

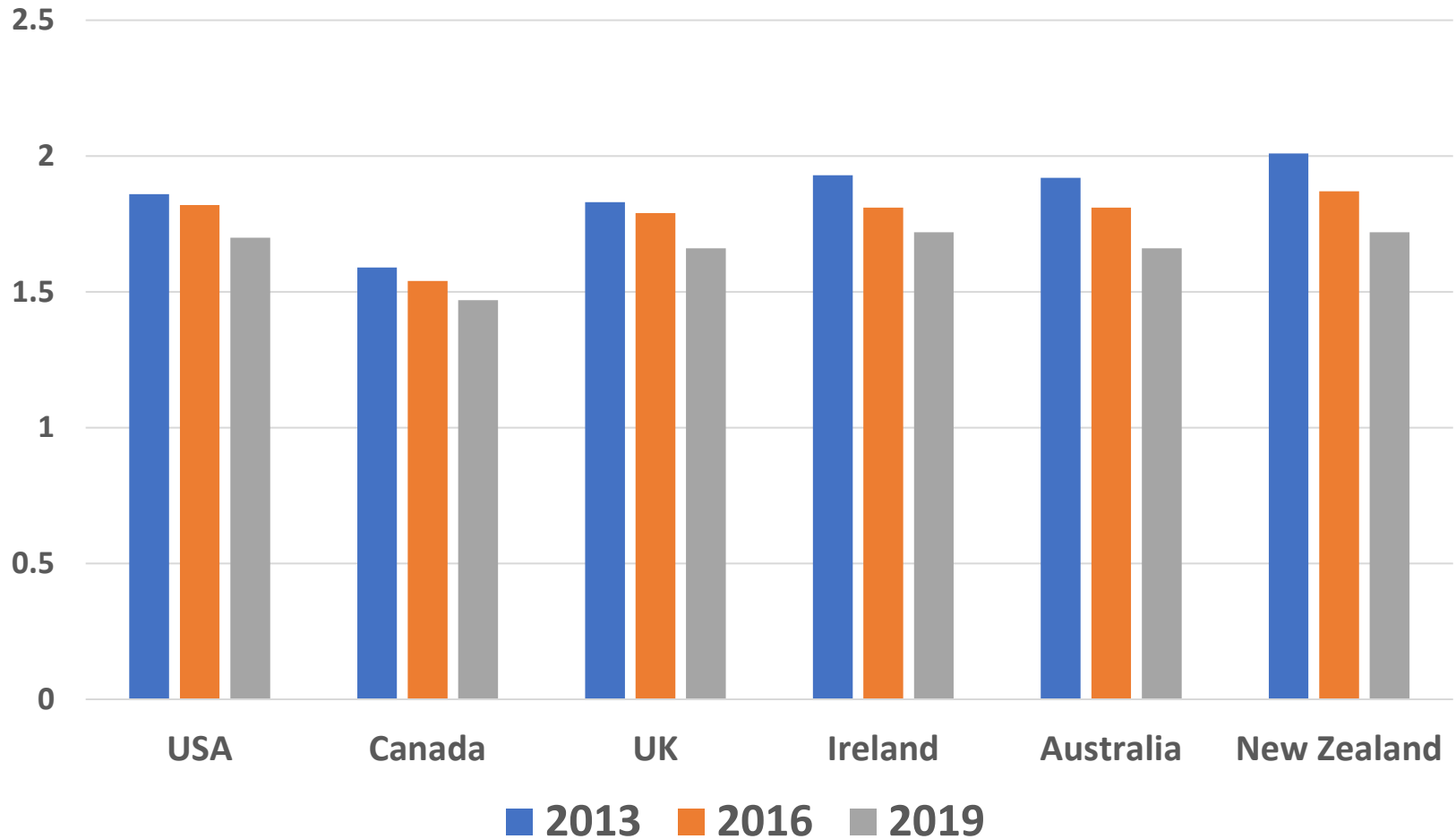
Australian Fertility Trends: the Potential Effects of COVID 19

