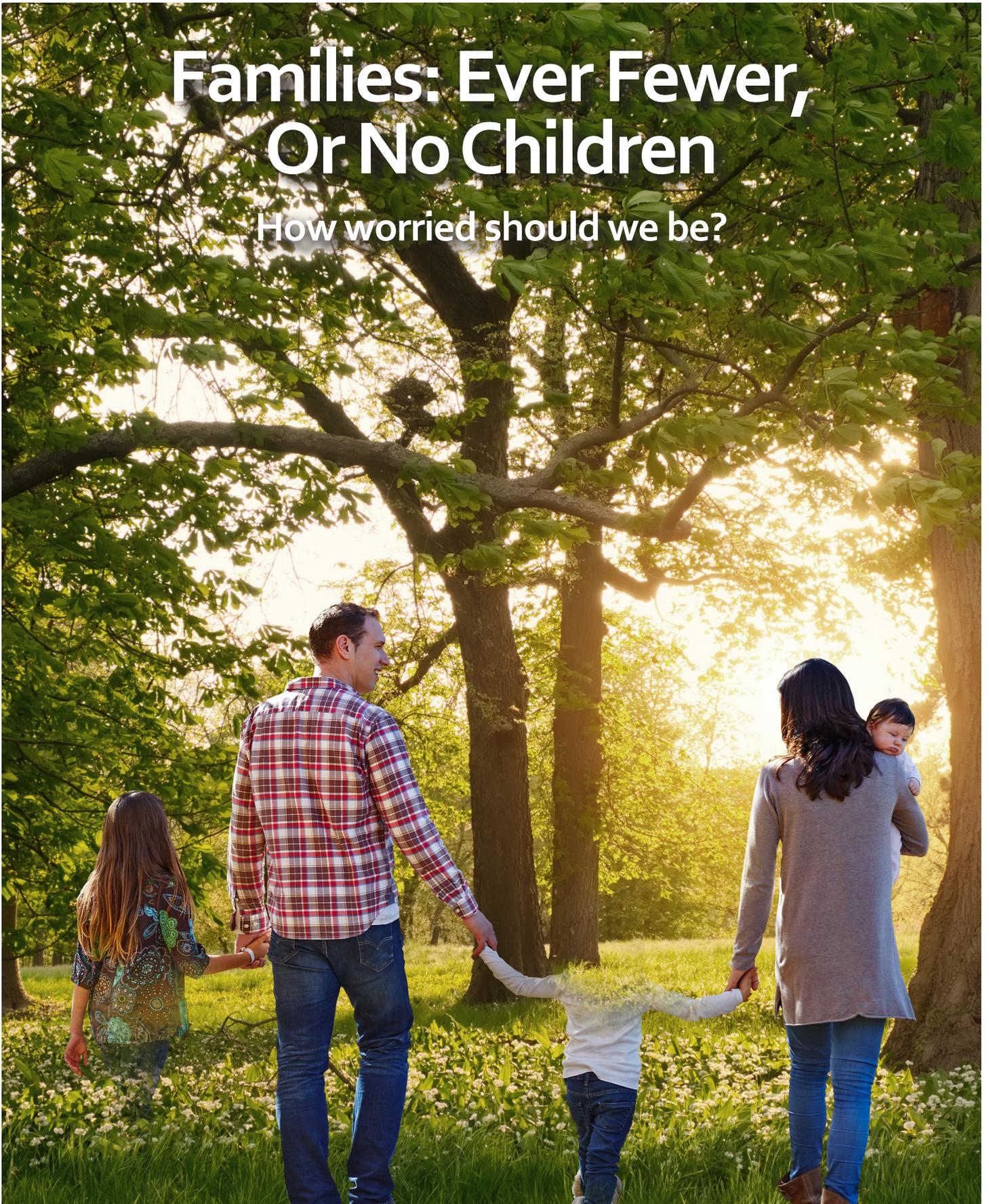


Families: Ever Fewer, Or No Children

How worried should we be?



A discussion paper: August 2019



ABOUT FAMILY FIRST NZ

Family First NZ is a charitable organisation formed in 2006, and registered as a charity with the Charities Commission. Its purposes and aims are:

- to promote and advance research and policy regarding family and marriage
- to participate in social analysis and debate surrounding issues relating to and affecting the family
- to educate the public in their understanding of the institutional, legal and moral framework that makes a just and democratic society possible
- to produce and publish relevant and stimulating material in newspapers, magazines, and other media relating to issues affecting families
- to speak up about issues relating to families that are in the public domain

For more information and copies of this report, go to www.familyfirst.nz



tel: 09 261 2426

fax: 09 261 2520

email: admin@familyfirst.org.nz

web: www.familyfirst.nz

post: PO Box 276-133, Manukau City 2241, New Zealand

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ABOUT THE AUTHOR



LINDSAY MITCHELL has been researching and commenting on welfare since 2001. Many of her articles have been published in mainstream media and she has appeared on radio, television and before select committees discussing issues relating to welfare.

In 2009 her paper, *Maori and Welfare*, was published by the *New Zealand Business Roundtable*. She mentored beneficiary families during the 2000s and volunteers at Rimutaka Prison.

She has also kept a blog since 2005 and counts herself as a rarity in blog survival rates.

When she isn't writing and researching, Lindsay paints and exhibits, specialising in Maori portraiture.

Lindsay has written three previous reports for Family First NZ - *Child Poverty & Family Structure: What is the evidence telling us?* and *Child Abuse & Family Structure: What is the evidence telling us?* were published in 2016, and *Imprisonment & Family Structure: What is the evidence telling us?* was published in 2018.

"What follows is a rudimentary look at the shrinking family; what has influenced the trend to fewer children and what might influence future fertility. The question, 'Ever fewer, or no children: how worried should we be?' will elicit varying answers from different individuals and groups. But as New Zealand's fertility rate hits an all-time low, addressing the question gains urgency."

EXECUTIVE SUMMARY

New Zealand's birth rate has hit at an all-time low. In 2018 there were only 11.87 births per 1,000 of the population. The total fertility rate dipped to 1.71 births per woman, well below the population replacement rate of 2.1 births.

Fertility rates in countries most similar to New Zealand are all falling. Demographers and statisticians predict the family will continue to shrink. Additionally, as more women remain childless, the rest will have to increase their fertility to maintain population replacement level. This is unlikely.

In addition to fewer births, other underlying trends are occurring. More births are occurring in the most deprived quintiles, though somewhat paradoxically fewer children are being born onto welfare benefits.

Falling marriage rates correlate with falling fertility. As total fertility has decreased, the percentage of births to unmarried mothers has risen peaking around 2010. While many unmarried births are to cohabiting couples, a large minority are not.

A growing body of research finds cohabiting relationships are more likely than married relationships to separate. Increased brevity of relationships decreases opportunity for having children (within any given relationship at least).

The Pacific birth rate is falling faster than any other ethnic group. Maori now have the highest birth rate but it too is falling. The only ethnic group with a (slightly) increasing birth rate is Asian.

Mothers are ageing. Teenage births now match those to 40-44 year olds. The most fertile age group is 30-34. Delaying childbirth is reducing the window available for having children. While delayed childbirth presents advantages, it also presents risks - difficulty in conception or involuntary infertility.

Maternal education is strongly related to delayed child-bearing and lower fertility.

The shrinking family is welcomed by environmentalists (though not unanimously). Messaging to first world countries to limit or reject childbearing as the best way to reduce carbon footprints is gaining currency.

While some are listening, the desire to have children persists, though most women want more children than they actually go on to produce.

New Zealand is no longer reaching the population replacement birth rate necessary for long-term economic growth and balanced dependency ratios. Treasury has been somewhat sanguine about the birth rate and has not yet considered the recent decline.

There are negative social costs as families both shrink and become more globalised. Increasingly, the elderly (and not so elderly) live alone with fewer family supports.

From a social science perspective, one child families are not particularly problematic, with a meta analyses of studies into developmental outcomes for only children finding them indistinguishable from firstborns and children from small families.

In larger families, from a parent's perspective, 'happiness' research finds no additional gain after two births. For children, though, the presence of siblings assists later relationship building (somewhat dependent on the quality of sibling relationships.) Additionally, three or more child families can present economies of scale that are environmentally friendly. Larger families also offset the increasing proportion of females choosing to be childless.

As New Zealand's fertility rate falls progressively further below population replacement level, the need to address the issue becomes more urgent.

A myriad of policies should theoretically be effective in encouraging fertility. Some are already in play but could be further developed: cash incentives, home ownership subsidies, reduction of student loan burden, work-life balance supports, legislated wage increases, child support design and funding

New Zealand's birth rate (2018) has hit at an all-time low in 2018. The total fertility rate dipped to 1.7 births per woman, well below the population replacement rate of 2.1 births.

The Pacific birth rate is falling faster than any other ethnic group. Maori now have the highest birth rate but it too is falling. The only ethnic group with a (slightly) increasing birth rate is Asian.

for Assisted Reproductive Technology treatments. Others are not in play: removal of marriage or couple penalties, income splitting, and application of child tax exemptions or rebates.

New Zealand mothers say they want more government support but as provisions like subsidised childcare and paid parental leave have become more generous the total fertility rate has continued downward. Countries with reputedly better family supports, e.g. Scandinavian states, fare no better in fertility rates. Exceptions to falling fertility are rare. Even China's abolition of the one-child policy has not arrested its declining fertility rate.

With the female labour force participation rate at an all-time high, corporate family-friendly policies may have increasing potential for positive impact on fertility by making it easier to combine motherhood and paid employment.

Initiatives to raise awareness about the risks of delaying childbirth (already underway in the United Kingdom), and the repercussions associated with having few or no family supports in old-age, could have value.

Personal fertility decisions ultimately rest with individuals and their own values and morality. These may be influenced by societal and cultural pressures and expectations, but public policy-makers are experiencing diminishing ability to affect childbearing decisions.

Immigration can be utilised to supplement a shrinking population. Fortunately, politicians can exercise greater influence in that sphere. But demand for both skilled and unskilled labour is heating up internationally.

The matter of fertility is critical to New Zealand's future. If not actively worrying about it, at the very least the topic should feature regularly in our private and public conversations.

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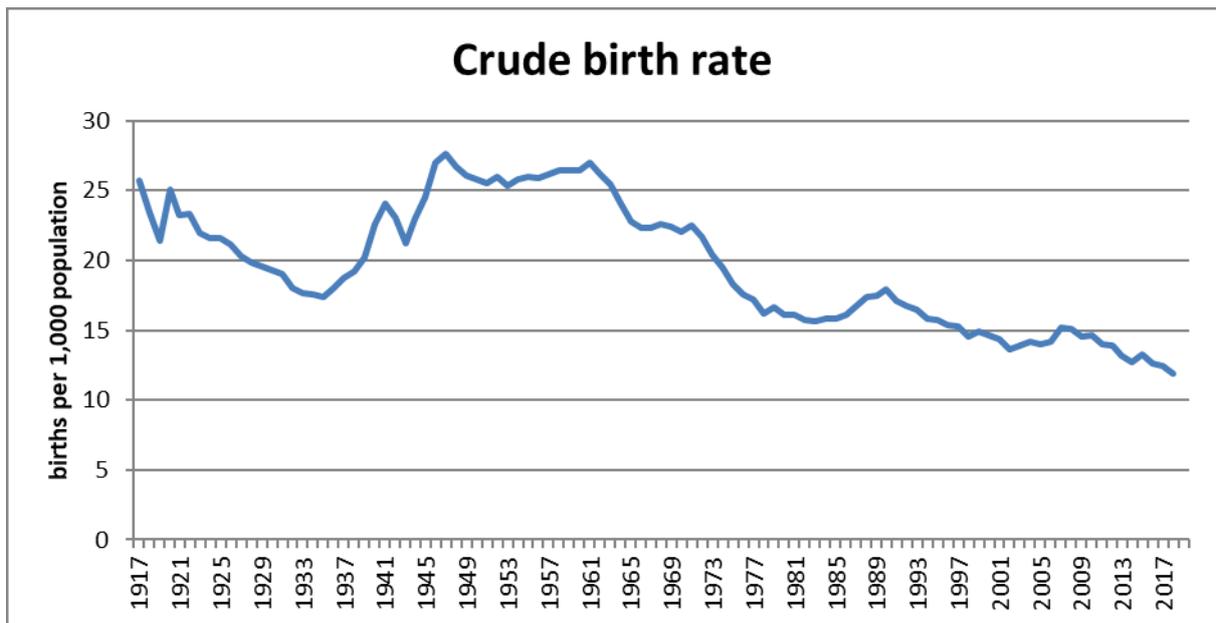
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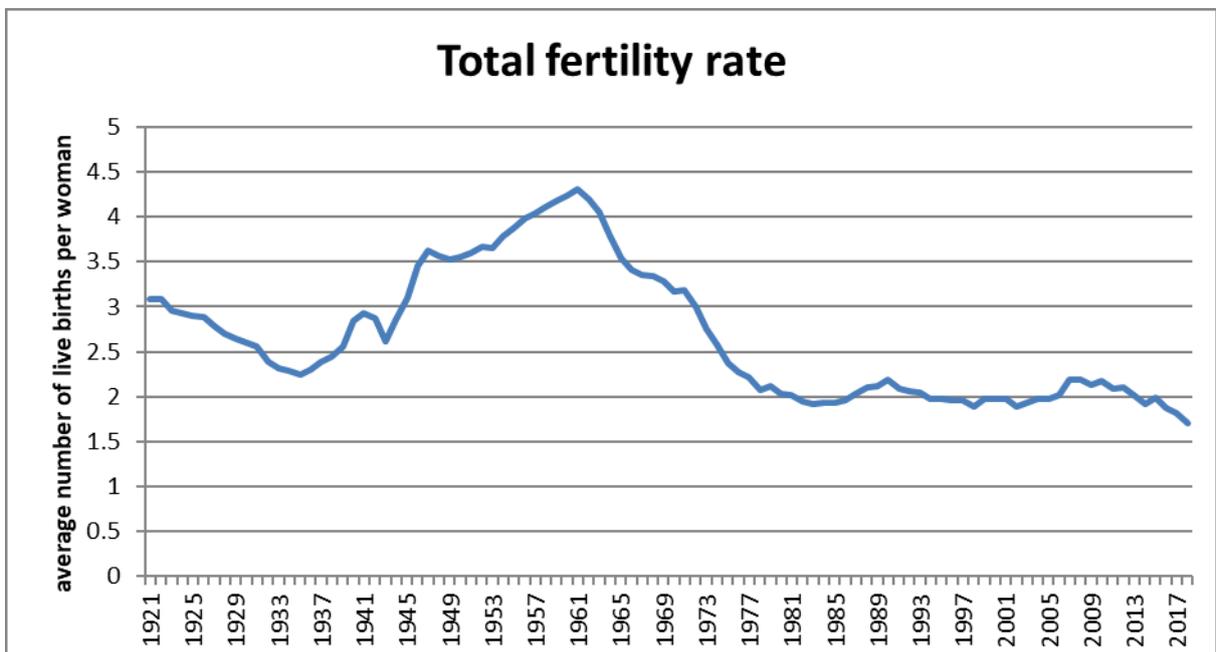
Historical Context

New Zealand's birth rate has hit an all-time low. In 2018 there were only 11.87 births per 1,000 of the population.



Data source: Infoshare, Statistics New Zealand, Crude birth rate (Maori and total population) (Annual-Dec)

The total fertility rate (TFR) - the average number of live births that a woman would have during her life if she experienced the age-specific rates of a given period (the specified year) – dipped to 1.71 in 2018. This is well below the population replacement rate of 2.1 births.



Data Source: Infoshare, Statistics New Zealand, Total fertility rate (Maori and total population) (Annual-Dec)

In 1961 women gave birth to an average of 4.31 children - a highpoint in the last 100 years.

The Second World War ended in September 1945. Tim Garlick writes in his history of the Ministry of Social Development and its predecessors:

“The war had resurrected fears about a declining birth rate; an expanding population and healthy family life were seen as essential for social well-being. As a result, successive governments were to implement a range of measures of assistance that were less targeted at a single individual in need, but rather intended to influence a specific social outcome: the preservation and encouragement of the family unit.”¹

Originally introduced in 1938, the Family Benefit became Universal (ceased to be means-tested) in 1946. Thereafter each child under 16 received 10 shillings weekly, equivalent to 8% of the average weekly wage in 1946². This was a substantial income boost for many. For Maori living in impoverished communities – many still rural and isolated - the payment (or incentive) was particularly significant.

The results of the incentive are documented in the New Zealand Yearbook of 1947-49:

“The birth-rate for 1947 (27.63 per 1,000 of total population) is the highest on record in recent years; and, in fact, it is necessary to go back to 1912 to find a higher rate recorded in New Zealand. The high rate of marriages and the extension of family benefits under the Social Security Act may be mentioned as two factors contributing to the recent high level of births.”³

Reference is also made to the legitimisation of children by late birth registration, “...in order to participate in family benefits under the Social Security Act.”

“The abnormally high birth-rates recorded for Maoris in recent years, particularly in comparison with the remainder of the population, must be attributed partly to late-registrations of hitherto unregistered births. This became particularly noticeable in 1946, and is no doubt attributable in some measure to the extension of family benefits under the social security scheme to cover all children under sixteen years of age, irrespective of the income of the parents. The following analysis of registrations of Maori births in 1946 illustrates this point.”

