whether from maternal or paternal grandparents—are more likely to be employed, work longer hours, and earn higher incomes compared to those relying on other care arrangements. These findings underscore the critical role of grandparental assistance in facilitating women's workforce participation after becoming mothers.

Notable differences also emerge in the family and grandparental characteristics associated with childcare arrangements. Families relying on maternal grandparents for childcare tend to have higher socioeconomic status, characterized by more college-educated mothers, higher rates of urban household registration, and greater household incomes. Maternal grandparents in these families are generally better educated, more likely to hold CCP membership, and slightly younger than paternal grandparents. Additionally, these families typically have fewer children, meaning maternal grandparents care for fewer grandchildren. This profile suggests that maternal grandparental care is more prominent in urban, highly educated families with greater social and economic resources.

Table 1. Descriptive statistics.

| | Main childcare provider | | | | |
|----------------------------------|------------------------------------|----------|-----------------------|--|--|
| | Other people Paternal grandparents | | Maternal grandparents | | |
| Women's labor market outcomes | | | | | |
| Employment status | | | | | |
| Employed | 61.0% | 75.7% | 74.6% | | |
| Not employed | 39.0% | 24.3% | 25.4% | | |
| Working hours per week | 29.638 | 38.369 | 36.542 | | |
| | (25.342) | (24.522) | (22.380) | | |
| Logged income | 1.774 | 2.223 | 2.428 | | |
| | (1.572) | (1.492) | (1.510) | | |
| Individual-level characteristics | | | | | |
| Only-child status | | | | | |
| Only child | 91.9% | 91.9% | 70.4% | | |
| Non-only child | 8.1% | 8.1% | 29.6% | | |

Table 1.



Table 1. (Cont.) Descriptive statistics.

| | Main childcare provider | | | | |
|--------------------------------|-------------------------|-----------------------|----------|--|--|
| | Other people | Maternal grandparents | | | |
| Educational attainment | | | | | |
| Upper secondary and below | 84.0% | 81.9% | 67.4% | | |
| College and above | 16.0% | 18.1% | 32.6% | | |
| Age | 34.897 | 33.897 | 33.632 | | |
| | (7.482) | (8.112) | (7.634) | | |
| Marital status | | | | | |
| Separated/divorced/widowed | 4.9% | 4.3% | 10.9% | | |
| Currently married | 95.1% | 95.7% | 89.1% | | |
| Household registration status | | | | | |
| Rural hukou | 67.5% | 69.9% | 43.3% | | |
| Urban hukou | 32.5% | 30.1% | 56.7% | | |
| Self-rated health | 2.447 | 2.508 | 2.475 | | |
| | (1.185) | (1.165) | (1.132) | | |
| Age of the youngest child | 6.378 | 5.354 | 4.806 | | |
| , , | (4.215) | (3.702) | (3.492) | | |
| Number of children | 1.360 | 1.424 | 1.279 | | |
| | (0.579) | (0.620) | (0.549) | | |
| Parental-level characteristics | | | | | |
| Age of youngest grandparent | 60.939 | 59.592 | 59.045 | | |
| | (10.702) | (11.151) | (10.158) | | |
| CCP membership | | | | | |
| Yes | 14.9% | 14.3% | 20.4% | | |
| No | 85.1% | 85.7% | 79.6% | | |
| Grandparental education | | | | | |
| Primary and below | 54.6% | 54.4% | 38.8% | | |
| Lower secondary | 26.4% | 26.3% | 30.6% | | |
| Upper secondary and above | 19.0% | 19.2% | 30.6% | | |
| Family-level characteristics | | | | | |
| Logged family income | 10.517 | 10.772 | 10.969 | | |
| | (1.088) | (0.964) | (1.002) | | |
| Region | | | | | |
| East China | 42.9% | 45.1% | 45.0% | | |
| Central China | 34.9% | 31.0% | 31.6% | | |
| West China | 22.1% | 23.8% | 23.4% | | |
| N | 4,146 | 1,804 | 402 | | |

Note: Categorical variables are presented as percentages and continuous variables are presented as means and standard deviations, where standard deviations are presented in parentheses.