Peter McDonald

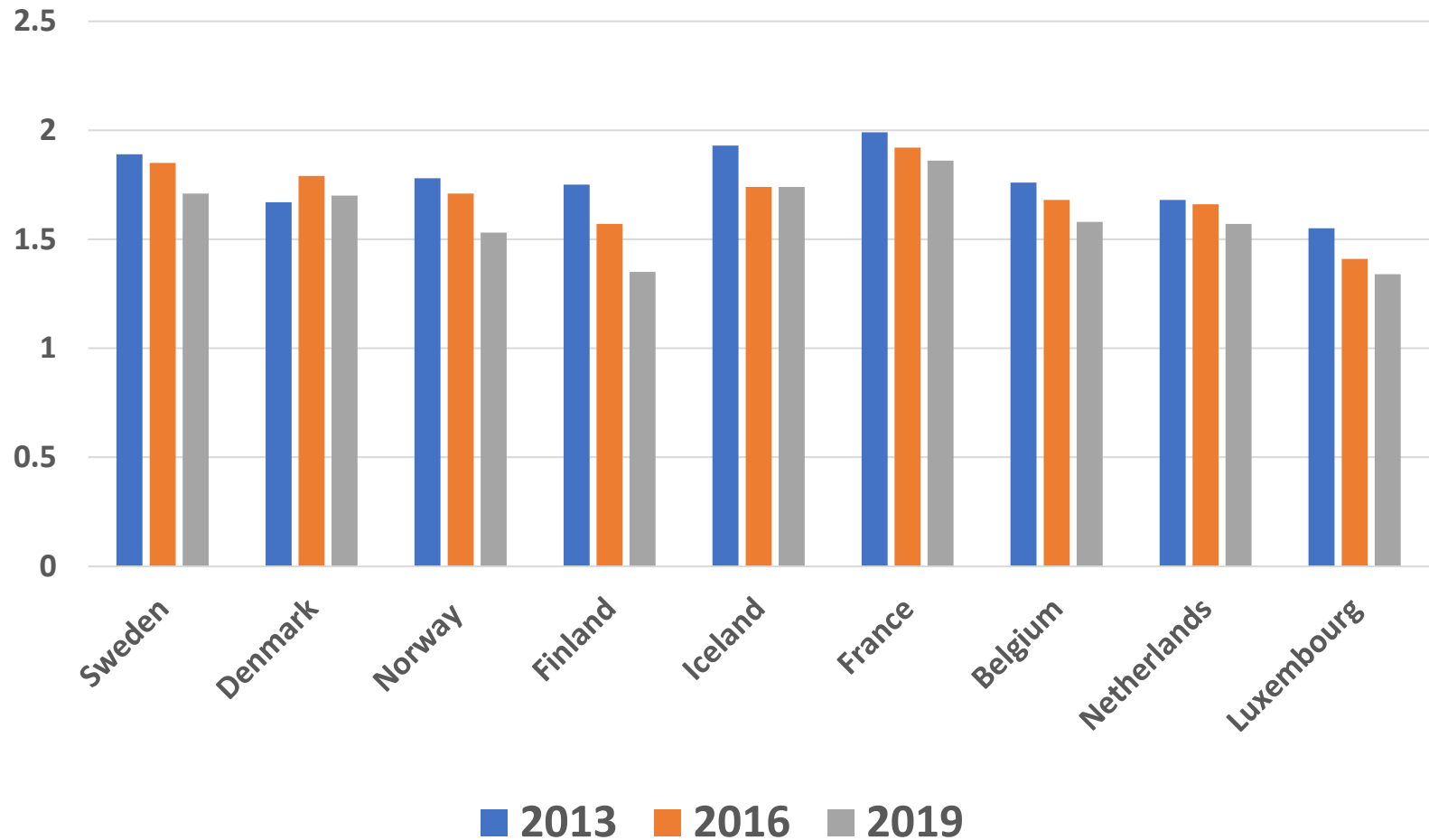
ARC Centre of Excellence in Population Ageing Research

*Source: McDonald, P 2020, 'A Projection of Australia's Future Fertility Rates',
Centre for Population Research Paper, The Australian Government, Canberra.*

