Ask: NUS Economists

How to nudge couples to have more kids

Lowering long-term net cost of raising children yields more benefits than one-off Baby Bonus cash gift

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*How effective are the Baby Bonus and other incentives in raising fertility rates?*

It is well known that Singapore has a problem with declining fertility rate. In the half-century period, Singapore’s total fertility rate (TFR) halved in 1967 to 2017, more than its average per woman, but has declined steadily since then. TFR refers to the average number of births each woman would have during her child-bearing years (that is, from 15 to 44 years). For the population to replace itself without immigration, women need to have an average of 2.1 babies. The current TFR per woman is 1.28 for those aged 15 to 49.

After the boom of the 1960s, in 1965, the year Singapore became independent, the TFR hit a high of 4.5. This was, however, still way above the replacement rate. By 1977, as the country modernised and women became better educated, the TFR was fluctuating below replacement level.

From 1986, the government started a series of family-planning campaigns to persuade couples to have fewer children. By the 1990s, the campaign included tax and housing allocation differentials that penalised those with more children. In 1996, the TFR reached a low of 1.1 children per woman. That year saw Singapore’s first economic recession since independence, which coincided with the Year of the Tiger in the Chinese lunar calendar, considered inauspicious for births.

In 2018, the TFR rose sharply to a high of 1.96 children per woman. The 2019 TFR peak is a result of a confluence of factors: the onset of the anti-natalist policy coming together with the traditionally auspicious Year of the Dragon, coinciding with the number “88,” which is in numerology with double prosperity to some Chinese dilemma. However, the TFR in 1996 and 2000s. Last year, Singapore’s TFR dropped to 1.16, making it the second low in 2020.

The latest figures from the Department of Statistics are that the TFR has dropped to 1.58. There are implications on population growth, which in turn affects the old-age dependency ratio instead of working-age population and future economic growth.

How to increase the fertility rate of the population? If having children is a natural economic decision, an individual’s preference for raising them and the costs of having them will affect fertility rates.

How effective are population policies in influencing people’s decisions to have more children and alleviate fertility decline? How effective are policies that seek to delay the costs of raising children if the costs of raising children are impeding to having children?

**BABY BONUS AND OTHER LONG-TERM POLICIES**

To find out, we looked at data on pro-natalist policies and the TFR. The Singapore Government offers a range of economic incentives in the hope of boosting fertility rates. The Baby Bonus scheme implemented in 2001 is probably the most explicit incentive, giving parents “cash for kids” to defray the financial costs of child-rearing. There are two components to the Baby Bonus – a cash gift that increases by birth order and a matching dollar-for-dollar co-savings scheme that can be used for approved expenses (mainly education and health-related expenses).

Since its inception, several enhancements have been made to the scheme. In 2018, under the Jubilee Matriage and Parenthood Package, the cash gift was enhanced to $8,000 for the first child born in 2018 and $10,000 for the second-born.

Our regression analysis suggest that the implementation of the one-off Baby Bonus is ineffective or limited in effectively raising fertility rates. When we incorporate two dummy variables into the regression model to take into account the years with lunar signs dragon and tiger, we found a positive effect of dragon and a negative effect of tiger on fertility rates. This suggests that the decisions and preference for having children are culturally influenced, with an increase in the TFR in dragon years and a fall in the TFR in tiger years.

While the cash Baby bonus alone had no little effect, we did find that pro-natalist policies as a whole have a positive and significant effect on the TFR. This suggests that policies to lower the long-term costs of raising children may be more effective than the one-off Baby bonus.

**The cost of raising a child**

With the insight that policies to defray the long-term costs of child-rearing are effective, we then set out to investigate the long-term cost of child-rearing in Singapore and evaluate how pro-natalist policies help defray the costs of raising children.

We projected the expected costs of raising a child in Singapore. Expenditure per child typically declines with each birth order since there are economies of scale where there are more children. Direct subsidies and tax relief tend to increase with the number of children, thus lowering the cost per child.

We estimate the expected child-rearing costs for three income groups: at the 20%, 50% and 70% percentiles of household income.

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