

Can Family Policies Affect Fertility Behavior?

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Abstract

Low fertility is an issue that many countries, including most of Europe, North America, and Confucian regions, have been facing for decades. In response to low fertility rates, many regions have implemented pro-natal family policies to encourage population growth. The impact varied: family policies can affect most Western countries and have less effect on Confucian regions. This difference stems from the significant pressure faced by young individuals in Confucian regions due to rapid industrialization. Consequently, regions influenced by Confucianism need to adopt more complex strategies to combat declining birth rates.

Keywords

Fertility; Family Policies; Confucian regions.

1. Introduction

As societies have modernized, fertility rates have declined very substantially. In the pre-modern era, fertility rates of 4 to 7 children per woman were common. But the global average fertility rate has halved from around 5 in the 1960s to around 2.3 in 2022 (World bank, 2024). Rapid population growth then comes to an end as the fertility rate decline.

More than half of the global population now lives in regions with below-replacement fertility (less than 2.1 children per woman). In many highly developed countries, the trend towards fertility decline has been so far-reaching that it has been deemed irreversible. Indeed, of the 25 most advanced countries as measured by the 2023-2024 human development index (HDI), a development indicator published by the United Nations Development Programme (UNDP) that combines health, wealth and knowledge to a single index, only one country has a total fertility rate (TFR, measuring the number of children per woman) above replacement level; four countries have TFR below 1.3, five have TFR between 1.3 and 1.5, and 15 have TFR between 1.5 and 2.1 (UN, 2024). In many highly developed countries, rapid population aging because of these very low fertility levels, and in some cases, the prospect of significant population declines, have become a central socioeconomic and policy challenge.

The rapid decline of the fertility rate is one of the most fundamental social changes that happened in developing countries. It took Iran only 10 years for fertility to fall from more than 6 children per woman to fewer than 3 children per woman. China made this transition in 11 years — before the introduction of the one-child policy (Roser, 2014).

What's striking is that the ultra-low fertility in Confucian countries and territories. As the first industrialized country in east Asia, Japan firstly experienced a dramatic decline in fertility shortly after World War II. Between 1947 and 1957, the TFR fell from 4.5 to 2.0 births per woman. It then stabilized, ranging between 2.0 and 2.2 for nearly two decades before it started to decline again in 1974 (Bumpass et al., 2009), reaching a low of 1.20 in 2023. The Four Asian Tigers (Hong Kong, Singapore, South Korea, and Taiwan) showed similar patterns in population

decline since 1960s. Macau has a fertility rate of about 1.1, one of the lowest in the world. In Chinese mainland, the fertility decline began around the 1970s, with the TFR falling from about 6.1 children per woman in 1970 to 1.2 children per woman in 2022 (NHK world, 2024). Among Confucian countries and territories, South Korea has the world's lowest fertility rate, 0.78. As responses to low fertility, most of countries/territories introduced generous family policies. However, the effect of policies is not satisfactory. It challenges the classical theory of economics assumed that cost reduction can stimulate fertility.

2. Theory Framework

Past fertility research largely focused on understanding fertility decline over time and the negative cross-country relationship between income and fertility. The most important mechanism in explaining these patterns was the quantity-quality tradeoff. Becker (1960), Becker and Lewis (1973) introduced the Quantity-Quality (QQ) model and argued that parents derived utility from both child quantity (i.e., the number of children) and the quality of children, which can be proxied by the amount spent on each child at given prices. The introduction of child quality partially explained the observed empirical relationships between income and fertility. The other stylized fact is the negative relation between women's labor force participation and fertility and motivate the research on the role of the opportunity cost of women's time in determining fertility rates. Butz and Ward (1979) provided a well-known early analysis of the separate roles of men's and women's earnings in determining fertility. The later development was surveyed in Doepke et al. (2022).

However, much has changed over the last few decades. In particular, fertility is no longer negatively related to income, women's labor force participation and women's education across high-income countries (Ahn and Mira, 2002); Doepke et al., 2022). Instead, family policy (D'Albis, Gobbi, and Greulich, 2017), cooperative fathers (Lopes 2020), favorable social norms (Kleven et al., 2019), and flexible labor markets (Ayllón, 2019) have become key determinants of fertility choice.

3. The Impact of Family Policies on Fertility in OECD Countries

A generalized decline in fertility rates since the 1970s in most OECD countries, together with large differences in the experiences of individual OECD countries. In Nordic and English-speaking countries, the decline in fertility rates started earlier. Southern and several Continental European countries, where the decline started later but then proceeded much faster. Spain and Italy reached an ultra-low fertility rate of 1.2 in recent years, one of the lowest in the OECD. As a response, there are many welfare reform in OECD countries, for instance, a major Austrian reform increasing the duration of parental leave from one year to two years for any child born on or after July 1, 1990 (Lalive and Zweimüller, 2009), a 2007 maternity leave reform in Germany that considerably increased the financial incentives, by up to 21,000 EUR, for highly educated and higher-earning women (Raute, 2019) and so on.