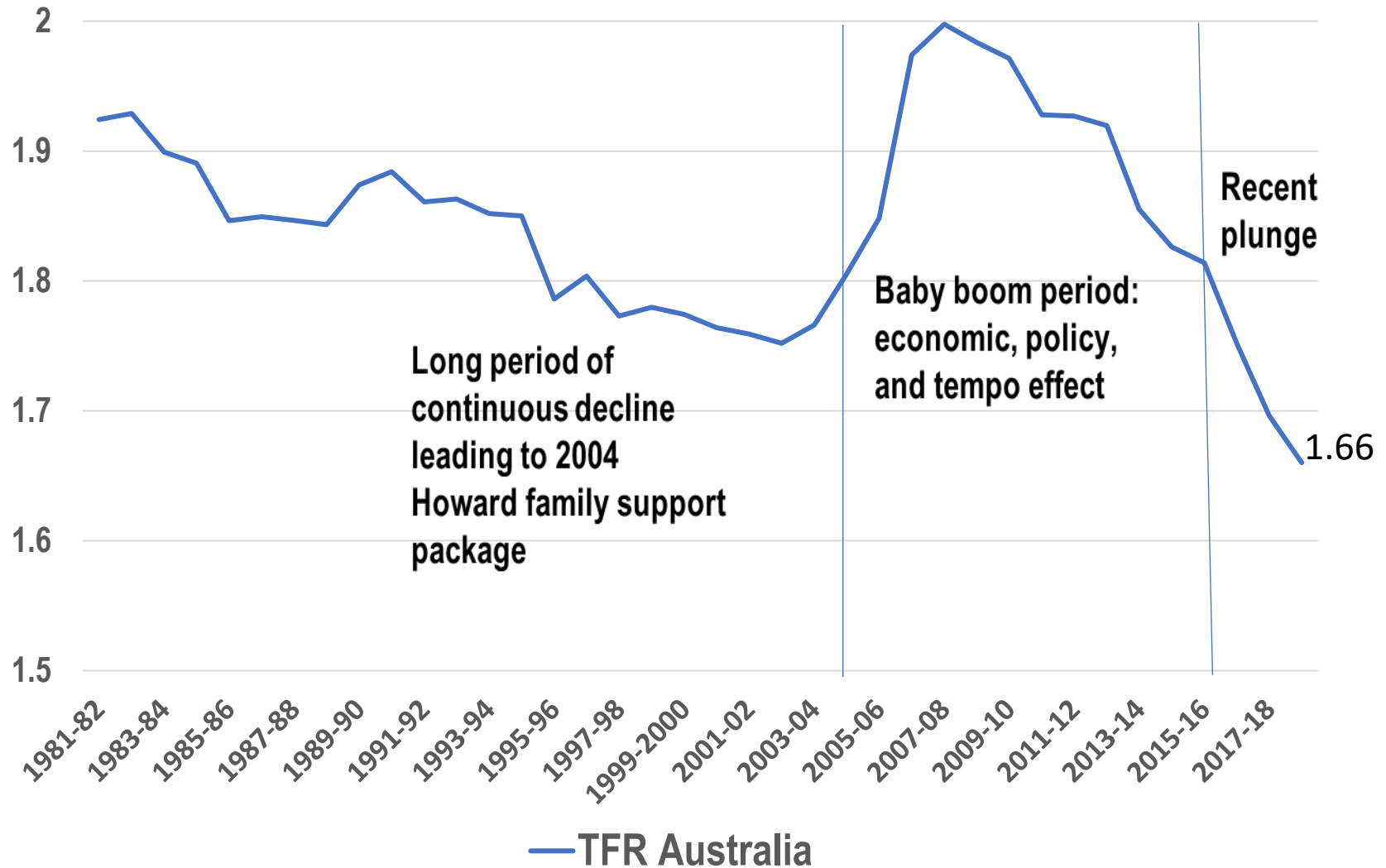
Total Fertility Rates, English-Speaking Countries, 2013-2019



