

RESEARCH

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More education for women could help China's fertility problem

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Dr Shuang Chen is an Assistant Professor in the Department of Social Policy at LSE. A demographer in training, she uses quantitative methods to address questions at the intersection of demography, education and social policy. Her current research focuses on the demographic causes of educational inequalities and the role of education in fertility transitions in developing countries.

It is often believed that more educated women have fewer children. However, new research on China by **Shuang Chen** shows that more education can actually have the reverse effect and lead to an increased birth rate.

In recent decades the fertility rate in China has dropped drastically and, since the early 1990s, has remained below the replacement level (the average number of children born per woman at which a population exactly replaces itself one generation to the next without migration). The rapid fertility decline means an increasing share of the elderly population with a decreasing share of working-age people able to support them. If below-replacement fertility persists, it eventually leads to population decline.

Despite the ending of the 1979 one-child policy in 2015, fertility rates have not recovered, and China is heading for a demographic crisis; one that could be catastrophic for the country. Experts are trying to understand why fertility remains low and what can be done to increase birth rates.

In her recent paper, [The Positive Effect of Women's Education on Fertility in Low-Fertility China](#), Dr Shuang Chen from the Department of Social Policy at LSE, highlights how more education for women could be part of the answer.



People observe that higher educated women tend to have fewer children. But that in itself does not mean... that education reduces fertility. ”

Correlation not causation

"Generally, people observe that higher educated women tend to have fewer children. But that in itself does not mean that more education causes women to have fewer children, or that education reduces fertility," she explains.

"For example, family background plays a big role because it can determine both women's education and their fertility outcomes, meaning it's not education that causes some women to have fewer children. Some women, from certain family backgrounds, will always have fewer children, regardless of their education level."

Dr Chen also believes that reverse causality - that women's fertility or fertility intentions causes them to pursue more or less education - could be a factor in the link between education and fertility and that women's fertility or fertility intentions could cause them to pursue more or less education. "Women who have more children or want to have more children might end their education earlier," she says. "That would lead us to observe that more educated women have fewer children, but that doesn't mean it's the higher education that's causing them to have fewer children."

A natural experiment

To explore this area further, Dr Chen exploited the expansion of China's educational provision in 1999 and used it as a natural experiment to test fertility levels before and after the expansion.

In June 1999, the Ministry of Education in China suddenly increased the number of college places available from 1.08 million in 1998 to 1.56 million in 1999, a 44 per cent increase. This evolved into a sustained expansion in higher education until 2007. Between 1998 and 2007, the number of admissions to higher education institutions saw a more than fivefold growth from 1.08 to 5.66 million.



Findings from this study help illustrate why the transition from the 'one-child' policy to a universal 'three-child' policy has achieved limited impact on raising fertility. ”

Dr Chen used this sudden increase in education to test how it affected fertility rates and found that it had a positive effect on fertility. Each additional year of women's education, as a result of the education expansion, increased women's number of children by 10 per cent.

When she analysed these findings, she found that increased education did not increase the average age of women at the time of their first marriage, as is often believed. Secondly, she found that education increased demand for children among married women, with educated women more likely to participate in the labour market and earn a high income. This suggests that they are able to combine work and childrearing more easily.

Education also increases women's non-wage income. For example, if more educated women marry more educated men, as is the case in China, the family income is higher. This means, once again, that more educated women are more able to afford childcare, which can make working alongside raising a family more compatible.



If you... misinterpret correlation for causation you can imagine the policy implication could almost be to limit women's education to increase fertility. Not only would that be very dangerous, it would be counterproductive. ”

More support for families will help developing countries improve fertility rates

Based on these findings, Dr Chen argues that China's fertility levels today would be even lower without the major progress in women's education in recent decades, and she calls for increased support for families.

"Findings from this study help illustrate why the transition from the 'one-child' policy to a universal 'three-child' policy has achieved limited impact on raising fertility. While low fertility can be reversed, merely *allowing* women to have more children is insufficient without increased support for families or measures to reduce the work-family conflict women face."

These findings chime with other research from China citing the high cost of childrearing as the key explanation for low fertility in the country.

Although her research is focused on China, Dr Chen believes her findings are relevant to other low fertility developing countries. She highlights how studies in Brazil and urban Thailand have also found that gender equality and the availability of alternative childcare arrangements have increased the probability of women having more children.

She adds: "As more developing countries are expected to reach below-replacement fertility levels in the near future, there is a compelling need for future research to better understand the effect of women's education on fertility and help address the policy challenges posed by low fertility in the developing world."

Going forwards, Dr Chen hopes her findings are used to refute the common misconception that increased education always leads to reduced fertility. "If you have that false belief and misinterpret correlation for causation you can imagine the policy implication could almost be to limit women's education to increase fertility. Not only would that be very dangerous, it would be counterproductive." ■

Dr Shuang Chen was speaking to Charlotte Kelloway, Media Relations Manager at LSE.

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