To examine the relationship between only-child status and the likelihood of relying on different types of grandparental childcare, we employed a random effects multinomial logit model (Table 2). The results show a significant association between being an only daughter and the likelihood of depending on maternal grandparents for childcare. Specifically, being an only daughter increases the odds of using maternal grandparental care by a factor of 4.66 (e^1.538) compared to other childcare arrangements. This finding



Table 2. Random effects multinomial logit model results: Impact of only-child status on grandparental childcare choices.

| | Paternal grandparental childcare | Maternal grandparental childcare |
|-----------------------------------------------------------|----------------------------------|----------------------------------|
| Only child status (ref. = non-only child) | -0.229 (0.176) | 1.538*** (0.230) |
| Age | -0.163*** (0.048) | 0.017 (0.086) |
| Age squared | 0.002*** (0.001) | 0.000 (0.001) |
| Marital status (ref. = Separated/divorced/widowed) | 0.078 (0.205) | -1.184*** (0.279) |
| Household registration status (ref. = rural hukou) | -0.104 (0.114) | 0.809*** (0.192) |
| Educational attainment (ref. = upper secondary and below) | 0.220 (0.144) | 0.115 (0.223) |
| Self-rated health | 0.027 (0.040) | 0.147* (0.075) |
| age of the youngest child | -0.072*** (0.013) | -0.150*** (0.024) |
| Number of children | 0.281*** (0.076) | 0.102 (0.142) |
| Youngest grandparental age | 0.011 (0.008) | 0.025 (0.015) |
| Grandparental CCP membership (ref. = no) | 0.034 (0.140) | 0.173 (0.219) |
| Grandparental education (ref. = primary and below) | | |
| Lower secondary | -0.139 (0.120) | 0.176 (0.209) |
| Upper secondary and above | -0.159 (0.141) | 0.316 (0.232) |
| Logged family income | 0.319*** (0.046) | 0.562*** (0.093) |
| Region (ref. = East China) | | |
| Central China | -0.210 (0.110) | 0.008 (0.189) |
| West China | 0.072 (0.123) | 0.435* (0.213) |
| Survey year dummies | Yes | Yes |
| Constant | -23.619 (15.846) | -58.232* (29.002) |
| N | 60 | 352 |

Note: Standard errors in parentheses; * p < 0.05, ** p < 0.01, *** p < 0.001; standard errors are clustered at the individual level.



supports Hypothesis 2, demonstrating that women who are only daughters are significantly more likely to rely on their parents—particularly maternal grandparents—for childcare support.

Table 3 illustrates that both maternal and paternal grandparental childcare positively impact mothers' labor market outcomes. These arrangements are associated with higher employment rates (Model 1), longer working hours (Model 3), and increased personal income (Model 5). These findings support Hypothesis 1 (both Hypothesis 1a and 1b). However, further analysis reveals significant differences in these effects based on mothers' sibling status.

The influence of maternal grandparental childcare is particularly striking for women who are only children. When only daughters receive childcare support from their own parents, they exhibit significantly higher employment rates (Model 2), marginally longer working hours (Model 4), and marginally higher personal income (Model 6). In contrast, while childcare provided by paternal grandparents generally benefits mothers, it does not offer additional advantages for only daughters.

These findings support Hypothesis 3, suggesting that only daughters experience greater career benefits from maternal grandparental childcare compared to support from their in-laws. This pattern highlights that the effectiveness of grandparental childcare varies depending on family dynamics and the mother's background characteristics.

Table 3. Random effect models predicting the differential impact of grandparental childcare on mothers' labor market outcomes.

| | Labor force participation | | Worki | Working hours | | Logged annual income | |
|----------------------------------------------------|---------------------------|-----------------------------|----------------------|-------------------------------|----------------------|-------------------------------|--|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | |
| Only child status (ref. = non-only child) | -0.021 (0.017) | -0.037 ⁺ (0.021) | -2.570* (1.026) | -2.725* (1.287) | 0.076 (0.061) | 0.002 (0.074) | |
| Main Childcare Provider (ref. = other people) | | | | | | | |
| Paternal grandparental childcare | 0.142*** (0.011) | 0.142*** (0.011) | 9.353*** (0.672) | 9.525*** (0.711) | 0.400*** (0.035) | 0.386*** (0.037) | |
| Maternal grandparental childcare | 0.128*** (0.022) | 0.096*** (0.026) | 8.231*** (1.224) | 6.994*** (1.460) | 0.266*** (0.061) | 0.214** (0.073) | |
| Only-child*Paternal grandparental childcare | | -0.003 (0.036) | | -2.176 (1.972) | | 0.153 (0.107) | |
| Only-child*Maternal grandparental childcare | | 0.127** (0.047) | | 4.484 ⁺ (2.565) | | 0.231 ⁺ (0.130) | |
| Age | 0.036*** (0.006) | 0.036*** (0.006) | 2.400*** (0.380) | 2.399*** (0.379) | 0.122*** (0.018) | 0.122*** (0.018) | |
| Square of age | -0.000*** (0.000) | -0.000*** (0.000) | -0.035*** (0.005) | -0.035*** (0.005) | -0.002*** (0.000) | -0.002*** (0.000) | |
| Marital status (ref. = Separated/divorced/widowed) | -0.023 (0.025) | -0.024 (0.025) | -3.403* (1.413) | -3.412* (1.414) | -0.353*** (0.066) | -0.354*** (0.066) | |
| Household registration status (ref. = rural hukou) | 0.048*** (0.013) | 0.047*** (0.013) | -0.374 (0.754) | -0.410 (0.755) | 0.325*** (0.044) | 0.326*** (0.044) | |