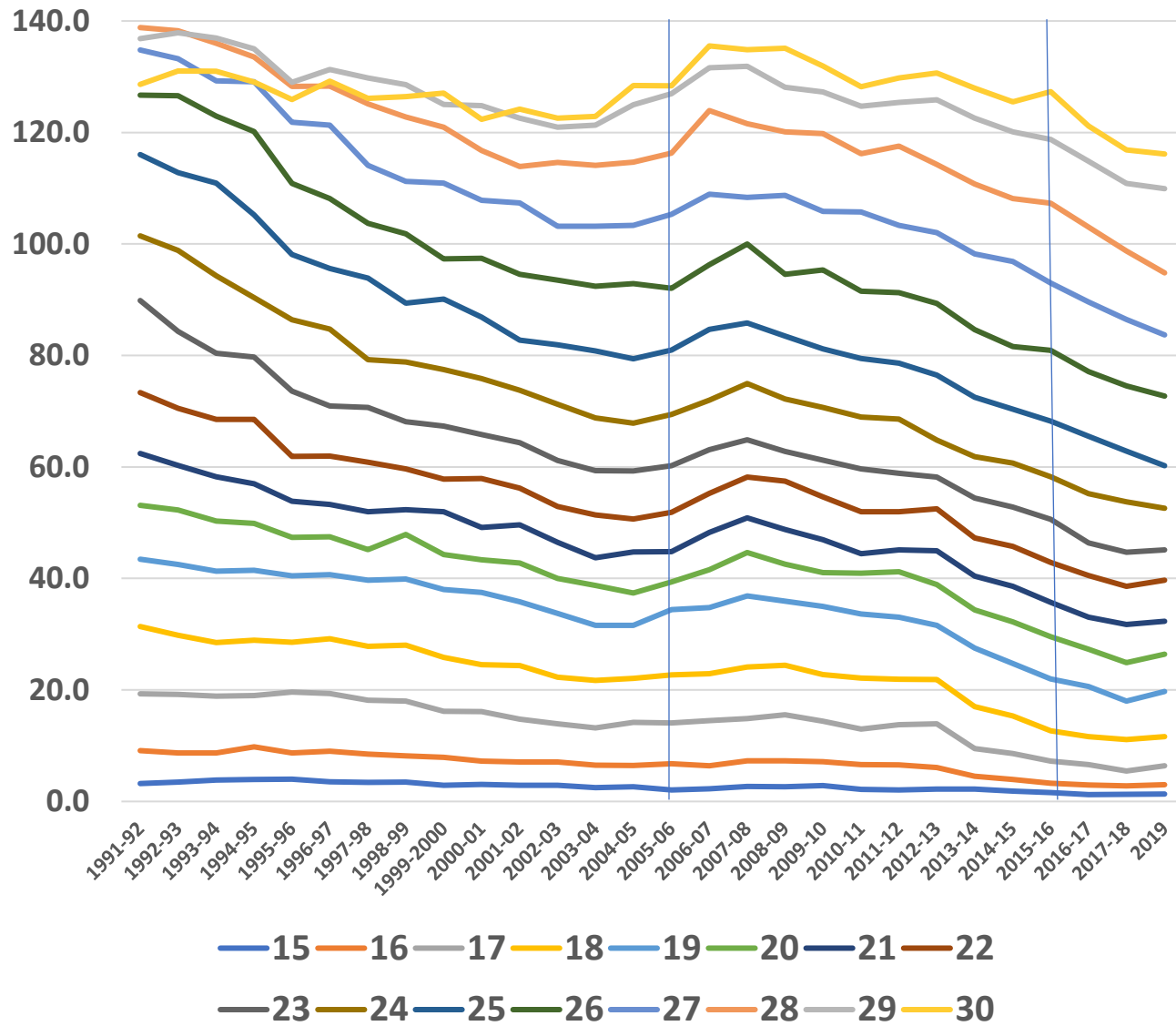
Total Fertility Rates, North and Western Europe 2013-2019



