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## Does Education Effect on Son Preference? A Review of Recent Research in Asian

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### Abstract

*In Asian society, there has been a historical preference for males over daughters. In Asia, where Confucianism has traditionally held sway, individuals have embraced enduring ideals such as the belief that having multiple offspring is a source of good fortune, that nurturing children is a means of providing for the elderly, and that showing reverence to one's parents is of utmost importance. Simultaneously, patriarchy holds sway in conventional Asian countries, with a pronounced inclination towards male offspring. The disparity in the sex ratio has led to numerous significant societal issues, including human trafficking, expensive dowries, a shortage of available marriage partners, a crisis among unmarried men, and the illicit trade of marriages (bride smuggling). Therefore, this study aimed to investigate: (1) The development of a theoretical framework for son preference; (2) Hot spots for research on the phenomenon of son preference; (3) whether the influence of son preference still exists, and factors effecting son preference; (4) Adverse social consequences of son preference; (5) The moderating effect of education on sons' preferences.*

**Keywords:** *son preference, fertility preference, education, gender*

### 1. Introduction

Historically, Asian households have typically favoured sons over daughters (Tang, 1995). In Asian civilization, it is traditional for males to bear the responsibility of continuing the family lineage, which holds significant importance (Tang, 1995). Chao et al. (2019) argue that a skewed sex ratio occurs due to a preference for male offspring and various forms of discrimination against females. In 1979, China initiated the implementation of the one-child policy. The policy aimed to control the growth of the population by imposing a limitation on

urban couples, allowing them to have just one child. However, in most rural areas, couples were allowed to have a second child only if their first kid was a girl. Gu and Roy (1995) argue that China's one-child policy, along with its entrenched patriarchal culture, widespread use of ultrasound technology, abandoning of female infants, and infanticide, has led to a substantial gender imbalance in the country's birth rate. In their 2017 study done in South Korea, Yoo et al. (2017) found evidence suggesting a significant decline in patriarchy and a normalisation of the sex ratio at birth. The results of this investigation were released in 2017. Patriarchal parents can potentially keep producing children until their households reach the desired number of males within their demography. A study conducted in India revealed that parents exhibit a proclivity to bear more offspring when their firstborn is a female (Kugler & Kumar, 2017). This discovery provides support for the previously indicated claim. In addition, it is common for men to have a greater capacity to generate income compared to women, which could potentially play a role in reinforcing patriarchal ideologies.

Our review contributes several significant additions to the existing body of knowledge. Firstly, we shall discuss recent theoretical progress. Now, we will examine the latest empirical studies, specifically highlighting findings from the past decade. The third question pertains to the continued existence of son preference, the underlying factors that contribute to son preference, and the adverse societal consequences associated with it. Ultimately, we provide an examination of the processes that connect education with the selection of offspring, along with the methodologies employed to uncover these mechanisms. In this essay, we will evaluate the degree to which it has been proven that there is a cause-and-effect link between schooling and the choice of having a son. Finally, it is crucial to assess the pros and cons of the current level of research and discuss the prospective prospects that await in this field.

## **2. Development of Theoretical Frameworks**

Among the notable and reliable concepts in the field of demography, the Demographic Transition Theory (DTT) stands out as one of the many theories that have been formulated. The classical demographic transition theory was originally formulated by Williams Thompson in 1929 and then expanded upon by Frank Notestein in 1945. Williams Thompson originated the notion. The initial conception of the idea was based on the study of the demographic transformation that occurred in Western European nations following the Industrial Revolution. Nevertheless, most countries that have had or are presently experiencing a demographic transition have undergone similar phases of demographic change, as stated by Kirk (1996). This applies to most countries that have experienced or are now experiencing a demographic change.

During the demographic transition, a country experiences various stages of population growth rates along with corresponding social, political, economic, and cultural changes. These changes ultimately lead to the conclusion of the demographic transition. According to the demographic transition theory, the decline in birth rates has been accompanied by a rise in women's empowerment and a decrease in gender roles. This phenomenon has coincided with the decrease in fertility. Reducing the number of children allows women to allocate more time towards seeking employment prospects (Davis & van den Oever, 1982), hence reducing their reliance on male family members. This is due to the fact that women have a greater amount of available time to actively search for employment opportunities. Dyson (2013) observes that the mean age of marriage has risen in both industrialised and developing nations. This phenomenon is evident in both nations. Parents who have fewer children are more inclined to provide their daughters with higher educational opportunities compared to their sons.