Table 3. (Cont.) Random effect models predicting the differential impact of grandparental childcare on mothers' labor market outcomes.

| | Labor force participation | | Working hours | | Logged annual income | |
|-----------------------------------------------------------|---------------------------|---------------------|------------------|------------------|-----------------------------|-----------------------------|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| Educational attainment (ref. = upper secondary and below) | 0.157*** | 0.157*** | 2.964*** | 2.968*** | 0.693*** | 0.692*** |
| | (0.015) | (0.015) | (0.849) | (0.848) | (0.053) | (0.053) |
| Self-rated health | -0.012** (0.005) | -0.012** (0.005) | 0.032 (0.305) | 0.030 (0.305) | -0.029 ⁺ (0.015) | -0.029 ⁺ (0.015) |
| Age of the youngest child | 0.012*** | 0.012*** | 0.885*** | 0.883*** | 0.039*** | 0.039*** |
| | (0.001) | (0.001) | (0.091) | (0.091) | (0.005) | (0.005) |
| Number of children | -0.034*** | -0.034*** | -1.606** | -1.613** | -0.159*** | -0.160*** |
| | (0.010) | (0.010) | (0.603) | (0.603) | (0.032) | (0.032) |
| Logged family income | 0.032*** | 0.032*** | 1.211*** | 1.217*** | 0.394*** | 0.394*** |
| | (0.005) | (0.005) | (0.353) | (0.353) | (0.017) | (0.017) |
| Youngest grandparental age | 0.001 | 0.001 | 0.011 | 0.011 | 0.001 | 0.001 |
| | (0.001) | (0.001) | (0.058) | (0.058) | (0.003) | (0.003) |
| Grandparental CCP | 0.014 | 0.015 | 0.842 | 0.872 | 0.013 | 0.014 |
| membership (ref. = no) | (0.015) | (0.015) | (0.927) | (0.927) | (0.052) | (0.052) |
| Grandparental education (ref. = primary and below) | | | | | | |
| Lower secondary | 0.024 ⁺ | 0.025 ⁺ | 0.149 | 0.139 | 0.146** | 0.147** |
| | (0.013) | (0.013) | (0.815) | (0.814) | (0.045) | (0.045) |
| Upper secondary and above | 0.009 | 0.009 | -0.488 | -0.522 | 0.113* | 0.113* |
| | (0.014) | (0.014) | (0.907) | (0.905) | (0.052) | (0.052) |
| Region (ref. = East China) | | | | | | |
| Central China | -0.054*** | -0.054*** | -1.887* | -1.895* | -0.216*** | -0.216*** |
| | (0.012) | (0.012) | (0.745) | (0.745) | (0.040) | (0.040) |
| West China | -0.049*** | -0.050*** | -0.194 | -0.243 | -0.307*** | -0.306*** |
| | (0.013) | (0.013) | (0.896) | (0.894) | (0.046) | (0.046) |
| Survey year dummies | Yes | Yes | Yes | Yes | Yes | Yes |
| Constant | -0.690*** | -0.690*** | -32.187*** | -32.157*** | -4.399*** | -4.401*** |
| | (0.111) | (0.111) | (7.441) | (7.432) | (0.365) | (0.365) |
| N | 6352 | 6352 | 6352 | 6352 | 6352 | 6352 |
| Within R-squared | 0.410 | 0.410 | 0.206 | 0.206 | 0.295 | 0.295 |
| Between R-squared | 0.415 | 0.417 | 0.227 | 0.229 | 0.570 | 0.571 |
| Overall R-squared | 0.407 | 0.407 | 0.209 | 0.210 | 0.463 | 0.464 |

Notes: Standard errors in parentheses; $^+p < 0.1$, $^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$; standard errors are clustered at individual level.