Registrations during Quarter ended	Date of Birth.			Totals.
	Before 1945.	During 1945.	During 1946.	
31st March, 1946	118	436	588	1,142
30th June, 1946	318	56	882	1,256
30th September, 1946	523	21	1,138	1,682
31st December, 1946	488	20	1,188	1,696
Totals, 1946	1,447	533	3,796	5,776

Source: New Zealand Yearbook 1947-49

As birth registrations do not necessarily equate to actual births in any given year, demographer Ian Pool re-estimated the Maori crude birth rate for 1946 from 57 per 1,000 to 49 per 1,000⁴ – still a high point.

Economist Patrick Nolan writes:

“The Universal Family Benefit was provided to not only address families’ financial needs, but to also promote increased birth rates and reinforce women’s maternal roles in society (Beaglehole, 1993; McClure, 1998).”⁵

In 2006, the Families Commission described how:

“Public policies also supported the post-war notion of the family, by financially rewarding families for having children and by targeting assistance to married couples: A Universal Family Benefit (UFB) was paid to mothers for each child they gave birth to, irrespective of the income of the family. A 2001 study indicates that if there had been no UFB in those post-war years, fertility in New Zealand might have been reduced by as much as 28 percent (Pool et al, 2007, p 202, referencing Poot & Siegers, 2001).”⁶

Undoubtedly, then, the Universal Family Benefit was intended to increase fertility and succeeded.

From 1961, the birth rate commenced a steep decline, plateauing

The war had resurrected fears about a declining birth rate; an expanding population and healthy family life were seen as essential for social well-being.

Public policies also supported the post-war notion of the family, by financially rewarding families for having children and by targeting assistance to married couples.

somewhat between the mid-sixties and seventies. By 1981, just 20 years later, fertility had more than halved to 2.01 children per female. Family Benefit value had eroded badly due to rampant inflation in the 1970s and 80s. More importantly, growing participation in the workforce as well as ability to control their fertility were critical changes for women. Some say entry into the work force carried the most weight.

As the wage rate for women has risen, the opportunity cost of raising children has also risen.

The New Zealand Treasury comments:

“The cost of children is also significantly affected by the value of the time of married women: as the wage rate for women has risen, the opportunity cost of raising children has also risen. Becker argues that the “contraceptive revolution” was a smaller factor than is often postulated, and was more a response to a decrease in the demand for children, than a cause.”⁷

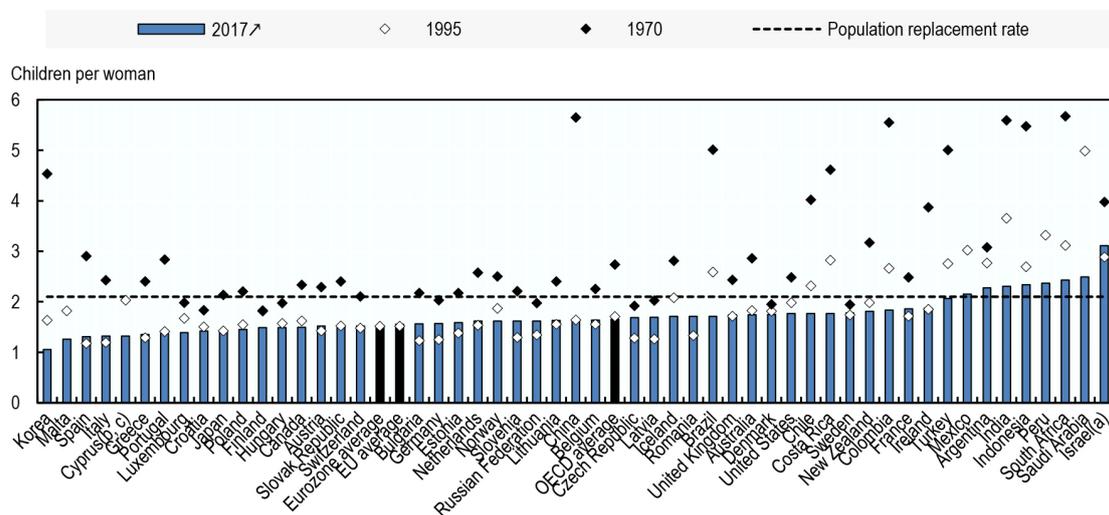
Framing this on a personal level, ex-cabinet minister and historian Michael Bassett writes:

“My grandparents came from families of 9, 13, 7 and 11, respectively. None had more than five children themselves, and in my generation three is the largest amongst us. Nearly all have only two. The biggest boost to birth control in the 20th century was the realisation that it was easier to bring up a smaller family, and there were likely to be more equal parental opportunities, and more disposable cash to enjoy life.”⁸

From 1980 to 2015, the total fertility rate fluctuated around 2.1 – or population replacement level. A small increase, sometimes referred to as a ‘mini baby boom’, followed the introduction of Working for Families in 2005 but was short-lived.

Pool et al also identify a ‘baby blip’ around 1990 when there was a brief return to early childbearing by females who had themselves been born to young mothers.⁹

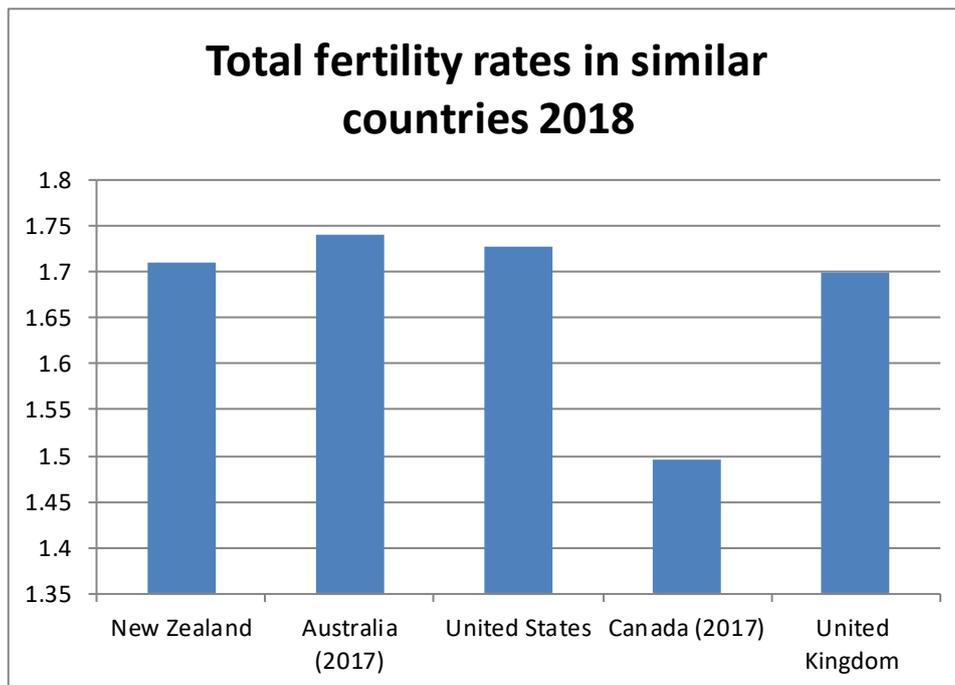
By 2018 however fertility had declined to just 1.71 – the lowest ever rate for this country. Previously New Zealand had been unusual in maintaining population replacement level or near to it. Now it is starting to resemble many other OECD member countries.



Source: https://www.oecd.org/els/family/SF_2_1_Fertility_rates.pdf

Fertility rates in those countries most similar to New Zealand are all falling. Their historic fertility patterns are all broadly similar, with high fertility in the 1950s and 60s, though none reached the level of New Zealand (which may account for the prior noted research finding that without the Family Benefit, New Zealand’s fertility rate may have been 28 percent lower).

Fertility rates in those countries most similar to New Zealand are all falling.



Data source: Statistics NZ, Australian Bureau of Statistics, Centers for Disease Control and Prevention (US), Statistics Canada, Office for National Statistics (UK)

Predictions of further shrinkage

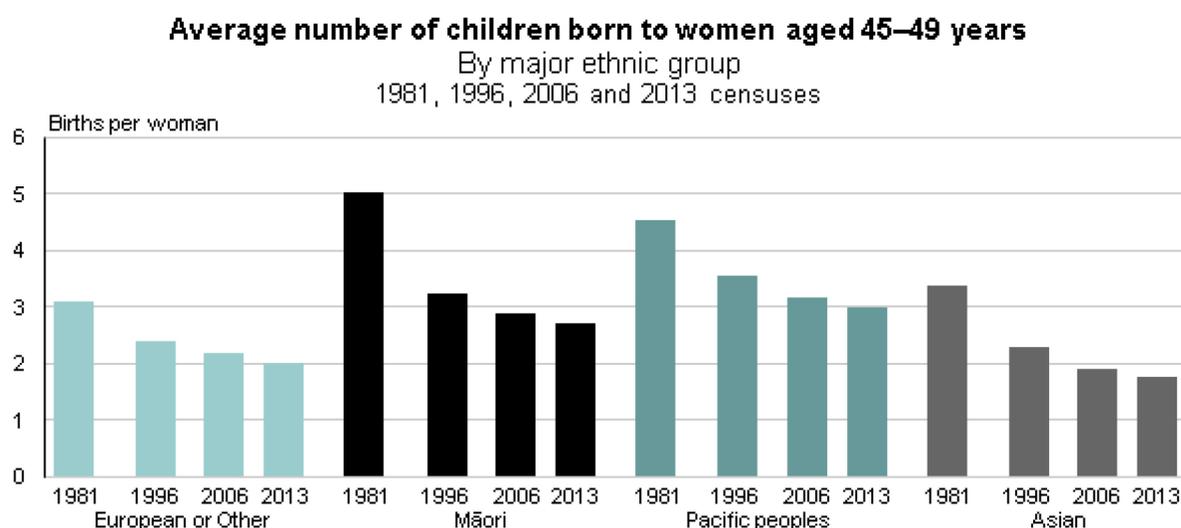
According to SuperU, known previously as the Families Commission:

“Compared with earlier generations, the number of children being born is decreasing (in actual numbers and as a proportion of the population), as more people stay single, more people partner but do not have children and more women delay having children until they are financially settled – often into their mid-30s or later. It is projected that by 2061, children aged up to 14 years will make up only 16 percent of the population, compared with 21 percent in 2006.”¹⁰

... and 33 percent in 1960.¹¹

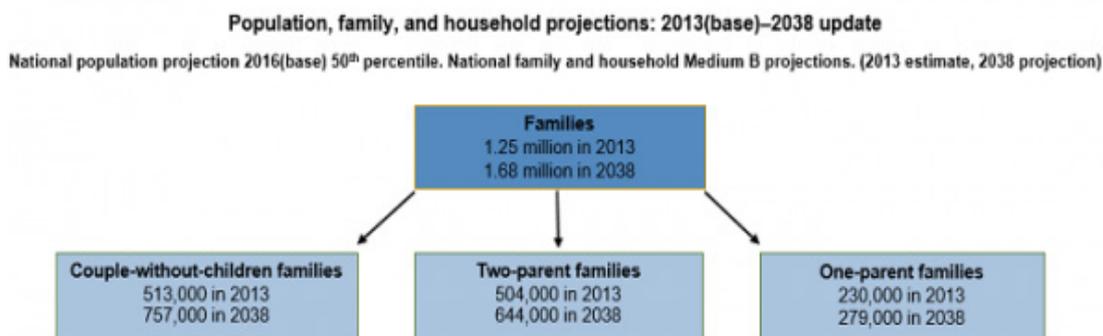
While census data provide point-in-time counts they hold predictive information inasmuch as they show established trends. For instance, “The proportion of women aged 45-49 years who were childless (i.e. they had borne no live children) was 9, 10, 13 and 16 percent at the 1981, 1996, 2006 and 2013 Censuses respectively.”¹²

The following chart illustrates the firmly established downward trend for numbers of children that had been borne by 45-49 year-old females in each ethnic group:



Source: *How accurate are population estimates and projections? An evaluation of Statistics New Zealand, population estimates and projections, 1996–2013, p48*

From the 2013 census base, Statistics New Zealand projects the greatest growth in family type will be among couple-without-children families:



Source: *Childless couple and empty-nester numbers grow*, Statistics New Zealand, 27 October, 2017

While much of the growth will come from 'empty nesters', those whose children have grown up and left home, "An increasing proportion of couples who will never have children is also likely to contribute to the growing number of this group of families, but to a much lesser extent."¹³

Statistics New Zealand also points to another reason why overall fertility is likely to decline:

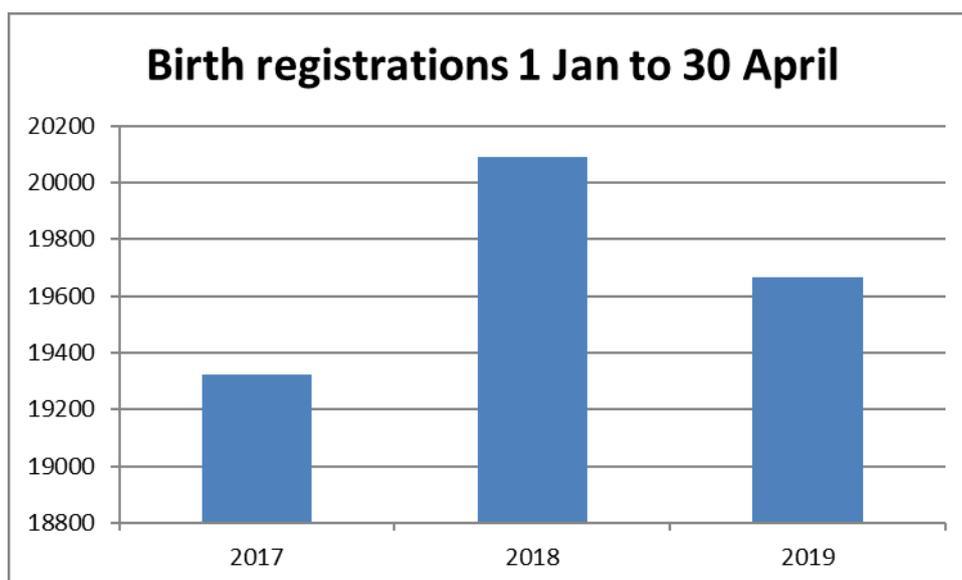
"As childlessness increases, the remaining women will need to have more children if New Zealand is to achieve current levels of fertility. For example, if one in five women remain childless, the remaining women would have to average 2.6 children for New Zealand to achieve a total fertility rate of 2.1 births (the accepted replacement level fertility for a developed country)."¹⁴

In 2006, Ian Pool predicted:

"Unless the Baby Blip [c1990] cohort that reaches key reproductive ages over the next decade, and thus produces a booster to the population at parenting ages, has children younger and at higher rates than has been the case for the cohorts before them, then we are destined to slide towards European models of sub-replacement fertility."¹⁵

Statistics New Zealand projects the greatest growth in family type will be among couple-without-children families.

His aberrant scenario did not eventuate and the slide to sub-replacement has indeed continued.



Data source: *Official Information Act Response from Internal Affairs to L Mitchell, June 14, 2019*

Total birth registrations in the first third of 2019 are down 2.1% on the same period in 2018. In and of itself this isn't conclusive, given the 2018 number superseded 2017, yet the overall fertility rate for the year fell from the previous. It is nevertheless noteworthy.

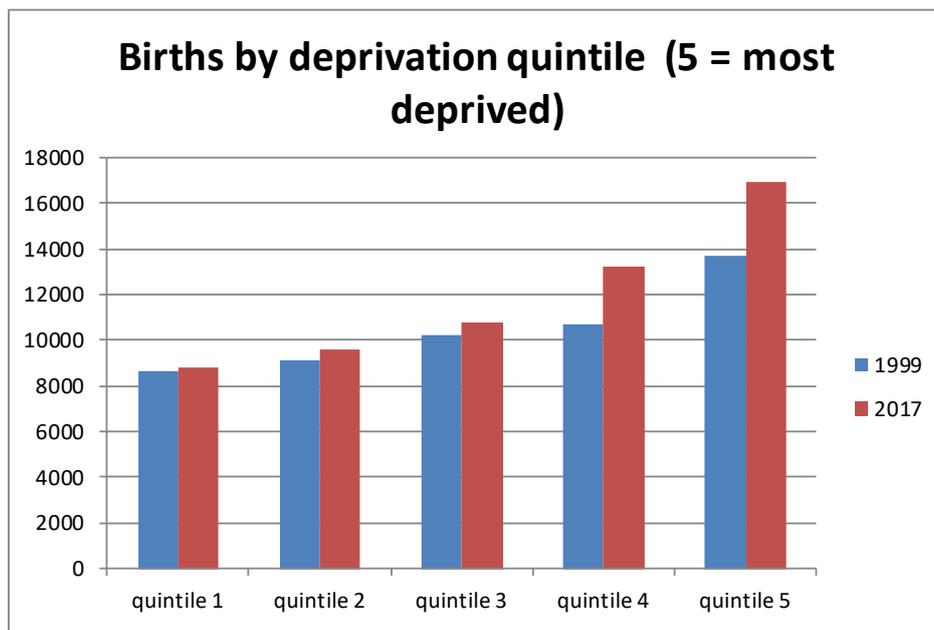
Of course, the current 1.7 children per woman is only an average. Some women are choosing not to have any children while others are having many more than the average. Single measures of fertility hide underlying trends and numbers.

