

How consumption habits shape fertility choices

ECONOMICS

By DU HAOFENG et al.

Demographic change is a fundamental, long-term, and strategic concern for national economic and social development. China's population structure is now taking on new features, most notably declining fertility and population aging, making high-quality population development a new imperative for Chinese modernization. Over the past several decades, sustained rapid economic growth has profoundly reshaped household consumption patterns. The younger generation that came of age during this period has, in turn, developed relatively stable consumption habits. Formed through years of lived experience, these preferences influence how families allocate resources and may therefore play an important role in fertility decisions. Examining the mechanisms through which consumption habits shape fertility behavior can deepen our understanding of changing fertility levels while providing a theoretical basis and practical guidance for improving related policies. Drawing on stylized facts about household consumption and fertility in China, this study advances a new hypothesis: To maintain established consumption habits, individuals of childbearing age tend to have more children when income growth accelerates and fewer when it slows. The study develops both theoretical and quantitative analyses to characterize this mechanism.

Stylized facts

China's national accounts reveal a clear pattern in household income and consumption since 2001. During periods of faster income growth, the household consumption ratio—final household consumption expenditure as a share of GDP—declines, meaning that consumption grows more slowly than income. Conversely, when income growth slows, the household consumption ratio rises, and consumption grows faster than income. By accounting identity, a rise or fall in the consumption ratio necessarily means that consumption growth exceeds or trails income growth. Put differently, when income growth decelerates, households do not immediately slow their consumption growth by the same proportion. Instead, they devote a larger share of income to consumption, allowing consumption to continue growing at a relatively brisk pace. Standard intertemporal consumption theory has difficulty explaining this pattern—a household seeking to “smooth consumption” would generally be expected to save more when income growth slows in order to support future consumption.

Consumption habit formation offers an important explanation. Under this mechanism, the utility households derive from current consumption depends not only on how much they consume now, but also on their past

level of consumption. Utility therefore reflects both the level of consumption and the rate at which consumption has grown over time. Drawing on aggregate data on household consumption and total output in China from 1978 to 2023, as well as household-level data from the China Family Panel Studies (CFPS) for 2010–2018, this study finds that faster growth in past consumption is associated with faster growth in current consumption. The habit-formation effect is also considerably stronger among younger households than among older ones. The younger the household, the more likely it is to maintain relatively rapid consumption growth, with the pattern especially pronounced among households headed by people aged 20–30. This group closely corresponds to China's principal childbearing cohort today—those born in the 1990s and 2000s.

This generation grew up during a period of rapid economic expansion, when steadily rising household incomes supported continuous improvements in consumption and helped establish relatively stable consumption habits. Once these individuals enter the labor market, however, slower income growth may lead them to preserve those habits by having fewer children and reducing child-rearing expenditures. Following this logic, the stronger their consumption habits, the greater their incentive to cut fertility-related spending when income growth slows. To test this hypothesis, we analyze changes in age-specific fertility rates from 2017 to 2023, a period during which China's total fertility rate declined markedly. To limit the influence of extreme values, the analysis focuses on women aged 20–39, who account for more than 95% of births among women of reproductive age. The results show that fertility fell more sharply among younger cohorts over this period.

Mechanism analysis

Taken together, these stylized facts suggest a new explanation for China's recent fertility decline: When income growth slows, households have fewer children in order to preserve their established consumption habits. To formalize this mechanism, we develop a two-period overlapping generations (OLG) model that incorporates endogenous fertility decisions, human capital accumulation, and habit formation in consumption. The model breaks changes in fertility down into four distinct mechanisms.

The first is the effect of consumption habits. Slower income growth strengthens the relative pull of established consumption habits and lowers fertility; faster income growth weakens that pull and raises fertility. The stronger the habit-formation effect, the more pronounced this relationship becomes. The second mechanism is preference: The stronger the subjective preference for children, the more children adults choose to have. The third is childbearing costs, with higher costs leading to fewer children. The



Staff members at the Marriage and Childbearing Service Center in Wuxing District, Huzhou, Zhejiang Province, provide newlywed couples with information on prenatal and postnatal care. Photo: IC PHOTO

fourth concerns the trade-off between quality and quantity, whereby greater investment in education lowers fertility through a substitution effect. Together, these mechanisms yield a central proposition: Adults seeking to maintain established consumption habits tend to have more children when income growth accelerates and fewer when it decelerates.