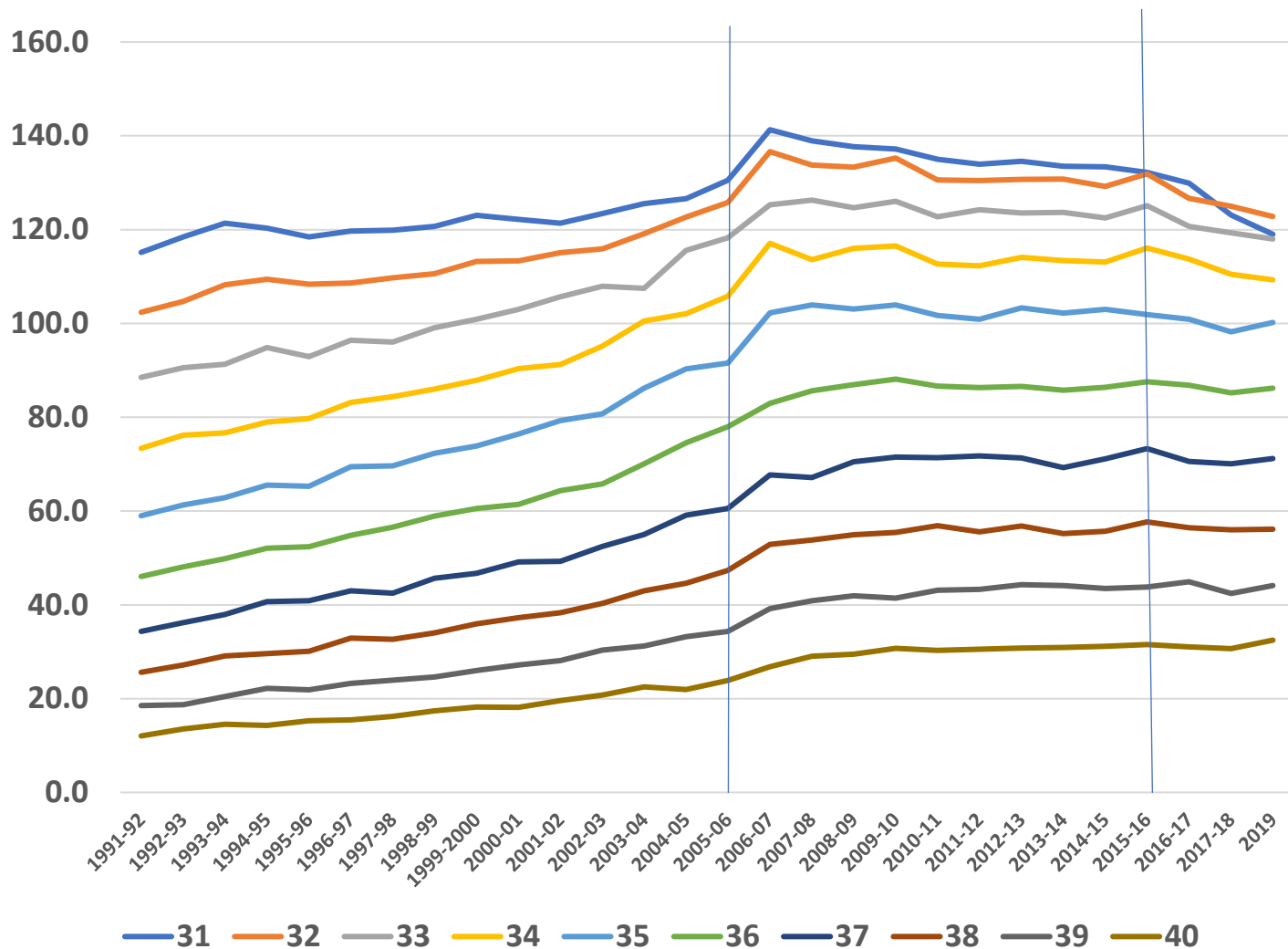
Total Fertility Rate, Australia, 1981-82 to 2018-19



