

# Tradeoff between Entrepreneurship and Lineage: Evidence from China's Nationwide Two-Child Policy \*

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## ABSTRACT

We investigate the tradeoff between household fertility and entrepreneurship by modeling fertility and occupational choices as jointly endogenous. Using a difference-in-differences strategy based on China's two-child policy, we find that households with a married woman aged 20 to 40 are less likely to engage in entrepreneurship but more likely to have additional children. This tradeoff is driven by heightened risk aversion following childbirth, as increased minimum consumption raises the perceived cost of entrepreneurial risk. The negative impact is more pronounced among households facing higher subsistence consumption, financial constraints, income volatility, and weaker intra-household risk sharing, supporting risk aversion as the key mechanism. Effects are also stronger in households whose first child is a daughter, reflecting son preference. Our findings suggest that demographic policies can unintentionally suppress entrepreneurial activity by amplifying household-level sensitivity to risk.

Keywords: Entrepreneurship, Family Planning Policy, Household Economics, Risk Preference, Intra-household Risk Sharing

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# 1 Introduction

As entrepreneurship plays a vital role in economic growth, job creation, and wealth equality (Schumpeter, 2008; Decker et al., 2014; Herranz et al., 2015), a vast literature has focused on what drives individuals to become entrepreneurs.<sup>1</sup> Many scholars argue that risk associated with entrepreneurship are a primary reason for why individuals are deterred from starting their own business (Evans and Jovanovic, 1989; Manso, 2011; Gottlieb et al., 2022). Much of the prior theoretical and empirical research has centered on risk factors at the individual level, such as personal income and career prospects. Despite the household’s collective capacity to bear risk being a key factor in shaping household labor decisions (Ortigueira and Siassi, 2013), the influence of family preferences on entrepreneurial choice remains surprisingly underexplored and calls further investigation.

This paper aims to bridge this gap by exploring how household-level collective preferences affects entrepreneurial choice. There is growing interest in understanding how household demographic changes influence individual members’ risk attitudes and economic outcomes. For instance, research shows that fund managers who have experienced family bereavement tend to adopt lower risk strategies (Liu et al., 2023), and single CEOs may pursue riskier investments to increase their attractiveness in the marriage market (Roussanov and Savor, 2014). These findings suggest that household traits and events play a crucial role in shaping individuals’ occupational choices, including entrepreneurial decisions, highlighting the importance of considering household-level factors alongside individual characteristics. Our study focuses on how childrearing intentions, particularly in cultures where childbirth is highly valued, influence entrepreneurial choices, highlighting the implications of expected

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<sup>1</sup>For example, studies have identified several key factors that affect individual entrepreneurial decisions, such as financial constraints, risk tolerance, career risk, entry regulation, tax policy, insurance on self-employment, and collateral (Evans and Jovanovic, 1989; Gentry and Hubbard, 2000; Hurst and Lusardi, 2004; Klapper et al., 2006; Cagetti and De Nardi, 2006; Aghion et al., 2007; Manso, 2011; Denes et al., 2023; Manuel et al., 2015).

childbirth for household preferences.

A priori, it is unclear how parenthood influences entrepreneurship. On one hand, families expecting a child may pursue entrepreneurship in search of higher income; on the other hand, they may avoid it due to the need for income stability and greater time commitments.<sup>2</sup> Thus, the extent to which fertility shapes households' labor market decisions remains an empirical question. Since fertility and entrepreneurial choices are jointly and endogenously determined within the household, establishing causality between them is inherently challenging.

China provides an ideal empirical setting to examine this tradeoff due to a sharp and exogenous shift in fertility policy. In 2016, the government replaced its longstanding one-child policy with a nationwide two-child policy, granting all households the legal right to have a second child. Unlike earlier local or conditional relaxations,<sup>3</sup> the policy in 2016 sent a clear message to the public and to governments at all levels, and it significantly increased both the birth rate and the number of second children born. This policy change offers quasi-experimental variation: its timing provides an intertemporal relaxation of fertility constraints, while exposure varies across households based on the childbearing age of married women. We employ this policy-induced variation to identify the causal impact of increased fertility on household-level entrepreneurial decisions.

To strengthen our theoretical framework, we develop a household life-cycle model in which fertility and occupational choices are jointly determined. The model features household preferences over consumption and children, with utility derived from consumption above a subsistence threshold and from the number of children. Households choose between wage

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<sup>2</sup>Risk preference is a critical determinant of entrepreneurship (Kanbur, 1979; Kihlstrom and Laffont, 1979; Hvide and Panos, 2014) and is dynamic and responsive to internal and external life changes (Chetty and Szeidl, 2007; Kettlewell, 2019).

<sup>3</sup>As discussed in Section 2.1, earlier reforms had limited demographic impact. Although the central government began allowing local governments to relax the one-child policy in 2002—particularly for families in which either spouse was an only child—these measures had little effect on fertility. This was largely because (i) the targeted families comprised only a small segment of the population and had limited additional incentive to have a second child, and (ii) local implementation was often hindered by inconsistencies between a family's hukou (household registration) and their actual place of residence.

employment and entrepreneurship, where entrepreneurship involves greater income volatility. Fertility is endogenously chosen, subject to potential policy constraints. The model predicts that lifting fertility constraints increases childbirth but reduces entrepreneurship due to heightened effective risk aversion driven by higher subsistence needs—especially among households with stronger child preference. Key mechanisms include: (1) increased risk aversion as consumption approaches subsistence, (2) stronger effects among financially constrained households, (3) amplified tradeoffs in riskier sectors, and (4) the role of intra-household risk-sharing.

To empirically test these predictions, we use the China Family Panel Studies (CFPS) in the years surrounding the implementation of the two-child policy. These panel data are biennial surveys of Chinese households, providing rich demographic information such as age, gender, number of children, and relationship to the respondent and socioeconomic variables such as working status and industry of employment.

We adopt a difference-in-differences strategy to examine childbirth decisions and entrepreneurial decisions between families that have one married woman aged between 20 and 40 years old (referred to as the treated group thereafter) and other families (as the control group). We first consider all households, including no-child families, to assess the overall policy effect.<sup>4</sup> We find that families with a married woman with stronger biological capability to bear a child experience an 1.1 percentage point lower likelihood of having a family member who works as an entrepreneur, i.e., a person who reports to be self-employed (and generates substantial income), relative to other families.<sup>5</sup> Given that the unconditional mean of the likelihood of having an entrepreneurial member in a family is 9.3 percentage points, the

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<sup>4</sup>Even for no-child families, the policy may influence their childbirth plans by increasing the allowable quota for children.

<sup>5</sup>There could be concern that our treated group and control group have inherently different risk preference as well as different family characteristics such as family wealth, family expenditure size, etc. In order to mitigate this concern, we select on samples from these two groups with similar family characteristics based on propensity score matching in Section 4.5 and find consistent results.

policy change had statistically and economically significant effects on reducing entrepreneurship. Moreover, we find no significant differences in entrepreneurship between the two groups in the pre-policy period, supporting the validity of the parallel trends assumption.

We further examine the heterogeneous treatment effects by separating families into those with and without any children prior to the policy change. We hypothesize that the former group with legal binding conditions experienced greater relaxation in their birth choices following the reform, which in turn should affect labor choices to a higher degree. Indeed, the former group experience a 2.1 percentage point lower likelihood of entrepreneurship with statistical significance, while the latter group experience a 0.7 percentage point lower likelihood, which is statistically insignificant. Therefore, the policy effect is primarily driven by the group with legal binding conditions, confirming that the pattern we discover is specific to childrearing decisions.

To further ensure that fertility decisions are driving factors of entrepreneurial decisions in our setting, we show that the treated group had significantly more births after the two-child policy, which is the intended consequence of the new birth policy. To be specific, the treated group had 0.028 more births per household after the policy change, and this change in birth deliveries is very substantial, given that the unconditional mean number of births per household each survey year is 0.066.<sup>6</sup> More importantly, we do not find significant differences in childbearing between the two groups before the policy change. These results validate the idea that the two-child policy was an exogenous shock that affected entrepreneurial activities via birth choices.

We also uncover an intriguing pattern related to the gender of children born to families that had at least one child prior to the policy change: the policy effect is stronger among families whose first child is a daughter. As China is well-known for its cultural preference

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<sup>6</sup>This estimate is obtained even after we control for other determinants of birth documented in literature, including family wealth (Lovenheim and Mumford, 2013), mortgage (Hacamo, 2021), and uninsurable earnings risk (Sommer, 2016).

for sons, families with a first female child may focus on giving birth to a male baby in the second round and thus postpone entrepreneurial plans. This finding confirms that the nature of the two-child policy functioned not only as a demographic shock but also interacted with deep-rooted cultural norms, producing unintended consequences.

Our theoretical framework emphasizes household-level risk as the central mechanism underlying our findings. Childbirth, as a major lifecycle event, raises a household's minimum required consumption, thereby narrowing the margin between actual consumption and the subsistence threshold. As this margin tightens, even modest income fluctuations can result in disproportionately large utility losses, making volatile entrepreneurial income less attractive. This shift does not reflect a change in intrinsic preferences but rather a rise in effective risk aversion driven by tighter consumption constraints. To evaluate this mechanism, we conduct multiple empirical tests, including tests for revealed shifts in risk preferences and heterogeneity analyses based on proximity to the subsistence consumption thresholds, uncertainty about career prospects, and intra-household risk sharing.

For the first test, we rely on the revealed risk preferences of family heads, measured through a questionnaire that assesses their propensity to take a risky cashflow instead of a guaranteed cashflow, and examine the impact of childrearing on entrepreneurial decisions. Consistent with our previous finding, we find that the treated group that just had a newborn baby has reduced their risk tolerance.

For our second test, we hypothesize that households operating near the minimum subsistence level exhibit heightened risk aversion, which deters entrepreneurial activity. Empirically, we find a pronounced tradeoff among households allocating a large share of their expenditures to subsistence goods such as food, clothing, daily necessities, housing, transportation, and communication. Moreover, this effect is amplified by financial constraints: among households with a high subsistence ratio, only those facing financial constraints experience a significant decline in entrepreneurial activity. This pattern suggests an increase

in effective risk aversion after the policy change, consistent with our model’s prediction.

For the third and fourth mechanism tests, we focus on entrepreneurial income risk, both from the perspective of the household head’s career prospects and the household’s overall income structure. We hypothesize that the negative effect of childbirth on household-level entrepreneurial activity is stronger when income is more volatile and less diversified. Specifically, households where the family head works in sectors with greater uncertainty—proxied by higher rates of firm failure and exit—face elevated career-related income risk. As childrearing raises effective risk aversion, this uncertainty becomes more deterrent following childbirth. Empirically, we find that entrepreneurial activity declined significantly after the two-child policy among households exposed to greater career uncertainty for the household head, consistent with our theoretical prediction.

At the household level, we examine how intra-household income sharing interacts with this tradeoff. Households with fewer income earners or with highly concentrated income sources are more vulnerable to income shocks, especially when facing increased minimum required consumption due to childrearing. Our results show that entrepreneurial activity declines more sharply in such households, suggesting that limited intra-household risk sharing exacerbates the negative impact of childbirth on entrepreneurship. These findings highlight the importance of both individual career prospects and household income structure in shaping entrepreneurial responses to fertility-related shocks.

Last but not least, we also rule out one alternative explanation for the relationship we discover: time constraints. We divide the sample by family size, as larger families—particularly those including grandparents—may offer more support with childcare. We find that the policy effect is significant in both groups and statistically indistinguishable between them. This suggests that our results are not attributable to time constraints related to childcare that might otherwise crowd out entrepreneurial activities.

This paper makes a contribution to the literature on the economic effects of China’s

family planning policy. Prior literature has primarily examined the social and economic effects of China’s one-child policy.<sup>7</sup> In this regard, this research provides a new perspective from labor market choices and entrepreneurship. Beyond China’s birth policy, this paper also adds to the literature on the effects of demographic composition on labor markets, as the real impact of a family planning policy that encourages childbirth has been relatively underexplored.<sup>8</sup> In particular, this study is the first to demonstrate that policies aimed at promoting population growth can have a short-term adverse effect on entrepreneurship. Since both population growth and entrepreneurship (along with associated innovation) are crucial for economic growth, policymakers intending to encourage childbirth may need to raise the incentives and support provided to a level that facilitates the dual roles of young entrepreneurs in both career development and family expansion, rather than favoring one over the other.

Speaking more broadly, this paper contributes to the behavioral economics literature by providing new evidence on how demographic changes and lifecycle events within households shape risk preferences and economic behavior.<sup>9</sup> As for determinants of entrepreneurship, Alan et al. (2017) show that family members influence other members’ risk preferences (e.g., the transmission of risk appetite from parents to children), while Lindquist et al. (2013) document that individuals with entrepreneurial parents are more likely to become

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<sup>7</sup>For example, Wei and Zhang (2011) and Wei (2015) show that China’s population control policy led to gender imbalances, which in turn led to the creation of entrepreneurial firms as the male population tends to appeal to the female population with wealth in the marriage market. Similarly, Huang et al. (2021b) document stricter fertility restrictions led to higher education levels, more white-collar jobs, and more female empowerment, while Huang et al. (2023) show that marriage distortion from the one-child policy leads to welfare loss. Also, Choukhmane et al. (2023) find that China’s one-child policy attributed to a rise in the household savings rate and investment in children’s education.

<sup>8</sup>Previous papers, for instance, primarily focus on the family planning policy that prevents an increase in the fertility rate. These works include the effects of contraceptives on women’s labor participation (Bailey, 2006), on women’s participation in professional programs such as law and medicine (Goldin and Katz, 2002), and on the gender gap in wages (Bailey et al., 2012) as well as the effects of access to reproductive health services on female entrepreneurial activity (Zandberg, 2021)

<sup>9</sup>Single status (Roussanov and Savor, 2014) and bereavement of family members (Liu et al., 2023) affect managers’ risk-taking in investment. Also, Bennedsen et al. (2007) show that appointing a family CEO leads to under-performance of firms among large firms.

entrepreneurs themselves. In this respect, our paper introduces childbirth as a key household-level factor that influences individual occupational choices and broader household economic decisions. Importantly, we highlight that the increase in household-level risk associated with childbirth can spill over across family members, amplifying effective risk aversion and shaping labor market behavior at the household level.

Our paper also highlights the cultural dimension as a key factor in the determinants of entrepreneurship. In this regard, our empirical analyses illustrate how a unique, family-specific cultural factor influences local entrepreneurship, which is different from prior studies that focus on financing, institutional environments, innovation spillovers, and human capital.<sup>10</sup>

The structure of the paper is as follows. In Section 2, we provide detailed information about China’s two-policy, entrepreneurship, and risk factors. In Section 3, we develop a theoretical model to derive testable predictions and clarify the underlying mechanisms. In Section 4, we introduce longitudinal survey data of households in China, explain our identification strategy, and present empirical tests for identification. In Section 5, we discuss potential channels and alternative explanations. We conclude in Section 6.