### **3. Research hotspot areas**

Although extensive research has been conducted on gender preferences worldwide, the majority of it has primarily focused on regions and nations with a more prevalent patriarchy. The countries mentioned are primarily located in various regions, including North Africa (Morocco, Tunisia, and Egypt), the Near East, Central Europe, the Caucasus (Albania, Azerbaijan, Armenia, and Georgia), South Asia (India, Bangladesh, and Nepal), and East Asia (China, Korea, and Vietnam). Brunson (2010), Calhoun (2013), and Hatlebakk (2012) are among the writers included in this study. The countries of India, Bangladesh, Egypt, and Nepal are known for having some of the most severe examples of patriarchy worldwide (Brunson, 2010; Hatlebakk, 2012; Rai et al., 2014). These countries have patriarchal practices. According to the findings of a study conducted by Rossi and Rouanet (2015), patriarchal ideas not only persist in North Africa but have also become increasingly prominent over time. The patriarchal system is widespread in around two-thirds of the countries located in the Sub-Saharan Africa region. Nevertheless, prior research has indicated that patriarchal beliefs are not notably widespread in several Latin American countries, including Colombia and the Dominican Republic (Arnold, 1997), as well as other Caribbean nations. This is the situation in several countries. The 1990s have been the decade that has observed this transition. In contrast, other countries, like India, have mostly maintained their historical patriarchal values (Bhalla et al., 2013). This is the situation prevailing in India. When gender preferences exist at the national level in Europe, the gender of offspring is typically determined by a combination of male and female traits. In general, this is the current state of affairs. The figures from the Nordic nations, however, do not substantiate the gender imbalance hypothesis; instead, they illustrate novel perspectives on gender. Regarding their third child, Danish couples exhibit a little inclination towards having girls, a finding that was also seen in Sweden and Norway by Jacobsen et al.

(1999). Swedish and Norwegian couples tend to favour having a mixed gender composition for their second kid, but when it comes to their third child, they exhibit a preference for girls. Conversely, Finnish couples exhibit a slight inclination towards choosing male partners in their romantic relationships. In their study, Hank and Kolher (2000) discovered that the preference for females over men in the Czech Republic, Lithuania, and Portugal was similar to what they saw in Portugal. Based on the research conducted by Hank and Kolher (2000), it was found that younger girls are more likely to be favored over younger boys. Each of these qualities is prone to undergoing fast alterations. Research conducted by Brockmann in 1999 has revealed a regional bias towards male offspring in some areas of Germany throughout specified time periods. This preference has been noted. The global prevalence of male preference may diminish due to economic advancement and enhanced female education (Kumar & Sinha, 2018). Conversely, this could exacerbate the imbalance in sex ratio at birth (SRB) by reducing the desired number of children and the actual number of children born during labor.

The preference for sons persists in several East Asian countries, including China, Japan, and Korea, where the tradition of Confucian "filial piety" is prevalent. According to Konrad et al. (2002), it is a widespread custom in several countries for parents to live with their eldest son, who is considered responsible for taking care of his parents as they grow older. According to Larsen et al. (1998), it is the male descendants who are responsible for performing ancestor worship rituals and continuing the family lineage. Conversely, a recent study carried out in Japan and Korea reveals a decrease in patriarchal beliefs, with parents showing no bias towards the gender of their children. Kureishi and Wakabayashi (2011) examine gender preferences in Japan using Japanese microdata. It was found that parents in the cohort born between 1920 and 1939 had a clear preference for having sons, as indicated by their choice of names. However, this tendency disappeared in subsequent cohorts. Choi and Hwang (2015) found that their study on the impact of child gender on fertility and parental investment in Korea revealed a considerable reduction in the disparity between boys and daughters in terms of both financial and non-financial benefits. These results indicate that the inclination towards having male children has declined during the previous twenty years. Nevertheless, Chinese parents, especially those residing in rural regions, persist in favoring male offspring and are inclined to have more children if there is no male child in the family (Jiang et al., 2016; Lu & Tao, 2015).

