

## Ask:NUS Economists

# Boost fertility? Nudge educated women to marry, and marry young

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For The Straits Times

**Q** Can you shed more light on why baby-making incentives haven't worked?

**A** In a previous article in this column, on Sept 26, my colleague Chia Ngee Choon and her co-author Chia Han Mae wrote about why some pro-natalist policies such as the Baby Bonus have not worked.

Their recommendation was to focus on policy measures that lower the long-term cost of rearing children. Affordability is a valid consideration. If raising a child with high human capital content is going to consume a large proportion of parental lifetime income that constrains other lifestyle expenses, including retirement, parents are unlikely to aim for a larger family.

But there is another important factor that needs more attention than it has received so far: that is the increasing proportion of singles and late marriages. It is worth giving it a quantitative assessment.

In Asian societies, in general, no marriage means no children. Typically, a married Singaporean

woman in the 40-49 age group had at least two children, on average, though the number fell to 1.9 last year. Past policies, therefore, have essentially been telling couples to have more than two children to offset the shortfall resulting from no marriages and late marriages. Isn't this too much to ask, when the norm has shifted towards two children per married couple?

A recent study I conducted with a student, Toh Shen Hui, and further examined with Chua Yeow Hwee, revealed a somewhat unexpected very strong link between female higher education (measured by the proportion of degree-holding females in the female workforce) and fertility determinants.

What matters is female higher education, not just basic education. Traditionally, female education has been used as a measure of time cost of a child; a more educated mother attending to a child has to forgo a bigger pay packet. Such a view is too narrow and the role of female education should be viewed on its own right.

Fertility determinants fall into two categories. The first category includes the fundamental or basic determinants such as affordability and female higher education. The second category includes the

intermediate determinants such as marriage, age at first marriage and age at first childbirth.

Although affordability is a direct determinant of the number of children a couple plan to have, female higher education works primarily through the intermediate determinants. Female higher education leads to a fall in the number of marriages and increases the age at first marriage and age at first childbirth. Graphically, each of these intermediate determinants shows a very close relationship with female higher education.

These intermediate variables change very slowly, which means their next year values are very much like this year values with a slight modification. Data analysis shows that female higher education alone accounts for these persistent trends and captures 92 per cent of the drop in the female marriage rate over 1980-2013 and 98 per cent of the increase in female age at first childbirth over 1992-2017.

In 1980, in Singapore, the total fertility rate (TFR) was 1.82 children per woman of child bearing age. (the replacement TFR is 2.1). This dropped to 1.19 by 2013. This drop was very much a result of falling female marriages.

Since 2013, the female marriage

rate has risen marginally. However, late marriages and delayed attempts to have children add to biological constraints on fertility. On average, a birth of a child occurs two to three years after the first marriage. Last year, female age at first childbirth was 30.7. A delay by one more year may lower the TFR

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by another 0.1 point because of the increase in one-child and no-children marriages.

Interestingly, contrary to standard thinking, female labour force participation has a much smaller negative effect on the TFR in Singapore. In fact, countries like Britain and Sweden, with flexi work arrangements, have successfully turned this negative relationship between working women and fertility into a positive one.

An increase in affordability through an increase in lifetime household income, which is enhanced through female labour force participation, is an important factor in boosting fertility.

However, the negative effect of female higher education, working through the intermediate variables, far outweighs the positive income effect.

As the Singapore economy matures and income growth slows, the positive income effect on fertility is going to stay subdued.

Therefore, the key consideration is how to nudge educated women to marry, and marry at a young age.

This is not an elitist consideration; it is simply because they are the ones who tend not to marry, or marry late. As of 2017, 37 per cent of the female workforce

were degree holders. A further 19 per cent were diploma and professional qualification holders. These numbers are bound to increase further.

My former colleague Euston Quah, in an opinion piece in ST on Sept 11, brought attention to lowering the search cost for a marriage partner. In fact, tertiary institutions are the best places for pairing up. In the workplace, the choice pool shrinks and socialising opportunities get sucked up by hectic work schedules.

Parents, instead of discouraging, should encourage their children in tertiary institutions to find marriage partners while studying but not at the expense of their studies, of course.

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