## 2 Background Information and Related Literature

### 2.1 Two-Child Policy in China

In China, the family is considered the core unit of society, consistent with Confucian philosophy, which emphasizes the duty of each family member (Ma, 2006). In particular, children

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<sup>10</sup>For instance, the provision of capital encourages the creation of start-ups via accelerator programs (Cohen and Murray, 2019), local crowdfunding activities (Yu and Fleming, 2022), and banking deregulation (Black and Strahan, 2002; Kerr and Nanda, 2009), while regulation on patent infringement (Appel and Simintzi, 2019) and regulation on non-compete agreements (Jeffers, 2014) may create barriers to entry in entrepreneurship. Moreover, specific social factors of human capital including education of specialized university curriculum (Colombo and Piva, 2020), wage premium at different stages of life-cycle (Merida and Rocha, 2021), and capabilities of multiple job functions (Lazear, 2004, 2005) are conducive to spurring entrepreneurial activities.

are expected to carry out filial piety to their parents so that the family functions in harmony (Li, 2014). In that sense, the idea that having more children brings prosperity to the family is deeply embedded in Chinese culture. For instance, Gao and Qu (2019) and Xu and Liu (2021) find that elderly Chinese parents' life satisfaction increases with the number of children. In this regard, giving birth has been a valuable tradition in Chinese society.

Despite such culture, the Chinese Communist Party declared nationwide restriction on couples' bearing multiple children in 1979 as an effort to cope with the shortage of resources due to famine. The consequences of violating the one-child policy include monetary fines, professional sanctions such as loss of employment, and sometimes administrative sanctions such as forced sterilizations or abortions.

While the Chinese government started to relax the one-child policy in the 2000s, most of these new policies were ineffective. In 2002, the central government allowed the one-child policy to be relaxed by local governments for “double-single” families with both the husband and wife from one-child families. This policy to allow “double-single” families to raise two children was gradually adopted by all provinces/cities in 2002-2011. However, the initiative was largely ineffective, as double-single families were uncommon and had limited incentives to have a second child. For example, fewer than 10% of such families in Shanghai applied to have their second child (and half of those indeed gave birth to their second child).<sup>11</sup> In 2013, the central government further relaxed the one-child policy, allowing local governments to permit 'one-single' families—those in which either the husband or wife is from a one-child family—to have a second child. However, the policy was not effective: only 5% of such families in Shanghai were willing to have a second child.<sup>12</sup>

Finally, the central government introduced the *universal* two-child policy in October

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<sup>11</sup><https://www.chinatimes.com/newspapers/20151229000899-260301?chdtv> and <http://cpc.people.com.cn/n/2014/0226/c83084-24466140.html>

<sup>12</sup><http://politics.people.com.cn/BIG5/n/2015/0213/c1001-26560112.html> and [https://www.bbc.com/zhongwen/trad/focus\\_on\\_china/2014/12/141222\\_cr\\_singlechildpolicy](https://www.bbc.com/zhongwen/trad/focus_on_china/2014/12/141222_cr_singlechildpolicy)

2015: each family was permitted to bear two children regardless of their residential province or ethnicity, and this two-child policy came into effect on January 1, 2016. This policy appears to have been effective in the short run: government statistics suggest much more newborns in 2016 and 2017; more importantly, more than half of these newborns were second children.<sup>13</sup> We focus on the impact of the two-child policy in effect in 2016 to examine how it changed families' incentive to have another child and entrepreneurship for the following two reasons: first, as the statistics suggested, the two-child policy has a universal effect on newborns; and second, unlike prior policies that may be complicated by the conflict of "Hukou" and residence (i.e., the registered location and actual location), the two-child policy is nationwide and sends a clear signal to all levels of governments.

In spirit of analyzing consequences of this regulatory change, the recent literature has examined how China's two-child policy has affected individuals' economic and financial decision making. For instance, Baker et al. (2022) study the effects of the policy change on Chinese households' saving rates and find that families who experienced the relaxation of constraints on additional birth increased savings due to worries about higher costs of raising a second child. Choi et al. (2024) study the impact of the policy change on individuals' borrowing decisions and find that Chinese female university students reduced borrowing and invested less in human capital due to the increased chance of childbearing and childcare and expected motherhood penalty in the labor market. However, how entrepreneurial choices have been shaped by the policy change remains under-explored, and our paper fits into the literature on China's two-child policy.

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<sup>13</sup>[https://www.stats.gov.cn/sj/sjjd/202302/t20230202\\_1895981.html](https://www.stats.gov.cn/sj/sjjd/202302/t20230202_1895981.html) and <https://www.bbc.com/zhongwen/trad/chinese-news-57361169>

## 2.2 Entrepreneurship in China

The literature on entrepreneurship in China has examined a variety of economic, financial, and institutional factors that shape entrepreneurial activity. As with other emerging economies, financial access—through venture capital and government support—plays a crucial role in enabling entrepreneurs to scale their ventures.

A recent study by Bernstein et al. (2020) emphasize how second-tier stock exchanges, which offer better shareholder protection, facilitate capital raising for younger, high-growth companies. Similarly, Oh et al. (2021) and Li and Wu (2014) explore how housing prices and market dynamics shape entrepreneurial decisions in China. In addition to financial factors, regional disparities, educational background, and labor market conditions significantly affect entrepreneurial outcomes in China. Bai et al. (2024) highlight entrepreneurial reluctance in China, finding that individuals with higher college entrance exam scores are less likely to start businesses, as they are more drawn to waged employment, particularly in the state sector. In a similar vein, Huang et al. (2021a) show that higher educational attainment is generally associated with a lower likelihood of entrepreneurship. Kong and Qin (2021) further investigate China-specific institutional factors, revealing that China’s anti-corruption campaign has had a positive impact on entrepreneurship, particularly in urban areas, by curbing rent-seeking behavior and easing financial constraints for non-state-owned enterprises. In terms of gender bias in Chinese entrepreneurship, Shu et al. (2025) find that the one-child policy resulted in lower participation rates among female entrepreneurs, as penalties associated with second childbirth discouraged entrepreneurial activity.

Nevertheless, prior studies on Chinese entrepreneurship often overlook the role of risk preferences and cultural factors. The implications of our paper contribute to a deeper understanding of how other developing economies can foster robust entrepreneurial ecosystems.

## 2.3 Risk Preferences and Entrepreneurship

Risk preference is a crucial determinant of entrepreneurship; papers have theoretically and empirically documented that higher risk tolerance leads to a higher likelihood of forming entrepreneurship (Hvide and Panos, 2014; Kanbur, 1979; Kihlstrom and Laffont, 1979). At the same time, papers have documented that risk aversion can dynamically change and in particular, amplify upon life events such big consumption commitments. For instance, Chetty and Szeidl (2007) show that commitments such as purchasing a house or car amplify risk aversion in response to moderate-stake shocks such as losing a job temporarily. In the context of our study, giving birth following the relaxation of birth policy results in permanently higher childcare expenses, constituting large, irreversible consumption commitments. Likewise, Kettlewell (2019) shows that individuals' willingness to take financial risks declines with the onset of parenthood. Building on these studies, we contribute to the literature on entrepreneurship by highlighting a shift in risk preferences induced by a policy shock and demonstrating its impact on entrepreneurial activity in China.

## 3 Model

We consider an infinite-horizon, discrete-time model in which a representative household chooses consumption  $c_t$ , occupational status  $i_t \in \{\text{wage earner, entrepreneur}\}$ , and whether to have an additional child  $f_t \in \{0, 1\}$  at each period  $t$ . The model captures how endogenous fertility interacts with effective risk aversion and occupational choice. Our framework builds on foundational work in occupational choice and household risk (Evans and Jovanovic, 1989; Kihlstrom and Laffont, 1979), habit formation and minimum consumption requirement (Campbell and Cochrane, 1999), and structural household decision-making (Attanasio et al., 2008; Ortigueira and Siassi, 2013). It also relates to empirical studies on fertility policy and

labor market behavior (Wei and Zhang, 2011).

### 3.1 Preferences

The household derives utility from consumption exceeding a minimum required level and from children. The lifetime utility is given by:

$$U = \sum_{t=0}^{\infty} \beta^t \left[ \frac{(c_t - X_t)^{1-\rho}}{1-\rho} + \theta \cdot b(n_t) \right], \quad \text{where } X_t = X_0 + \psi \cdot n_t, \quad c_t \geq X_t, \quad (1)$$

where  $\beta \in (0, 1)$  is the discount factor,  $\rho > 0$  is the constant coefficient of relative risk aversion,  $\theta > 0$  is the preference weight on children,  $b(n_t)$  is the utility from children (increasing and concave), and  $X_t$  is the minimum required consumption, which increases linearly with the number of children  $n_t$ .<sup>14</sup> This formulation captures how childrearing increases the sensitivity to downside consumption risk and hence induces effective risk aversion.

### 3.2 Household Budget Constraint

The household's asset accumulation follows:

$$a_{t+1} = (1 + r)a_t + y_t^{it} - c_t - e(n_t) - \kappa \cdot \mathbb{I}_{i_t=\text{entrepreneur}, i_{t-1}=\text{wage earner}}, \quad (2)$$

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<sup>14</sup>If the minimum required consumption is modeled as being proportional to the childrearing cost, i.e.,  $X_t = \alpha \cdot e(n_t)$ , the mechanism linking fertility to effective risk aversion becomes cost-based rather than headcount-based. The core predictions still hold, but the curvature of  $e(n_t)$  may influence the magnitude of fertility's deterrent effect on entrepreneurship.

where  $a_t$  is beginning-of-period assets,  $r$  is the risk-free interest rate, and  $y_t^{i_t}$  denotes labor income, defined as:

$$y_t^{i_t} = \begin{cases} w & \text{if } i_t = \text{wage earner,} \\ \mu + \varepsilon_t & \text{if } i_t = \text{entrepreneur, } \varepsilon_t \sim \mathcal{N}(0, \sigma^2), \end{cases} \quad (3)$$

where  $w$  is the fixed wage from employment, and  $\mu + \varepsilon_t$  represents risky entrepreneurial income, consisting of a mean return  $\mu$  and stochastic shock  $\varepsilon_t$ . The function  $e(n_t)$  represents the cost of childrearing, assumed to be increasing and concave in  $n_t$ . The entry cost  $\kappa$  is incurred only when the household switches from employment to entrepreneurship, capturing startup and search frictions.

### 3.3 Fertility Dynamics

Fertility is an endogenous binary choice made each period:

$$n_{t+1} = n_t + f_t, \quad f_t \in \{0, 1\}, \quad \text{subject to } n_t \leq N_{\max}, \quad (4)$$

where  $N_{\max}$  denotes the policy-imposed fertility cap (e.g., one during the one-child policy period and two after the introduction of the two-child policy). The fertility decision  $f_t$  may also be influenced by household characteristics, such as age or the gender of the first child.

### 3.4 Recursive Bellman Equation

Let  $V_t(a_t, i_{t-1}, n_t)$  denote the household's value function at time  $t$ , given current assets  $a_t$ , previous occupation  $i_{t-1}$ , and number of children  $n_t$ . The Bellman equation is:

$$V_t(a_t, i_{t-1}, n_t) = \max_{c_t \geq X_t, i_t, f_t} \left\{ \frac{(c_t - X_t)^{1-\rho}}{1-\rho} + \theta \cdot b(n_t) + \beta \cdot \mathbb{E} [V_{t+1}(a_{t+1}, i_t, n_{t+1})] \right\}, \quad (5)$$

subject to:

$$a_{t+1} = (1+r)a_t + y_t^{i_t} - c_t - e(n_t) - \kappa \cdot \mathbb{I}_{i_t=\text{entrepreneur}, i_{t-1}=\text{wage earner}}, \quad (6)$$

$$n_{t+1} = n_t + f_t. \quad (7)$$

### 3.5 Characterization of Optimal Choices

At each time  $t$ , the household chooses consumption  $c_t$ , occupational status  $i_t$ , and fertility decision  $f_t$  to maximize the Bellman equation subject to the household's dynamic constraints.

The optimal consumption level  $c_t$  satisfies the Euler equation implied by the Bellman recursion:

$$\frac{\partial V_t}{\partial c_t} = u'(c_t) = (c_t - X_t)^{-\rho} = \lambda_t, \quad (8)$$

where  $\lambda_t$  is the marginal value of wealth, interpreted as the increase in expected lifetime utility from an additional unit of resources at time  $t$ . This condition equates the marginal utility of consumption above the minimum threshold to the discounted marginal value of future assets:

$$(c_t - X_t)^{-\rho} = \beta(1+r) \cdot \mathbb{E}_t \left[ \frac{\partial V_{t+1}}{\partial a_{t+1}} \right]. \quad (9)$$

A household with a higher  $\lambda_t$  is more financially constrained or closer to the consumption floor  $X_t$ , and therefore places higher value on current income, reducing today's consumption to accumulate precautionary savings.

Occupational choice  $i_t \in \{\text{wage earner}, \text{entrepreneur}\}$  is determined by comparing the expected continuation values from each option, accounting for the entry cost  $\kappa$  only when transitioning into entrepreneurship:

$$i_t^* = \arg \max_{i_t \in \{\text{wage earner}, \text{entrepreneur}\}} \left\{ \frac{(c_t - X_t)^{1-\rho}}{1-\rho} + \theta \cdot b(n_t) + \beta \cdot \mathbb{E} [V_{t+1}(a_{t+1}, i_t, n_{t+1})] \right\}, \quad (10)$$

Fertility is chosen based on a comparison of the marginal utility from having an additional child with the expected increase in future consumption needs and dynamic utility costs. The household chooses to have a child ( $f_t^* = 1$ ) if:

$$f_t^* = \begin{cases} 1 & \text{if } n_t < N_{\max} \text{ and } \theta \cdot b'(n_t) + \beta \cdot \mathbb{E}[V_{t+1}(a_{t+1}, i_t, n_t + 1) - V_{t+1}(a_{t+1}, i_t, n_t)] > 0, \\ 0 & \text{otherwise.} \end{cases} \quad (11)$$

This condition captures the tradeoff between the direct utility gain from an additional child and the indirect costs from higher minimum required consumption and tighter effective risk aversion.

### 3.6 Model-Implied Predictions

Our model yields several theoretical predictions based on comparative statics. These remarks capture key mechanisms linking fertility decisions to occupational choice, operating through effective risk aversion shaped by proximity to subsistence consumption and the curvature of utility at low consumption levels.