To clarify the findings, we visualized the results from Model 2, Model 4, and Model 6 in Table 3 and presented the key outcomes in Figure 1. The figure highlights the differential effects of grandparental childcare on mothers' labor market outcomes, depending on the grandparents' lineage and the mother's only-child status.



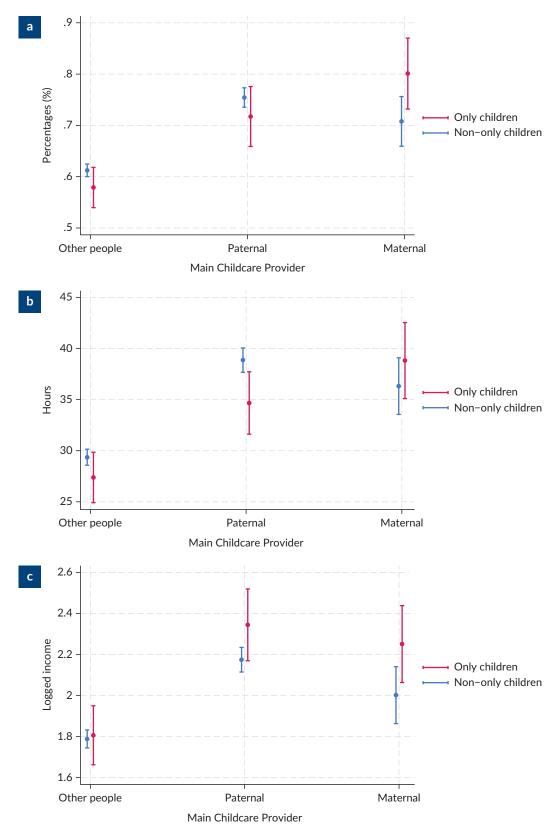


Figure 1. Labor market outcomes by main childcare provider and only-child status: (a) labor force participation—results are predicted from Model 2, Table 3; (b) working hours per week—results are predicted from Model 4, Table 3; (c) logged annual income—results are predicted from Model 6, Table 3.

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Figure 1 reveals that maternal grandparental childcare provides the greatest benefits for mothers who are only children, leading to significantly higher levels of labor force participation, longer working hours, and greater income compared to mothers with siblings. This suggests that only-child mothers derive the most substantial labor market advantages from maternal grandparental support.

In contrast, mothers relying on daycare centers or caring for their children themselves show the poorest outcomes across all three labor market measures. Interestingly, the figure also indicates that non-only-child mothers benefit more from paternal grandparental childcare, while only-child mothers gain more from maternal grandparental support.

Overall, Figure 1 underscores that the benefits of grandparental childcare are not uniform but vary based on family structure and the grandparents' lineage. These findings align with our hypotheses, emphasizing the critical role of intergenerational caregiving in shaping maternal labor market outcomes.

5. Discussion and Conclusion

Using a decade of data (2010–2020) from the CFPS, this study examines how grandparental childcare and family structure influence mothers' labor market outcomes. The findings reveal that the relationship between grandparental care and maternal employment is closely tied to family configurations, particularly in terms of generational lineage and sibling status. These results contribute to our understanding of how intergenerational support systems shape women's ability to balance work and family responsibilities in contemporary China.

Both maternal and paternal grandparental childcare is strongly associated with improved labor market outcomes for mothers, including higher employment rates, longer working hours, and increased income. This highlights the critical role of informal childcare, particularly from grandparents, in supporting mothers' workforce participation. By offering reliable and cost-free childcare, grandparents help alleviate the work-family conflict, allowing mothers to focus more on their careers and professional development.

Our analysis also shows that mothers who are only children are more likely to rely on their own parents for childcare. This reflects the unique dynamics of only-child families, where parents can devote their resources and attention exclusively to one child. Without siblings to share parental support, only-child mothers often maintain stronger bonds with their parents, ensuring greater access to their assistance. This concentrated parent-child relationship appears to extend to the next generation, as only-child mothers rely more heavily on their own parents for childcare. These findings suggest that China's former one-child policy not only shaped family size but also reinforced vertical family ties, particularly in how adult children access and utilize parental support.

The interaction effects in the analysis further confirm that only-child mothers benefit the most from maternal grandparental childcare. This aligns with the matrilineal advantage observed in grandparent-grandchild relationships (Chan & Elder, 2000) and the gendered division of childcare responsibilities within families (Thomese & Liefbroer, 2013). These dynamics emphasize the central role maternal grandparents play in providing childcare, especially for daughters without siblings.