Underlying Trends

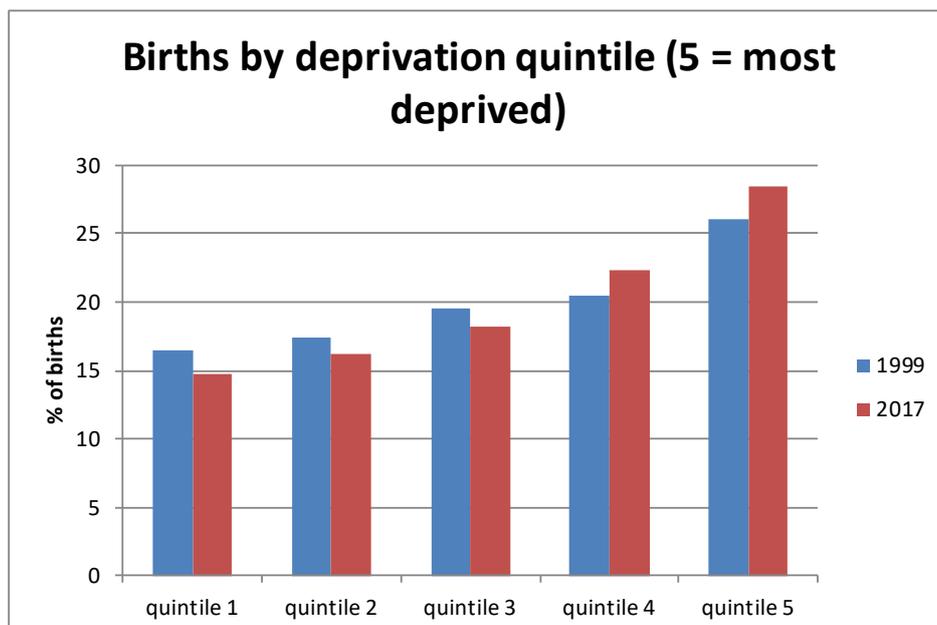
The following statistics draw mainly on a mix of Ministry of Health (MOH)¹⁶ and Statistics New Zealand data. (The data is drawn from MOH Maternity Reports 1999 and 2017. The 1999 report – the first of the series – has acknowledged data limitations. It uses the National Minimum Dataset (NMDS) covering 52,428 mothers discharged from hospital whereas Births, Deaths and Marriages data records 57,421 births.)

Deprivation

More children are being born in the most deprived neighbourhoods.



Data Source: Reports on Maternity 1999 and 2017, Ministry of Health



Data Source: Reports on Maternity 1999 and 2017, Ministry of Health

To some extent it's to be expected that children are born in lower socio-economic neighbourhoods given parents are generally poorer when they are young. But just over half of the children born in 2017 were into homes in the two poorest quintiles.

According to the Ministry of Health, “Māori, Pacific and Indian women giving birth were more likely to reside in more deprived neighbourhoods. This trend was more evident for Māori and Pacific women (48.5% of Māori and 58.8% of Pacific women resided in quintile 5, whereas 5.5% and 3.9%, respectively, resided in quintile 1). The distribution of Indian women giving birth showed a similar trend but to a lesser extent (31.9% of Indian women resided in quintile 5, and 9.9% in quintile 1).”¹⁷

Māori, Pacific and Indian women giving birth were more likely to reside in more deprived neighbourhoods.

As there are relatively more Maori, Pacific and Indian births this partially explains why more babies are being born in poorer neighbourhoods.

More recently though, “Between 2013 and 2017, birth rates for women in quintiles 1 and 2 showed a significant increase, birth rates in quintile 3 showed a non-significant decrease, and birth rates in quintiles 4 and 5 showed a statistically significant decrease.”¹⁸

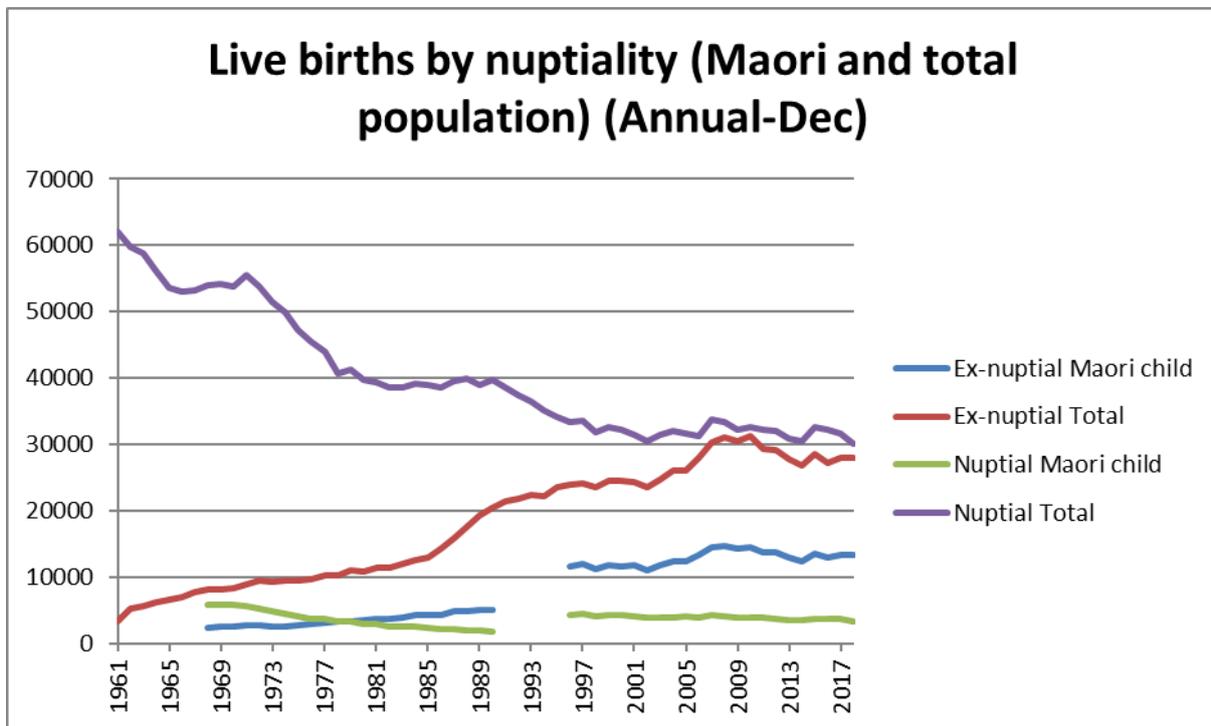
The trend between 1999 and 2017 may have reversed but the distribution remains less even than it was in 1999.

Deprivation and reliance on income support are linked. Ministry of Social Development research finds:

“The proportion [of children] included in a benefit at birth or very soon after fell from around 25% of children born in the 1990s to 20% of children born in 2005 and 2006 and 18% of children born in 2007.”¹⁹

At the end of December 2017, 9,900 babies born that year had a caregiver in receipt of a main benefit. This indicates an early dependence percentage of around 16.6 percent, consistent with the identified trend above. Fifty one percent of the parents/caregivers were Maori, suggesting an early dependency rate for Maori of 30 percent.²⁰

Marital status



Data Source: Infoshare, Statistics New Zealand, Live births by nuptiality (Maori and total population)(Annual Dec)

In 1961, most mothers were married. Seventy four percent of brides were under 25.²¹ The longevity of marriages lent itself to larger families. Only one in twenty births was to an unmarried mother.

As overall fertility decreased from that year, the percentage of births to unmarried mothers rose. Just as the Universal Family Benefit had incentivised increased fertility from 1946, growing, discretionary income support for single mothers - culminating in the statutory Domestic Purposes Benefit (DPB) in 1973 – increased the ex-nuptial birth ratio (the proportion unmarried births to married). It allowed, “...an increase in the number and proportion of pregnant

single women who did not marry or place their child for adoption,²² or mothers to receive income support whilst living in undeclared de facto relationships. (Only three years after its introduction, the government conducted a review into why the numbers claiming the DPB had climbed so rapidly.)

The longevity of marriages lent itself to larger families.

Like the Family Benefit, the response was stronger amongst low income groups, including many Maori. By 2018, only one in five Maori children was born to a married mother.

The New Zealand Treasury makes the following contribution regarding growth in unmarried parenting:

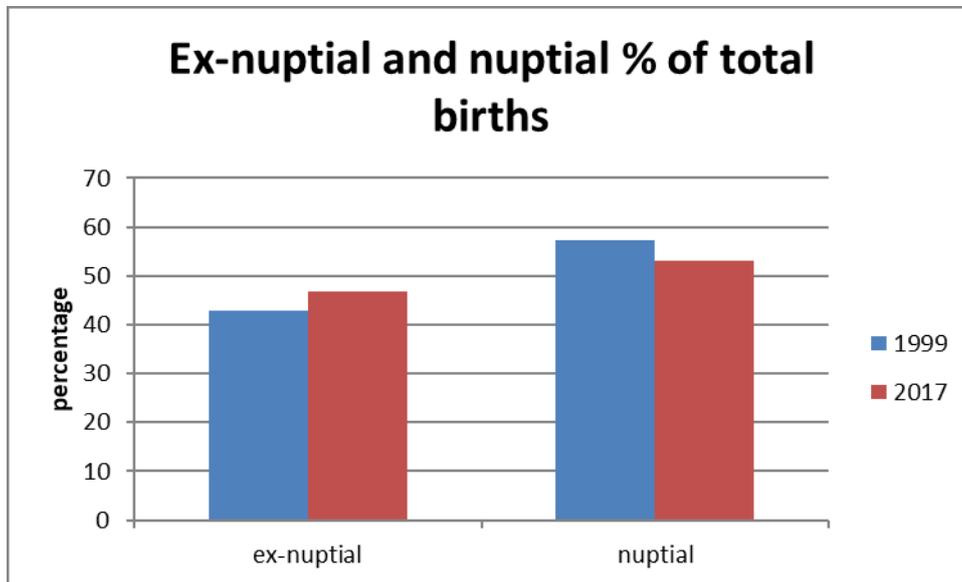
“Unwed, non-cohabitating parents are increasingly prevalent in the West, leading some to describe the rising trend in single parent households as “serial polygyny”. One explanation for this phenomenon is an imbalance in numbers of “marriageable women” and “marriageable men” (men who are employed and not in prison) (Bergstrom 1997, Willis 1999, Wilson 1987).

Because more women want to have children than there are marriageable men, some men will benefit from unofficial polygyny—fathering children by several women and marrying none (Willis 1999). Single women gain by having children rather than remaining childless.

Having children outside marriage may therefore be a rational choice among the poor and unskilled where men’s wages are not much higher than women’s. Historically non-marital childbearing has occurred disproportionately among the poor (Ermisch 2003).²³

Because more women want to have children than there are marriageable men, some men will benefit from unofficial polygyny – fathering children by several women and marrying none.

The last observation provides another possibility for why more children are being born in the most deprived quintiles. Single parents proliferate among the poorest families. There were 14.4% more ex-nuptial births in 2017 than in 1999.



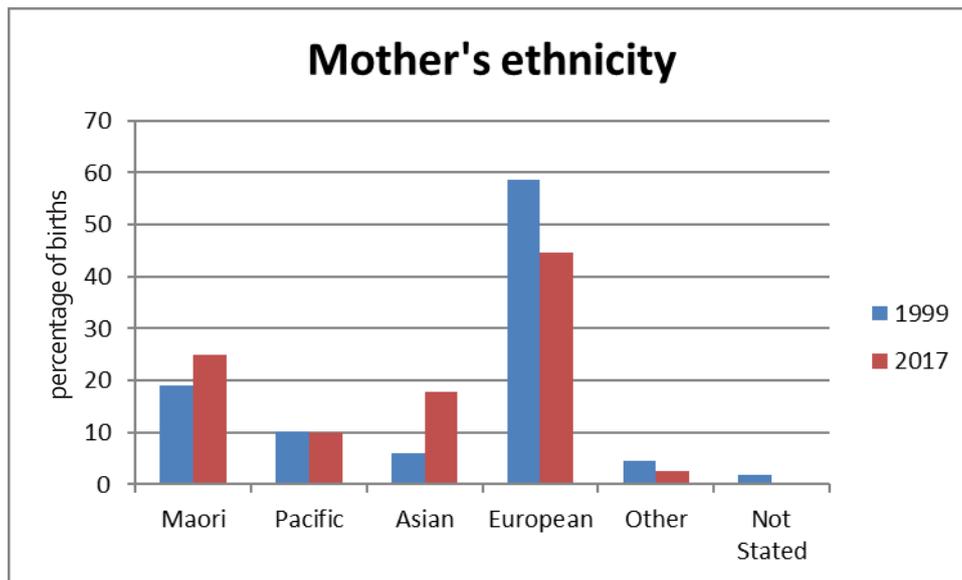
Data source: Infoshare, Statistics New Zealand, Live births by nuptiality (Maori and total population) (Annual-Dec)

While many ex-nuptial births are to cohabiting couples – 62 percent in 2017²⁴ – a large minority are not. A number of studies find cohabiting fertility is lower than married fertility.^{25 26}

In 2015 there were 130 registered births to parents in Civil Unions;²⁷ this number grew to 163 in 2017.²⁸

Ethnicity

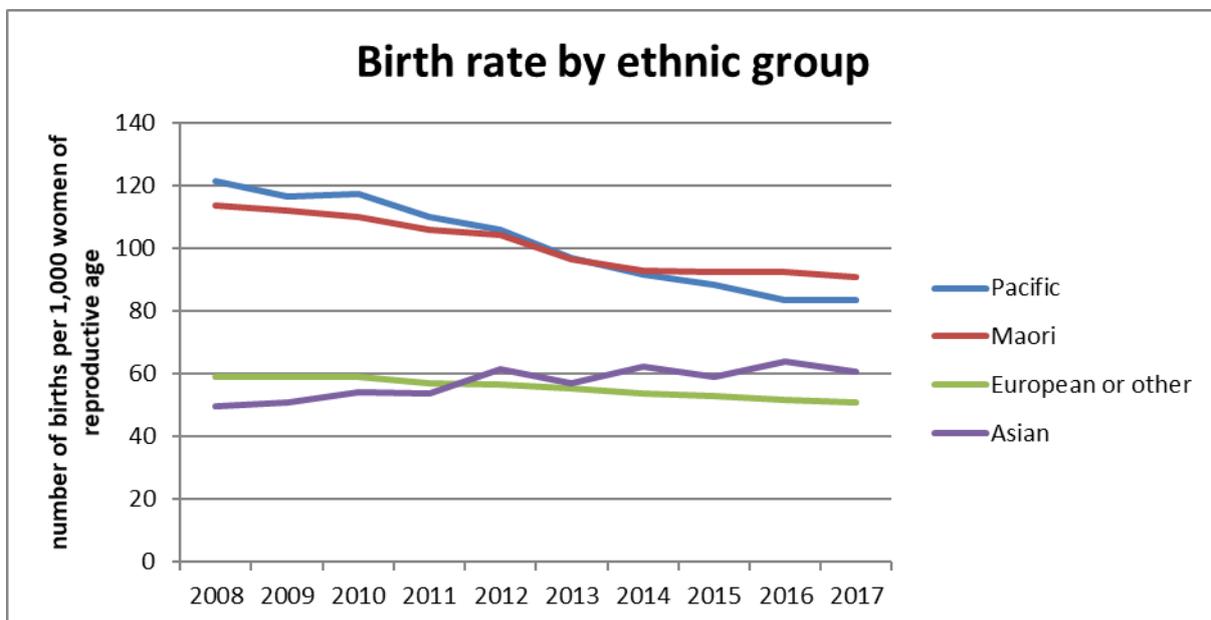
There are marked changes in the ethnic make-up of births.²⁹



Data Source: Reports on Maternity 1999 and 2017, Ministry of Health

The percentage of births to Asian and Indian mothers has more than tripled since 1999; a quarter of all births are now to Maori mothers; the Pacific percentage is virtually unchanged and the percentage born to European mothers has fallen by 14 percentage points.

All ethnic birth rates are falling bar Asian (Pool suggests Filipina are contributing to this anomaly).³⁰ The Pacific birth rate has fallen the most since 2008.