***Prediction 1: Lifting the fertility cap leads to an increase in childbirth and reduced entrepreneurship.*** The policy-imposed fertility cap  $N_{\max}$  introduces a discontinuity in household decision-making. When the cap is binding, households are unable to realize their desired fertility level. A relaxation of the policy cap (e.g., from a one-child limit to a two-child limit after the two-child policy) induces a discrete increase in  $n_t$  for constrained households, which in turn raises effective risk aversion and alters their occupational choice dynamics. The model therefore predicts a kinked behavioral response to fertility policy: discrete upward jumps in fertility and corresponding downward shifts in entrepreneurship rates among policy-exposed families.

***Prediction 2: Stronger child preference intensifies the fertility-entrepreneurship tradeoff.*** An increase in the preference weight on children  $\theta$  leads households to choose higher fertility, which indirectly reduces the likelihood of entrepreneurship through elevated effective risk aversion. That is, stronger preference for children increases  $n_t$ , which in turn raises effective risk aversion, thereby lowering the marginal utility of risky entrepreneurial income. Consequently, households with stronger revealed child preference—such as those exhibiting *son preference* or early fertility—are predicted to reduce entrepreneurial participation more substantially in response to changes in fertility policy.

***Prediction 3: Fertility reduces entrepreneurship via effective risk aversion, especially under financial constraints.*** An increase in the number of children  $n_t$  raises the household’s minimum required consumption,  $X_t = X_0 + \psi \cdot n_t$ , effectively tightening the gap between actual consumption  $c_t$  and the subsistence threshold  $X_t$ . As this gap narrows, the household’s utility function becomes more sharply curved near  $X_t$ , and the marginal utility of consumption increases rapidly. Although the relative risk aversion parameter  $\rho$  is fixed, the household becomes more sensitive to income fluctuations as  $c_t$  approaches  $X_t$ . This reflects a rise in *effective* risk aversion: the tightening of consumption constraints makes them behave more cautiously in the face of uncertainty.

Consequently, fertility-induced increases in  $X_t$  reduce the household’s willingness to engage in entrepreneurship, which exposes them to higher income volatility. Households with a high subsistence ratio  $X_t/c_t$  (i.e., close to the consumption floor) experience sharp increases in effective risk aversion when fertility increases, which leads them to adopt more conservative occupational choices.

Importantly, the impact of this mechanism is amplified for financially-constrained households. Low-wealth households, lacking the financial slack to buffer shocks, experience greater increases in effective risk aversion and are more reluctant to engage in risky occupational

choices. In contrast, households with higher asset holdings  $a_t$  are more likely to choose entrepreneurship because wealth provides a buffer against income volatility (e.g., absorbing fertility-induced shocks) and allows them to maintain consumption above the rising threshold  $X_t$ . The model predicts that the fertility-entrepreneurship tradeoff is strongest among households that are both financially constrained and close to their consumption floor.

***Prediction 4: Entrepreneurial income risk intensifies the fertility-entrepreneurship tradeoff.*** An increase in the volatility of entrepreneurial income, captured by a higher  $\sigma$ , amplifies the negative impact of fertility on entrepreneurial activity. As fertility raises the household's minimum required consumption  $X_t$ , the household becomes more sensitive to consumption shortfalls. This rise in *effective* risk aversion makes income uncertainty more costly in utility terms. In environments where entrepreneurial income is highly volatile, this heightened sensitivity leads to a sharper decline in the relative attractiveness of entrepreneurship.

Moreover, intra-household risk-sharing mechanisms play a critical role in moderating the deterrent effect of fertility on entrepreneurship. Households with multiple income earners or more diversified labor income portfolios are better positioned to absorb shocks from entrepreneurial income risk. In contrast, households with fewer earners or highly concentrated income sources face greater downside exposure when fertility increases, making them more susceptible to fertility-induced exits from entrepreneurship.

The model therefore predicts that the negative effect of fertility on entrepreneurship is more pronounced (1) in sectors or occupations characterized by greater income volatility and (2) in households with limited intra-household risk sharing. These dynamics underscore the importance of household income structure in shaping labor market decisions under demographic transitions.

## 4 Empirical Analyses

### 4.1 Data

Our primary data source is the China Family Panel Studies (CFPS) conducted by Peking University, a biennial household survey that collects detailed demographic information—including residence, hukou status, gender, age, number of children, and relationship to the respondent—as well as socio-economic variables such as entrepreneurial status, industry of employment, homeownership, home value, mortgage amount, government subsidy receipt, and education expenditure. This dataset covers 12,072 unique households in the period between 2012 and 2020. Additionally, we supplement the CFPS with data from the China Statistical Yearbook, incorporating province-level characteristics such as the unemployment rate, GDP growth rate, and population growth rate. Appendix A provides a more detailed description of the dataset, and Appendix B outlines the definitions of all variables used in the analysis.

Table 1 presents summary statistics of our main dataset. *Entrepreneur* is the primary variable of interest and is defined as an indicator variable equal to 1 if a household includes a member who reports being self-employed.<sup>15</sup> Acknowledging potential biases in self-reporting—particularly due to incentives related to social insurance benefits—we also consider alternative definitions of entrepreneurship. These include cases where entrepreneurial income constitutes at least 10% of total household income and where entrepreneurial business assets exceed the median asset size in the same year-province level. Given that the mean likelihood of having an entrepreneurial household member is 0.093, the majority of households rely primarily on wage employment to support household finances.

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<sup>15</sup>General family business is included in the definition, whereas agricultural family business is excluded from the definition.

## 4.2 Main Effects

We employ a difference-in-differences (DID) approach using biennial CFPS household survey data from 2012 to 2020 to analyze how household entrepreneurial activities vary with the introduction of the two-child policy across families with different exposures to it. More specifically, we estimate the following DID regression:

$$Y_{i,j,t} = \beta \cdot Treated_i \times Post_t + \delta \cdot Z_{i,j,t} + \eta_i + \mu_j + \phi_t + \epsilon_{i,j,t}, \quad (12)$$

where  $i$  denotes household in the CFPS surveys,  $j$  denotes province, and  $t$  denotes year. The main dependent variable  $Y_{i,j,t}$  is an indicator variable of whether household  $i$  has a self-employed member (which represents household  $i$ 's entrepreneurial choices) or the number of newborn babies over the past two survey years (which represents the household's birth choices).  $Treated_i$  is an indicator variable equal to one if household  $i$  includes a married woman aged 20 to 40 in the pre-policy period, thus having higher biological feasibility for childbirth (and zero if household  $i$  does not have a married woman aged 20 to 40 in the pre-policy period),<sup>16</sup> and  $Post_t$  is an indicator variable equal to one if the observation is made after the two-child policy (i.e., 2016, 2018, and 2020), and zero otherwise (i.e., 2012 and 2014).

We estimate Equation (12) in two ways: we first estimate it using the entire sample, and we then estimate it for two sub-samples separately: the first sub-sample group labeled "no-child families" includes families that did not have any child before the policy change

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<sup>16</sup>The World Health Organization defines the reproductive age range as 15 to 49. Thus, households in the control group may still have births after the two-child policy, but with lower probability due to reduced biological feasibility. We acknowledge that some control groups in the pre-period may exhibit characteristics of treated groups in the post-period if married women aged 20-40 join the households, while some treated groups in the pre-period may exhibit the characteristics of control groups if married women aged 20-40 leave the households during the post-period. This change in the composition of treated and control groups could potentially confound our results. However, this bias is likely to work against our findings, making it more difficult to identify significant effects in the treated sample during the post-period.

and thus were unaffected (or less affected) by the two-child policy, and the second subsample group labeled “families with one or more children” includes families that already had children before the policy change and thus could deliver birth additionally after the new policy relaxed stringency on birth regulation.

When we implement our DID analysis using the entire sample, we aim to estimate the “total” effect of the two-child policy — that is, the average treatment effect — since the policy impacts both subgroups. Even for “no-child” families, fertility intentions can change due to long-term family planning: when they can have two children in total, it may be beneficial to consider having the first child at a younger maternal age. Because the two-child policy is intended to encourage childbirth among both families with existing children and those without, our DID analysis using the full sample provides a more comprehensive estimate of the policy’s overall effect on entrepreneurship. In contrast, when we conduct DID analyses separately for the two subgroups, we estimate heterogeneous treatment effects.

$Z_{i,j,t}$  is a set of control variables for household-level characteristics including family income, family size, education expenditure, government subsidy, urban indicator, mortgage amount, home value, and homeownership status, and province-level characteristics including unemployment rate, GDP growth rate, and population growth rate. We include household fixed effects ( $\eta_i$ ) in all specifications to capture any time-invariant household-level unobservable factors, such as family traditions, which might simultaneously affect households’ entrepreneurial decisions and birth choices. We also include fixed effects for the residence province ( $\mu_j$ ) to capture time-invariant province-specific unobservable characteristics, such as business cycles and regulatory changes. We further control for year fixed effects ( $\phi_t$ ) to mitigate concerns that year-specific economic conditions could confound our results.<sup>17</sup>

We estimate Equation (12) using a linear probability model (LPM) because probit and

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<sup>17</sup>As an alternative specification, we include household fixed effects as well as province-by-year fixed effects to account for time-varying unobservable characteristics at the province level.

logit regression estimates may be inconsistent under an extensive list of fixed effects (i.e., the incidental parameter problem, Wooldridge (2002)).<sup>18</sup> We cluster standard errors at the household level.

The key coefficient of interest is the DID estimate,  $\beta$ , which captures the causal effect of the two-child policy on household decisions in the labor market and family planning. It essentially captures the entrepreneurial and birth choices for households with a wife with higher biological feasibility to delivering a baby relative to households with a wife with lower biological feasibility. It captures the average treatment effect in a full-sample DID analysis. When it is based on two sub-samples, we expect the DID estimates to be stronger in the subgroup with children already.

Panel A of Table 2 reports the full-sample estimation results for Equation (12) on how Chinese households' entrepreneurial choices (*Entrepreneur*) vary by the degree of biological feasibility of a married woman to child-bearing before and after the policy. In Columns 1 and 2, we estimate policy effects on the full sample and find that the treated group including a married woman with stronger biological feasibility for childbirth are about 0.9 percentage point to 1.1 percentage points less likely to have an entrepreneur in the household compared to the control group including a married woman with weaker biological feasibility.<sup>19</sup> As shown in Internet Appendix Table IA.1, this result is driven by both a decline in the incentive to start a new business and an increase in the likelihood of exiting existing entrepreneurial activities. Given that the unconditional likelihood of entrepreneurship is 9.3 percentage points, Chinese households' labor choices significantly changed after the policy.

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<sup>18</sup>Out of a total of 50,934 observations, 2,401 predicted outcome values fall outside the  $[0, 1]$  range. This represents a reasonable proportion of out-of-bounds predictions for a linear probability model.

<sup>19</sup>Choi et al. (2024) show that motherhood results in worse job prospects in the Chinese labor market following the two-child policy, primarily due to concerns about potential disruptions to job operations. If this is indeed the case, married women aged 20 to 40 should be less likely to participate as wage earners and more likely to pursue entrepreneurship. This dynamic would introduce an upward bias in our estimates, leading to an understatement of the true negative effect (i.e., a smaller estimated magnitude).

Our empirical evidence suggests that the motive to maintain a stable income to cover rising childcare expenses outweighs the incentive to pursue potentially higher, but riskier, returns through entrepreneurship.

The identifying assumption of the difference-in-differences strategy is parallel trends, which requires that the treated group and the control group indicate similar entrepreneurial trends before the two-child policy. At the time of the introduction of the new policy, the exogenous timing led the treated group to be one with higher biological feasibility for childbirth and the control group to be the one with lower biological feasibility by construction of these two groups. Column 3 of Panel A in Table 2 shows that a statistically significant decline in the likelihood of having an entrepreneur after the policy change in families with a married woman aged 20 to 40.<sup>20</sup> Taken together, these results support the interpretation that the demographic shock at the national level causally reduced the likelihood of entrepreneurship at the household level.

In Panel B of Table 2, we report estimates of Equation (12) across two different subgroups: no-child families and families with one or more children. Columns 1 and 2 show that the former group experience a drop of 0.6 percentage point to 0.7 percentage point in the likelihood of having an entrepreneurial member, which are not statistically significant, whereas Columns 4 and 5 show that the latter group experience a drop of 1.9 percentage points to 2.1 percentage points in the likelihood of having an entrepreneurial member. This differential effect attributes to a varying degree of freedom to deliver a new baby, which should be a more relevant factor to the group with binding conditions, while the group with non-binding conditions could still be affected as they may revise long-term family plans in response to the policy. Similarly, Columns 3 and 6 show a stronger response in the entrepreneurial activities in the years after the two-child policy for the families with one or

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<sup>20</sup>We carry out the same parallel trend test on PSM matched sample in Section 3.3, and find a sharp contrast in entrepreneurial activities in the years before the two-child policy and after the two-child policy.

more children. In this regard, we find that entrepreneurial choices were differentially affected by the legally binding birth constraints in the pre-policy period.

### 4.3 Validation Tests: Child Birth

After presenting evidence for a causal effect of birth policy shocks on entrepreneurial choices, we conduct a validation test to examine if the two-child policy indeed led to more birth among the treated group, and hence having a newborn baby caused reduced entrepreneurship. We again estimate Equation (12), using the number of newborn babies as the outcome variable, as reported in Panel A of Table 3.<sup>21</sup> Columns 1 and 2 show that the treated group had about 0.023 to 0.028 more births relative to the control group even after we control for birth determinants documented in the literature including uninsurable earnings risk (Sommer, 2016), mortgage (Hacamo, 2021), and family wealth (Lovenheim and Mumford, 2013). Given that the unconditional mean number of newborn babies per household in a given survey year is 0.066, the two-child policy had a statistically and economically significant effect on fertility, which confirms that the policy is effective in our sample.

Furthermore, Column 3 shows that the treated group and the control group exhibited similar pre-policy trends in childbearing, supporting the interpretation that the two-child policy influenced the fertility decisions of relatively younger households, which in turn affected their entrepreneurial choices. These results suggest that the relaxation of fertility restrictions reduced the likelihood of engaging in entrepreneurial activity, consistent with our theoretical *Prediction 1*.

Recent literature highlights the importance of adjusting for correlation between outcome

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<sup>21</sup>To be more specific, we use the change in the number of children reported by households between survey waves as our outcome variable. While this change may occasionally reflect the adoption of children, it is important to note that adoption rates in China are relatively low. According to the Ministry of Civil Affairs, the number of registered adoptions nationwide declined from 44,260 in 2009 to 15,143 in 2018. Given these figures, the vast majority of changes in household child counts primarily reflect the arrival of newborns rather than adopted children.

variables when conducting difference-in-differences analyses. In our setting, the fertility decision variable and the entrepreneurial activity variable can be correlated with each other, necessitating appropriate correction. Following Heath et al. (2023), we apply a multiple testing correction using 1,000 bootstrap replications. We report p-values for both outcome variables under two model specifications: one that includes household, province, and year fixed effects, and another that includes household and province-by-year fixed effects. Figure 1 shows that p-values on these variables are all below 0.05, confirming that two-child policy had causal effect on both birth decisions and entrepreneurial decisions.