This desire is particularly widespread in rural areas. The sex ratio at birth is a representation of these data, indicating the ratio of male to female births. According to the United Nations (2019), China's sex ratio at birth in 2018 was 1.126, significantly surpassing the sex ratios of Japan (1.056) and South Korea (1.055). Son preference can result in various issues, including a decrease in investments in the education and development of female children, a disruption in

the marriage market, and gender-based discrimination against women and girls. These problems are in addition to the existing imbalance in the sex ratio at birth. (Song & Burgard, 2008; Wang & Wang, 2005). The topics are addressed in the works of Song with Burgard (2008), and Wang and Wang (2005). Hence, to successfully advance social equity and financial well-being, it is imperative to comprehend the factors associated with a decline in the preference for male offspring.

Despite rapid market reforms, structural transformation, and decreases in poverty, the preference for male offspring has persisted in recent decades. The sex ratio at birth in the Republic of Korea has shown a progressive growth during its transition to a high-income country, despite a drop in the desire for sons during this period. Viet Nam, an Asian economy, is experiencing tremendous expansion and has also observed a substantial rise in the gender ratio at birth in recent times. These findings indirectly provide support for the cultural explanation of son preference. As stated by Asadullah et al. (2021). Pakistan is currently experiencing a demographic shift that is similar to what is happening in other developing nations. Pakistan is presently in the third stage of demographic transition, as viewed from the standpoint of demographic transition. This stage is marked by a decrease in mortality and a decrease in fertility, although the fertility rate has not yet reached the replacement level.

According to the World Bank, the birth rate has declined from 41.32 per thousand in 1950 to 27.84 per thousand in 2020. This signifies a substantial reduction. The fertility rate declined from 6.60 in 1950 to 3.39 in 2020 (Knoema, 2022). Given the ongoing shift in fertility rates, it is crucial to assess whether the changes in key factors such as higher education levels for both men and women, as well as increased female participation in the workforce, could potentially disrupt the long-standing patriarchal system and the traditional preference for male offspring. In response to the decline in reproduction rates observed in China after the termination of the "one-child policy" in 2016, the Chinese government has implemented the "three-child policy" and other supportive measures since June 2021 (Zhai & Jin, 2023). Although the new policy has expanded the ability to meet diverse reproductive needs among different social groups (Chen, 2023), recent research has shown that fertility objectives do not necessarily align with actual fertility outcomes. Shi and Yang (2021) found that the gender structure, except for not having any children, was the least favored. This indicates that a prevailing gender structure exists in certain Chinese households currently. These findings indicate that certain Chinese families are apprehensive about the prospect of having two sons. The report concludes by summarizing the transformation in Chinese families' attitudes towards having boys, which has shifted from desiring numerous sons in the 1950s to desiring at least one son, and ultimately to fearing the prospect of having two sons. This development took place over the span of the 20th

century. However, in the extensive rural areas of China, there is a significant inclination towards sons rather than daughters. The study conducted by Shen and Brown in 2022.

#### **4. Causes of son preference**

Patriarchal behavior is highly prevalent in South and East Asia. In patriarchal civilizations prominent in Asia, a son is highly valued due to his capacity to continue the family lineage, inherit the family business, support elderly parents, and safeguard and provide for dependent members of the extended family. In civilizations that have a patriarchal structure and practise dowries, sons have the opportunity to increase the wealth of their families through marriage. Conversely, female offspring are perceived as a financial liability due to the obligation of their families to fund substantial dowries for their marriages. According to Purewal (2010), patriarchal families perceive daughters as an unproductive investment since, upon marriage, women relocate to their husband's household and assist in the accumulation of his family's wealth rather than their own. In traditional societies, there is an expectation that women will give birth to male children after becoming married. This anticipation can exert a significant influence not just on future females but also on now existing girls. Research conducted in Pakistan has shown that women who have at least one son exert more influence over the day-to-day decision-making within their households (Javed & Mughal, 2019). According to research conducted by Kishore & Spears (2014) and Li & Wu (2011), it has been suggested that having a first-born male is associated with an increase in the mother's food consumption and a decrease in the likelihood of her being underweight. This phenomenon has been witnessed in both China and India. Milazzo's 2018 paper posits that the prevalence of son preference in India can be primarily attributed to the elevated rates of illness and death among adult women.

