

Planet sculpture (2008) by Marc Quinn in the sunset at the Gardens by the Bay, with Singapore's skyline in the background.



Reversing Demographic Decline

Singapore's experience in trying to raise its fertility rate offers lessons for other countries

Poh Lin Tan



Globally, fertility is on the decline. While a total fertility rate below the replacement level of 2.1 is now the norm for advanced economies, the very lowest rates are found in Japan, the Republic of Korea, Singapore, Taiwan Province of China, and higher-income Chinese cities, including Shanghai and Hong Kong SAR. As a result, in the absence of immigration, this region is set to experience the most rapid population aging and decline.

In the case of Singapore, the government has grappled with the relentless downward trend in fertility since the 1980s. After a public campaign and limited programs failed to produce results, a package of pronatalist incentives was introduced in 2001 and enhanced over the years. Currently, the package includes paid maternity leave, childcare subsidies, tax relief and rebates, one-time cash gifts, and grants for companies that implement flexible work arrangements. Despite these efforts, the fertility rate deteriorated from 1.41 in 2001 to a precarious 1.16 in 2018.

What can we learn from Singapore?

Lesson 1: Address the rising age at childbearing

The mean age of childbearing has increased by approximately one year a decade among Organisation for Economic Co-operation and Development countries, according to calculations by Oxford University's Melinda Mills and colleagues (Mills and others 2011). In Singapore, changes in the age composition of women giving birth have been especially dramatic. Women ages 20–24 are now as likely to give birth as women ages 40–44 and far less likely than women ages 35–39. Moreover, unlike in a number of European countries, the steep decline in fertility among women in their 20s has not been offset by higher birth rates among women in their 30s. Instead of merely being delayed, these missing babies have vanished permanently.

The rising age at childbearing is the lowest-hanging fruit from a policy perspective. It is far easier to help couples who are already married and desire at least two children to achieve their fertility goals than to attempt to match singles in the marriage market or persuade couples who do not want more children to change their minds. While the two-child-family ideal continues to hold in Singapore, the phenomenon of higher ages at parenthood reduces

the probability that families will achieve it, because of either unforeseen changes in circumstances such as divorce, health, or income shocks, or reduced ability to conceive and carry a child to term.

The Singaporean policy approach aims to create a more conducive environment for marriage and fertility for all groups—in particular to help married women reconcile labor participation with motherhood. However, few if any of the instruments are designed specifically to allow women to become mothers at peak childbearing ages, either to stem the decline among women in their 20s or to boost fertility rates among women in their early 30s. As a result, the lack of age sensitivity represents a lost opportunity to cater to the most receptive group of prospective parents.

Lesson 2: Reproductive technologies are not a panacea

One reason for older childbearing in advanced economies is the public's misplaced faith in reproductive technologies' effectiveness. According to Judith Daniluk and colleagues at the University of British Columbia, common fertility myths include the belief that good health and in vitro fertilization (IVF) can offset the effects of age-related infertility (Daniluk, Koert, and Cheung 2012). Few people are aware that IVF poses health risks to women or that delayed childbearing can lead to more complications during pregnancy or birth and more birth defects. Men and women thus tend to underestimate the risks associated with delaying marriage and childbearing.

As part of the package of pronatalist incentives, the Singaporean government subsidizes up to 75 percent of assisted reproductive technology treatment costs for qualifying married couples and allows them to tap into their medical accounts under the national savings program to pay for the procedures. Singapore's fertility experience suggests that access to IVF and other reproductive technologies is not sufficient to ensure that older women have enough babies to compensate for fertility decline among younger women. Japan, another excellent example, has the world's highest percentage of babies born through IVF (about 5 percent), as well as one of the lowest fertility rates.

Lesson 3: Household production cannot be fully outsourced

Singapore's low fertility also demonstrates the limitations of formal sector provision of childcare

and housework. Peter McDonald at the Australian National University argues that even though women have more educational and labor market opportunities than ever, gender inequality at home, which places the burden of caring for children and household chores on women, results in very high opportunity costs of childbearing and hence very low fertility (McDonald 2006).