#### 4.4 Cultural Factor: Patriarchy and Lineage

China has long exhibited a cultural preference for sons, and gender imbalance during the one-child policy is documented in the literature (Wei and Zhang, 2011; Wei, 2015). In this context, we test if this cultural factor played a role in impacting fertility choices and ultimately, entrepreneurial choices after the two-child policy was introduced. Specifically, we estimate Equation (12) on the subsample of families with one or more children (as in Panel B of Table 2), dividing them into two groups based on the gender of the first child. Columns 1 and 2 of Table 4 show that families whose first child is a daughter experienced a statistically significant decline of 2.8 to 2.9 percentage points in the likelihood of having an entrepreneurial member, which is statistically significant, but Columns 3 and 4 show that families with a first-born son did not experience significant change in the entrepreneurial choices. In other words, there is economic significance in the effect across the two subsamples, and son preference is associated with a lower likelihood of entrepreneurship as families with a first female child may focus on giving birth to a male baby and thus postpone entrepreneurial plans. This finding reinforces the view that the two-child policy constituted not only a demographic shock but also interacted with deep-rooted cultural norms, which is consistent with our theoretical *Prediction 2* that stronger child preference intensifies the

tradeoff between fertility and entrepreneurship. While the relaxation of birth restrictions aimed to promote fertility, it also had unintended consequences in dampening entrepreneurial activity.

## 4.5 Robustness Checks

In addition to main results, we run various robustness tests to verify that our results remain statistically significant to different specifications. First, we implement a synthetic difference-in-differences approach, following Arkhangelsky et al. (2021) in order to mitigate the concern that baseline Equation (12) provides a biased estimate if the treated group and the control group are systematically different due to the family composition differential. We regress the entrepreneurial choice variable on control variables, collect residuals, and regress the residuals on the interaction of the treatment dummy and the post dummy. Panel A of Table 5 shows that we still find similar significant effects of the two-child policy on birth choices and entrepreneurial choices.

Second, to further ensure that inherent differences between the treated and control groups are not driving our empirical results, we conduct a robustness check by means of matching the characteristics of our treated group those of our control group, using the nearest neighbor propensity score matching technique. Specifically, we obtain the control sample by estimating the probability of having a married woman aged 20 to 40 in 2014 using the covariate variables listed in Table 2. We then use the predicted probability to match, without replacement, a treated household with a control household in the same province and year that has the closest propensity score, using a caliper of 0.001. We compare pre-conditions between the treated and control groups using pre-period data in Panel A of Internet Appendix Table IA.2. We find that the mean values of the matching variables in the pre-policy period are significantly different between the treated group and the control group, but the mean differences in these variables become insignificant after the matching, as shown in Panel B of Internet Appendix

Table IA.2. We then use the Lawley-Hotelling trace test to examine the joint significance of the differences across all characteristics. As the p-value is 0.98, we fail to reject that all variables together are significantly different. These test results suggest that our matching approach performs reasonably well and that matched control households are very similar to treatment households; thus, the random assignment assumption underlying our difference-in-difference analysis is supported.

Panel B of Table 5 presents robust results from this propensity score matching: Columns 1 and 2 show that the treated group experienced a drop in the likelihood of having an entrepreneurial member by 2.6 percentage points to 2.7 percentage points. More to the point, the magnitude of the effect on the entrepreneurial choice for the matched-sample is larger to that in the main sample in Panel A of Table 2; if anything, the true effects of the two-child policy could be stronger, once we take into account for differences in the characteristics of households. Thus, our results cannot be attributed to differences in household characteristics, and it must be the new birth policy that had a substantial impact on entrepreneurial choices.

While the PSM method above accounts for the differences in characteristics between the treated group and the control group, one might still be concerned that the composition of the two groups differs. Specifically, the control group could include households with married women outside the 20–40 age range or households without any married women. For the case that the control group includes older married women—who tend to be more risk-averse (Barsky et al., 1997)—this could bias our estimates toward zero by diluting the treatment effect. However, our results remain robust to their inclusion. Moreover, there is no observed difference in revealed risk preferences between the treated and control groups unless the women in the treated group had recently given birth as will be shown in Table 6. As for the latter group (households without married women), the most strikingly distinct family type would be single-person households, who may be more likely to pursue entrepreneurship than married households (Roussanov and Savor, 2014). We address this concern by excluding

these single-person households from the control group in our baseline regression. In Panel A of Internet Appendix Table IA.3 demonstrates that our results remain robust even after this exclusion. Therefore, the compositional difference is not the driver of our empirical findings.

Third, we use alternative definitions of entrepreneurship in Panel B of Internet Appendix Table IA.3 as we want to focus on serious entrepreneurs who contribute substantially to household income or involve larger-scale businesses, rather than subsistence or informal ventures.<sup>22</sup> In Columns 1 through 3, we use as the new outcome variable an indicator variable of whether family includes a member who at makes up at least 10% of family income. We find that the treated group experienced a drop in the likelihood of having an entrepreneurial member by 0.7 to 0.9 percentage points, based on the new definition, and this estimate is consistent with a sign of parallel trends. In Columns 4 through 6, we use as the new outcome variable an indicator variable of whether a family has an entrepreneur whose business assets exceed the median business asset size in the same year-province. We find that the treated group experienced a drop in the likelihood of having an entrepreneurial member by 1.0 to 1.2 percentage points, and the parallel trends again hold. Therefore, the effects of the birth policy remain significantly negative on entrepreneurship when we consider serious entrepreneurs.

Fourth, we examine the policy effect on households living in urban areas by excluding households living in rural areas from the sample. This is because family farming, common in rural China, may qualify as a form of entrepreneurship, whereas our focus is on traditional entrepreneurs who assume financial risk with the goal of generating profit, creating jobs, and fostering innovation. Panel C of Internet Appendix Table IA.3 shows that the two-child policy still had negative impact on entrepreneurial choices. Thus, the policy change deterred the traditional form of entrepreneurship rather than family farming.

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<sup>22</sup>This distinction follows Schoar (2010), who differentiates between subsistence entrepreneurs, who engage in low-scale business out of necessity, and transformational entrepreneurs, who actively pursue growth and higher returns.

Fifth, we make sure that our empirical results are not driven by bad controls. In order to show that the two-child policy is the main driver of entrepreneurial choices, we run the baseline Equation 12 without including any control variables. Columns 1 and 2 in Panel D of Internet Appendix Table IA.3 show that our baseline results do not suffer from bad control issues. Similarly, Columns 3 and 4 show that our results on serious entrepreneurs are robust without including any control variables. In this respect, we document that the introduction of the new birth policy is the main determinant of entrepreneurial choices.

Sixth, we ensure that the tradeoff between entrepreneurship and birth choices is not driven by specific industries. For that matter, we identify the industry of the largest income earner in each household, regardless of whether this earner is a wage earner or an entrepreneur, and include industry-by-year fixed effects in our analysis. As shown in Panel E of Internet Appendix Table IA.3, the tradeoff remains robust even after controlling for these fixed effects. Therefore, we confirm that the tradeoff between entrepreneurship and birth choices persists across diverse industrial contexts.

Seventh, we address the possibility that the observed decline in entrepreneurial activity among treated households may be mechanically driven by female entrepreneurs temporarily suspending their businesses due to childbirth. To examine this, we redefine the outcome variable as an indicator for whether the household includes at least one male entrepreneur, rather than focusing on overall household entrepreneurship. Panel F of Internet Appendix Table IA.3 shows that the negative relationship between the two-child policy and entrepreneurship remains robust under this specification, suggesting that the fertility-entrepreneurship tradeoff is not solely driven by temporary business interruptions among women. Importantly, this result highlights that the increase in household-level risk from childbirth can spill over to other family members—particularly men—by altering overall household risk aversion and shaping collective labor market decisions.

## 5 Mechanisms and Alternative Explanations

### 5.1 Mechanisms: Family Risk

#### 5.1.1 Risk Preference Changes

As discussed earlier in our model, we argue that households' effective risk preferences shift upon childbirth, and that this shift leads to a reduced likelihood of engaging in entrepreneurship. Given that parenthood is shown empirically to increase individuals' risk aversion (Kettlewell, 2019), and that lower risk tolerance reduces the likelihood of entrepreneurship (Kanbur (1979); Kihlstrom and Laffont (1979); Hvide and Panos (2014)), we expect the two-child policy influences households' entrepreneurial choices through changes in their risk preferences.

To support this mechanism, we propose four sets of tests addressing changes in risk preferences from different perspectives. The first test is related to revealed risk preferences derived from direct survey responses. To that end, we use a risk preference questionnaire administered during the 2018 CFPS survey to assess households' revealed risk attitude.<sup>23</sup> The survey question asks whether the respondents would prefer a fixed amount at various levels or a fair coin toss gamble which would provide 200 RMB if the face is head and nothing if the face is tail.<sup>24</sup>

Based on their certainty equivalent, we categorize respondents into three different risk types (Risk Category): 1 if the certainty equivalent is less than 100 (risk-averse), 2 if the

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<sup>23</sup>Since this questionnaire was only available in 2018, we compare household risk preferences cross-sectionally, exploiting variation in whether the household had a newborn in that survey year.

<sup>24</sup>The questionnaire first asks whether the respondents would be willing to take a fixed amount of 100 RMB or take the coin toss. If the respondents prefer the former, they move on to the next question whether they prefer a fixed amount of 80 RMB or the coin toss. If the respondents prefer the coin toss in the first question, they move on to the next question whether they prefer 120 RMB or the coin toss. In this manner, the questionnaire uses 50 RMB, 80 RMB, 100 RMB, 120 RMB, and 150 RMB as different choices for the fixed amounts. Using the highest fixed amount that the respondents prefer as their certainty equivalent, we can measure their revealed risk preferences.

certainty equivalent is equal to 100 (risk-neutral), and 3 if the certainty equivalent is greater than 100 (risk-seeking). Additionally, we confine the sample to respondents who answered all the “Big Three” financial literacy questions from Lusardi and Mitchell (2011) correctly so that we can filter out those who may not have understand the purpose of survey questions measuring certainty equivalent. Then, we select the categorical risk preference of the family member with the highest income and run an ordered logit regression, using the categorical risk preference as the dependent variable. We estimate the following model using a sample of 689 unique household observations from the CFPS database in 2018:

$$Y_i = \beta \cdot Treated_i \times New\ Born\ in\ 2018_i + \alpha \cdot Treated_i + \gamma New\ Born\ in\ 2018_i + \delta \cdot Z_i + \mu_j + \epsilon_i, \quad (13)$$

where *New Born in 2018<sub>i</sub>* is an indicator variable equal to one if household *i* had a newborn baby in that survey year and zero otherwise. All other variables are defined as previously described.

We present the estimation results of Equation (13) in Table 6. Columns 1 and 2 of Table 6 show that treated households who had a newborn in the survey year exhibit significantly lower revealed risk preferences, which is consistent with our theoretical *Prediction 3* that fertility reduces entrepreneurship via risk aversion. As giving birth in 2018 is an endogenous choice, one may be concerned that only inherently risk-averse households chose to have a child in that year. However, this concern for selection bias is ruled out as the coefficient on *New Born in 2018* is statistically insignificant. In addition, Column 3 shows that there is no difference in revealed risk preference between the treated group and the control group when we do not consider the recent birth. Thus, we provide suggestive evidence that shift in risk preference upon the recent experience of childbirth could in turn affect entrepreneurial choices as opposed to innate heterogeneous preferences that shape labor choices.

### 5.1.2 Subsistence Ratio and Financial Constraints

Our theoretical model predicts that as consumption approaches the minimum subsistence level, the curvature of the utility function implies households become effectively more risk-averse. To test whether this mechanism—where proximity to subsistence consumption amplifies risk aversion—suppresses entrepreneurial activity, we employ the subsistence ratio as our empirical criterion. This ratio is calculated as the share of subsistence expenditure (expenditures on food, clothing, daily necessities, housing, transportation, and communication) relative to total expenditure. Then we compute the median subsistence ratio in the pre-policy period in rural/urban areas for each province and divide the sample into high- and low-subsistence-ratio groups. Columns 1 and 2 of Panel A in Table 7 show that treated households with a high subsistence ratio experienced a decline in entrepreneurial activity after the implementation of the two-child policy. In contrast, Columns 3 and 4 reveal no such change among households with a low subsistence ratio. These results empirically confirm that when households consume near the minimum required level, their heightened risk aversion deters engagement in entrepreneurship.

Next, we examine the role of financial constraints in amplifying this decline in entrepreneurship through increased risk aversion. Financially constrained households exhibit greater aversion to entrepreneurial risk after childbirth, as they lack assets to buffer against income volatility. In China, housing assets often constitute the primary form of financial wealth and play a critical role in entrepreneurship by serving as collateral (e.g., Schmalz et al., 2017; Oh et al., 2021). In light of this, we measure family housing wealth by calculating each household’s net housing value (excluding mortgage debt) and determining the median within rural and urban areas of each province. Using this cutoff, we categorize households into groups with high and low housing wealth.

Panel B of Table 7 presents the interaction between the subsistence ratio and finan-

cial constraints. Column 1 shows that among households with a high subsistence ratio, financial constraints, which arise from proximity to the minimum subsistence level, reduce entrepreneurial activity due to heightened risk aversion. Conversely, Column 2 demonstrates that high housing wealth relaxes budget constraints, mitigating this tradeoff. For households with a low subsistence ratio, financial constraints are irrelevant: Columns 3 and 4 indicate that, given their distance from the subsistence threshold, these households can maintain sufficient spending and thus do not disengage from entrepreneurship.

Taken together, these findings indicate that tightening consumption constraints induce more cautious behavior, deterring entrepreneurship. The fertility-entrepreneurship tradeoff is most pronounced among households that are both financially constrained and close to their consumption floor, consistent with our theoretical *Prediction 3*.