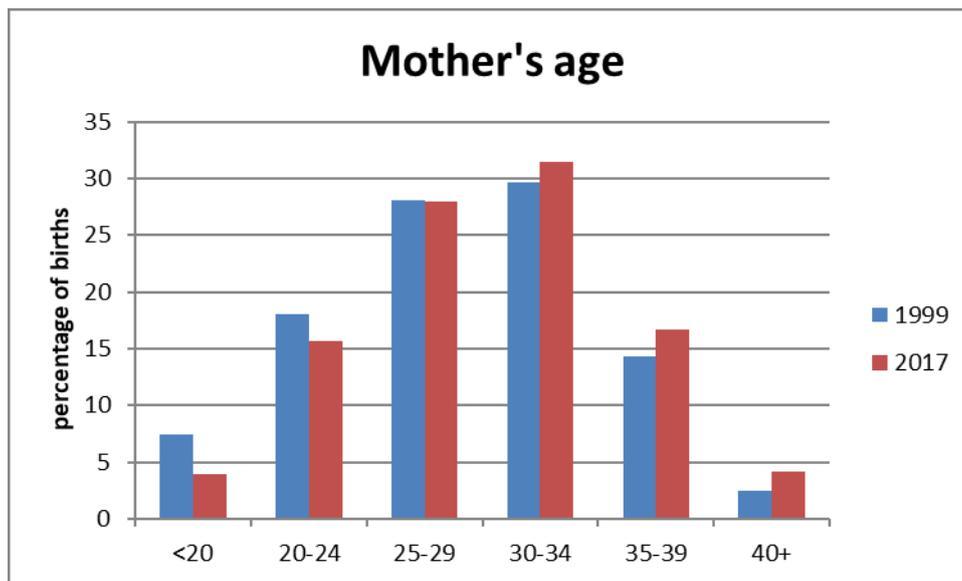
Data source: Report on Maternity 2017, Ministry of Health

(Demographer Moana Rarere has shown using Census 2013 data that Māori women who identify as 'Māori only and always' have the most children. Next are 'Māori + other' followed by 'Descent only' Māori. Forty three percent of the first group have three or more children compared to 13 percent of non-Māori.)³¹

According to Ministry of Social Development in 2018, "Māori and Pacific women continue to have higher and earlier fertility than European and Asian women and they are more likely to require support from the benefit system as a parent."³²

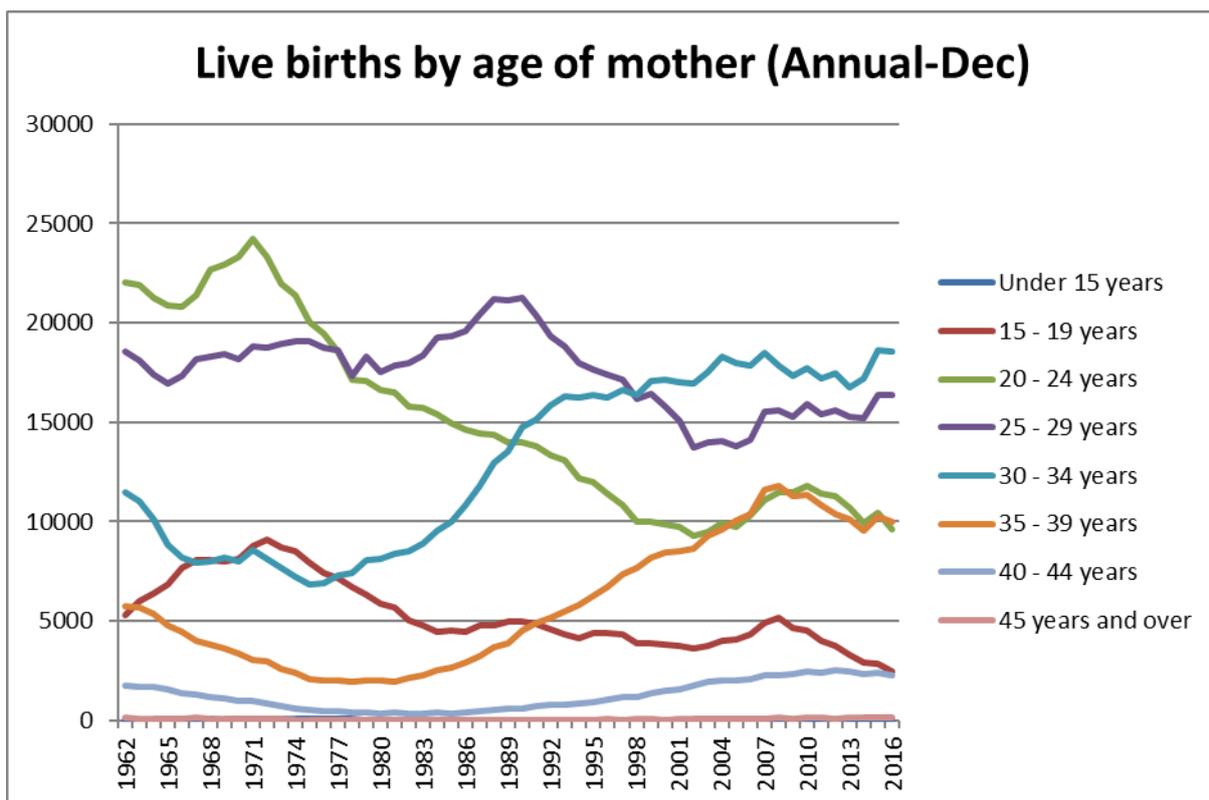
Ageing mothers

The ageing of mothers is apparent between 1999 and 2017.



Data Source: Reports on Maternity 1999 and 2017, Ministry of Health

Using Statistics New Zealand data which date back further to 1962, this pattern is more pronounced.

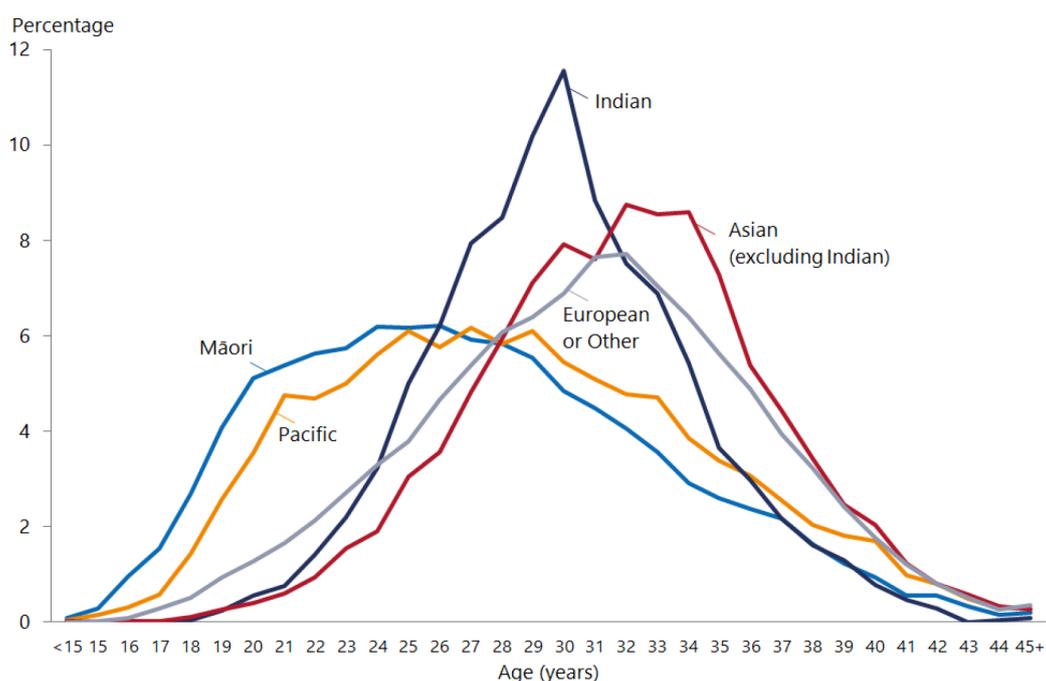


Data source: Infoshare, Statistics New Zealand, Live births by age of mother (Annual-Dec)

Teenage births now match those of the over 40s. The next two most divergent age groups (20-24 and 35-39 years) have also merged and 30-34 has grown from being the 4th (in 1974) to 1st most common age for child-bearing.

There are distinctly different fertility-age patterns across ethnicities with Maori and Pacific women displaying the youngest fertility but also a broad spread across child-bearing years. Births to Indian mothers are strongly clustered around the age of thirty. Broadly speaking, Indian mothers begin having children older and stop having children younger. Asian and European mothers have the oldest fertility rates.

Figure 4: Percentage of women giving birth, by age (in years), for each ethnic group, 2017



Note: The denominator used to calculate percentages is the total number of women giving birth for each ethnic group.

Source: *Maternity Report 2017, Ministry of Health*

Delayed childbearing has some advantages:

“Longitudinal studies have ... demonstrated numerous positive aspects related to childbearing at a later age, such as better family functioning, higher family stability and a more stable economic position of parents.”³³

An analysis of data from the Growing Up in New Zealand longitudinal study found:

“Women who have their first birth at age 35 or older generally also have high levels of education and incomes. Most plan their pregnancies, and some need assistance to become pregnant. They are in good health and stable relationships, and most identify as European-New Zealand ethnicity. Most of these characteristics are shared with all first-time mothers aged 25 or over.”³⁴

However:

“Delaying childbearing obviously reduces the window of opportunity for childbirth, and potentially means smaller families and fewer children overall.”³⁵

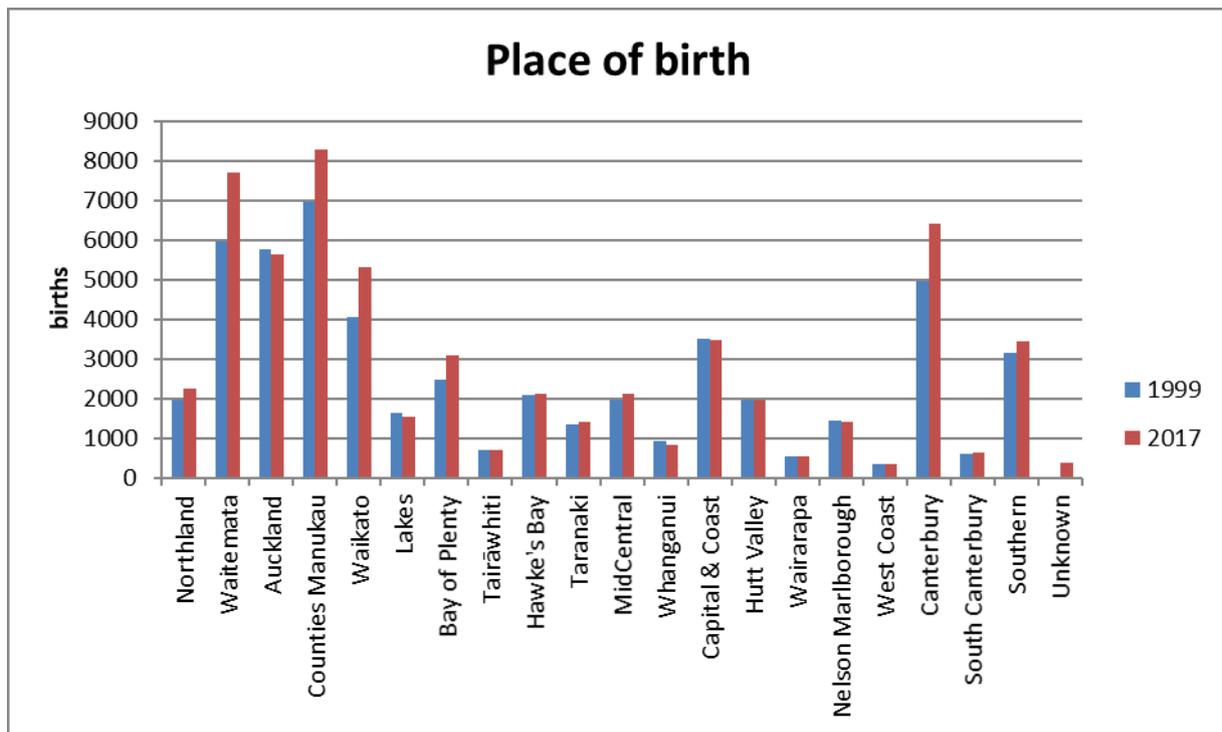
Delaying childbearing also reduces ease of conception. Couples may remain childless but not through choice.

Delaying childbearing obviously reduces the window of opportunity for childbirth, and potentially means smaller families and fewer children overall.

Geography

In line with general population growth, more births are occurring in the Auckland DHB areas of Waitemata and Counties Manukau, as well as the North Island regions of Waikato and Bay of Plenty. With the exception of Christchurch, most other regions have only very modest increases, are flat or show slight declines. Notably, the Wellington DHB Capital and Coast, Hutt Valley, and Whanganui have declining numbers of births when compared to 1999; Wairarapa, Nelson Marlborough and West Coast are virtually unchanged. Sub-national birth rates have implications for growth of local economies.

Couples may remain childless but not through choice.



Data Source: Reports on Maternity 1999 and 2017, Ministry of Health

Siblings

In 1999, 71 percent of the births were subsequent births. By 2017 the proportion had fallen to 60 percent. This is consistent with the smaller family and lower likelihood of having a sibling(s).

Education

MOH data does not record mother's educational attainment.

The New Zealand Women: Family, Employment and Education 1995 study produced the following table:

Table 6.5: Rates of First Childbearing: Births at Various Ages by Selected Socio-demographic Characteristics, NZW:FEE

Characteristics	Age-specific rate of first birth					Number of women
	15-19	20-24	25-29	30-34	35-39	
Birth cohort						
1936-49	0.15	0.53	0.61	0.38	0.21	803
1950-59	0.18	0.41	0.47	0.45		934
1960-69	0.14	0.33				860
1970-75	0.14					420
Ethnicity						
Maori	0.34	0.58	0.37	0.33		513
Non-Maori	0.12	0.39	0.53	0.42	0.19	2504
Education						
No qualifications	0.28	0.58	0.57	0.41	0.09	787
Secondary qualifications	0.12	0.40	0.57	0.41	0.26	765
Other tertiary qualifications	0.11	0.36	0.48	0.44	0.14	1163
University qualifications	0.03	0.14	0.40	0.37	0.34	302
Overall	0.15	0.40	0.52	0.41	0.19	3017

The longitudinal study, Growing Up In New Zealand, recorded highest educational qualification for first time mothers with births due between 25 April 2009 and 25 March 2010³⁶:

Table 05. Maternal age by highest educational qualification for mothers with first child

	n (N=2923)	< 20 years Row % (95% CI)	20 - 29 years Row % (95% CI)	30 - 39 years Row % (95% CI)	40+ years Row % (95% CI)
No secondary school qualification	150	52.7 (44.7 - 60.7)	34.0 (26.4 - 41.6)	12.0 (6.8 - 17.2)	1.3
Secondary school qualification NCEA 1-4	647	18.9 (15.8 - 21.9)	55.5 (51.7 - 59.3)	24.3 (21.0 - 27.6)	1.4
Diploma or Trade Certificate or NCEA 5-6	865	8.7 (6.8 - 10.5)	56.2 (52.9 - 59.5)	32.6 (29.5 - 35.7)	2.5 (1.5 - 3.6)
Bachelors Degree	728	0	44.0 (40.3 - 47.6)	53.0 (49.4 - 56.6)	3.0 (1.8 - 4.3)
Higher Degrees	533	0	26.6 (22.9 - 30.4)	69.4 (65.5 - 73.3)	3.9 (2.3 - 5.6)

Where fewer than 10 cases have been reported CIs have not been calculated

Source: *Growing Up in New Zealand, Before we are born, 2010, p20*

The already clear correlation between older first-time mothers and higher educational qualification has become more accentuated. Internationally:

“The association between female education and age at becoming a parent is well-documented. Early studies demonstrated a strong inverse relationship between education and fertility, with education impacting the timing of first births (Rindfuss *et al.*, 1980; Martin, 2000).”³⁷

The already clear correlation between older first-time mothers and higher educational qualification has become more accentuated.

In respect of Maori and cultural identity, Moana Rarere found: “If we reflect on the major fertility differences across the identity categories, we see higher average number of children and lower rates of childless amongst women with no qualifications than those women with a degree or higher.”³⁸

Approval for ever fewer or no children

Looking at the statistics, and assuming individuals have free will, it would seem a majority believes that families with fewer or no children is a good idea or it wouldn't be happening; more on that later though.

There is one group which publicly applauds having fewer or no children at all: environmentalists.

A view gaining currency is the best thing a young person can do for the environment is not have children. Eye-watering projections are made about the lifetime carbon footprint of a new-born baby. Influential groups such as Population Matters, with world renowned spokespeople Sir David Attenborough and Jane Goodall, promote messages like:

“Having fewer - or no - children brings [other] benefits. Smaller families can free people to devote more money and time to the children they have, or other aspects of their lives, such as friendships, careers and activities that give them pleasure. Those who choose to be childfree will have very much more freedom, including (for some) to do other things to help protect the planet or help others.

“Children in small families can benefit from having more attention from their parents, and greater freedom without siblings. Children grow up happy in families of all sizes but some research suggests children in smaller families do better in later life.”³⁹

Ironically, the messaging and imagery is aimed at developed world countries most of which already have below replacement level fertility rates. With increased prosperity, education and choice fertility rates decline. The focus on first world countries (e.g. United Kingdom, fertility rate = 1.7) nevertheless persists because levels of consumerism are much greater than in countries with high fertility (e.g. Niger, fertility rate=7.13).

Eye-watering projections are made about the lifetime carbon footprint of a new-born baby.