A classic explanation for declining fertility in modern economies centers on the trade-off between quantity and quality in childbearing. As economic development raises the returns to human capital, parents place greater emphasis on child quality—that is, investment in children's human capital—and consequently choose to have fewer children. The mechanism examined here is different. Expenditure required to maintain established consumption habits crowds out spending related to childbearing and child-rearing. In our model, stronger habit formation and the greater relative pull of established consumption levels increase the share of total expenditure devoted to adults' own consumption, while reducing the shares allocated to both the number and quality of children. When the habit-formation mechanism is removed, adults devote a constant share of expenditure to their own consumption, while the division between spending on child quantity and child quality depends on the level of educational investment they choose. As educational investment rises, the expenditure share devoted to child quality increases, while the share devoted to child quantity falls. Yet recent data show that education-related spending has remained relatively stable as a share of household consumption in China. The increase in educational expenditure that the traditional quality-quantity framework associates with declining fertility is therefore not clearly observed. This suggests that substitution between spending on child quantity and child quality cannot fully explain China's recent fertility de-

cline, particularly since 2017, whereas consumption habit formation may offer an important complementary explanation.

To assess the quantitative importance of this mechanism, we extend the benchmark framework into a multi-period quantitative OLG model and introduce intergenerational differences in the strength of consumption habits, allowing the model to more closely match observed Chinese data. Overall, consumption habit formation explains nearly 36% of the decline in China's total fertility rate from 2017 to 2023. Its explanatory power, however, varies substantially across generations. Among people aged 20–24, whose consumption habits are strongest, habit formation accounts for approximately 52% of the decline in fertility. Among those aged 40–44, whose consumption habits are relatively weak, it explains only about 10%. We further conduct sensitivity analyses by varying parameters that may influence consumption habits. Across a range of plausible parameter values, habit formation explains between 28% and 46% of the decline, indicating that the mechanism is both quantitatively robust and economically significant.

Because subsidies for child-rearing costs constitute the most direct policy instrument for encouraging adults to have children, this study also evaluates their effectiveness and examines how consumption habit formation shapes their impact. The results show that child-rearing subsidies can raise both fertility and economic growth, with their effectiveness increasing as consumption habits become stronger. Over the long term, the habit-formation effect increases the impact of subsidy policies on fertility by 96% and their effect on household income growth by 72%.

Policy implications

Promoting coordinated, high-quality development of both the population

and the economy is a central objective of Chinese modernization. Maintaining a reasonable fertility level and optimizing the demographic structure can provide the human capital needed for industrial upgrading. Stable economic growth, meanwhile, raises household income and helps families realize their diverse fertility aspirations, creating conditions in which they both want to have children and feel able to do so. This, in turn, supports more coordinated development of the population and the economy.

From a policy perspective, improving the fertility support system—particularly by reducing the costs of childbirth, childcare, and education—is essential for increasing fertility and optimizing the population structure. Our findings point to three policy recommendations. First, meaningfully reducing the financial burden on families is essential for raising fertility. Within the bounds of fiscal sustainability, the government should provide moderate recurring child-rearing subsidies to ease the economic pressure families face during the childbearing and child-rearing stages. Public services should also expand access to high-quality childcare, reducing the burden of care on families. Second, the government should improve the provision of high-quality public education, offering more flexible educational pathways and cultivating greater social acceptance of diverse forms of educational and career development. Such measures would help ease excessive competition for educational resources. Third, alongside efforts to lower the cost of raising children, policymakers should foster a more fertility-friendly social environment to strengthen people's willingness to have children.

Du Haofeng is an assistant professor from the School of Economics at Central University of Finance and Economics. This article has been edited and excerpted from *The Journal of World Economy*, Issue 3, 2026.