### 5.1.3 Entrepreneurial Income Risk

Our next test investigates whether the fertility-induced decline in entrepreneurship is stronger for households exposed to higher entrepreneurial income risk. In our model, the income from entrepreneurship is stochastic, and its volatility ( $\sigma$ ) reduces the attractiveness of entrepreneurship when households become more risk-averse due to childbearing. This implies that childbirth will lead to a sharper decline in entrepreneurship in more uncertain (i.e., riskier) industries. To test this, we follow Gottlieb et al. (2022) and construct industry-level measures of entrepreneurial risk by computing the 2-year failure rates of private firms using the Bureau van Dijk’s Orbis database.<sup>25</sup> We match these risk measures to households based on the industry of the family head, under the assumption that the industry in which the household head is employed is likely to be the industry of entry if they pursue entrepreneur-

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<sup>25</sup>We construct the failure rate based on the existence of financial reports in this dataset; for a given firm in a year, we record it to have survived if its financial report is again included in the data two years later, and then aggregate the survival rate to the industry level.

ship.<sup>26</sup>

We estimate Equation (12) in these two sub-samples separated by the median industry failure rate. Columns 1 and 2 of Table 8 show that the treated households whose family heads work in industries with higher failure probabilities experienced a decline in entrepreneurial activities after the two-child policy,<sup>27</sup> whereas Columns 3 and 4 show that there is no such change among households whose family heads work in industries with lower failure rate. Hence, the risk aversion of entrepreneurs relative to wage earners amplifies upon possible birth when they work in an industry with a high chance of failure, and it leads to a lower likelihood of entrepreneurship. These empirical findings align with our theoretical *Prediction 4* that households in riskier industries are more likely to exit or avoid entrepreneurship after having a newborn.

#### 5.1.4 Intra-Household Risk Sharing

Our next test examines the role of household-level risk sharing: we argue that entrepreneurial status may not be sustained if labor income sources are insufficiently diversified within the household. For this channel, we split the sample into families with a low or high number of income earners based on whether the number of family members earning positive labor income is greater than or at (or below) the sample median. We then test whether households

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<sup>26</sup>While industry-level firm failure rates provide a proxy for entrepreneurial income volatility, this measure may not fully capture the heterogeneity in income risk faced by individual entrepreneurs. For instance, failure rates may reflect firm exit due to reasons unrelated to income fluctuations (e.g., mergers, retirement, or strategic closure), and within-industry variation in entrepreneurial outcomes could be substantial. Moreover, households may enter niche segments or rely on informal income sources that are not well represented in formal sector failure rates. We acknowledge these limitations and interpret our results as reflecting broader industry-level risk exposure rather than precise household-level volatility.

<sup>27</sup>Based on Bureau van Dijk's Orbis database, we find that in the sample period, China experienced relatively low survival rates in the following sectors: Education, Culture, sports and recreation, Health, social security and public welfare, Real estate, Hotel and catering service, Agriculture, forestry, animal husbandry and fishery, Construction, and Production and supply of electricity, gas and water (in the increasing order of survival rates). On the contrary, it experienced relatively high survival rates in the following sectors: Water resource, environment and public facility management, Transportation, storage, and postal service, Public administration and social organization, Mining, Information transmission, computer service and software, Scientific research, technical service and geological prospecting, Wholesale and retail, and Manufacturing (in the increasing order of survival rates).

with a low number of income earners remain their likelihood of engaging in entrepreneurial activities after a possible childbirth. We estimate Equation (12) in these two sub-samples. Panel A of Table 9 shows that entrepreneurial activities decreased only for families with fewer family members who provide a different source of household income. This finding supports the risk preference change mechanism.

Similarly, we test whether households with a high concentration of labor income in a single family member experience a decline in entrepreneurship. To do so, we split the sample into two groups: households with an income concentration rate above or equal to the sample median, and those with a concentration rate below the median. We estimate Equation (12) using these two sub-samples. Panel B of Table 9 shows that entrepreneurial activities decreased only for families with high income concentration. In other words, only when the household-level income risk of an entrepreneur is shared with other family members, can the family support this entrepreneurial activity, which is consistent with our theoretical *Prediction 4*.

These findings on intra-household risk sharing are consistent with the broader literature on labor market dynamics within families. In particular, Ortigueira and Siassi (2013) find that labor supply goes up for a spouse in case the other spouse becomes unemployed among families with a low level of wealth, and Shore (2010) finds counter-cyclical risk-sharing benefits of marriage due to diversified labor income risks. Likewise, Wang (2019) documents an added-worker effect whereby workers' job search intensity goes up upon the unemployment of their spouse. In this respect, we document that entrepreneurship represents another dimension of choices in the labor market in which intra-household risk sharing plays a critical role.

## 5.2 Alternative Explanations

In this section, we explore an alternative explanation for our baseline result. One possible channel is that time spent on childcare crowds out time that could otherwise be devoted to developing entrepreneurial ventures, thereby reducing entrepreneurship. If this mechanism were at play, we would expect to observe differential entrepreneurial responses between large families (above the median family size) and small families (below the median), as the presence of non-parental family members such as grandparents could alleviate childcare burdens and enable parents to focus more on entrepreneurship. We estimate Equation (12) separately for these two subsamples, based on family size in 2014, and report the results in Internet Appendix Table IA.4. The DID coefficients are significant in both subsamples. Moreover, we find no differential impact of the policy on entrepreneurial status across the two groups.<sup>28</sup> These results suggest that time constraints are unlikely to explain our main findings.

## 6 Conclusion

In this paper, we investigate how China’s nationwide two-child policy influenced households’ entrepreneurial choices and child-raising decisions. We document that households with a married woman with strong biological feasibility for childbirth at the time of the introduction of the two-child policy were more likely to prioritize childbirth and were less likely to be entrepreneurs after the regulatory change. This represents a significant change in labor activities, given that entrepreneurship in our data produces positive labor income and makes up a significant fraction of family income. We implement several tests based on revealed risk preferences, proximity to subsistence consumption in combination with financial constraints, career uncertainty of household heads, and intra-household risk-sharing, which collectively

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<sup>28</sup>Comparing the DID coefficients between columns (1) and (3), the Chi-squared statistic is 0.05 ( $p = 0.83$ ); for columns (2) and (4), the statistic is 0.07 ( $p = 0.80$ ).

validate the reduced risk preference mechanism. In this respect, this paper sheds light on the implications of family planning, not just on demographic changes but on labor market outcomes, underscoring the need for coordinated design of birth policies alongside labor and innovation policies. Moreover, given the central roles of both population dynamics and entrepreneurship in driving economic growth, policies facilitating the dual roles of young entrepreneurs in both career development and family expansion are called for.

## Appendix A Database Description

### A.1 China Family Panel Studies (CFPS)

The China Family Panel Studies (CFPS) is a comprehensive longitudinal survey conducted by the Institute of Social Science Survey at Peking University (CFPS). Funded by the Chinese government through Peking University, the CFPS aims to collect data on Chinese communities, families, and individuals, focusing on both their economic and non-economic activities and behaviors.

Initiated in 2010 and conducted biennially, the CFPS tracks changes and trends over time, covering topics such as economic activities, education outcomes, family dynamics and structures, health and wellbeing, and social interactions. The survey spans both urban and rural areas across various provinces and regions in China, providing a comprehensive perspective on the lives of Chinese citizens. In the 2010 baseline survey, the CFPS interviewed approximately 15,000 families and around 30,000 individuals within these families, achieving a response rate of about 79%. The respondents are tracked through annual follow-up surveys, which ensures continuity and depth in the data collected.

Initial oversampling in five provinces, with 1,600 families in each, facilitates regional comparisons. The remaining sample, comprising 8,000 families, is drawn from other provinces to ensure nationwide representativeness through weighting. The 2010 CFPS baseline survey used a multi-stage probability drawing with implicit stratification, designed for cost-effectiveness and to enable the study of social contexts. This sampling process involved three stages: county (or equivalent), village (or equivalent), and then household. The CFPS employs computer-assisted personal interviewing (CAPI) technology, provided by the Survey Research Center (SRC) at the University of Michigan. This technology allows for the design of a complex interview schedule tailored to each household member, reducing measurement error and enabling close monitoring of interview quality in the field by the ISSS management team.

The CFPS's data collection method includes face-to-face interviews, self-administered questionnaires, and some web-based surveys, ensuring a diverse approach to data gathering and capturing various aspects of life in China. The survey encompasses thousands of households and individuals, thus providing a wide range of data points. Three key features of the CFPS are particularly notable: (1) All individuals over the age of 9 in a sampled household are interviewed, constituting the core members of the CFPS, (2) Children in CFPS house-

holds are also considered core members, with a core member exiting the study only through death, (3) Annual follow-ups are conducted with all core members of the CFPS.

Researchers and policymakers utilize the data collected through the CFPS to analyze various aspects of Chinese society, including trends in family structure, income inequality, social mobility, demographic changes, health, and education. The survey's findings provide insights into the evolving dynamics of Chinese society and contribute to informing both policy decisions and academic research.

## Appendix B Data Variable Description

The table presents the description of variables of China Family Panel Studies (CFPS), China's Yearbook data used in this paper, and the definition of legal binding conditions with respect to additional birth in the period before the introduction of the two-child policy.

Data Variables	Description
<b>CFPS Variables</b>	
Entrepreneur (Indicator)	An indicator variable of whether a surveyed respondent's household includes an entrepreneurial member who reports to be self-employed
Number of Newborns	Number of newborn babies for a surveyed household over the past 2 years.
Log(1+Family Income)	Log of the total income received by all household members from various sources, including wages, agricultural earnings, business revenues, and other income.
Log(Family Size)	Log of the total number of family members in a surveyed household.
Log(1+Education Expenditure)	Log of the value of the amount a surveyed household has spent on child education, including food expense, boarding fee, school bus fee, textbooks, reference books, school supplies, and school activities.
Log(1+Gov Subsidy)	Log of the value of the sum of any government subsidies a surveyed household has received, including minimum living allowance, subsidy for low-income families, reforestation subsidy, agricultural subsidy, work injury subsidy, and disaster relief.
Urban (Indicator)	Indicator variable equal to one if a surveyed household's residence is in an urban area and equal to zero if the residence is in a rural area.
Log(1+Mortgage)	Log of the value of a mortgage in case a surveyed household has a mortgage.
Log(1+Home Ownership Value)	Log of the value of a house in case a surveyed household owns a house, i.e., $\text{Log}(1+\text{Home Value} \times 1(\text{Home Ownership}))$ .
Risk category	Revealed risk preference of the highest income earner in a household based on the 2018 CFPS survey, which asks whether the respondent would prefer a fixed amount at various levels or a fair coin toss gamble that would provide 200 RMB if the face is head and nothing if the face is tail. The value of this variable is 1 if the respondent is risk-averse, 2 if risk-neutral, and 3 if risk-seeking.
Subsistence ratio	Share of subsistence expenditure (expenditures on food, clothing, daily necessities, housing, transportation, and communication) relative to total expenditure in the pre-policy period
Entrepreneurial income risk	This variable is constructed based on the proportion of firms that remain in the Bureau van Dijk's Orbis database two years after a given year, aggregated to the industry level. We match industries of entrepreneurs in our dataset using two-digit NAICS codes. High (low) failure rate refers to families in which the entrepreneur operates in an industry with a failure rate above (below) the median industry failure rate.
Number of income earners	A high (low) number of income earners refers to families in which the number of family members earning positive labor income is greater than or equal to (or below) the sample median.
Income concentration	High (Low) income concentration refers to families in which the highest individual income accounts for more than (or at or below) the sample median share of total family income.

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<b>Yearbook Variables</b>	
Unemployment Rate	Unemployment rate in a given year at the province level.
GDP Growth Rate	Yearly GDP growth rate at the province level.
Population Growth Rate	Yearly population growth rate.
<hr/>	
<b>Binding Conditions</b>	
No-child families	Families that did not have any child before the policy change Thus, these families could deliver a baby during one-child policy
Families with one or more children	Families that already had children before the policy change Thus, these families could not deliver an additional baby during one-child policy

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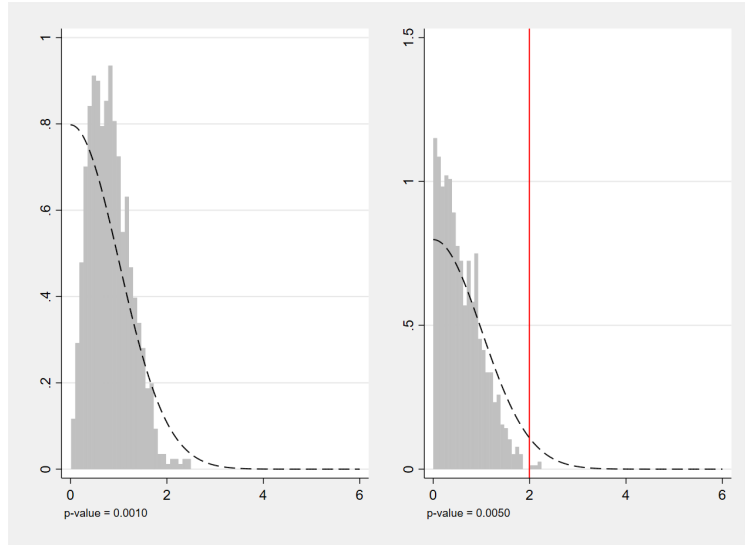
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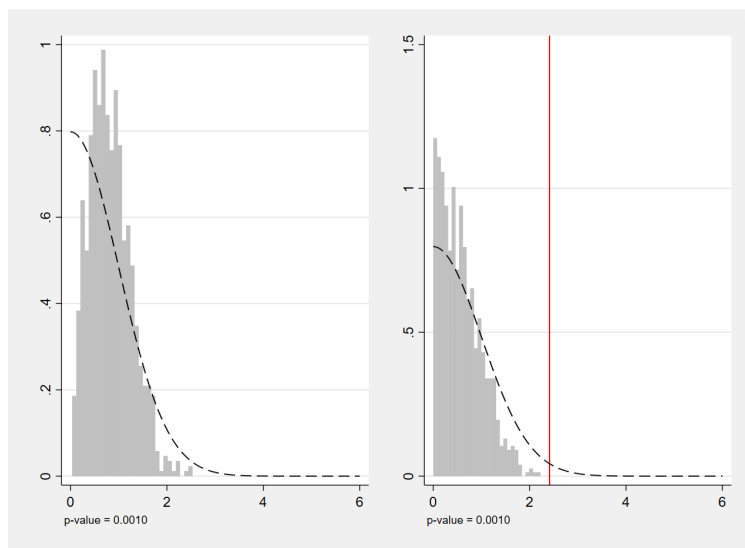
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Figure 1: Multiple Hypothesis Testing

This figure shows results on multiple hypothesis testing in which we test for the significance of our baseline estimates on birth dimension and entrepreneurship dimension jointly. It plots estimation coefficients out of 1000 bootstraps. In Panel A, we use household fixed effects, province fixed effects, and year fixed effects. In Panel B, we use household fixed effects, and province-by-year fixed effects. The left graph on each panel is simulated results on the birth choice variable and the right graph on each panel is simulated results on the entrepreneurial choice variable.