Population Matters advises the United Kingdom government:

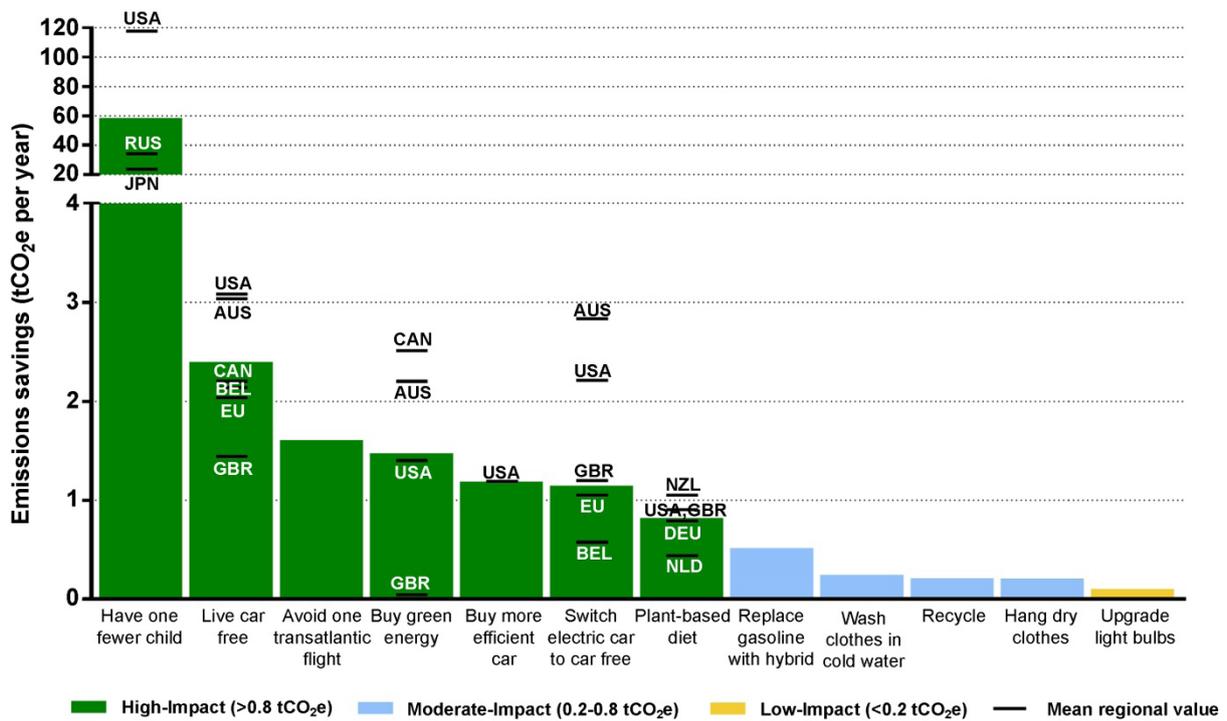
"Instead of seeing population and demographics as inevitable forces which policies must accommodate, the government should include measures to shape and reduce population growth into its policies."⁴⁰

Focus on family size is entering the popular discourse increasingly. A good example is this statement from Ryan Bridge, Magic Talk (May 2019):

"The single best thing a climate change believer can do for their planet is to stop breeding, or, at the very least, have fewer children."⁴¹

His published opinion piece may have been somewhat tongue-in-cheek but the 'money' statement was repeated frequently as a promo. A supporting chart was posted on-line to illustrate the 'high impact' savings of having one fewer children.

Ironically, the messaging and imagery is aimed at developed world countries most of which already have below replacement level fertility rates.



Source: *The climate mitigation gap: education and government recommendations miss the most effective individual actions*, Wynes & Nicholas, IOP Science, July 2017

A Household Climate Action model built by Motu, a New Zealand non-profit economic and public policy research institute, was featured in the New Zealand Herald in 2015. The presence of a child or children featured among the variables. All else being equal, estimated greenhouse emission rose from 17 to 18.8 tonnes by adding 1 child:

Household Climate Action Tool

How could your household help reduce climate change? This tool will give you facts about where greenhouse gas emissions typically come from in a kiwi household similar to yours and the actions that can make a difference.

Who lives in your household?

1 adult No children

About how much does your household spend a year?

65000

What actions would make a difference?



Your household produces **17** tonnes of greenhouse emissions a year. This creates global warming - one of the biggest crises facing the earth today. Carbon emissions must be at zero to stabilise the earth's climate.

Household Climate Action Tool

How could your household help reduce climate change? This tool will give you facts about where greenhouse gas emissions typically come from in a kiwi household similar to yours and the actions that can make a difference.

Who lives in your household?

1 adult ▼ 1 child ▼

About how much does your household spend a year?

65000

Show me!

What actions would make a difference?



Your household produces **18.8** tonnes of greenhouse emissions a year. This creates global warming - one of the biggest crises facing the earth today. Carbon emissions must be at zero to stabilise the earth's climate.

Source: *Climate Action Tool, Insights, New Zealand Herald, November 2015*

If the two findings – Wynes and Nicholas versus Motu - seem rather divergent, methodology may explain why. In *Reproduction and the carbon legacies of individuals*, Paul Murtaugh and Michael Schlx of Oregon State University wrote:

"The summed emissions of a person's descendants, weighted by their relatedness to him, may far exceed the lifetime emissions produced by the original parent. Under current conditions in the United States, for example, each child adds about 9441 metric tons of carbon dioxide to the carbon legacy of an average female, which is 5.7 times her lifetime emissions. A person's reproductive choices must be considered along with his day-to-day activities when assessing his ultimate impact on the global environment."⁴²

Not just the immediate child produced is included in future carbon calculations. His or her descendants are also included (which assumes human extinction is not imminent after all).

Some pro-population control advocates suggest the provision of carbon credits for having fewer children:

"Market-based mechanisms — emissions trading schemes (essentially cap-and-trade schemes) — are in vogue as a means to address the climate change problem. Why not use such mechanisms to address the population problem?"⁴³

Climate change presents a double-edged sword for would-be parents. Not only do they worry about adding another (or extending their own) carbon footprint but about the state of the world they are bringing a child into.

The Australian Conservation Foundation and One Million Women – both environmentalist organisations - recently surveyed their female supporters. Respondents comprised 6,514 women aged from under 18 to over 80. The results were published early in 2019:

Not only do they worry about adding another (or extending their own) carbon footprint but about the state of the world they are bringing a child into.

"One in three (33.4 per cent) of the women under 30 surveyed said they were 'reconsidering having children or more children because I am increasingly worried that if I have children they will face an unsafe future from climate change'. In the 30–39 age range, that figure was still more than one in five (22.4 per cent)."⁴⁴

An American Congresswoman Alexandria Ocasio-Cortez recently live-streamed on Instagram:

"There's scientific consensus that the lives of children are going to be very difficult, and it does lead, I think, young people to have a legitimate question – is it OK to still have children?"⁴⁵

The carbon footprint science and proposed solutions are highly debatable but that is not the purpose of this paper. The reality is anthropogenic climate change is now an overriding concern of an upcoming generation who'll base their behavioural decisions on what they believe. Parents of school children and young adults are well aware of the pervasive nature of their convictions, which may already be influencing fertility.

In the United States, the fertility decline matches New Zealand's. In May 2019, National Public Radio reported comments from Dowell Myers, a demographer at the University of Southern California:

"At first, we thought it was the recession," Myers says of the recent downturn in births. But after a slight rise in 2012, the rate took another nosedive. He adds that by nearly all economic standards — except for high housing costs — birthrates should now be rising."⁴⁶

They aren't. The US fertility rate reached a 32-year low of 1.728 in 2018.

"The birthrate is a barometer of despair," Myers says in response to the CDC data. Explaining that idea, he says young people won't make plans to have babies unless they're optimistic about the future."⁴⁷

But even environmentalists can't reach a consensus on the case for rejecting parenthood.

Co-founder of Conceivable Future, a US organisation formed to raise climate change awareness, Josephine Ferorelli says it's ironic that:

"For the most effective activists, their reason for doing this work is because of their children."

Yet another viewpoint claims large families are good for the environment because they recycle and reuse more, live in smaller spaces per person, drive fuller cars and consume less per person.⁴⁸

American agricultural economist Lyman Stone argues that forgoing children leaves couples with much higher disposable dollars and consumption capacity:

"Because of this higher-intensity consumption by childless couples, while lower fertility could reduce long-run emissions, it probably has no net impact on short-run emissions — or even increases them. And short-run emissions have the largest impact on future temperatures (because there is a time delay between carbon emissions and climate impact)."⁴⁹

Philosopher and author Rivka Weinberg believes other policies to address climate change should take precedence:

"Some people are saying you can't have children and I don't think that's at all fair. It's not that you can't have a wonderful life as a childless person, but you can't understate the effects of having children; it's visceral, it's a special relationship that no other relationship will substitute."⁵⁰

Another viewpoint claims large families are good for the environment because they recycle and reuse more, live in smaller spaces per person, drive fuller cars and consume less per person.

Hence the strong desire to have children persists. Environmentalists may simply find ways to justify doing so.

The desire to have children persists

In 2007, New Zealand demographer Janet Sceats interviewed 68 women about their attitudes to having children. She told the New Zealand Herald:

"Most of the women really did want to have children... [B]ut there was an increasing realisation that they were not going to have as many as they would have liked because of other pressures - economic and career."⁵¹

This is mirrored by US attitudes where pollsters, Gallup, found, "Despite the recent drop in the U.S. fertility rate, Americans' attitudes about having children have remained unchanged over the past 23 years. More than nine in 10 adults say they already have children, are planning to have children, or wish that they had had children."⁵²

Americans' Desire to Have Children

	1990	2003	2013
	%	%	%
Have children	73	72	74
Do not have but want to have children	17	16	16
Do not have children but would like to have done so	3	6	3
Do not want children	4	4	5

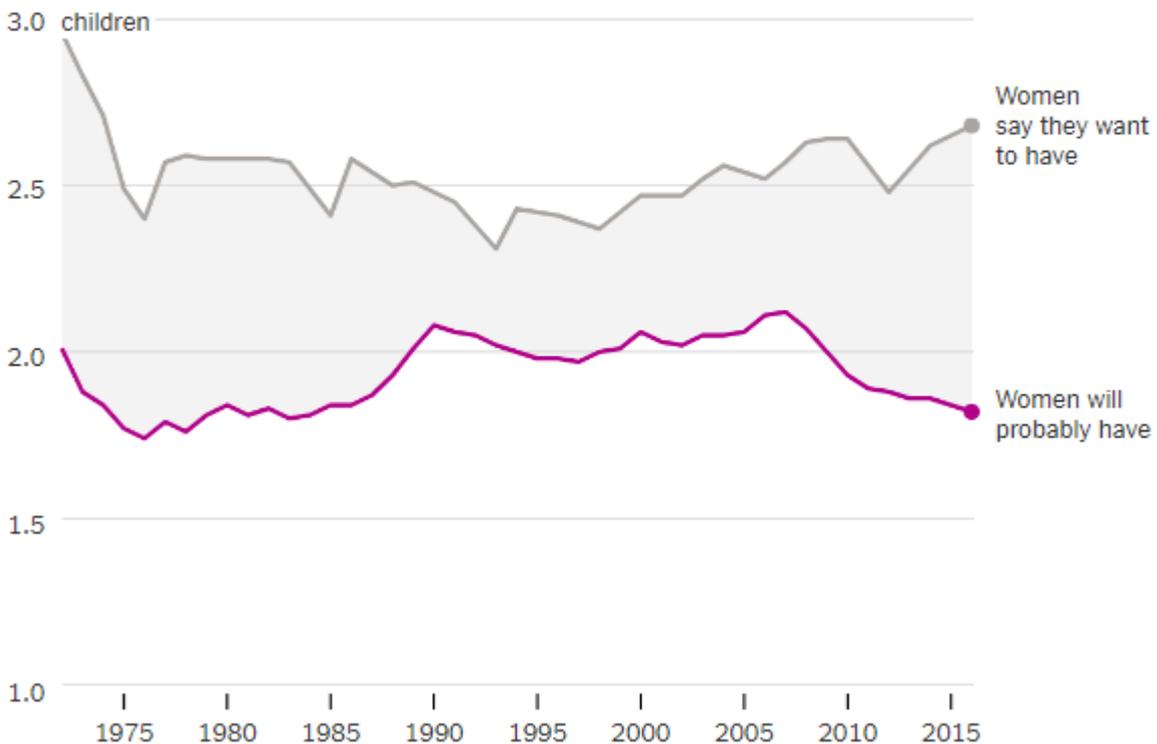
GALLUP

Source: *Desire for Children Still Norm in U.S.*, Gallup, September 25, 2013

Intentions and outcomes don't always equate though. Staying in the US, a country highly comparable to New Zealand in fertility rates and patterns, the gap between what women want and what they actually achieve is widening:

Even as Desired Fertility Is Rising, Birth Rates Are Falling

The average number of children that:



Source: *American Women Are Having Fewer Children than They'd Like*, New York Times, February, 2018. Data Sources: C.D.C. N.C.H.S. (total fertility rate); General Social Survey (ideal fertility)

In Australia:

"...a national survey of 3,201 men and women aged 20-39 years undertaken in 2004 [found] two-child families were the most popular, followed by three-child families.

A family of four or more children appeared to be more popular than no children or only one child (taken separately). In fact, each of these latter two alternatives (taken separately) was considered to be ideal by less than 10 per cent of men and women in four age groups."⁵³

New Zealand women often hold as an ideal not only having children, but having a family of two to three. Most see a one-child family as undesirable.

In the United Kingdom, The Fertility Education Initiative Task Force, formed to promote awareness that, "...fertility rates for both sexes actually decline gradually from the late 20s..." commissioned a national survey of 1,000 16-24 year olds (male and female) across the country. Conducted in early 2016, it found:

"94% of those who did not already have them said they would like to have children in the future. Of those who said they wanted children in the future, three-quarters of girls (76%) and two-thirds of boys (64%) said they would like to have children before they are 30."⁵⁴

The New Zealand Family from 1840, a demographic history of the New Zealand family, reported:

"Qualitative data show that New Zealand women often hold as an ideal not only having children, but having a family of two to three. Most see a one-child family as undesirable... such views were expressed particularly by Maori women, who often reported considerable family expectations for them to have children."⁵⁵



It would appear potential parents still want to have children, if not as many as their grandparents produced.

Implications of smaller families

In New Zealand and elsewhere, an increased fiscal burden is imminent as the baby boomer generation enters old-age. Superannuation and health costs will both grow as a percentage of GDP.

Fertility and dependency ratios

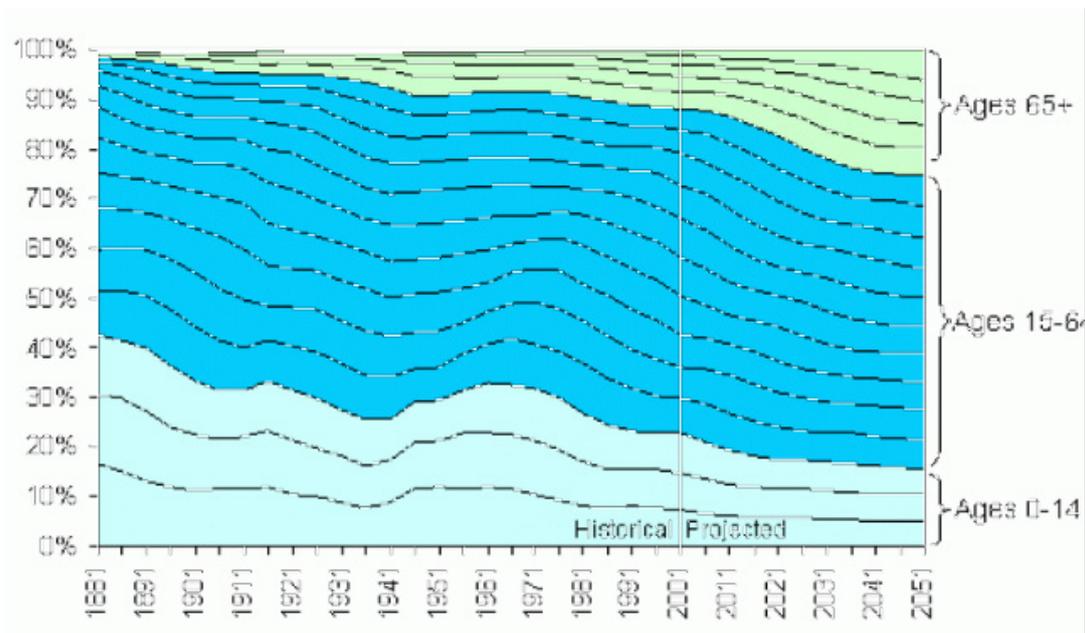
Politicians are apt to warn about shrinking worker-to-dependent ratios. For example, Australian Treasurer Peter Costello on ABC Television in 2007 said, "Currently we have five people of working age to support each person aged 65 and over. It is estimated by 2047 there will only be 2.4 people."⁵⁶

They imply a need to worry but aren't always clear which actions would avert a 'looming crisis'. In this instance 'increased fertility' was the clear answer as the Treasurer took the opportunity to publicly take credit for the mini baby boom underway (but short-lived it transpired).

With smaller families though, the dependent share of the population at the other end of the age scale also shrinks.

A 2003 Treasury chart below illustrates how the traditionally defined working-age portion (15-64 year-olds) remains relatively stable historically and into the future.

An increased fiscal burden is imminent as the baby boomer generation enters old-age.



Source: *The Ageing of the New Zealand Population, 1881-2051 (WP 03/27)*

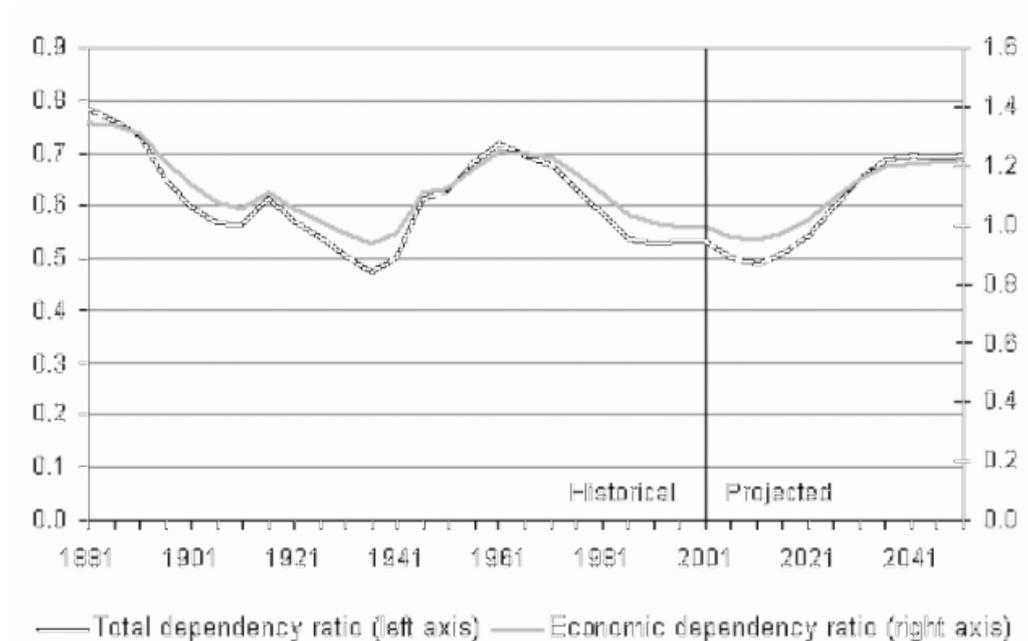
Scepticism regarding the age groupings is addressed:

“All three indices can be criticised. It can be argued, for instance, that a majority of people are now “dependent” until age 20, or even age 25, rather than age 15. There are also conceptual problems with simply adding together indices of youth dependency and old-age dependency, since the two types of dependency may have different economic and social implications. A response to these concerns is that all summary indices are necessarily imperfect and incomplete, but that some, including the three dependency ratios shown here, are nevertheless illuminating.”