Age Specific Fertility Rates (per 1000), Ages 15-30 1991-92 to 2019, Australia (Postponement Ages)



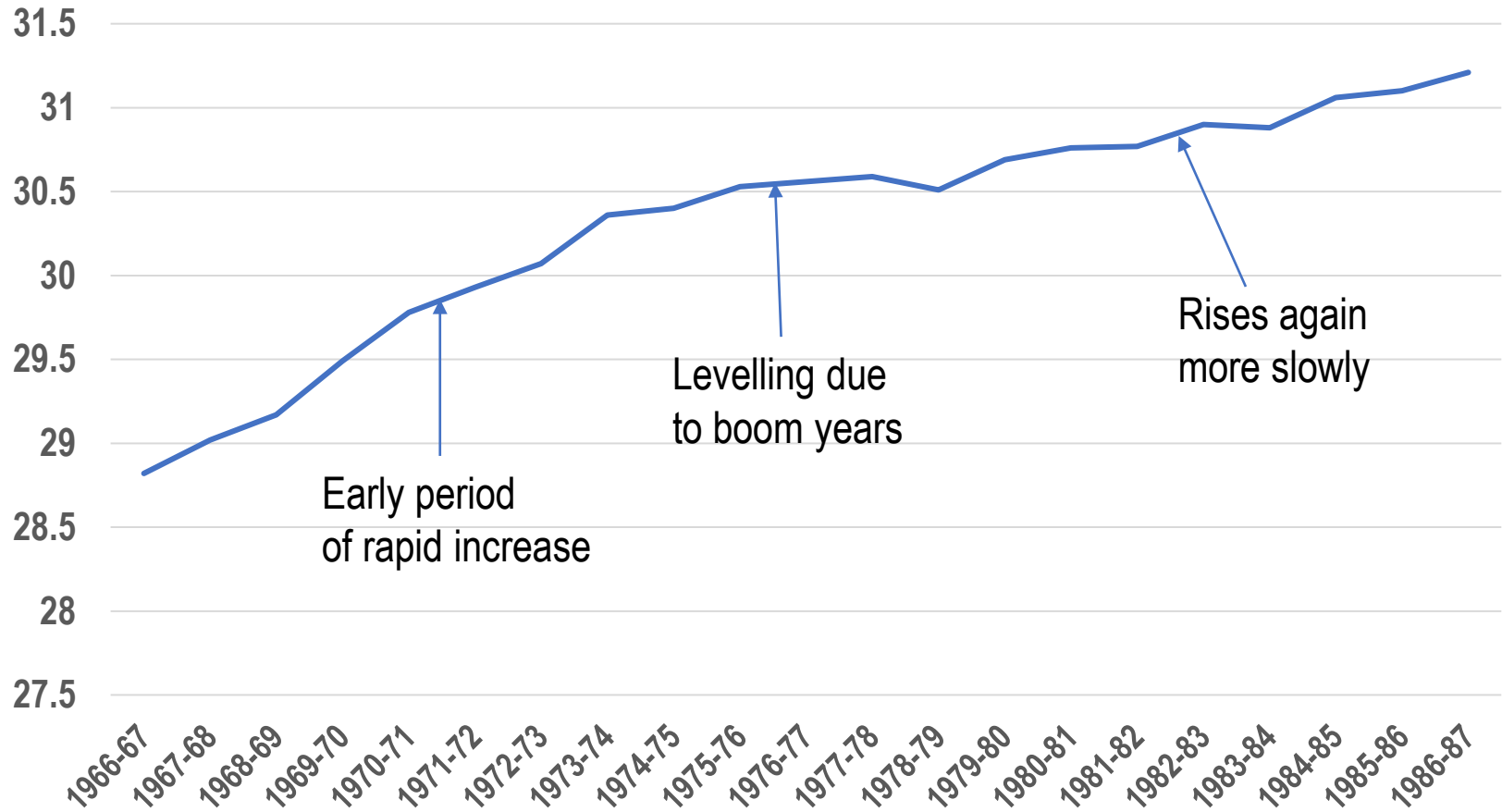
Age Specific Fertility Rates (per 1000), Ages 31-40 1991-92 to 2019, Australia (Recuperation Ages)