(A) Household, Province, Year FE



(B) Household, ProvinceXYear FE

Table 1: Summary Statistics

The table presents summary statistics for our main sample. The sample consists of 50,934 household-year observations (12,072 unique households) from the CFPS database for the sample period from 2012 to 2018. Detailed descriptions of all other variables are available in Appendix B.

	Mean	sd	p25	p50	p75	Obs.
Entrepreneur	0.093	0.291	0.000	0.000	0.000	50,934
Number of New Borns	0.066	0.256	0.000	0.000	0.000	50,934
Log(1+Family Income)	1.693	0.812	1.145	1.722	2.197	50,934
Log(Family Members)	1.185	0.513	0.693	1.099	1.609	50,934
Log(1+Education Expenditure)	0.234	0.360	0.000	0.000	0.392	50,934
Log(1+Gov Subsidy)	0.063	0.154	0.000	0.000	0.058	50,934
Urban (Indicator)	0.464	0.499	0.000	0.000	1.000	50,934
Log(1+Mortgage)	0.103	0.412	0.000	0.000	0.000	50,934
Log(House Ownership Value)	2.147	1.596	0.693	2.398	3.332	50,934
Unemployment Rate (%)	3.257	0.537	2.970	3.300	3.630	50,934
GDP Growth Rate (%)	7.369	2.657	6.100	7.600	8.900	50,934
Population Growth Rate	0.004	0.008	-0.002	0.004	0.008	50,934

## Table 2: Baseline Results

The table presents regression results from the linear probability models that examine the effect of China's two-child policy on entrepreneurial choices. The sample consists of 50,934 household-year observations (12,072 unique households) from the CFPS database for the sample period from 2012 to 2020. The dependent variable is *Entrepreneur*, an indicator variable of whether a household has an entrepreneur among family members. *Treated* is an indicator variable equal to one for households that have a one married woman aged between 20 and 40 years old, and zero for households that do not have a married woman aged between 20 and 40 years old. *Post* is one for household-year observations in the two-child policy period and zero for the pre-two-child policy period. Detailed descriptions of all other variables are available in Appendix B. In Panel A, we estimate the overall effects as well as dynamic effects of the two-child policy on entrepreneurial choices, using the full sample. In Panel Panel B, we separately report the results for families that did not have any child before the policy change and thus were not bound by the one-child policy and families that already had children and could not deliver birth additionally before the policy change and hence were bound by the one-child policy. Standard errors reported in parentheses are robust and clustered at the household level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

**Panel A. Baseline Effects**

	Entrepreneur		
	(1)	(2)	(3)
Treated × Post	-0.009** (0.004)	-0.011** (0.004)	
Treated × 1(Year = 2012)			-0.008 (0.006)
Treated × 1(Year = 2016)			-0.014*** (0.005)
Treated × 1(Year = 2018)			-0.004 (0.006)
Treated × 1(Year = 2020)			-0.033*** (0.009)
Log(1+Family Income)	0.063*** (0.003)	0.063*** (0.003)	0.063*** (0.003)
Log(Family Members)	0.013*** (0.004)	0.014*** (0.004)	0.012*** (0.004)
Log(1+Education Expenditure)	0.026*** (0.005)	0.026*** (0.005)	0.025*** (0.005)
Log(1+Gov Subsidy)	-0.011 (0.010)	-0.011 (0.010)	-0.011 (0.010)
Urban (Indicator)	0.028*** (0.005)	0.027*** (0.005)	0.027*** (0.005)
Log(1+Mortgage)	0.015*** (0.004)	0.015*** (0.004)	0.015*** (0.005)
Log(House Ownership Value)	0.002* (0.001)	0.002** (0.001)	0.002** (0.001)
Unemployment Rate	0.013** (0.005)		
GDP Growth Rate	-0.001 (0.001)		
Population Growth Rate	1.029** (0.523)		
Household fixed effects	Yes	Yes	Yes
Province fixed effects	Yes	No	No
Year fixed effects	Yes	No	No
Province × Year fixed effects	No	Yes	Yes
Observations	50,934	50,934	50,934
Adjusted R-squared	0.364	0.365	0.365

**Panel B. Binding Conditions**

	No-Child Families (Non-Binding)			Families with Any Children (Binding)		
	(1)	(2)	(3)	(4)	(5)	(6)
Treated × Post	-0.006 (0.006)	-0.007 (0.006)		-0.019** (0.009)	-0.021** (0.009)	
Treated × 1(Year = 2012)			-0.014 (0.009)			-0.015 (0.011)
Treated × 1(Year = 2016)			-0.012 (0.012)			-0.022** (0.011)
Treated × 1(Year = 2018)			-0.004 (0.010)			-0.007 (0.011)
Treated × 1(Year = 2020)			-0.030*** (0.009)			-0.072*** (0.018)
Log(1+Family Income)	0.069*** (0.008)	0.069*** (0.008)	0.069*** (0.008)	0.062*** (0.004)	0.062*** (0.004)	0.062*** (0.004)
Log(Family Members)	0.018*** (0.006)	0.020*** (0.006)	0.019*** (0.006)	0.013** (0.006)	0.011* (0.006)	0.010 (0.006)
Log(1+Education Expenditure)	0.028*** (0.009)	0.027*** (0.009)	0.026*** (0.009)	0.026*** (0.007)	0.026*** (0.008)	0.025*** (0.008)
Log(1+Gov Subsidy)	-0.007 (0.015)	-0.005 (0.016)	-0.004 (0.015)	-0.013 (0.016)	-0.018 (0.016)	-0.017 (0.016)
Urban (Indicator)	0.024** (0.011)	0.023* (0.011)	0.023* (0.011)	0.036*** (0.008)	0.037*** (0.008)	0.036*** (0.008)
Log(1+Mortgage)	0.021** (0.010)	0.021** (0.010)	0.021** (0.010)	0.015** (0.006)	0.014** (0.006)	0.014** (0.006)
Log(House Ownership Value)	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)	0.003 (0.002)	0.003 (0.002)	0.002 (0.002)
Unemployment Rate	0.017 (0.010)			0.009 (0.008)		
GDP Growth Rate	-0.003* (0.001)			0.003 (0.002)		
Population Growth Rate	1.395 (1.045)			-0.280 (0.837)		
Household fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Province fixed effects	Yes	No	No	Yes	No	No
Year fixed effects	Yes	No	No	Yes	No	No
Province × Year fixed effects	No	Yes	Yes	No	Yes	Yes
Observations	29,057	29,057	29,057	21,877	21,877	21,877
Adjusted R-squared	0.345	0.346	0.346	0.378	0.379	0.379

Table 3: Validation Test - Birth Choices

This table presents the results of a validation test examining whether our treated group—with stronger biological feasibility for childbirth—had more births than the control group with lower biological feasibility. It reports the estimation results of Equation 12 using the number of newborn babies over the past two years as the outcome variable. Standard errors reported in parentheses are robust and clustered at the household level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Number of Newborns		
	(1)	(2)	(3)
Treated × Post	0.028*** (0.003)	0.023*** (0.003)	
Treated × 1(Year = 2012)			0.000 (0.001)
Treated × 1(Year = 2016)			0.019*** (0.004)
Treated × 1(Year = 2018)			0.023*** (0.005)
Treated × 1(Year = 2020)			0.032*** (0.006)
Log(1+Family Income)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)
Log(Family Members)	0.088*** (0.004)	0.089*** (0.004)	0.090*** (0.004)
Log(1+Education Expenditure)	-0.049*** (0.003)	-0.049*** (0.003)	-0.049*** (0.003)
Log(1+Gov Subsidy)	-0.023*** (0.008)	-0.022** (0.009)	-0.022*** (0.009)
Urban (Indicator)	0.017*** (0.004)	0.017*** (0.004)	0.017*** (0.004)
Log(1+Mortgage)	0.016*** (0.003)	0.016*** (0.003)	0.016*** (0.003)
Log(House Ownership Value)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Unemployment Rate	0.010** (0.004)		
GDP Growth Rate	0.001 (0.001)		
Population Growth Rate	0.533 (0.382)		
Household fixed effects	Yes	Yes	Yes
Province fixed effects	Yes	No	No
Year fixed effects	Yes	No	No
Province × Year fixed effects	No	Yes	Yes
Observations	50,934	50,934	50,934
Adjusted R-squared	0.066	0.070	0.070

Table 4: Cross-sectional Test by First Child Gender

This table examines the cross-sectional test based on the gender of the first child among the selected families that had children before the introduction of the two-child policy. Standard errors reported in parentheses are robust and clustered at the household level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Entrepreneur			
	First Child is Female		First Child is Male	
	(1)	(2)	(3)	(4)
Treated $\times$ Post	-0.029** (0.012)	-0.028** (0.013)	-0.010 (0.012)	-0.015 (0.012)
Log(1+Family Income)	0.065*** (0.006)	0.064*** (0.006)	0.058*** (0.006)	0.058*** (0.006)
Log(Family Members)	0.009 (0.010)	0.009 (0.010)	0.015* (0.009)	0.013 (0.009)
Log(1+Education Expenditure)	0.039*** (0.011)	0.037*** (0.011)	0.013 (0.010)	0.013 (0.010)
Log(1+Gov Subsidy)	-0.011 (0.024)	-0.013 (0.023)	-0.010 (0.021)	-0.018 (0.021)
Urban (Indicator)	0.028** (0.011)	0.031*** (0.011)	0.044*** (0.011)	0.044*** (0.011)
Log(1+Mortgage)	0.023** (0.009)	0.022** (0.009)	0.006 (0.009)	0.006 (0.009)
Log(House Ownership Value)	0.002 (0.003)	0.003 (0.003)	0.003 (0.002)	0.003 (0.002)
Unemployment Rate	0.005 (0.012)		0.013 (0.011)	
GDP Growth Rate	0.002 (0.003)		0.005* (0.003)	
Population Growth Rate	0.394 (1.125)		-0.751 (1.235)	
Household fixed effects	Yes	Yes	Yes	Yes
Province fixed effects	Yes	No	Yes	No
Year fixed effects	Yes	No	Yes	No
Province $\times$ Year fixed effects	No	Yes	No	Yes
Observations	10,573	10,573	11,304	11,304
Adjusted R-squared	0.356	0.358	0.401	0.402

Table 5: Robustness Checks

This table presents several robustness tests, incorporating a different difference-in-differences approach and regression on a matched sample. Panel A reports results from a synthetic difference-in-difference approach in which we regress the outcome variable on control variables, collect residuals, and regress residuals on the main explanatory variables. Panel B reports results of estimation on Equation 12 on the matched sample with similar family characteristics between the treated group and the control group based on the nearest neighbor propensity score matching. Standard errors reported in parentheses are robust and clustered at the household level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

<b>Panel A. Synthetic Difference-in-Differences</b>			
	Entrepreneur		
	(1)	(2)	(3)
Treated $\times$ Post	-0.008** (0.004)	-0.011** (0.004)	
Treated $\times$ 1(Year = 2012)			-0.007 (0.006)
Treated $\times$ 1(Year = 2016)			-0.015*** (0.005)
Treated $\times$ 1(Year = 2018)			-0.005 (0.006)
Treated $\times$ 1(Year = 2020)			-0.029*** (0.009)
Household fixed effects	Yes	Yes	Yes
Province fixed effects	Yes	No	No
Year fixed effects	Yes	No	No
Province $\times$ Year fixed effects	No	Yes	Yes
Observations	50,934	50,934	50,934
Adjusted R-squared	0.364	0.365	0.365

**Panel B. Propensity Score Matching**

	Entrepreneur		
	(1)	(2)	(3)
Treated × Post	-0.027*** (0.008)	-0.026*** (0.008)	
Treated × 1(Year = 2012)			-0.012 (0.009)
Treated × 1(Year = 2016)			-0.026*** (0.009)
Treated × 1(Year = 2018)			-0.019* (0.010)
Treated × 1(Year = 2020)			-0.058*** (0.015)
Log(1+Family Income)	0.055*** (0.005)	0.056*** (0.005)	0.056*** (0.005)
Log(Family Members)	0.003 (0.007)	0.001 (0.007)	0.001 (0.007)
Log(1+Education Expenditure)	0.024*** (0.008)	0.023*** (0.008)	0.021** (0.008)
Log(1+Gov Subsidy)	0.016 (0.020)	0.019 (0.020)	0.020 (0.020)
Urban (Indicator)	0.029*** (0.009)	0.028*** (0.009)	0.028*** (0.009)
Log(1+Mortgage)	0.020** (0.008)	0.019** (0.008)	0.019** (0.008)
Log(House Ownership Value)	-0.000 (0.002)	-0.000 (0.002)	-0.000 (0.002)
Unemployment Rate	0.019** (0.008)		
GDP Growth Rate	0.000 (0.002)		
Population Growth Rate	2.499*** (0.862)		
Household fixed effects	Yes	Yes	Yes
Province fixed effects	Yes	No	No
Year fixed effects	Yes	No	No
Province × Year fixed effects	No	Yes	Yes
Observations	15,972	15,972	15,972
Adjusted R-squared	0.355	0.357	0.357

Table 6: Mechanism Test: Risk Preference

The table presents the results of ordered logit regression using risk category as the outcome variable. The sample consists of 689 unique household observations from the CFPS database in 2018. Based on a survey questionnaire to figure out certainty equivalent, risk category is defined as follows: 1 if highest income earner in a family is risk-averse, 2 if risk-neutral, and 3 if risk-seeking. This survey questionnaire is only available in 2018. *New Born in 2018* is an indicator variable that equals one if household had a newborn baby in 2018 survey year and zero otherwise. Standard errors reported in parentheses are robust and clustered at the province level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Risk Category		
	(1)	(2)	(3)
Treated $\times$ New Born in 2018	-1.011*	-1.058*	
	(0.582)	(0.588)	
New Born in 2018	0.215	0.161	
	(0.544)	(0.548)	
Treated	-0.229	-0.124	-0.192
	(0.163)	(0.219)	(0.204)
Log(1+Family Income)		0.216	0.226
		(0.145)	(0.146)
Log(Family Members)		0.014	-0.035
		(0.248)	(0.264)
Log(1+Education Expenditure)		-0.309**	-0.273*
		(0.158)	(0.164)
Log(1+Gov Subsidy)		0.589	0.708
		(0.582)	(0.554)
Urban (Indicator)		-0.165	-0.178
		(0.394)	(0.398)
Log(1+Mortgage)		0.128	0.112
		(0.127)	(0.124)
Log(House Ownership Value)		-0.059*	-0.049
		(0.034)	(0.034)
Unemployment Rate		0.429*	0.385*
		(0.225)	(0.224)
GDP Growth Rate		-0.562***	-0.503***
		(0.138)	(0.131)
Population Growth Rate		31.435	22.780
		(27.453)	(23.237)
Province fixed effects	Yes	Yes	Yes
Observations	689	689	689
Adjusted R-squared	0.038	0.044	0.041