Regarding the three dependency ratios, the first, the **total dependency ratio**, is defined thus:

“The youth dependency ratio is the population aged 0-14 divided by the population aged 15-64; the old-age dependency ratio is the population aged 65 and over divided by the population aged 15-64; the total dependency ratio is the sum of the young and old-age dependency ratios.”⁵⁷

The second is the **economic dependency ratio** defined as, “The population in the labour force divided by the population not in the labour force.” The two are closely linked.



Source: *The Ageing of the New Zealand Population, 1881-2051 (WP 03/27)*

Immediately apparent is the higher dependency ratios projected by mid-century also occurred during the baby boom when New Zealand was one of the wealthiest countries in the developed world. The country did not suffer economically under the high dependency ratio, quite the contrary (notwithstanding expenditure on the aged is higher on a per capita basis than spending on the young).

As yet, Treasury has not considered the implications of a fertility rate consistently below replacement level and steadily falling.

In 2003 Treasury posed an alternative view to that of a looming crisis:

“Commentaries on population ageing often overlook the fact that ongoing increases in total dependency ratios can be seen as returning New Zealand to a long-run average.”⁵⁸

Ten years later in its legislatively required statement on New Zealand’s long-term fiscal position, Treasury noted:

“A higher birth rate [which] might seem intuitively helpful for reducing fiscal pressures, in fact would do little to affect underlying trends.”⁵⁹

This is because:

“... a birth rate that is higher than we expect would not make much difference ... Before they become taxpayers, contributing to government finances, those extra children would need medical care and education, increasing cost pressures in those areas. Eventually they would become taxpayers, but we will need to address our long-term fiscal pressures before then.”

Treasury concluded that future governments will have to tax more and/or spend less, and/or take on more debt. By 2016, the official line was still that governments have, “...many options at their disposal to address these challenges, but the challenge gets harder the longer we delay.”⁶⁰

Here’s the kicker. Treasury’s Long-Term Fiscal Modelling from 2016 assumes fertility, “Falls to 1.9 babies per woman from 2032.”⁶¹ It fell progressively below that optimistic projection in years 2016, 2017 and 2018.

As yet, Treasury has not considered the implications of a fertility rate consistently below replacement level and steadily falling. Additionally, in a ‘high level’ initial briefing to the 2019 Welfare Expert Advisory Group the Ministry of Social Development described fertility as “...low and relatively stable.”⁶²

Fertility and economic growth

Economic growth provides for improving living standards which all aspire too. It is also crucial to global competitiveness. Treasury states:

“Economic growth is important because higher incomes give people choices they would not otherwise have. New Zealand is also exposed to international pressures. If we fail to match other countries, we can expect many skilled people to leave for higher-paying jobs overseas, and we will not have the level of resources that other countries have to address social needs.”⁶³

Nor will we attract migrants.

Conventional wisdom has it that population replacement –at the very least – is necessary for economic growth and nationhood (national identity and independence). Ian Pool quotes Canadian colleague Alan Simmons who says:

“...for Canada to continue to grow, one or more of the following alternatives were necessary: more babies, more migrants, or accept slow growth and search for other alternatives; for example, increase productivity per worker, exploit groups with low labour force participation, and export production and jobs.”⁶⁴

Some economists believe that productivity growth (not necessarily dependent on population growth) will improve living standards into the future. The use of new technologies, robots, data mining and artificial intelligence will boost productivity:



"If we can build roads and factories faster than we produce babies, then the next generation will inherit a higher level of capital per person, hence higher productivity and real incomes."⁶⁵

Pool is less convinced. Maintaining that measuring productivity is "...difficult, contentious and often highly subjective..." he favours migration and fertility to replace the population.⁶⁶

Population decline is a threat to economic growth.

Professor Hisakazu Kato, of Japan's Meiji University recently posed the interesting question: "Will population decline create a richer society?"

"A nation's demographic trend affects its economic growth over the long term... the larger the population, the higher the chance that great innovators will emerge... a larger population increases the opportunity for intellectual interchange with diverse human resources, which in turn promotes technological progress... as the population declines, the number of people in research and engineering jobs falls, which negatively affects the nation's R&D performance... A nation's population declines when the fertility rate drops, which results in the aging of the population and a reduction in the size of the young labour force. As a result, society gradually loses the creativity and aggressiveness associated with younger people... as the population grows larger, so does the consumer market. A population decline means that the domestic market for consumer products and services shrinks. Some economists claim... that a declining population brings a richer economy on a per capita basis... it's unlikely this happy turnout will take place. As mentioned, the decline of the population will reduce the labour force, hamper productivity growth and erode the domestic market base. Therefore, there is a chance that the macroeconomic growth rate will be in negative territory and as a result per capita growth rate could also be negative."⁶⁷

Given Japan's fertility rate remains stubbornly low, Professor Hisakazu advises the government to invest in new technologies and invite more highly talented and skilled workers from overseas.

Research into low fertility in Europe finds, "In the long run, below-replacement fertility is likely to lead to age structures that are sub-optimal with respect to their economic growth implications. The exact magnitude of these effects depends on a host of demographic, social, and political factors."⁶⁸

Specific modelling found, "With a life expectancy of 80 years, our simulations imply that the long-run working-age shares will drop to somewhere between 50% and 55% if fertility levels stay at current levels. Comparing this with the current working-age shares close to 70% in most European countries implies a reduction in the number of workers per capita of around 25% under the assumption that average participation rates remain unchanged. Even though this adjustment is likely to happen over several decades, the resulting negative growth effects will clearly be noticed, especially by those economies with already modest economic growth."⁶⁹

Sustained low fertility (combined with low mortality) is generally assumed to negatively impact on economic growth in the long-term. Put simply, according to the Social Trends Institute, New York:

"Nations wishing to enjoy robust long-term economic growth and viable welfare states must maintain sustainable fertility rates of at least two children per woman."⁷⁰



Social costs

Australian social historian Janet McCalman writes:

"... smaller families mean fewer grandchildren, siblings, cousins, uncles and aunts. Smaller families diminish resilience: fewer potential breadwinners, less collective human and material capital to provide for those who cannot provide for themselves. In big families, if there are more mouths to feed when young, there are more hands and minds to work when mature."⁷¹

Not only shrinking but separated and globalised families mean more one-person households, a trend strongly evident

Nations wishing to enjoy robust long-term economic growth and viable welfare states must maintain sustainable fertility rates of at least two children per woman.

in New Zealand where one-person households are projected to increase by 52 percent between 2013 and 2038. For context, family households will grow by only 31 percent over the same period.⁷² McCalman asks who will care for these singular people as they age:

"If you live alone, who will nurse you when you are discharged from hospital? Who will find you when you fall? Who will keep in touch when your confusion makes using the computer impossible? Who will simply 'be there' for you?"

Family Characteristics

One-child families

One-child families are on the rise. In New Zealand between the 2001 and 2013 census couples with two or more children grew 11.7%; couples with one child increased by 23.7 percent.⁷³ In the US, "The proportion of mothers who had one child at the end of their childbearing years doubled from 11 percent in 1976 to 22 percent in 2015."⁷⁴

The advantages and disadvantages of growing up in a one-child family are highly subjective. (Coincidentally, both the writer and publisher of this report each had a parent who was an only-child and reported profound loneliness through lack of a sibling).

The researched evidence today is mixed.

Some shows that children without siblings have greater difficulty in negotiating social relationships later in life. Other finds, "...there are some differences in adult sociability behaviours between those who grew up with and without siblings; however, our pattern of findings suggests that these differences are not large or pervasive across a range of sociability behaviours and may grow smaller with age."⁷⁵

Studying structural brain development researchers discovered that, "... only-children exhibited higher flexibility scores (a dimension of creativity) and lower agreeableness scores (a dimension of personality traits) than non-only-children."⁷⁶

However, a meta analyses of 115 studies into children from one-child families concluded:

"Across all developmental outcomes, [only children] OCs were indistinguishable from firstborns and people from small families. Theories relating to OC deprivation and OC uniqueness were discredited by the results of the meta-analyses. The meta-analyses supported parent-child relationships as an important factor in producing the developmental outcomes attained by OCs, firstborns, and people from 2-child families."⁷⁷

From the social science perspective, one-child families do not pose an overarching problem.



Larger families

From a parental perspective, 'happiness' research does not find a positive result for any more than two children. Not that a third or more children make parents unhappy – they simply don't make them any more happy, or as academics Myrskylä and Margolis who analysed survey respondent data from over 11,000 births in Germany and Britain put it, "...we find no positive gain in subjective well-being for third births... We find that the happiness gain around the time of childbirth attenuates with parity, being strongest for the first, lower for the second, and non-positive for the third child.... Decreasing gains in subjective well-being at higher birth orders may inhibit people from moving to parity three."⁷⁸

For the child though, there are benefits from growing up with siblings in enhanced ability to socially relate to others - with a caveat. According to researchers using United Kingdom longitudinal data:

"A growing body of research suggests that individuals raised with siblings gain social skills that facilitate relationship building with others. But while this pattern has been demonstrated among kindergartners and adults, surprisingly it does not replicate among adolescents. Our results suggest that social skills among adolescents are unrelated to the number of siblings, but clearly related to the quality of sibling relationships, a

pattern previously unrecognised because researchers lacked indicators of sibling relationship quality.”⁷⁹

An American study finds that the likelihood of divorce reduces relative to growing sibling numbers:

“Our results indicate that additional siblings are associated with a greater likelihood of getting married, and, once married, a decreased likelihood of divorce... among those who ever marry, each additional sibling is associated with a three percent decline in the likelihood of divorce, net of covariates.”⁸⁰

Children with siblings learn to communicate, negotiate, share and compromise; and growing up with siblings also leads to expectations about own family formation.

Some environmentalists see large families as attractive economies of scale inasmuch as they consume less per family member by sharing, economising and recycling more.

What’s indisputable is as more women choose to remain childless, families with three or more children will contribute to keeping fertility at population replacement level.

But as New Zealand’s total fertility rate continues to decline progressively **below** that level, are there public policies that could reverse the trend?

What could reverse the shrinking family?

The following interventions have been both features of the past and present. They could be developed further.

Policies in play

Direct cash incentives

As shown, historically fertility has been responsive to cash incentives. More latterly, their effectiveness is less clear. According to a 2013 Treasury working paper:

“Most studies find that family benefits have a positive but very small effect on fertility (Gauthier, 2007; Milligan, 2005; Duclos, 2003; Gauthier and Hatzius, 1997) although a significant minority of studies find no effect at all (Martin, 2003; Moffit, 1998). Couples may bring forward the timing of births in the reproductive life cycle, rather than increase the quantum of births (Guest and Parr, 2010; Martin, 2003). Australia’s total fertility rate increased from 1.73 to 1.97 between 2001 and 2008. The consensus is that most of this was not due to cash benefits to new mothers (the so-called ‘Baby Bonus’) but rather due to fertility catch up - that is, women aged 30-39 giving birth at higher rates having delayed childbirth when they were younger (Lattimore and Pobke, 2008; Guest and Parr, 2010).”⁸¹

Working for Families (WFF) is currently the major form of income-tested cash assistance for New Zealand families with dependent children. In 2019 family tax credits account for approximately \$3 billion – or 3.3% -of government expenditure.⁸² Introduced in 2005 WFF may have influenced the mini baby boom that ended in 2008. The scheme has endured but the upward fertility trend did not.

Best Start, introduced in July 2018, is an additional payment for children aged 0-2 primarily aimed at reducing child poverty (perhaps because actively encouraging fertility would not suit the current government’s desire to establish environmental credentials?) A universal payment in the child’s first year, then lightly means-tested for the next two years, it ceases when the child turns three (in line with eligibility for free or subsidised early childhood education.) Early data does not indicate a positive response. Birth registrations (below) did not spike, and, as detailed earlier, birth registrations in the first third of 2019 are 2.1% lower than the same period in 2018.

Jun-17	Jul-17	Aug-17	Total
4595	4968	6190	15753

Jun-18	Jul-18	Aug-18	Total
4914	4982	4925	14821

Data source: Official Information Act Response from Internal Affairs to L Mitchell, June 14, 2019

Growing home ownership

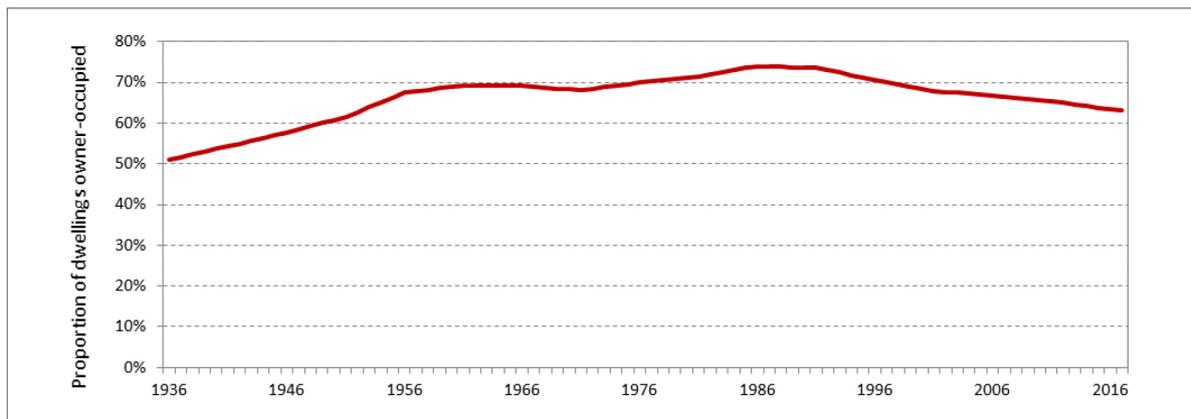
The steady fall in home ownership – now at its lowest rate since 1953⁸³ - has also been suggested as a reason why people are delaying or rejecting having children. From SuperU research:

“... New Zealand is in a situation where many young families – even those where partners are both working and earning a good income – are having difficulty purchasing a house. Many are paying high rents and some are also repaying student debt. Some may be delaying having children.”⁸⁴

Families with the lowest home ownership rates – Maori (28%) and Pacific (19%) – also have the largest families.

This theory doesn't explain however why those families with the lowest home ownership rates - Maori (28%) and Pacific (19%)⁸⁵ - also have the largest families (notwithstanding they may still be having fewer children than they would with the security and stability of an owned home.)

FIGURE 2.1: HOMEOWNERSHIP RATES FOR HOUSEHOLDS – 1936 TO 2017²³

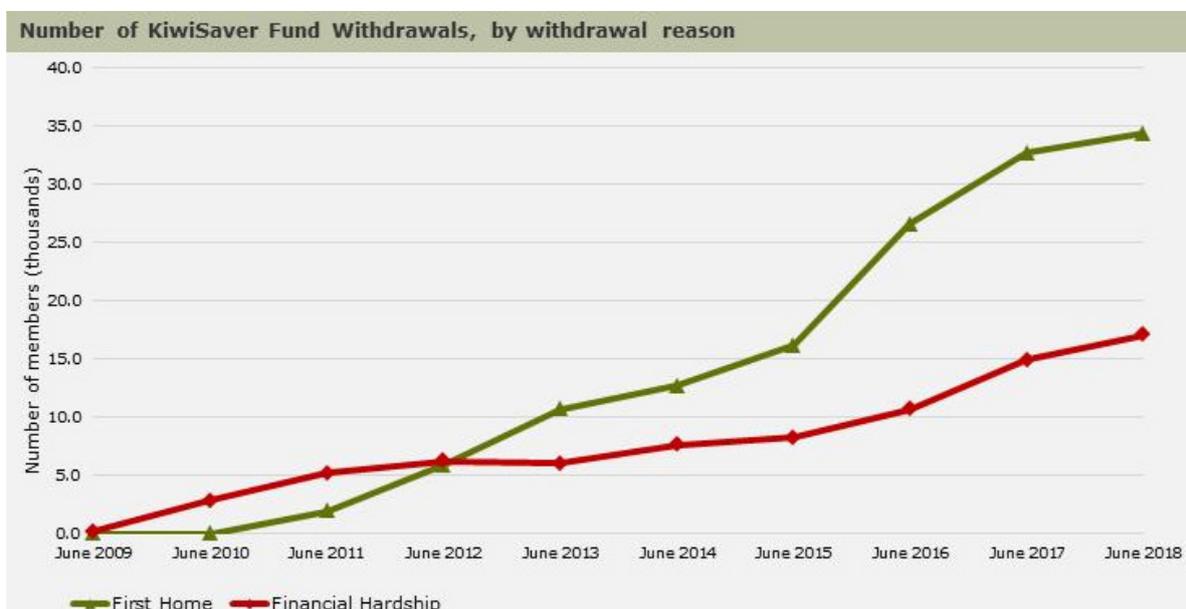


Source: A Stocktake of New Zealand's Housing, Alan Johnson, Philippa Howden-Chapman, Shamubeel Eaqub, February 2018

Historically, home ownership grew during the time when capitalisation of family benefits and cheap state loans were available. It fell away after 1991 when, "Ruth Richardson's 'mother of all budgets' ended the state's home-ownership support programmes..."⁸⁶

In retrospect, the role of family benefit capitalisation from 1959 may be somewhat overstated.⁸⁷ In 1962, nearly 10,000 capitalisations of Family Benefits were approved but the number had almost halved by 1972 when only 5,308 applications went through.⁸⁸ That represents a tiny percentage of the 425,474 families receiving that benefit in 1972.