A multitude of economic, cultural, and institutional reasons have contributed to the development of deeply ingrained patriarchal beliefs, which continue to be widespread in contemporary society. These beliefs persist in the present day. An example of a cultural practice that is widespread in South Asian countries is the dowry system. In many nations, the birth of girls is commonly perceived as a fiscal liability. According to this system, the family of the bride is obligated to furnish the family of the groom with enduring assets as a requirement for marriage (Chowdhury, 2010). Another example of this phenomenon can be observed in the religious importance attributed to ancestor worship in countries belonging to the Sinosphere, including China, Vietnam, and South Korea. In these countries, the presence of sons is required to perform ancestor worship ceremonies. This is based on the belief in a hereafter and the desire to ensure the welfare of the deceased's spirit and the entire family (Yoo et al., 2017). This is done to assure the resurrection of the deceased's spirit.

Gao et al. (2012) assert that Confucianism has had a dominant position in Chinese intellectual tradition for over two millennia, serving as the primary source for moral principles and ideological frameworks. Confucius, who lived from 551-479 BC, is credited with establishing the fundamental principles of Confucianism. He is widely recognised as one of China's most prominent intellectuals and sages. Confucius was credited with the examination of the ethical and ceremonial regulations of the Xia, Shang, and Zhou dynasties. Mencius, who was the second most wise man after Confucius, was renowned for his assertion that "being unfilial is the gravest transgression." Being childless is really undesirable. The strong bias towards male offspring in China can be partly ascribed to the traditional Confucian rules that have been established. The male-to-female ratio in China was approximately 1.199 in 1999 and rose to 1.212 in 2009. The ratio is markedly greater than the global average of 1.076 in 2009, as stated by the Chinese population census in 2000. The influence of long-standing cultural beliefs and values on human behaviour and decision-making is substantial. Confucianism has served as the official philosophy of the state and has held a significant position in Chinese culture since the Han Dynasty (Park & Chesla, 2007). It is crucial to remember this fact.

In China, where Confucianism has traditionally held sway, the populace has embraced the notions of "prolific offspring as a source of good fortune," "nurturing children to ensure support in old age," and "paying homage to one's parents." Simultaneously, patriarchy has a position of power in traditional Chinese society, with a notable inclination towards favouring male offspring. The disparity in the sex ratio has resulted in numerous significant societal issues, including human trafficking, expensive dowries, a shortage of marriage partners, a crisis among unmarried men, and the illicit trade of marriages (bride smuggling). The inclination towards having two children is apparent in countries with diverse social, economic, and cultural contexts. This preference is consistently constant and is regarded as the prevailing form of fertility preference across different societies (Hank, 2007). The survey conducted in 2000 revealed that most participants expressed their fertility preferences in relation to achieving gender balance. Specifically, 85 percent of women indicated a desire to have two children if there were no limitations. Furthermore, 99 percent of these women expressed a preference for having "one boy and one girl" (Chu, 2001). Previous research consistently indicates that China, being the origin of Confucianism, exhibits a significant inclination towards favouring male offspring within its customary culture. This preference, together with corresponding reproductive motivations and actions, has played a vital role in the elevated sex ratio at birth observed in China. Empirical research has additionally discovered that in present-day Chinese households, sons continue to offer much more assistance in sustaining their parents compared to daughters, as parents are more likely to reside with their sons (Xu Qi, 2015). According to

Kadoya and Yin (2014), even in modern metropolises like Beijing, Shanghai, Guangzhou, Chengdu, Wuhan, and Shenyang, sons and daughters-in-law are more inclined to provide support to their parents compared to daughters and sons-in-law. Presently, the scholarly world widely agrees that traditional Chinese society has a pronounced and enduring bias towards boys, as stated by Wang Wenqing and Pan Suiming in 2005. When Chinese individuals have children, it serves not only as a means for the pair to secure a home for themselves in their old age, but more significantly, it is a way to preserve and transmit the unique characteristics and traditions of their family and clan (Zhang Yi, 1997).