Table 7: Mechanism Test: Subsistence Ratio and Financial Constraint

The table reports regression results from linear probability models examining the impact of China’s two-child policy on entrepreneurial decisions, focusing on subsamples defined by the household’s subsistence ratio. The subsistence ratio is calculated as the share of subsistence expenditure — comprising expenditures on food, clothing, daily necessities, housing, transportation, and communication — relative to total expenditure measured in the pre-policy period. Panel A splits the sample into households with subsistence ratios above or below the provincial median, separately for rural and urban areas. Panel B explores the role of financial constraints by dividing households according to whether their housing wealth is above or below the provincial median, again within rural and urban subsamples. Standard errors, reported in parentheses, are robust and clustered at the household level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

<b>Panel A. Subsistence Ratio</b>				
	<b>Entrepreneur</b>			
	Households with High Subsistence Ratio		Households with Low Subsistence Ratio	
	(1)	(2)	(3)	(4)
Treated × Post	-0.020*** (0.006)	-0.023*** (0.006)	0.002 (0.006)	0.001 (0.006)
Log(1+Family Income)	0.060*** (0.004)	0.060*** (0.004)	0.055*** (0.004)	0.055*** (0.004)
Log(Family Members)	0.009 (0.006)	0.010* (0.006)	0.021*** (0.006)	0.021*** (0.006)
Log(1+Education Expenditure)	0.025*** (0.008)	0.024*** (0.009)	0.025*** (0.006)	0.024*** (0.006)
Log(1+Gov Subsidy)	0.000 (0.015)	0.001 (0.015)	-0.015 (0.012)	-0.016 (0.012)
Urban (Indicator)	0.037*** (0.007)	0.036*** (0.007)	0.020*** (0.007)	0.020*** (0.007)
Log(1+Mortgage)	0.018*** (0.007)	0.018*** (0.007)	0.013** (0.006)	0.013** (0.006)
Log(House Ownership Value)	0.000 (0.002)	0.001 (0.002)	0.004** (0.002)	0.003** (0.002)
Unemployment Rate	0.006 (0.008)		0.028*** (0.008)	
GDP Growth Rate	0.000 (0.002)		-0.002 (0.002)	
Population Growth Rate	0.747 (0.745)		1.377* (0.751)	
Household fixed effects	Yes	Yes	Yes	Yes
Province fixed effects	Yes	No	Yes	No
Year fixed effects	Yes	No	Yes	No
Province × Year fixed effects	No	Yes	No	Yes
Observations	25,021	25,021	22,674	22,674
Adjusted R-squared	0.380	0.382	0.348	0.348

**Panel B. Subsistence Ratio and Financial Constraint**

	Entrepreneur			
	Households with High Subsistence Ratio		Households with Low Subsistence Ratio	
	Housing Assets		Housing Asset	
	(1) Low	(2) High	(3) Low	(4) High
Treated × Post	-0.023*** (0.008)	-0.020 (0.012)	-0.003 (0.008)	-0.007 (0.012)
Log(1+Family Income)	0.048*** (0.005)	0.065*** (0.007)	0.047*** (0.005)	0.064*** (0.007)
Log(Family Members)	0.001 (0.008)	0.027** (0.012)	0.004 (0.007)	0.036*** (0.012)
Log(1+Education Expenditure)	0.021* (0.012)	0.009 (0.014)	0.025*** (0.008)	0.029*** (0.011)
Log(1+Gov Subsidy)	-0.001 (0.019)	0.001 (0.034)	-0.009 (0.014)	-0.015 (0.024)
Urban (Indicator)	0.027*** (0.010)	0.037*** (0.014)	0.015 (0.010)	0.015 (0.014)
Log(1+Mortgage)	0.024* (0.013)	0.016* (0.009)	0.003 (0.013)	0.011 (0.008)
Log(House Ownership Value)	-0.007** (0.003)	0.014* (0.008)	-0.002 (0.003)	0.023*** (0.008)
Household fixed effects	Yes	Yes	Yes	Yes
Province fixed effects	No	No	No	No
Year fixed effects	No	No	No	No
Province × Year fixed effects	Yes	Yes	Yes	Yes
Observations	12,793	9,736	11,853	8,564
Adjusted R-squared	0.433	0.411	0.371	0.406

Table 8: Mechanism Test: Entrepreneurial Income Risk

The table presents regression results from the linear probability models that examine the effect of China's two-child policy on entrepreneurial choices, focusing on sub-samples based on uncertainty about career prospects. We test the impact of potential childbirth on the likelihood of pursuing entrepreneurship when facing varying degrees of uncertainty in career prospects. After matching the information of the industry in which the family head works in our main dataset with the Orbis dataset and the failure rate of an industry in a given year by computing the fraction of the number of Chinese firms surviving in the subsequent two years, we split the sample into industries with high failure rate, which is above the median industry failure rate, and industries with low failure rate, which is below the median industry failure rate. Standard errors reported in parentheses are robust and clustered at the household level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Entrepreneur			
	Industry with High Failure Rate		Industry with Low Failure Rate	
	(1)	(2)	(3)	(4)
Treated $\times$ Post	-0.071*	-0.081*	0.028	0.018
	(0.043)	(0.048)	(0.029)	(0.032)
Log(1+Family Income)	0.022	0.021	0.049***	0.050***
	(0.028)	(0.030)	(0.018)	(0.019)
Log(Family Members)	0.097	0.102	0.013	0.015
	(0.069)	(0.069)	(0.044)	(0.042)
Log(1+Education Expenditure)	-0.019	-0.013	-0.110**	-0.110**
	(0.060)	(0.061)	(0.048)	(0.051)
Log(1+Gov Subsidy)	0.057	0.135	0.164	0.168
	(0.162)	(0.221)	(0.126)	(0.107)
Urban (Indicator)	0.018	0.017	0.007	0.012
	(0.046)	(0.053)	(0.060)	(0.062)
Log(1+Mortgage)	0.040	0.038	0.051**	0.054**
	(0.035)	(0.033)	(0.026)	(0.027)
Log(House Ownership Value)	0.007	0.009	0.004	0.003
	(0.009)	(0.009)	(0.007)	(0.007)
Unemployment Rate	-0.062		0.112	
	(0.097)		(0.090)	
GDP Growth Rate	-0.018		0.005	
	(0.015)		(0.018)	
Population Growth Rate	-5.050		2.968	
	(7.247)		(5.477)	
Household fixed effects	Yes	Yes	Yes	Yes
Province fixed effects	Yes	No	Yes	No
Year fixed effects	Yes	No	Yes	No
Province $\times$ Year fixed effects	No	Yes	No	Yes
Observations	939	933	1,177	1,173
Adjusted R-squared	0.375	0.369	0.328	0.320

Table 9: Mechanism Test: Intra-household Risk Sharing

The table presents regression results from the linear probability models that examine the effect of China's two-child policy on entrepreneurial choices, focusing on sub-samples based on intra-household risk sharing. We analyze sub-samples of households in Panel A based on the number of income earners, and in Panel B based on income concentrations. *High (Low) Number of Income Earners* equals one if the number of family members earning positive labor income is greater than (at or below) the sample median, and zero otherwise. *High (Low) Income Concentration* equals one if the highest individual income accounts for more than (at or below) the sample median share of total family income, and zero otherwise. Standard errors reported in parentheses are robust and clustered at the household level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Entrepreneur			
	Low Number of Income Earners (Lagged)		High Number of Income Earners (Lagged)	
	(1)	(2)	(3)	(4)
Treated $\times$ Post	-0.025*** (0.008)	-0.028*** (0.008)	0.001 (0.011)	-0.003 (0.012)
Log(1+Family Income)	0.069*** (0.004)	0.070*** (0.004)	0.046*** (0.007)	0.047*** (0.007)
Log(Family Members)	0.029*** (0.006)	0.028*** (0.006)	0.012 (0.010)	0.012 (0.010)
Log(1+Education Expenditure)	0.038*** (0.008)	0.039*** (0.008)	0.012 (0.013)	0.010 (0.013)
Log(1+Gov Subsidy)	-0.022 (0.013)	-0.024* (0.013)	0.009 (0.025)	0.008 (0.025)
Urban (Indicator)	0.041*** (0.007)	0.040*** (0.007)	0.029** (0.011)	0.029*** (0.011)
Log(1+Mortgage)	0.017** (0.007)	0.017** (0.007)	0.024** (0.011)	0.024** (0.012)
Log(House Ownership Value)	0.005*** (0.002)	0.005*** (0.002)	0.001 (0.003)	0.001 (0.003)
Unemployment Rate	0.018** (0.009)		-0.005 (0.017)	
GDP Growth Rate	-0.001 (0.003)		-0.008* (0.005)	
Population Growth Rate	0.809 (1.176)		3.666** (1.856)	
Household fixed effects	Yes	Yes	Yes	Yes
Province fixed effects	Yes	No	Yes	No
Year fixed effects	Yes	No	Yes	No
Province $\times$ Year fixed effects	No	Yes	No	Yes
Observations	25,600	25,600	7,302	7,302
Adjusted R-squared	0.375	0.376	0.210	0.213

**Panel B. Income Concentration of Household**

	Entrepreneur			
	High Income Concentration		Low Income Concentration	
	(1)	(2)	(3)	(4)
Treated × Post	-0.010** (0.005)	-0.012** (0.005)	0.010 (0.014)	0.007 (0.014)
Log(1+Family Income)	0.068*** (0.003)	0.069*** (0.003)	0.057*** (0.009)	0.059*** (0.009)
Log(Family Members)	0.015*** (0.004)	0.016*** (0.004)	0.022* (0.012)	0.023* (0.012)
Log(1+Education Expenditure)	0.029*** (0.006)	0.030*** (0.006)	0.017 (0.014)	0.015 (0.014)
Log(1+Gov Subsidy)	-0.017* (0.010)	-0.018* (0.010)	0.001 (0.031)	-0.002 (0.030)
Urban (Indicator)	0.031*** (0.006)	0.031*** (0.006)	0.023* (0.014)	0.022 (0.014)
Log(1+Mortgage)	0.013*** (0.005)	0.013*** (0.005)	0.015 (0.013)	0.011 (0.013)
Log(House Ownership Value)	0.003** (0.001)	0.003** (0.001)	-0.003 (0.003)	-0.004 (0.003)
Unemployment Rate	0.019*** (0.006)		-0.032 (0.020)	
GDP Growth Rate	-0.001 (0.001)		-0.006 (0.006)	
Population Growth Rate	0.869 (0.608)		5.378** (2.643)	
Household fixed effects	Yes	Yes	Yes	Yes
Province fixed effects	Yes	No	Yes	No
Year fixed effects	Yes	No	Yes	No
Province × Year fixed effects	No	Yes	No	Yes
Observations	42,245	42,245	4,719	4,719
Adjusted R-squared	0.377	0.378	0.205	0.213

## **Internet Appendix**

Tradeoff between Entrepreneurship and Lineage:  
Evidence from China's Nationwide Two-Child Policy

Table IA.1: Effects of Two-Child Policy on Changes in Entrepreneurial Activities

This table presents effects of the two-child policy on changes in entrepreneurial activities as opposed to the status of entrepreneurship. Columns 1 through 3 report effects on whether households become an entrepreneur, i.e., the outcome variable is an indicator variable equal to one if a household had no self-employed members in the previous survey year, but has at least one household member with self-employment in the current survey year. Columns 4 through 6 report effects on whether households quit entrepreneurship, i.e., the outcome variable is an indicator variable equal to one if a household had at least one self-employed member in the previous survey year, but no household members with self-employment in the current survey year. Standard errors reported in parentheses are robust and clustered at the household level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Becoming Entrepreneur			Quitting Entrepreneur		
	(1)	(2)	(3)	(4)	(5)	(6)
Treated × Post	-0.014*** (0.004)	-0.015*** (0.004)		0.011*** (0.004)	0.011*** (0.004)	
Treated × 1(Year = 2012)			0.004 (0.006)			-0.009 (0.006)
Treated × 1(Year = 2016)			-0.014** (0.005)			0.010* (0.005)
Treated × 1(Year = 2018)			-0.007 (0.005)			-0.003 (0.005)
Treated × 1(Year = 2020)			-0.022*** (0.007)			0.017** (0.008)
Log(1+Family Income)	0.042*** (0.002)	0.042*** (0.002)	0.042*** (0.002)	-0.022*** (0.002)	-0.022*** (0.002)	-0.022*** (0.002)
Log(Family Members)	0.006* (0.003)	0.006* (0.003)	0.005 (0.003)	-0.007** (0.003)	-0.006* (0.003)	-0.005 (0.003)
Log(1+Education Expenditure)	0.012*** (0.004)	0.012*** (0.004)	0.011*** (0.004)	-0.006 (0.004)	-0.006 (0.004)	-0.005 (0.004)
Log(1+Gov Subsidy)	-0.001 (0.009)	-0.001 (0.009)	-0.001 (0.009)	-0.002 (0.008)	-0.002 (0.008)	-0.002 (0.008)
Urban (Indicator)	0.015*** (0.004)	0.015*** (0.004)	0.015*** (0.004)	-0.010** (0.004)	-0.010** (0.004)	-0.010** (0.004)
Log(1+Mortgage)	0.014*** (0.004)	0.014*** (0.004)	0.014*** (0.004)	-0.002 (0.003)	-0.003 (0.003)	-0.003 (0.003)
Log(House Ownership Value)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Unemployment Rate	0.007 (0.005)			-0.007 (0.004)		
GDP Growth Rate	-0.002* (0.001)			0.002** (0.001)		
Population Growth Rate	0.405 (0.448)			-1.267*** (0.490)		
Household fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Province fixed effects	Yes	No	No	Yes	No	No
Year fixed effects	Yes	No	No	Yes	No	No
Province × Year fixed effects	No	Yes	Yes	No	Yes	Yes
Observations	50,934	50,934	50,934	50,934	50,934	50,934
Adjusted R-squared	0.025	0.027	0.027	0.042	0.044	0.044

Table IA.2: Descriptive Statistics for Propensity Score-Matched (PSM) Sample in Matching Treatment Probability

This table presents descriptive statistics for the propensity score-matched (PSM) sample in Panel B of Table 5. Panel A shows that the treated group and the control group indicate different characteristics. Then we match their characteristics in one survey period before the two-child policy in the following manner: we select the control sample by estimating the predicted probability of being in the treated group before the two-child policy using the control variables listed in Table 2 and selecting a household in the control group that has the closest propensity score to that of a household in the treatment group, using a caliper of 0.001 without replacement. The PSM sample consists of 3,564 (1,782 households in the treatment group and 1,782 households in the control group) households before the introduction of the two-child policy, and we compare below household-level and province-level characteristics between the treated and control groups in the pre-period. The F-statistic is reported at the bottom and is based upon a Multinomial ANOVA (MANOVA) test.