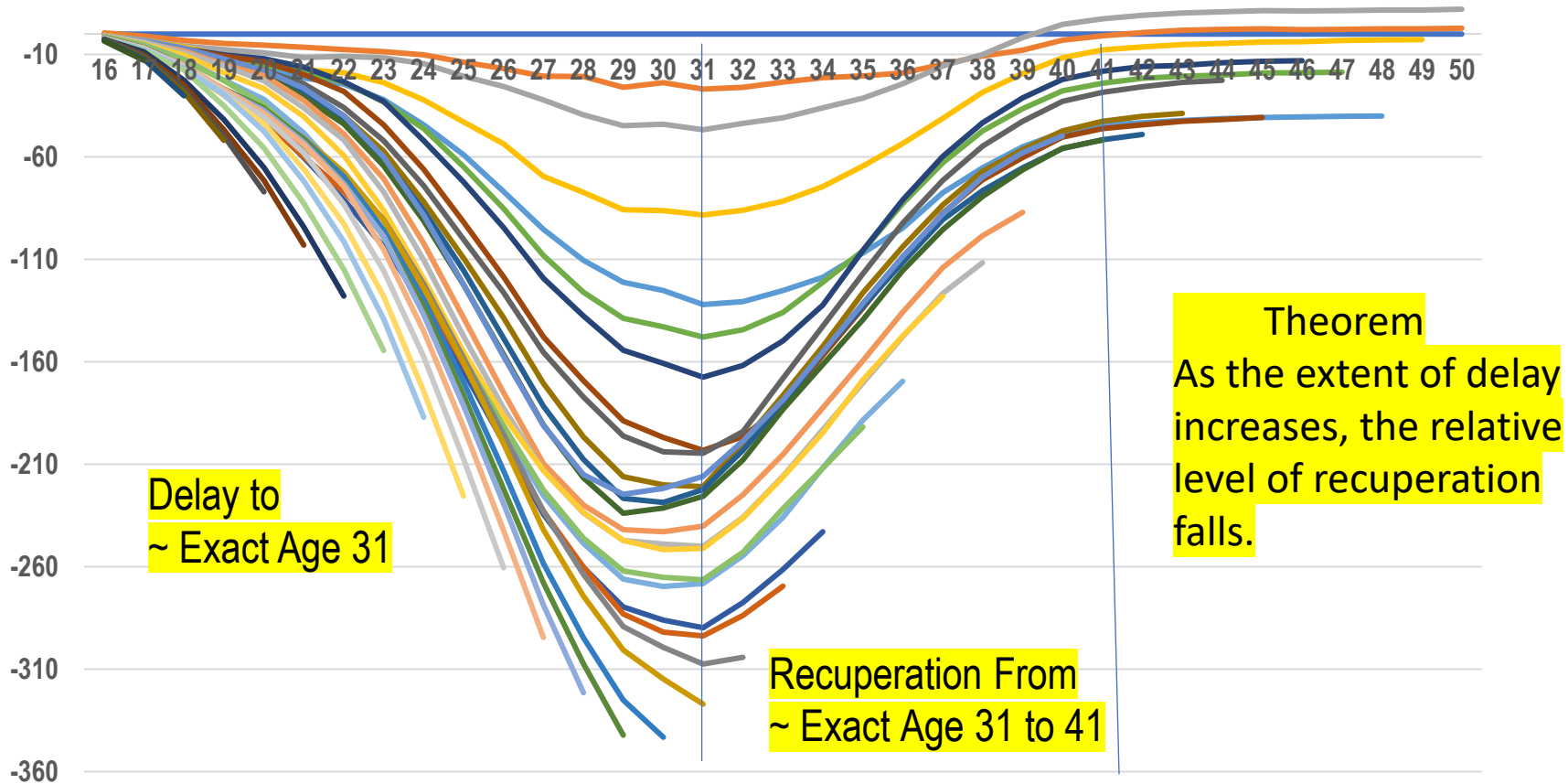
Tempo effects

- The whole period from 1990 onwards has been subject to changes in the timing of births (tempo effects), especially first births.
- Tempo effects can have substantial impacts on the Total Fertility Rate making it near impossible to interpret period (cross-sectional) trends in fertility.
- Tempo effects consist of postponement of births at younger ages with making up (recuperation) of some but not all of these postponed births at older ages.
- Trends in fertility rates for birth cohorts of women are much smoother and easier to interpret.

Age By Which the Cumulated Fertility of the Birth Cohort Reached 1.0, Australia



Cumulated Cohort Fertility, Deviations From 1966-67 Birth Cohort (the Delay-Recuperation Curve) (1966-67 = 0)



Delay to
~ Exact Age 31

Theorem
As the extent of delay
increases, the relative
level of recuperation
falls.

Recuperation From
~ Exact Age 31 to 41

- 1966-67
- 1967-68
- 1968-69
- 1969-70
- 1970-71
- 1971-72
- 1972-73
- 1973-74
- 1974-75
- 1975-76
- 1976-77
- 1977-78
- 1978-79
- 1979-80
- 1980-81
- 1981-82
- 1982-83
- 1983-84
- 1984-85
- 1985-86
- 1986-87
- 1987-88
- 1988-89
- 1989-90
- 1990-91
- 1991-92
- 1992-93
- 1993-94
- 1994-95
- 1995-96
- 1996-97
- 1997-98
- 1998-99
- 1999-2000
- 2000-01
- 2001-02
- 2002-03