### **5. Adverse consequences of son preference**

Son preference often manifests in significantly skewed sex ratios due to the practices of sex-selective abortions, female infanticide, and neglecting the health and nutritional needs of girls. These cases exemplify the various ways in which son preference becomes evident. According to the World Bank (2011), it is estimated that more than two million girls under the age of five go missing annually, with the bulk of these cases occurring in Asia. Moreover, Basu and De Jong (2010) found that in communities that do not accept sex-selective abortion, parents will keep having children until they have the desired number of males. Ojha (2021) suggests that when reproductive decisions are driven by the desire to produce a specific number of male children, it is probable that girls will be raised in households with a higher average number of members. Attané (2006), Bongaarts (2013), and Guilmoto (2015) have all documented the initial occurrences of female foeticide in China, India, and South Korea. Subsequently, this epidemic has extended its reach to various other areas, such as Vietnam, the South Caucasus, and Southern Europe (Duthé et al. 2012; Guilmoto 2015). In their study, Bongaarts and Guilmoto (2015) discovered that a staggering 1.7 million female infants were unaccounted for in the year 2015. It is important to note that the bulk of these missing newborns were born in Asian nations. In countries like India and China, where discrimination against women is common both before and after birth, prenatal sex selection can be used as a substitute for postnatal discrimination (Srinivasan, 2012). Sex selection at the population level leads to the eradication of millions of women, resulting in detrimental implications in the long term. Illustrations of this phenomenon can be observed in the instances of China, India, and South Korea. For example, a large number of males are unable to find potential mates, and there is a higher probability that women will experience forced marriages or other types of violence (Hudson & Den Boer, 2004; Larsen & Kaur, 2013).



Couples have the ability to engage in many methods of birth control, which are determined by the gender traits of the desired offspring. The gender distribution of wanted offspring is generally independent of the total desired number of children. In situations when couples possess a strong preference for male offspring, they will persist in having children until they successfully conceive a son, without regard for the overall number of children they desire (Clark, 2000; Hannum et al., 2009). Conversely, couples with a strong inclination towards having sons may desire multiple children, but they may opt not to have any if their first child is a male. Sexual orientation is an important determinant of fertility goals. Studies conducted by Clark (2000) have shown that there is a connection between parents' preferences for the gender composition of their children and their fertility goals and intended number of children. Changes in gender preferences can be attributed to social growth, government policies that promote normative change, and the establishment of welfare systems (Chung and Gupta, 2007). Some examples of these factors are the implementation of social welfare systems.

Throughout history, East Asian countries have continually exhibited robust patriarchal ideologies. The current trend of continually low birth rates in these civilizations poses a challenge in determining the continued prominence of the desire for sons. Further investigation is required to ascertain the correlation between preferences for gender composition and reproductive goals in these circumstances. The current trend of desiring a balanced gender composition among offspring is a specific matter of worry. While there is a prevalent preference for having sons, the benefits of having daughters are never talked about, and many people struggle to express the reasoning for their choice to have female children. Nevertheless, several studies have shown that the desire for male children remains considerable even in the situation of extremely low fertility rates. This is because a total fertility rate of one signifies that the cultural practice of desiring a male child to continue the family lineage is adopted by the sole child.

South Asia has always exhibited a strong bias towards male offspring, as seen by imbalanced sex ratios, disparities in child death rates, and unequal investment in girls' education compared to boys' schooling. Asadullah et al. (2021) have shown, based on data from a specially constructed, nationally representative survey conducted in Bangladesh, that the desire for having boys among women in the age group capable of bearing children has declined, while a preference for achieving gender balance has emerged. The survey's location in Bangladesh facilitated this discovery. The researchers explored a diverse range of ideas in order to elucidate the decline in the preference for male offspring. The hypothesis encompassed three factors: an upsurge in employment opportunities for women in the manufacturing industry, a rise in women's educational attainment, and a decline in the establishment of nuclear families. Women

in Bangladesh have consistently shown a declining preference for males, and to a lesser degree, women in India and Nepal have also exhibited this trend. This phenomenon has been documented in published statistical data on gender preferences for male offspring and female offspring.

Kabatek and Ribar (2021) argue that patriarchy has been eliminated from Western states. In countries where patriarchal ideologies were deeply rooted, a new inclination towards a specific gender for children may have emerged. This inclination may have supplanted the traditional patriarchal attitudes that were widespread in those cultures. Yoo et al. (2017) reported that the sex ratio at birth in South Korea peaked in 1990, with 116.5 male births for every 100 female births. Nevertheless, starting from the early 2000s, the ratio has been steadily declining and in 2013, it fell significantly below the expected level of 105.3. In 2016, the sex ratio at birth in India remained elevated, but it had fallen from around 115.6 in the early 1990s to 113 at the start of the 21st century (United Nations Population Fund, 2020). An enduring inclination towards having boys is seen in the disproportionate sex ratio, as documented by Yoo et al. (2017). This preference seems to persist despite the overall tendency towards a decrease. In other words, the favoritisms towards male children remains a significant societal problem in numerous countries, and it is imperative that policymakers and researchers give it considerable attention.