Nevertheless, the state is now firmly back in the business of support for home ownership not least with the facility to draw on KiwiSaver. Rapidly increasing numbers are making first home withdrawals on their subsidised savings.⁸⁹



Source: IRD Kiwisaver Statistics

Home ownership is featuring heavily in the political conversation. The current (and previous) governments have introduced a number of policies to increase the rate. In 2019, the opposition is firmly promoting deregulation to free up land for housing development, and the government seems to be responding. How successful these policies will prove is another matter.

But if support for home ownership can be viewed as simultaneously encouraging fertility, the area is not being neglected.

Student loans

In 2004, market research covering 3,969 tertiary students found student loans would have an impact on their decision to have children.⁹⁰ One in five thought the impact would be 'high'.

The current government has moved to make the first year of tertiary study free. A highly controversial policy which seems to have had little effect on increasing numbers studying, it is nevertheless recognition at government level that student debt is increasingly problematic. Careers not requiring student loans are now being actively promoted as attractive for that fact alone.

Delayed child-bearing associated with student debt is an international problem probably not foreseen by early advocates for greater access to advanced education (which ironically is also strongly linked to lower fertility rates.)

Increased wages

Legislatively increasing wages to ease the financial burden of children (e.g. implementation of the living wage) increases not only male but female wages, raising the opportunity cost of having children. The prospect of lost income may persuade a female to forgo motherhood or having another child.

According to New Zealand Treasury:

"A rise in market wages ... will raise the opportunity cost of bearing and raising children. This factor explains not only the increase in the labour force participation of married women, but also falls in fertility and rises in the divorce rate."⁹¹

The prospect of lost income may persuade a female to forgo motherhood or having another child.

For low income couples, moving to a living wage combined with WFF (which is income-tested) rationally leads to working fewer hours – not necessarily growing families.

Increased wages can therefore work both for and against fertility.

Child Support

The design of child support may play a hand in fertility decisions. Non-custodial parents (generally the father) are required to financially support their biological children. In New Zealand payments are assessed on income level and share of care. For the payer on a very low earned income or benefit the minimum payment is exceedingly small. Fathers assessed at a high level struggle to form new partnerships and support further children; perhaps those on lower assessments do not. Multi-partner fertility seems increasingly common though there is no New Zealand specific data regarding this phenomenon. We do know for instance that young men in prison (who pay no child support while incarcerated) have a higher likelihood of being fathers than others in their age cohort.⁹²

From 2020, benefit-dependent mothers will not have to name the father for the purposes of extracting child support.⁹³ This will further reduce the responsibility of males to financially support their children so could perversely encourage more fertility-boosting behaviour.

Work-life balance

This century, family-friendly policies have been primarily about improving work-life balance for parents and increasing female labour force participation. The introduction and subsequent extension of Paid Parental Leave falls into both categories; allowing time for mother/child bonding while encouraging attachment to the workplace. Work-life balance policies may encourage first and subsequent children but are not explicitly aimed at raising fertility. They may affect timing rather than quantity of births.



Progressive family-friendly policies are often cited as a positive feature of Scandinavian countries. While some research finds these policies may contribute to greater 'happiness' among parents, they have not boosted fertility.

Funding Assisted Reproductive Technologies

The number of women undertaking Assisted Reproductive Technology (ART) treatments is steadily increasing. Data from the Advisory Committee on Assisted Reproductive Technology (ACART) shows:

"In 2015, a total of 6,242 initiated fresh or thaw ART treatment cycles were undertaken in New Zealand. This was an increase of 6.0% on 2014 and an increase of 20.3% on 2011."⁹⁴

The Encyclopaedia of New Zealand records: "In 2014, 1,343 babies were born in New Zealand following ART (2.25% of all births), compared to 274 in 1997 (0.5% of all births)."⁹⁵

According to ACART:

"Of all the ART treatments in 2015, 28.3% (1,766) resulted in a clinical pregnancy, 22.6% (1,408) resulted in a delivery and 22.4% (1,401) in a live delivery."⁹⁶

That figure represents 2.38% of all live deliveries in 2015.⁹⁷

It appears New Zealand is lagging behind in its funding for ART. According to Dr Richard Fisher, Fertility Associates, the European Society of Human Reproduction and Embryology (ESHRE) benchmark is funding for 1,500 cycles per 1,000,000 population:⁹⁸

ESHRE Benchmark	1,500 cycles/million POP
NZ	~ 700/million
UK NICE ⁹⁹ Guidelines	3 cycle < 40 years 1 cycle 40-42 years
NZ	Up to 2 cycles < 40 years Subject to CPAC criteria
Australia	Unlimited access – co payments

In New Zealand, "A cycle of IVF can cost an average of \$11,500 - \$17,000."¹⁰⁰ Cycles required to achieve a live birth vary. In Australia in 2006, "Average health care cost per non-donor ART live-birth event was \$32 903 (range, \$24 809 for women < 30 years to \$97 884 for women ≥ 40 years). The cost per live birth for women aged ≥ 42 years was \$182,794."¹⁰¹

While delayed child birth is the main reason for the growth in ART other reasons include more same sex couples wanting to be parents and women experiencing difficulty in finding a suitable partner.

Increased government funding would assist the overall fertility rate.

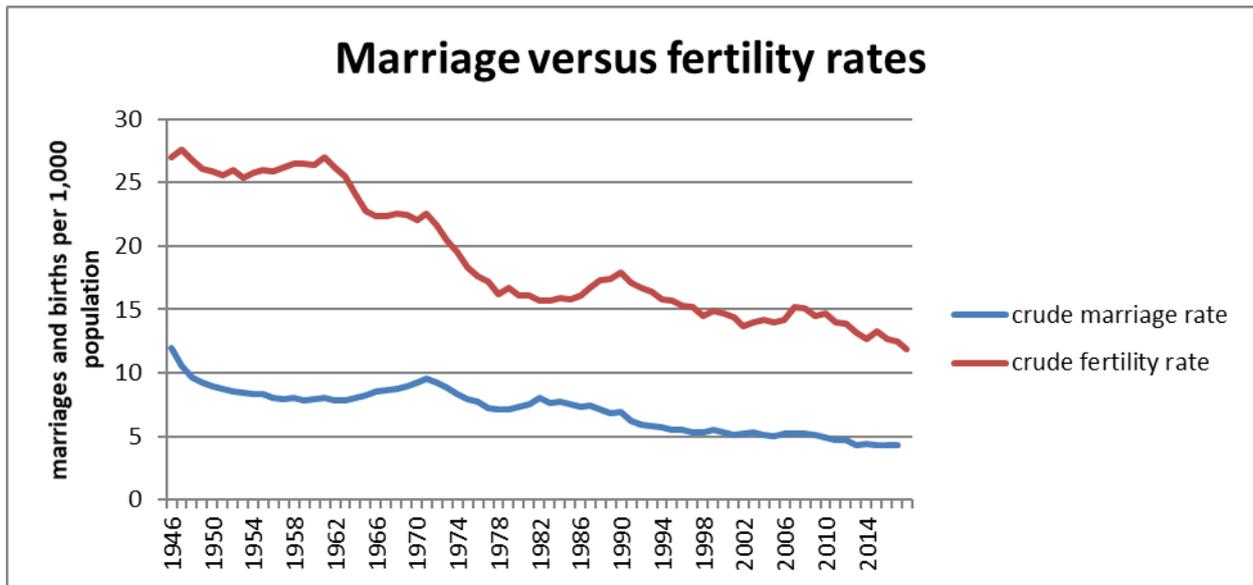
The next set of policy ideas are not currently in play.

Policies not in play

Removing marriage penalties

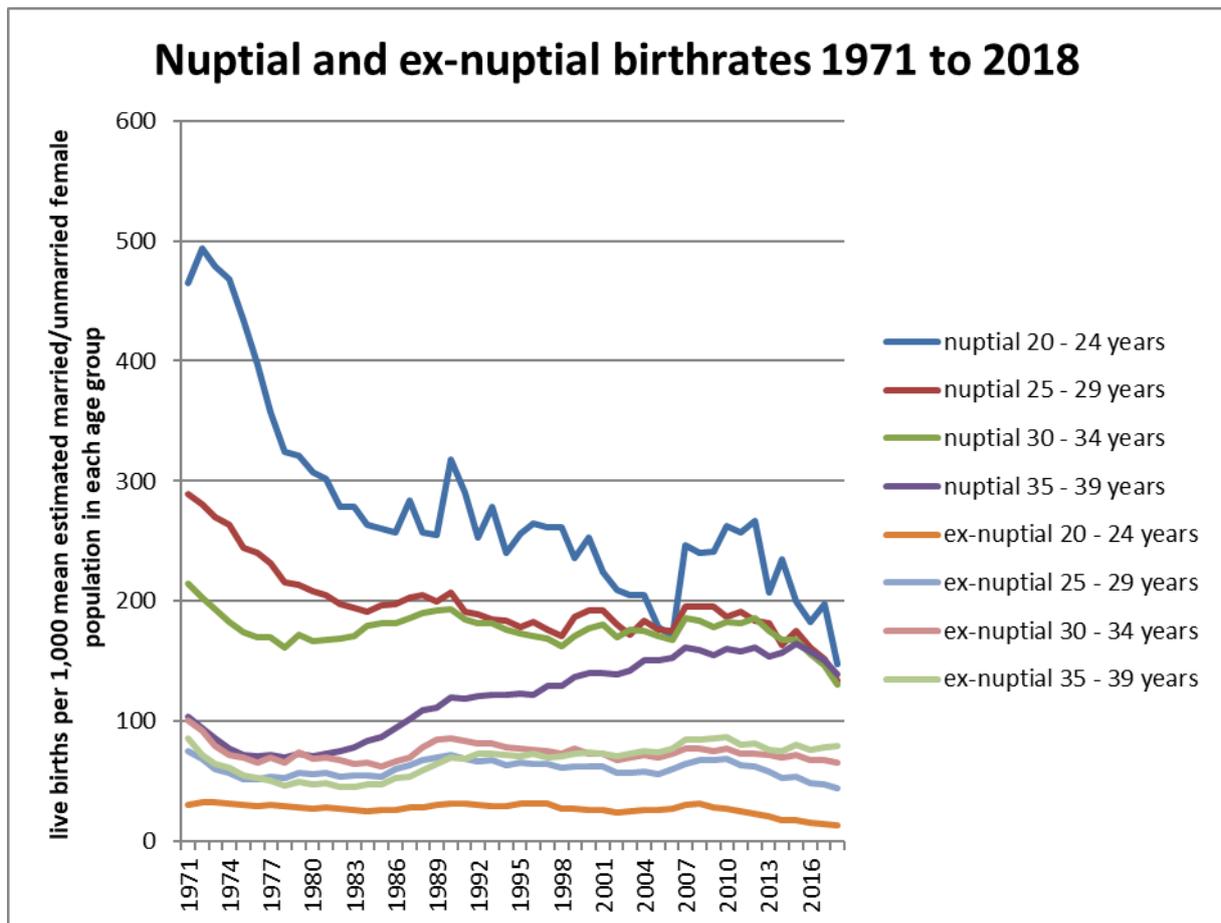
A reasonably strong correlation exists between falling fertility and falling marriage rates.

A reasonably strong correlation exists between falling fertility and falling marriage rates.



Data source: Infoshare, Statistics New Zealand, Crude marriage rate, December years (total population) (Annual-Dec), Crude birth rate (Maori and total population) (Annual-Dec)

Considering the four most fertile five-year age groups¹⁰², married birth rates have been consistently above unmarried birth rates for the same age cohorts. (Alert readers will notice that the ex-nuptial birth rates fell during the 1970s – the decade in which the DPB was introduced. At the same time the ex-nuptial birth ratio climbed. This is because the earliest baby boomers were entering adulthood swelling the numbers of unmarried young women – the denominator.)



Data Source: Infoshare, Statistics New Zealand, Age-specific nuptial and ex-nuptial fertility rates (Annual-Dec)

Also striking is the recent decline in fertility being driven almost entirely by married mothers. This invites speculation. For instance, the desire to get on the property ladder may be leading some married couples to shelve any immediate

plans for children. First home buyers recently reached their highest percentage on record.¹⁰³ It's also possible population estimates from which birth rates are derived are suspect, given difficulties and delays with the last census, and high migration. These are just two possibilities. Further research is required to address this apparent development.

Suffice to say, married females have higher fertility rates. Comparisons between married and cohabiting fertility rates are difficult.¹⁰⁴ Today most married couples cohabit prior to marriage. Often a pregnancy or birth will be the catalyst for marriage. But ample evidence points to the greater instability of cohabiting relationships. For instance:

"Analysis of data from Growing Up in Australia: The Longitudinal Study of Australian Children (LSAC), indicates that children living with cohabiting parents are more likely than those living with married parents to experience parental separation. Of infants who were living with two natural married parents in 2004, 12% were living with one natural parent by 2010. In contrast, among infants who were living with two natural parents in a cohabiting relationship in 2004, 27% were living with one natural parent by 2010. This pattern is consistent with prior research findings that cohabiting relationships are more likely than married relationships to separate (e.g., Qu & Weston, 2008b)."¹⁰⁵

Just as the window for fertility reduces when childbearing starts later, increased brevity of relationships decreases opportunity for having children (within any given relationship at least).

Historically, marriage was encouraged through social policy. According to the Encyclopaedia of New Zealand:

"In the 1950s the New Zealand welfare state was firmly focused on support for married couples with young children. Single, divorced and separated mothers still struggled financially."¹⁰⁶

Reference to 'married couples' is frequent in the literature describing this period. However, 1945 saw the first recorded case of an illegitimate child receiving a Family Benefit and the 1964 reform of the Social Security Act explicitly *included* illegitimate children.¹⁰⁷ Support for marriage was declining.

As early as 1988 the Royal Commission on Social Policy found, "...incentive structures which might encourage partners to separate do exist in the DPB..."¹⁰⁸

While it is unlikely a government today would, or even *could* (given legal discrimination constraints) make marriage a prerequisite for assistance, at the very least policy should not act against enduring parental relationships by creating marriage or couple penalties. These occur through both the tax and benefit systems.

According to the New Zealand Institute for Economic Research (NZIER):

"Marriage penalties occur when two parents (or spouses) have a higher total income (net of income transfers and living costs) when separated than when a partnered unit. The presence of marriage penalties means that some people are discouraged from entering into or remaining in a relationship in the nature of marriage by the family income assistance system."¹⁰⁹

The NZIER has modelled varying family types to calculate marriage penalties. For example:

"When the mother and father both have no market earnings, the marriage penalty before cost differences and child support is equivalent to 29.6 percent of net income (e.g., net income when two single people is 29.6 higher than when a couple) When separated, the non-custodial parent in this case is liable for \$773 Child Support, however as the custodial parent receives a main welfare benefit the Child Support payments made are retained by the state to offset the cost of the benefit, giving a marriage penalty net of child support of 27.3 percent. When the assumed reduction in rental expenses is taken into account the marriage penalty falls to 8.4 percent, or \$2,813.36"¹¹⁰

The desire to get on the property ladder may be leading some married couples to shelve any immediate plans for children.

In the 1950s the New Zealand welfare state was firmly focused on support for married couples with young children.

The presence of marriage penalties means that some people are discouraged from entering into or remaining in a relationship in the nature of marriage by the family income assistance system.

While an 8.4 percent penalty may seem modest, for every other family situation modelled – including a mix of benefit and/or market incomes – the penalty grew progressively rising to 18.4 percent.

Additionally:

“Marriage penalties are higher for families with children than for families without, which reflects the greater provision of targeted assistance to families with children.”¹¹¹

There are well known and documented aspects of the welfare and tax system that undermine the formation and survival of relationships.

Ironically child-specific payments may actually discourage fertility if remaining childless reduces the marriage penalty.

In 2018 economist and social policy advisor Michael Fletcher was commissioned by Superu to investigate individualising entitlements in New Zealand’s benefit system. He points out:

“...two unemployed people who live in the same household can each receive the Jobseeker Allowance of \$215 per week and can each earn \$80 per week before abatement; if those same two people are deemed to be a couple they receive \$71 per week less from the married Jobseeker rate of \$359 per week, and can only earn \$80 per week between them before the benefit is abated.”¹¹²

(It must be acknowledged that only those who are honest about their relationship status suffer the penalties. An Auckland University of Technology paper recently noted that 70 percent of mothers from the longitudinal Growing up In New Zealand study who said they were receiving the Domestic Purposes Benefit also said they had partners.¹¹³ A further negative effect of couple penalties is encouragement to commit fraud.)

