
F Has the Baby Bonus changed the patterns of birth by age?

The biggest concern about the impact of the baby bonus is on teenage mothers (aged 15-19 years), since they face the greatest monetary incentives to bear children and may not take into account the full lifetime implications of children for subsequent work and education prospects. One *very* simple method would be to assess this by considering whether the fertility rates for this age group increased from 2004 to 2006 (noting that while the bonus was introduced in 2004 it cannot have had any impact in that year, since conception would have occurred at a prior time). This measure is:

$$\Delta F1 = \text{ASFR}_{15-19,2006} - \text{ASFR}_{15-19,2004}$$

where the ASFR is the age-specific fertility rate. Using this measure, there are reductions in fertility rates for Australia as a whole, but reasonably large increases in South Australia and (particularly) the Northern Territory.

However, it may be that fertility was growing before the bonus was introduced and that the apparent increase using $\Delta F1$ is merely the continuation of historical trends. One way of dealing with this is to take the difference between pre-bonus and post-bonus growth:

$$\Delta F2 = (\text{ASFR}_{15-19,2006} - \text{ASFR}_{15-19,2004}) - (\text{ASFR}_{15-19,2004} - \text{ASFR}_{15-19,2002})$$

$\Delta F2$ is positive for Australia as a whole and only negative for Victoria and Western Australia. It is very high for the Northern Territory.

Finally, it could be that some common factor has increased the fertility rate for all ages (such as economic prosperity) and that $\Delta F2$ is picking up this general phenomenon rather than something that is particularly affecting young women. To control for this, the gap between $\Delta F2$ for women aged 15–19 and 24–29 was calculated (ie the difference in the difference in the difference):

$$\Delta F2 = \{(\text{ASFR}_{15-19,2006} - \text{ASFR}_{15-19,2004}) - (\text{ASFR}_{15-19,2004} - \text{ASFR}_{15-19,2002})\} - \\ \{(\text{ASFR}_{24-29,2006} - \text{ASFR}_{24-29,2004}) - (\text{ASFR}_{24-29,2004} - \text{ASFR}_{24-29,2002})\}$$

This is negative for all States and Territories except the Northern Territory, which again shows a very high positive change in fertility (table F.1).

Table F.1 Behaviour of teenage fertility
15-19 year olds, pre and post Baby Bonus^a

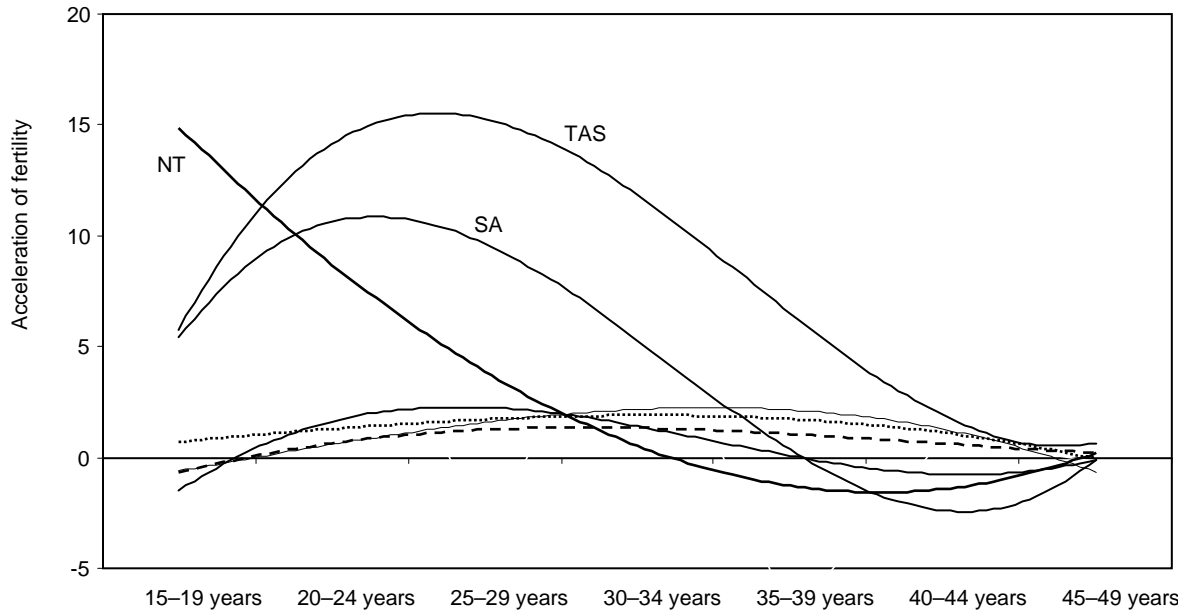
	Growth in fertility after the baby bonus	'Acceleration' in fertility growth	Difference in acceleration for 15-19 and 25-29 year olds
	$\Delta F1$	$\Delta F2$	$\Delta F3$
NSW	-1.8	0.4	-0.2
VIC	-0.6	-1.2	-0.1
QLD	-1.9	5.2	-2.3
SA	3.2	5.2	-6
WA	0	-0.8	-3.5
TAS	1.7	5.1	-5.3
NT	7.2	14.2	17.8
ACT	1.3	4.6	-16.3
AUST	-0.6	0.6	-1.3

^a See box 4.1 for the derivation and interpretation of these figures.

Data source: ABS, *Births, Australia*, (Cat. no. 3301.0).

Another (similar) way of diagnosing the possible influence of the baby bonus is to graph $\Delta F2$ across ages (figure F.1). Since $\Delta F2$ is subject to noise, the resulting curve for each jurisdiction is smoothed using a third order polynomial so that the underlying shape of the relationship is made clearer. In all jurisdictions, bar the Northern Territory, the resultant curve is concave — with the greatest acceleration in fertility occurring for women aged 25–39 years. This is consistent with the effects of recuperation (chapter 3). In contrast, the Northern Territory has a distinctively convex shape, suggesting that the baby bonus *may* have stimulated teenage pregnancies in that jurisdiction.

Figure F.1 The acceleration of fertility was generally greater for prime age women, not young women after the baby bonus^a



^a The figure shows the measure $\Delta F2$ from box 4.1 for each of the age groups for each State and Territory. The data were smoothed across age groups to reveal the underlying relationship more clearly. The Northern Territory is the only exception to the finding that prime-aged, not young women, have experienced the greatest acceleration of fertility.

Data source: ABS, *Births, Australia*, (Cat. no. 3301.0).