This study makes contributions to the understanding of grandparental childcare and maternal labor market outcomes. First, it differentiates between maternal and paternal grandparental care, revealing distinct patterns in how each type of support influences mothers' labor market engagement. This challenges traditional assumptions about lineage-based care and highlights the evolving dynamics of family support systems. Second, the findings illustrate how China's former one-child policy reshaped family structures and intergenerational support patterns. Being an only child significantly affects how women access and benefit from grandparental childcare, suggesting a shift from strictly patrilineal practices to more balanced intergenerational relationships.

The unique family structure of only-child households—characterized by the absence of siblings and a greater concentration of parental resources—has fostered stronger intergenerational ties. The one-child policy increased the prevalence of these households, particularly in urban areas (Feng et al., 2014), and daughters often received greater parental investment in education and human capital (M.-H. Lee, 2012). This allowed women to achieve higher educational levels and access previously restricted career opportunities (Fong, 2004). Our findings suggest that these benefits extend beyond education and early careers (X. Wang & Feng, 2021), as only-child mothers continue to rely on strong maternal intergenerational support for childcare. This support enables them to sustain labor market participation and mitigate the motherhood penalty.

Although China has transitioned to policies allowing two or three children per couple (Tatum, 2021; Zeng & Hesketh, 2016), the long-lasting impact of the one-child policy continues to shape family dynamics. Our findings indicate that structural changes brought about by the policy still influence childcare arrangements, maternal workforce participation, and decisions regarding additional children (Zhong & Peng, 2020). These persistent effects underscore the need for continued research on only-child families, especially those in their childbearing years, as China moves beyond the one-child era.

However, this study also highlights persistent gender inequalities in childcare and labor market outcomes. Although only daughters may experience some advantages due to greater parental support, this does not translate into genuine gender equality. Childcare responsibilities remain disproportionately shouldered by women and their female relatives, such as grandmothers, reinforcing the patriarchal gender division of labor within the home (Thornton & Lin, 1994). Young mothers continue to face the pressures of intensive motherhood (Rizzo et al., 2013) and the motherhood penalty for unpaid family responsibilities (Folbre, 2012), leaving them disadvantaged both within their families and in the labor market. While grandparental childcare alleviates some of this burden, it does not fundamentally challenge the patriarchal norms governing work and family roles. Future research should explore pathways toward gender equality by examining how women's lived experiences at home and work can inform policy reforms (Cornwall, 2016). Structural changes are necessary to address entrenched gender norms and create equitable conditions for women in both the family and the workplace.

This study also has important implications for China's efforts to boost fertility rates. While recent policy shifts allow for larger families, macro-level changes alone have not effectively encouraged higher birth rates. Research suggests that fertility policies must be complemented by family-focused support measures (Q. Chen et al., 2023; Zhong & Peng, 2020). Our findings show that decisions about additional children are closely tied to family childcare arrangements, particularly how mothers balance work and family obligations. Effective policy development requires a nuanced understanding of Chinese family structures and their



evolving dynamics, including the needs of grandparents who provide essential childcare support. Policies that address the needs of both working mothers and caregiving grandparents will be critical for fostering sustainable family systems.

Several limitations of this study should be acknowledged. First, the analysis assumes that childcare needs remain stable, but in reality, they vary significantly as children grow, with younger children (ages 0–3) requiring the most care. Future research could explore how childcare demands evolve over time. Second, the measure of grandparental involvement used in this study is simplified, categorizing care into three broad groups: paternal grandparents, maternal grandparents, and other caregivers. In practice, many families receive support from both sets of grandparents in varying degrees. Future research should explore these dynamics in greater detail and incorporate male samples to broaden the scope of the findings. Finally, while this study offers valuable insights, it does not yet establish strong causality. Future research could build on these findings by employing more rigorous causal methods.

In conclusion, this study provides important insights into the role of grandparental childcare in mitigating the motherhood penalty and supporting maternal employment, particularly among only-child mothers in China. The findings highlight the significance of family structure and intergenerational support in shaping women's labor market outcomes and balancing work and family responsibilities. By examining these dynamics, this study contributes to a deeper understanding of how family configurations and caregiving practices influence women's careers, particularly in the context of China's rapid social and demographic changes.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The data used in this article from the CFPS are publicly available at the following website: https://cfpsdata.pku.edu.cn/#/home

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