Indices of delay and recuperation for birth cohorts of women

Index of Delay

$$C31(\text{Cohort } t)/C31(\text{Cohort } 0)$$

Index of Recuperation

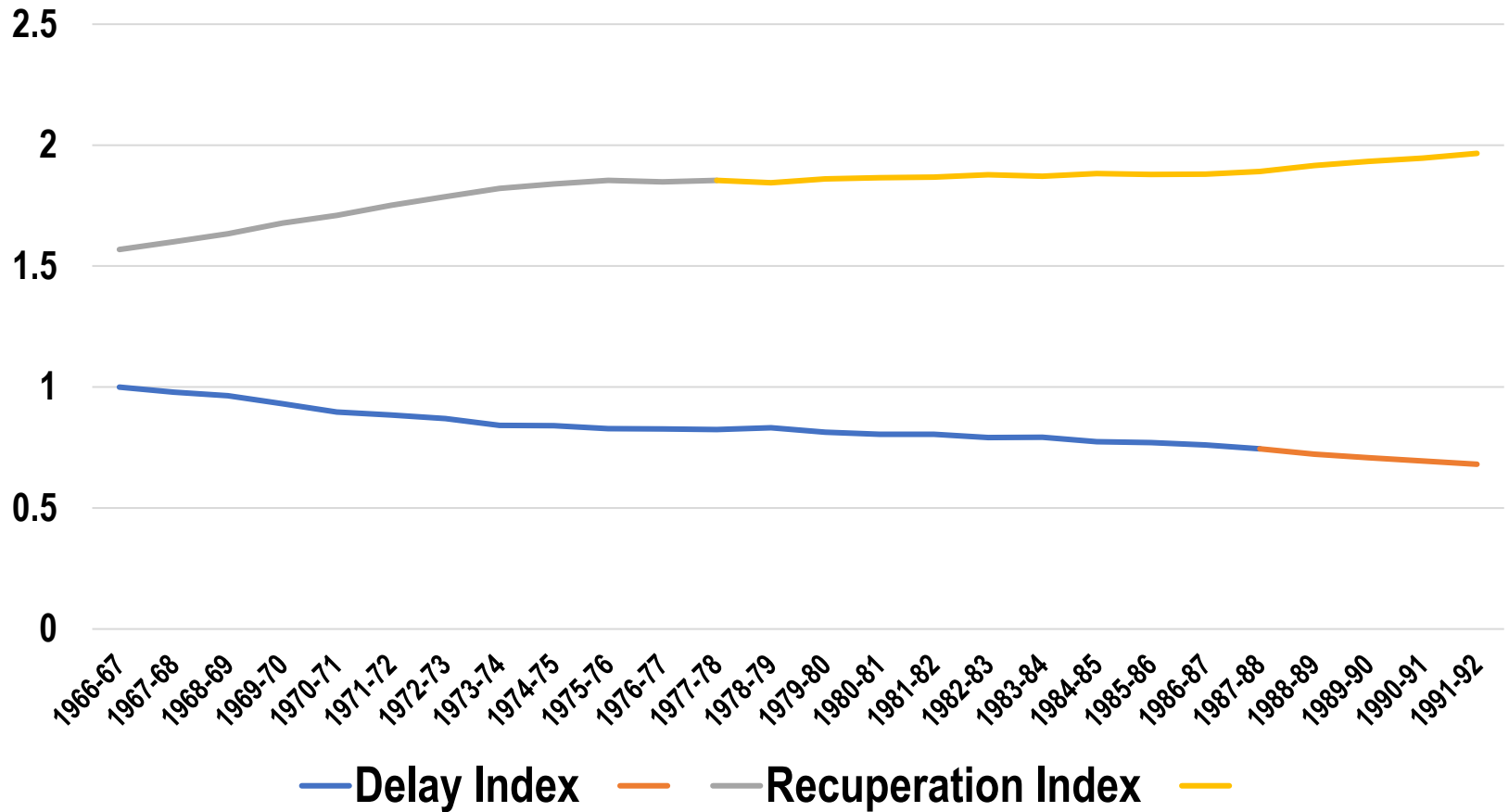
$$C41(\text{Cohort } t)/C31(\text{Cohort } t)$$

Where $CA(\text{Cohort } t)$ = Cumulated Cohort Fertility to Exact Age A for Women Born in Year t.

In this analysis, Cohort (0) is 1966-67.

Indices for Australia, Recorded and Projected

(Medium Projection, No COVID effect)



Additional Impact of COVID

Past Impacts of Economic Downturns on TFR

Year	Absolute Fall in TFR From the Previous Year
1929	0.13 births per woman
1930	0.05
1931	0.23
1932	0.17
1962	0.10
1963	0.10
1964	0.18
1965	0.19
1966	0.10
1972	0.20
1973	0.24
1974	0.10
1975	0.17
1976	0.09
1983	0.03
1991	0.05
2009	0.07

Google keywords relating to conception and pregnancy: study of USA

- Wilde, J., Chen, W. and Lohmann, S. 2020. COVID-19 and the Future of US Fertility: What Can We Learn From Google? IZA Institute of Labor Economics (IZA DP No. 13776)
- Our analysis suggests that between November 2020 and February 2021, monthly US births will drop sharply by approximately 15%. (This is equivalent to 0.25 births per woman coming off the Australian TFR).
- Women with less than a college education, as well as Black women, are predicted to have larger declines in fertility due to COVID-19.
- Quick Indicator: Medicare statistics on first antenatal visits?

Two COVID Scenarios

- In the *'likely COVID' scenario*, the total fertility rate is assumed to be **0.15** babies per woman lower in 2021, and around **80 per cent** of the babies that are deferred by COVID are assumed to be recuperated by 2032.
- In the *'severe COVID' scenario*, the total fertility rate is assumed to be **0.25** babies per woman lower in 2021, and around **70 per cent** of the babies that are deferred are assumed to be recuperated by 2032.
- Deferrals of births are assumed to take place at ages 21 to 40 and that fertility rates at ages 15-20 and at ages 41 and over are not affected by COVID-19. The logic is that decision-making about births at young and old ages is 'non-standard'.
- Based on the distributions by age of first and second births (in relative terms), two-thirds of the fall in total fertility rate in 2021 (the first full year of impact) is made at ages 21-30 and one third at ages 31-40.
- COVID-19 effects on deferral of births are assumed to continue at increasingly lower levels for the years 2022 to 2025 (Likely COVID) and 2022 to 2026 (Severe COVID).

Impacts of COVID-19 on Projections of Australia's Total Fertility Rates (per 1000)