## **6. The Moderating Role of Education on Son Preferences**

Previous studies have conducted limited study on the correlation between educational achievement and the preference for having a son in different regions of the world (Pande & Astone, 2007). However, it is important to note that Confucianism had a substantial influence on the formation of a patriarchal social structure in China. The relationship between educational achievement and patriarchy is not easily understood from a broad perspective. Bourne and Walker Jr. (1991) found that women's attitudes of the significance of femininity change when they participate in higher education. Consequently, this has a more pronounced effect on the survival of youngsters compared to teenage boys. However, research also indicates that in situations where patriarchy is overwhelmingly prevalent, the educational attainment of mothers may not be sufficient to effectively enhance the worth of their daughters. The daughters of mothers hold greater value than their mothers. According to a study conducted in Bangladesh (Bhuiya & Streatfield, 1991), a mother's progression from being ignorant to obtaining an elementary education had a minimal impact on decreasing her daughter's mortality rate by seven percent. By contrast, her son's projected mortality risk was forty-five percent. Nguyen and Le (2022) arrived at their conclusions by conducting comparisons among biological sisters

from 67 economically disadvantaged nations worldwide. The researchers initiated these comparisons. There is a consistent disparity in the ratio of male to female births with each year of mother education. The disparity amounts to 0.17 percentage points. Furthermore, heterogeneity studies reveal that the beneficial impact of maternal education is notably stronger for rural and economically disadvantaged groups.

Raza (2023) proposed that an increase in women' level of education is expected to result in a decrease in the desire for a perfect son. This idea was founded on the DTT theory, which posits that as a country undergoes modernization, not only do its demographics undergo change, but its norms and customs also undergo evolution. The primary reason for this is the presence of research indicating that expanding educational opportunities for females results in heightened knowledge and empowerment among women, ultimately leading to a decrease in gender inequality (Bushra & Wajiha, 2015; Shetty & Hans, 2015). Consequently, well-educated women possess the ability to envision a more promising future for their children, encompassing not only economic aspects but also the overall societal standing of women. As a result, they can emancipate their daughters from patriarchal and traditional ideologies.

## **7. Discussion**

Research has shown that the main driving force behind female-selective abortion is a strong desire for male offspring, resulting in a population sex ratio that is heavily biased towards males. Son preference exacerbates gender-based discrimination, resulting in detrimental effects on the health of females during their early life. Poor health during early childhood can lead to cognitive impairment, heightened vulnerability to chronic diseases, and reduced productivity in adulthood, according to UNICEF, the World Health Organisation, and the World Bank (2020). Consequently, the preference for male offspring may exacerbate gender inequality and hinder long-term human development. Therefore, the results of this study support the need for greater initiatives to eradicate the preference for male children and to improve maternal education as a viable solution.

This study identifies several inconsistencies and highlights common barriers that hinder our understanding of the various links between educational achievement and desire for male children. In addition, we discover opportunities for further expansion. There are some crucial issues that require further enhancement: Recent studies have faced the challenge of reconciling macro- and micro-level investigations. Due to limitations in data, researchers have been forced to either concentrate on the broader macro-level or the more specific micro-level. This has resulted in a lack of options for examining variations in educational classifications when comparing different countries. Conclusive evidence indicates a need for comprehensive

microdata that can be compared internationally. The effectiveness of comparisons across empirical studies is heavily contingent upon the format of the data that is employed. Now let's move on to the second problem, which involves considerations related to data. Longitudinal data, such as administrative, panel, or retrospective data, provide a higher probability of identifying causal relationships. On the other hand, cross-sectional data may provide a more accurate representation of the population's demographics, potentially resulting in disparate and challenging-to-compare outcomes. Longitudinal data have a higher likelihood of establishing causal correlations. Furthermore, the complex interplay between education, family policy, gender background, and fertility decisions presents a challenge in isolating the specific effects of various policy changes. This limitation is highlighted in this section, highlighting the need for further research. Policy studies conducted within the same time period might also capture delayed effects, sometimes referred to as spillover effects, that result from other policy or environmental changes.

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