There are a large body of literature on the effect of family policy on fertility. Sleebos (2003) found that previous studies provided mixed conclusions as to the effects of various policies on fertility behaviour and the findings were often inconclusive or contradictory. On balance, He argued that the existing evidence seemed to suggest a weak positive relation between reproductive behaviour and a variety of policies. Gauthier (2007) reviewed the empirical evidence and concluded that studies provided mixed conclusions as to the effect of policies on fertility. While a small positive effect of policies on fertility were found in numerous studies, no statistically significant effect was found in others. Sobotka *et al.* (2020) argued that public spending on families showed relatively close correlation with period fertility rates as well as with cohort family size, and providing widely available, accessible, and high-quality

childcare was indispensable to sustaining higher fertility rates, and subsidized and widely accessible provision of assisted reproduction tended to have a small positive effect on fertility rates, and large-scale expansions of family policies often had considerable short-term effects on fertility. Bergsviket *et al.* (2021) found that childcare expansions increase completed fertility, while increased cash transferred have temporary effects. Parental leave expansions, particularly from Central Europe, suggested larger effects than previously established. High-earning couples benefited more from parental leave expansions. Subsidizing assisted reproductive treatments showed some promise of increasing birth rates for women over the age of 35. Thomas *et al.* (2022) conducted a systematic review on the effect of leave on fertility and revealed that leave did in fact increase fertility when benefit increases were generous.

To sum up, as the development on family policies, more and more empirical evidence showed that universal family policies — job protection, allowance, generous parental leave and childcare services — have a positive effect on fertility behavior, at least in Europe and North American.

4. The Impact of Family Policies on Fertility in Confucian regions

Japan is a member of western countries. The Japanese welfare model is classified as a 'hybrid' combining liberal and conservative welfare regimes, in terms of Esping-Andersen's 'three worlds of capitalism'. That is to say, the intervention from the government for women with fertility problems is inadequate. To some extent, the low fertility rate in Japan is similar with those of the Southern Europe countries, such as, Italy, Spain and Portugal. Compared to Japan, there are more similarities in low fertility among in the Four Asian Tigers and the Chinese mainland had quickly modernized itself into an industrial economy.

As response to low fertility, the main thrust of policy development in Korea has been towards the provision of more comprehensive childcare which includes the increased payment for parental leave, and a plan to pay for a monthly child allowance for all children aged 0–5 from July 2018. Provision of childcare services has also been a major objective in Japan, but despite the steady expansion of slots available and children enrolled in childcare centres, the fertility rate has not significantly increased in both Japan and Korea.

Causes of low fertility in Confucian regions are complex and differ from those in Europe and North American (Kim, 2005). For example, the conflict between work and birth is less serious than Europe and North American due to the tradition that parent is willing to coresid with their sons in Confucian regions. The people tend to have fewer children due to involution without enough chance to high paying jobs. First, in these countries and territories, compressed modernity is popular, for example, the shift of population out of agriculture, the rise in completion of secondary school and tertiary education by women appear to have been more rapid than Europe and North American in history, and yet tradition is firmly maintained in many aspects of personal, social and political life. Second, these countries and territories confront with the technological barriers from developed countries and catching-up pressure from developing countries inferior to them. To retain the industrial advantage, these countries and territories must exploit their people and natural resources. Third, as newly industrialize countries and territories, the gap between high-paying job and low-paying job is large, and the high-paying jobs are not plentiful. It results in education fever. Parents throughout the region, especially mothers, invest large amounts of time and money to ensure that their children can enter prestigious universities and obtain top jobs. There are extraordinarily high rates of attendance at cram schools— over 75 per cent of South Korean children in 2009 (Anderson and Kohler, 2013). Accordingly, child-rearing has become so expensive that young couples cannot afford to have more than just one or two children (Jones, 2019).

5. Conclusion

Policies supporting children and families are clearly important, but often other factors and policies not pertaining directly to families might have a stronger impact on reproductive decisions. Compared to developed countries in Europe and North America, new industrialized countries face to steeper shocks from a change of environment, and young women and men have to bear considerable social-economic pressure. This may also explain why fertility rates in Confucian regions were declining to extreme low levels despite governments embark on ambitious reforms aiming to expand parental leaves family benefits and childcare availability. Under such circumstances, reversing fertility declines may require much wider institutional reform, dealing with labour market rules and culture, education institutions and gender inequalities.

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