Singapore provides insight into this issue because of the unusually robust range of options its formal sector provides. The government is heavily involved in the provision of low-cost and high-quality formal childcare. Working mothers receive childcare subsidies of S\$300 a month for formal childcare; lower-income families receive more. Moreover, unlike in most other advanced economies, families can (and many do) hire relatively low-cost domestic workers from neighboring Southeast Asian countries such as Indonesia and the Philippines. Hence, it is relatively easy for women to outsource childcare and housework in Singapore.

Singapore's low fertility rates suggest that formal sector provision cannot substitute for parents' spending quality time with children. While access to excellent childcare options and domestic workers may help, institutional support—parental leave and flexible work arrangements that allow families to spend more time together—is needed as well.

Lesson 4: Acknowledge human capital's true cost

It is no coincidence that Japan, Singapore, and other very low fertility countries also tend to score very well in human capital rankings, from Program for International Student Assessment tests to the new World Bank Human Capital Index. Economists have long noted a trade-off between quantity and “quality” of children (in terms of resources devoted per child). My coauthors and I argue (Tan, Morgan, and Zagheni 2016) that the East Asian institutional emphasis on early life achievements increases returns from investing in children's human capital, which means more children, more expense.

The other side of the coin is the serious consequences of being less successful than others, both for parents and their children. Local surveys suggest that a large proportion of singles wish to be married someday but choose to pursue educational or career success over dating. The majority of married couples have children, but most stop at one or two, owing to high education-related expenses and the desire to invest more in

each child. Couples who might otherwise want children voice concern over the ethics of a stressful childhood and upbringing or worry that they would lack the energy or ability to help their children compete effectively.

Singapore's human capital success story, which has propelled it to the top of international rankings, thus comes at a cost to its people's willingness and ability to build families. The inability to raise the fertility rate is hence not so much a testimony to ineffective pronatalist policies as to the overwhelming success of an economic and social system that heavily rewards achievement and penalizes lack of ambition. Tackling the fertility rate may therefore require confronting some of the weaknesses of the underlying system, which means not only addressing demographic challenges, but also potentially helping build social cohesion or healthy cultural attitudes toward risk taking.

At the end of this year's Forbes Global CEO Conference, Singaporean Prime Minister Lee Hsien Loong noted that with help from immigration, a fertility rate of 1.3–1.4 may be enough to meet the country's needs (Yong 2019). As long as there is tension between human capital and fertility, raising birth rates in Singapore to replacement levels will take more than just policy updates and patches. However, a mix of age-sensitive policies and enhancements of pronatalist incentives may push fertility to a more modest target of 1.4. Singapore has little time to lose: as the population ages, fewer and fewer couples will be of childbearing age, and a higher fertility rate will deliver less bang for the buck. It's now or never. **FD**

POH LIN TAN is an assistant professor at the National University of Singapore's Lee Kuan Yew School of Public Policy.

References:

- Daniluk, J. C., E. Koert, and A. Cheung. 2012. “Childless Women's Knowledge of Fertility and Assisted Human Reproduction: Identifying the Gaps.” *Fertility and Sterility* 97 (2): 420–26.
- McDonald, Peter. 2006. “Low Fertility and the State: The Efficacy of Policy.” *Population and Development Review* 32 (3): 485–510.
- Mills, Melinda, Ronald R. Rindfuss, Peter McDonald, and Egbert te Velde. 2011. “Why Do People Postpone Parenthood? Reasons and Social Policy Incentives.” *Human Reproduction* 17 (6): 848–60.
- Tan, Poh Lin, S. Philip Morgan, and Emilio Zagheni. 2016. “Examining the Link between Education Costs and Lowest-Low Fertility.” *Population Research and Policy Review* 35 (5): 327–50.
- Yong, Nicholas. 2019. “We Must Make Enough of Our Own Babies to Secure Singapore's Future: Lee Hsien Loong.” Yahoo News Singapore, October 17. <https://sg.news.yahoo.com/we-must-make-enough-of-our-own-babies-to-secure-our-future-lee-hsien-loong-083432783.html>.