**Panel A. Full Sample in the Pre-period**

	Treated (N=9,565)		Control (N=11,203)		Mean Diff	t-stat
	Mean	Median	Mean	Median		
Log(1+Family Income)	1.57	1.58	1.39	1.37	0.19***	19.36
Log(Family Members)	1.45	1.39	1.02	1.10	0.43***	76.83
Log(1+Education Expenditure)	0.24	0.10	0.19	0.00	0.06***	11.91
Log(1+Gov Subsidy)	0.06	0.02	0.06	0.01	0.00	0.14
Urban (Indicator)	0.41	0.00	0.46	0.00	-0.04***	-6.37
Log(1+Mortgage)	0.07	0.00	0.04	0.00	0.03***	6.24
Log(House Ownership Value)	2.08	2.40	1.90	1.95	0.18***	8.83
Unemployment Rate	3.25	3.27	3.33	3.33	-0.08***	-10.01
GDP Growth Rate	9.37	8.90	9.19	8.90	0.19***	7.00
Population Growth Rate	0.00	0.00	0.00	0.00	-0.00	-0.54

**Panel B. Propensity Score Matched Sample in the Pre-period**

	Treated (N=1,782)		Control (N=1,782)		Mean Diff	t-stat
	Mean	Median	Mean	Median		
Log(1+Family Income)	1.40	1.58	1.38	1.52	0.02	1.43
Log(Family Members)	1.19	1.10	1.19	1.10	-0.00	-0.12
Log(1+Education Expenditure)	0.20	0.00	0.20	0.05	0.01	0.53
Log(1+Gov Subsidy)	0.06	0.02	0.06	0.01	-0.00	-0.15
Urban (Indicator)	0.45	0.00	0.44	0.00	0.01	0.57
Log(1+Mortgage)	0.06	0.00	0.05	0.00	0.00	0.21
Log(House Ownership Value)	2.10	2.30	2.05	2.40	0.04	0.89
Unemployment Rate	3.32	3.34	3.32	3.34	0.00	0.00
GDP Growth Rate	8.14	8.70	8.14	8.70	0.00	0.00
Population Growth Rate	0.00	0.00	0.00	0.00	0.00	0.00
Joint test for the significance of t-values statistics					F-value	p-value
Lawley-Hotelling trace	0.0008				0.3014	0.98

### Table IA.3: Robustness Tests

This table presents various robustness tests, incorporating refinement of the control group, alternative definitions of entrepreneurship, tests on urban areas only, tests for bad controls, tests for industry-by-year fixed effects, and focus on male entrepreneurs. In Panel A, we exclude single-person households from the sample. In Panel B, we apply two alternative definitions of entrepreneurs to select on serious entrepreneurs: whether a household includes an entrepreneur whose income accounts for more than 10 percent of total family income, and whether the household's entrepreneurial business assets exceed the median asset size in the same year-province level. In Panel C, we only focus on households living in urban areas. In Panel D, we test for bad controls by running the baseline Equation 12 without including any control variables. In Panel E, we identify the industry in which the largest income earner in a household works in and include industry-by-year fixed effects. In Panel F, the dependent variable is an indicator for whether the household includes at least one male entrepreneur (i.e., a self-employed male household member). Standard errors reported in parentheses are robust and clustered at the household level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

**Panel A. Exclusion of Single-person Households**

	Entrepreneur		
	(1)	(2)	(3)
Treated × Post	-0.008*	-0.010**	
	(0.005)	(0.005)	
Treated × 1(Year == 2012)			-0.007
			(0.006)
Treated × 1(Year == 2016)			-0.010*
			(0.006)
Treated × 1(Year == 2018)			-0.002
			(0.006)
Treated × 1(Year == 2020)			-0.038***
			(0.010)
Log(1+Family Income)	0.070***	0.070***	0.070***
	(0.003)	(0.003)	(0.003)
Log(Family Members)	0.010*	0.011*	0.007
	(0.006)	(0.006)	(0.006)
Log(1+Education Expenditure)	0.024***	0.024***	0.022***
	(0.005)	(0.005)	(0.005)
Log(1+Gov Subsidy)	-0.010	-0.010	-0.009
	(0.010)	(0.010)	(0.010)
Urban (Indicator)	0.031***	0.030***	0.030***
	(0.006)	(0.006)	(0.006)
Log(1+Mortgage)	0.014***	0.014***	0.014***
	(0.005)	(0.005)	(0.005)
Log(House Ownership Value)	0.002	0.002*	0.002*
	(0.001)	(0.001)	(0.001)
Unemployment Rate	0.013**		
	(0.006)		
GDP Growth Rate	-0.001		
	(0.001)		
Population Growth Rate	0.972*		
	(0.547)		
Household fixed effects	Yes	Yes	Yes
Province fixed effects	Yes	No	No
Year fixed effects	Yes	No	No
Province X Year fixed effects	No	Yes	Yes
Observations	46,732	46,732	46,732
Adjusted R-squared	0.380	0.381	0.382

**Panel B. Alternative Definitions of Entrepreneurship**

	Entrepreneur: Business Income ≥ 10% Family Income			Entrepreneur: Business Asset ≥ Province-Year Median		
	(1)	(2)	(3)	(4)	(5)	(6)
Treated × Post	-0.007*	-0.009**		-0.010***	-0.012***	
	(0.004)	(0.004)		(0.003)	(0.003)	
Treated × 1(Year == 2012)			-0.008			0.001
			(0.005)			(0.005)
Treated × 1(Year == 2016)			-0.011**			-0.008*
			(0.005)			(0.004)
Treated × 1(Year == 2018)			-0.004			-0.009*
			(0.006)			(0.005)
Treated × 1(Year == 2020)			-0.030***			-0.021***
			(0.008)			(0.006)
Log(1+Family Income)	0.062***	0.063***	0.063***	0.056***	0.057***	0.057***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Log(Family Members)	0.009***	0.010***	0.008**	-0.001	-0.001	-0.002
	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)
Log(1+Education Expenditure)	0.025***	0.025***	0.024***	0.029***	0.028***	0.028***
	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)
Log(1+Gov Subsidy)	-0.007	-0.006	-0.005	-0.016**	-0.016**	-0.016**
	(0.009)	(0.009)	(0.009)	(0.007)	(0.007)	(0.007)
Urban (Indicator)	0.021***	0.021***	0.020***	0.013***	0.013***	0.013***
	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)
Log(1+Mortgage)	0.010**	0.010**	0.010**	0.012***	0.012***	0.012***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Log(House Ownership Value)	0.002	0.002*	0.002*	0.001*	0.001*	0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Unemployment Rate	0.010**	0.000	0.000	0.004	0.000	0.000
	(0.005)			(0.004)		
GDP Growth Rate	-0.001			-0.002*		
	(0.001)			(0.001)		
Population Growth Rate	0.668			0.733*		
	(0.495)			(0.423)		
Household fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Province fixed effects	Yes	No	No	Yes	No	No
Year fixed effects	Yes	No	No	Yes	No	No
Province × Year fixed effects	No	Yes	Yes	No	Yes	Yes
Observations	50,934	50,934	50,934	50,934	50,934	50,934
Adjusted R-squared	0.352	0.353	0.353	0.283	0.284	0.284

**Panel C. Urban Areas Only**

	Entrepreneur		
	(1)	(2)	(3)
Treated × Post	-0.012*	-0.015**	
	(0.007)	(0.007)	
Treated × 1(Year == 2012)			0.003
			(0.009)
Treated × 1(Year == 2016)			-0.019**
			(0.009)
Treated × 1(Year == 2018)			0.003
			(0.010)
Treated × 1(Year == 2020)			-0.052***
			(0.019)
Log(1+Family Income)	0.065***	0.066***	0.066***
	(0.005)	(0.005)	(0.005)
Log(Family Members)	0.028***	0.030***	0.027***
	(0.008)	(0.008)	(0.008)
Log(1+Education Expenditure)	0.029***	0.028***	0.025***
	(0.008)	(0.008)	(0.008)
Log(1+Gov Subsidy)	0.002	0.002	0.002
	(0.016)	(0.016)	(0.016)
Log(1+Mortgage)	0.010	0.009	0.009
	(0.006)	(0.006)	(0.006)
Log(House Ownership Value)	0.002	0.003*	0.003*
	(0.002)	(0.002)	(0.002)
Unemployment Rate	0.007		
	(0.010)		
GDP Growth Rate	-0.002		
	(0.002)		
Population Growth Rate	0.648		
	(0.887)		
Household fixed effects	Yes	Yes	Yes
Province fixed effects	Yes	No	No
Year fixed effects	Yes	No	No
Province X Year fixed effects	No	Yes	Yes
Observations	21349	21349	21349
Adjusted R-squared	0.450	0.453	0.453

**Panel D. Tests for Bad Controls**

	Entrepreneur		Entrepreneur: Business Income ≥ 10% Family Income	Entrepreneur: Business Asset ≥ Province-Year Median
	(1)	(2)	(3)	(4)
Treated × Post	-0.009** (0.004)	-0.010** (0.004)	-0.008* (0.004)	-0.009*** (0.003)
Household fixed effects	Yes	Yes	Yes	Yes
Province fixed effects	Yes	No	No	No
Year fixed effects	Yes	No	No	No
Province X Year fixed effects	No	Yes	Yes	Yes
Observations	50,934	50,934	50,934	50,934
Adjusted R-squared	0.341	0.342	0.333	0.259

**Panel E. Tests for Industry-by-Year Fixed Effects**

	Entrepreneur	
	(1)	(2)
Treated × Post	-0.012*	
	(0.007)	
Treated × 1(Year = 2012)		-0.007
		(0.010)
Treated × 1(Year = 2016)		-0.024***
		(0.009)
Treated × 1(Year = 2018)		-0.004
		(0.010)
Treated × 1(Year = 2020)		-0.012
		(0.027)
Log(1+Family Income)	0.055***	0.055***
	(0.005)	(0.005)
Log(Family Members)	0.010	0.010
	(0.008)	(0.008)
Log(1+Education Expenditure)	0.023***	0.022**
	(0.009)	(0.009)
Log(1+Gov Subsidy)	-0.032	-0.032
	(0.021)	(0.021)
Urban (Indicator)	0.022**	0.022**
	(0.011)	(0.011)
Log(1+Mortgage)	0.010	0.011
	(0.009)	(0.009)
Log(House Ownership Value)	0.003	0.003
	(0.002)	(0.002)
Unemployment Rate	0.010	0.009
	(0.009)	(0.010)
GDP Growth Rate	-0.002	-0.002
	(0.002)	(0.002)
Population Growth Rate	1.587*	1.535*
	(0.824)	(0.823)
Household fixed effects	Yes	Yes
Province fixed effects	Yes	Yes
Industry x Year fixed effects	Yes	Yes
Observations	16481	16481
Adjusted R-squared	0.479	0.479

**Panel F. Male Entrepreneur**

	Male Entrepreneur		
	(1)	(2)	(3)
Treated × Post	-0.003*	-0.004**	
	(0.002)	(0.002)	
Treated × 1(Year == 2012)			-0.003
			(0.002)
Treated × 1(Year == 2016)			-0.005**
			(0.002)
Treated × 1(Year == 2018)			-0.004*
			(0.002)
Treated × 1(Year == 2020)			-0.007
			(0.005)
Log(1+Family Income)	0.015***	0.015***	0.015***
	(0.002)	(0.002)	(0.002)
Log(Family Members)	0.003*	0.003*	0.003*
	(0.002)	(0.002)	(0.002)
Log(1+Education Expenditure)	0.007***	0.007***	0.007***
	(0.002)	(0.002)	(0.002)
Log(1+Gov Subsidy)	-0.002	-0.003	-0.003
	(0.004)	(0.004)	(0.004)
Urban (Indicator)	0.009***	0.008***	0.008***
	(0.002)	(0.002)	(0.002)
Log(1+Mortgage)	0.003	0.003	0.003
	(0.002)	(0.002)	(0.002)
Log(House Ownership Value)	0.000	0.001	0.001
	(0.001)	(0.001)	(0.001)
Unemployment Rate	-0.001		
	(0.002)		
GDP Growth Rate	-0.000		
	(0.001)		
Population Growth Rate	0.191		
	(0.225)		
Household fixed effects	Yes	Yes	Yes
Province fixed effects	Yes	No	No
Year fixed effects	Yes	No	No
Province X Year fixed effects	No	Yes	Yes
Observations	50,663	50,663	50,663
Adjusted R-squared	0.165	0.165	0.165

Table IA.4: Alternative Hypotheses: Time Constraints

This table presents tests results on alternative hypothesis. We test time constraint channel splitting the sample into households with above or below the median number of family members in 2014, which is a proxy for the number of people who can take care of babies. Standard errors reported in parentheses are robust and clustered at the household level. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	<b>Entrepreneur</b>			
	Large Households		Small Households	
	(1)	(2)	(3)	(4)
Treated $\times$ Post	-0.010*	-0.012*	-0.015*	-0.018**
	(0.006)	(0.006)	(0.008)	(0.008)
Log(1+Family Income)	0.071***	0.071***	0.065***	0.064***
	(0.004)	(0.004)	(0.006)	(0.006)
Log(Family Members)	0.019***	0.019***	0.009	0.011
	(0.005)	(0.005)	(0.007)	(0.007)
Log(1+Education Expenditure)	0.019***	0.019***	0.036***	0.037***
	(0.006)	(0.006)	(0.010)	(0.010)
Log(1+Gov Subsidy)	-0.020*	-0.021*	0.025	0.026
	(0.012)	(0.012)	(0.016)	(0.016)
Urban (Indicator)	0.032***	0.032***	0.021***	0.020**
	(0.006)	(0.006)	(0.008)	(0.008)
Log(1+Mortgage)	0.018***	0.018***	0.004	0.004
	(0.006)	(0.006)	(0.009)	(0.009)
Log(House Ownership Value)	0.002*	0.003*	0.001	0.001
	(0.001)	(0.001)	(0.002)	(0.002)
Unemployment Rate	0.020***		0.011	
	(0.007)		(0.009)	
GDP Growth Rate	-0.007**		-0.002	
	(0.003)		(0.004)	
Population Growth Rate	0.600		1.586*	
	(0.727)		(0.820)	
Household fixed effects	Yes	Yes	Yes	Yes
Province fixed effects	Yes	No	Yes	No
Year fixed effects	Yes	No	Yes	No
Province $\times$ Year fixed effects	No	Yes	No	Yes
Observations	30702	30702	16993	16993
Adjusted R-squared	0.374	0.375	0.344	0.344
p-value for coefficient comparison	(1) and (3) 0.8276	(2) and (4) 0.7952		