Back to those who comply with rules, Fletcher continues:

“There is at least anecdotal evidence that a fear of unintentionally running foul of the relationship test deters some people from forming friendships or intimate relationships even when these do not constitute a relationship under the law (Tolley, 2017).”¹¹⁴

One way to avoid partnering disincentives in the benefit system would be to individualise entitlements, but to do so without disadvantaging any current recipient would be very costly. Fletcher cites the Royal Commission on Social Policy 1988 which concluded, “...a rapid move to individual entitlement would mean a very large increase in government expenditure...”

Fletcher goes on to model changes that “... suggest the cost of individualising all entitlements would be in the order of \$1.5 billion to \$2 billion.” But he also cites forthcoming work from Anderson and Chapple that estimates individualisation would cost several billion dollars per annum.¹¹⁵

A universal basic income (UBI), promoted by both the Greens and the Opportunities Party during the 2017 general election campaign, would also solve the problem of couple penalties. In 2010, when Treasury modelled a UBI of \$300 per week for all individuals aged 16 and over, it identified a \$45-57b annual price tag¹¹⁶ (which would replace all current social security entitlements costing around \$27b.)

Economist Bryce Wilkinson describes disincentives inherent to New Zealand’s current tax and transfer system:

“The system has induced many New Zealanders to take costly measures to reduce their taxable income and/or increase their eligibility for hand-outs. The many options include reducing working hours, not seeking promotion, hiring accountants and tax lawyers, setting up family trusts, preferring tax sheltered investments, feigning sickness or disability and **changing family composition.**”¹¹⁷ (*my emphasis*)



Advice given to the Welfare Expert Advisory Group stated:

“A striking feature of benefit receipt over the last two decades is that the majority of families with children supported by main benefits are sole parent families, and the majority of people without children supported by main benefits are unpartnered. Increasingly, both partners in two-parent families are in employment.

Partnered people affected by job loss often do not qualify for any income support from main benefits if their partner continues to work because of the tight targeting of payments to couples under the joint income test.”¹¹⁸

There are well known and documented aspects of the welfare and tax system that undermine the formation and survival of relationships. It follows they work against marital or de facto fertility. How much the taxpayer is prepared to pay to remove them (given higher tax rates in and of themselves make raising families more difficult) is a question for politicians.

Income splitting

Income tax rates are graduated and currently levied on an individual basis. A couple earning a total of \$120,000 made up from one salary of \$100,000 and a second of \$20,000 would be \$4,400 better off if they were taxed on two salaries of \$60,000.¹¹⁹ Conservative and Christian parties, for example United Future, have long talked about income splitting as an issue of fairness for families. (The ACT Party might counter that a flat tax would also solve the same problem.)

The Inland Revenue Department (IRD) noted in 2008, “Income splitting for tax purposes is allowed in a number of countries and takes a variety of forms.”¹²⁰ It proceeded to suggest ways in which income-splitting might be administered.

It goes without saying that any change to taxation that falls in favour of the taxpayer requires government to forgo a slice of revenue. In 2010, a bill to introduce income splitting was introduced into parliament. It appears to have stalled at the 2nd reading, probably due to the imminent 2011 general election, and subsequently lapsed in 2017. The estimated implementation cost was around \$500m¹²¹, modest by comparison to benefit entitlement individualisation or a UBI.

Tax exemptions

Wilkinson describes the financial costs of churning money i.e. taxing families only to return it through subsidies:

“A Treasury guideline suggests government analysts assume that each additional dollar of government spending from taxes be counted as costing the community \$1.20 ... An Australian economist, Winton Bates, has estimated a reduction in the churning of taxpayers’ money through the tax-benefit system of 10 per cent of GDP could lift GDP per capita by 5%.”¹²²

In the past, New Zealand employed a system of tax exemptions for men with wives and dependent children. These became ‘rebates’ from 1 April 1974.¹²³ A return to either for primary caregivers of dependent children (single or cohabiting) would avoid the deadweight costs of churning. A simplistic suggestion possibly, but there is no reason why methods of the past shouldn’t be reappraised. Minus the cost of churning, child tax exemptions could offer more value than the current family tax credits.

What do mothers say they want?

What would encourage existing mothers to have more children? Research funded in 2006 by the Families Commission sought in-depth views from 40 mothers regarding parenting and workforce participation:

“Some ... noted the need for the government to provide support to encourage people to have more children because of the implications for the country of the falling birth rate...”¹²⁴

One participant specifically commented:

“I guess if they want to increase the birth rate they are going to have to do something because financially for a lot of families they’re going to be on the breadline otherwise. I know for example we earn a reasonable amount of money, but during those school holiday programmes for these two or three weeks, it was about \$1,000 which is essentially not being paid for a considerable number of days.”

In conclusion, the interviewers wrote:

“While it is recognised that governmental support is available through childcare subsidies, paid parental leave of 14 weeks and the Working for Families programme, what is wanted in terms of government support, as indicated by this study and consistent with other studies, are: - more childcare subsidy - more after-school and school holiday programme funding, regulation and information - longer paid parental leave at a higher rate - greater eligibility for and/or higher amounts of tax rebates or credits for parents to enable them to have real choice about when and if to return to paid work - support for employers who provide support for parents.”

Some items on that wish-list have materialised since 2006: increased family tax credits, a lift in Paid Parental Leave from 14 to 18 weeks (to rise to 26 weeks in 2020), and childcare subsidy increase from \$4 to \$5 an hour for low income families in 2016. Yet the fertility rate has continued downward.

Addressing the possibility of 'more babies' meeting the need to replace the population, in a 2017 paper Ian Pool wrote:

"Among Western developed countries, New Zealand lacks many public-policy props directed at reconciling prolonged education, work and family life, at the levels seen most notably in France and Scandinavia (Pool et al., 2007)." ¹²⁵

Those countries are however experiencing the same or lower fertility than New Zealand:

"In Norway, Finland and Iceland, birth rates dropped to historic lows in 2017, with 1.49 to 1.71 children born per woman." ¹²⁶

Sweden is slightly higher at 1.78 (mainly because of immigrant groups with high fertility rates). And Denmark had a similar rate to New Zealand: 1.73 in 2018.¹²⁷ France continued to trend downwards to 1.87 in the same year.¹²⁸

Corporate role in encouraging fertility

Employers can assist with family-friendly policies that make combining motherhood and work easier.

While government provides legislation that enshrines a mother's right to breastfeed during working hours and "...request flexible working arrangements..."¹²⁹, business can voluntarily do more. The ANZ is noted for being progressive in this area, already offering 26 weeks paid parental leave, KiwiSaver assistance, discounted childcare and flexibility around working from home. Other workplaces voted by mothers as being family-friendly are the New Zealand Defence Force, Ministry of Primary Industries, BNZ, Fonterra, Resene, Statistics NZ, Ministry of Health, ACC and Inland Revenue.¹³⁰

Some overseas employers offer to pay for the freezing of eggs and assisted reproductive technologies. In this regard they are not actively encouraging present day fertility but delayed fertility – arguably better than no fertility at all. Forbes reported recently, "...over 400 U.S. companies have policies in place to cover the cost of in vitro fertilisation (IVF)." ¹³¹

Business Insider Australia reports: "Companies like Apple, Facebook, and Google are offering female employees the chance to freeze their eggs." ¹³²

The number of women freezing their eggs is still relatively low but growing. Dr Mary Birdsall, Fertility Associates chair, said in 2018, "Last year we saw around 50 women freeze their eggs and the year before that was half that number." ¹³³

With New Zealand women having a particularly high and growing labour force participation rate¹³⁴, business can potentially play a significant role in affecting fertility.

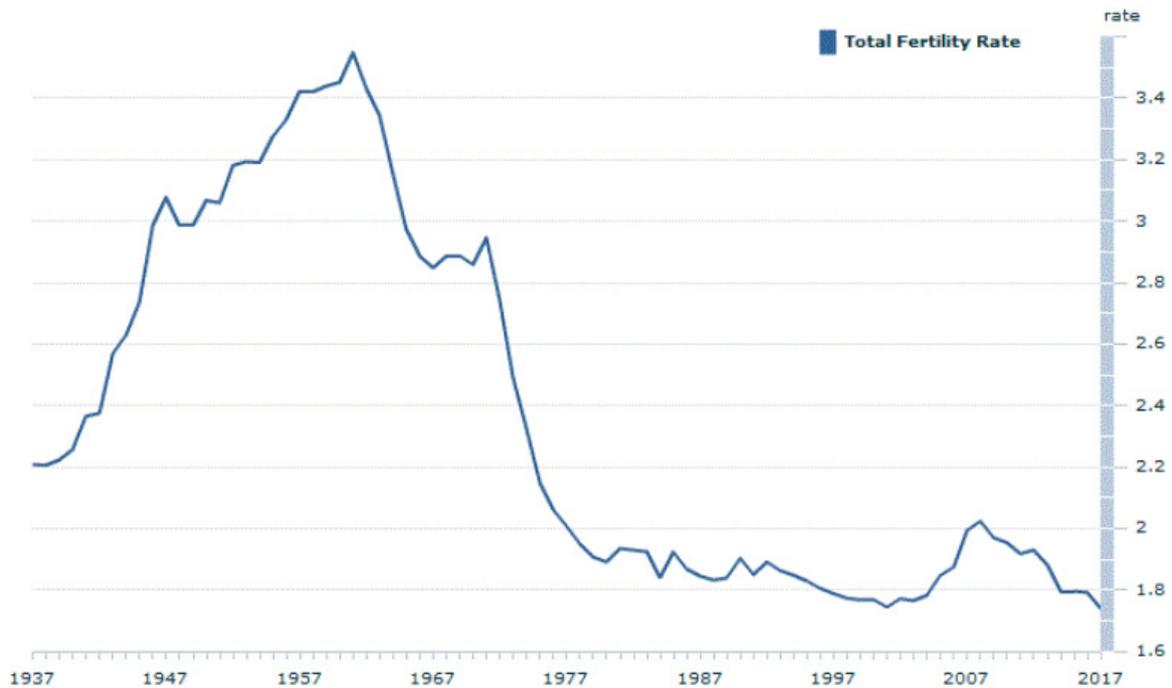
Other countries efforts to incentivise fertility

Australia

Treasurer in the John Howard government, Peter Costello is famous for urging Australians to, "Have one for Mum, one for Dad, and one for the country." In 2004, Australians were offered a Baby Bonus and increased family payments. A baby boom followed though there is disagreement about whether this was caused by the incentive or Gen X reaching the ages of 25 – 45 with ticking biological clocks. In the 2013/14 budget the bonus was abolished:

"The behavioural impact of changes to Baby Bonus has been an ongoing issue. While it is unlikely that its abolition will have a significant impact on birth rates, there is a strong possibility that it will affect the timing of births, as occurred in 2004 when the payment began." ¹³⁵

Total Fertility Rate, Australia - 1937 to 2017(a)



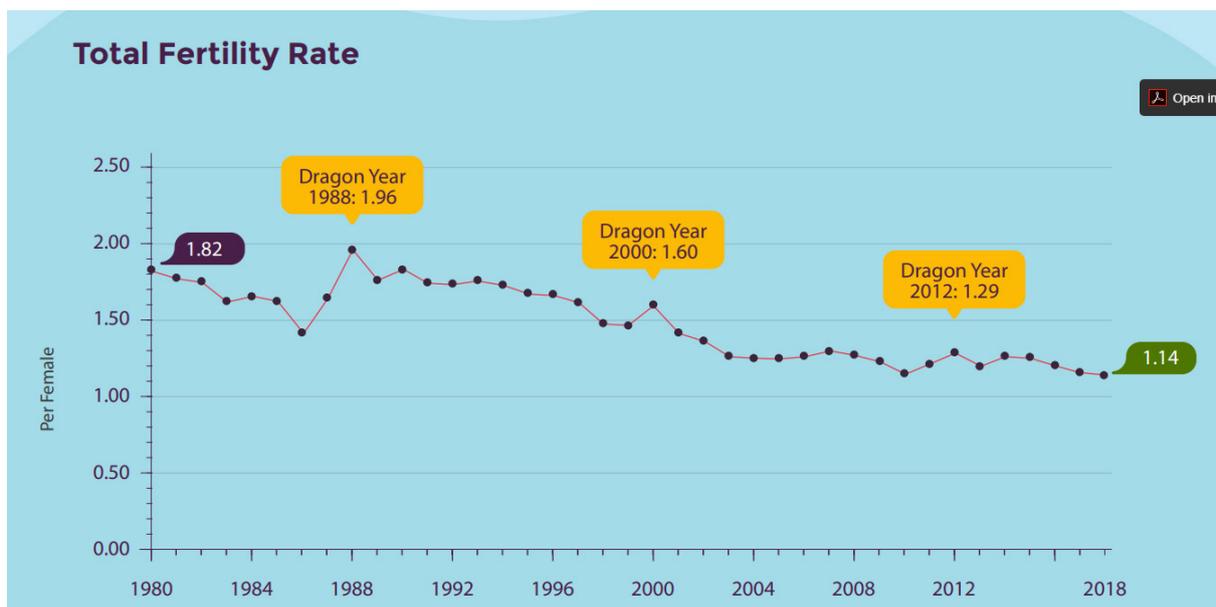
Source: Australian Bureau of Statistics, Births, Australia, 2017, Fertility rates

Singapore

In May 2019, The Economist reported that Singapore’s fertility rate had fallen to 1.14 in 2017.¹³⁶ According to the United Nations, “Singapore has the most long-standing and comprehensive policies to encourage marriage, boost fertility and provide support to families of any country in East Asia. Yet it also has one of the lowest fertility rates in the world.”¹³⁷ From 1987, these included financial incentives, work-life balance policies and marriage encouragement.

Assistance has become increasingly generous including cash payments, medical insurance for children, subsidised childcare, housing subsidies, tax breaks for working mothers, and 16 weeks paid parental leave (as well as one week for fathers). The Economist makes an interesting final observation:

“Overall fertility rates have continued to decline, with one exception: ethnic Malays. They are the poorest of Singapore’s three main ethnic groups, and so may be more susceptible to financial incentives.”



Source: Department of Statistics Singapore, Infographics, Total Fertility Rate

China

China introduced its one child policy in 1979. Fertility was already falling rapidly, reaching 2.8 that year. Yun Liang and John Gibson of Waikato University wrote in 2017:

"Given this already declining TFR, there is debate in the literature about the role of government policy versus other more fundamental factors in contributing to China's fertility decline. If policy is not the major determinant of fertility, then a reversal of policy, such as the 2015 changes that allow two children, may not have much effect....China would seem to face a difficult policy tradeoff because it needs to keep urbanising in order to become richer but this urbanisation may further depress fertility, and sub-replacement fertility will be a drag on future economic growth."¹³⁸

The one-child policy has been officially abandoned, or more correctly, penalties for having more than one child, suspended. Even with new-found freedom to procreate – which could be viewed as an unprecedented incentive - Chinese women persist in limiting their families, especially urban dwellers.

In 2018, Mu Guangzong, professor at the Population Research Institute of Peking University wrote,

"... a large number of women of childbearing age today were born in the 1980s and 1990s, and since many of them are the only child of their parents, they are more likely to have just one child themselves."

"According to the National Bureau of Statistics, 17.23 million newborns were added to China's population last year, down 630,000 year-on-year, and the birth rate dropped from 1.295 per cent in 2016 to 1.243 per cent in 2017."¹³⁹

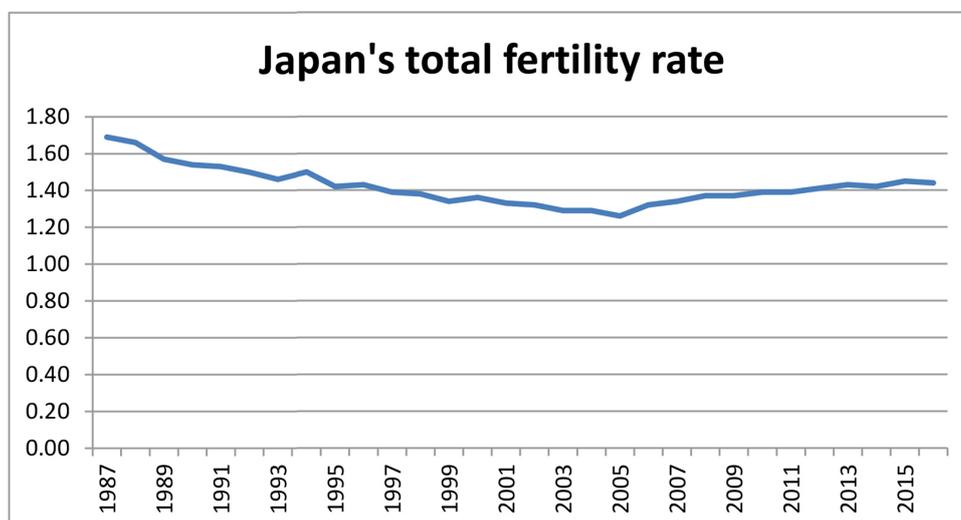
China does not publish a reliable fertility rate, but the National Bureau of Statistics announced in early 2019 that just over 15 million births occurred in 2018; 2 million fewer than the year before.¹⁴⁰ Even these numbers are disputed.

Japan

Japan presents a well-known, long-standing case of very low fertility well below replacement level. The story is similar to other countries described with family-friendly policies (with a particular focus on paternity leave) and cash incentives increasingly available. Assisted reproductive technologies are subsidised and speed-dating groups are organised by the state. As well, the example of Nagicho makes for interesting reading:

"One notable local example of comprehensive policy coordination is the town of Nagicho, which raised its fertility rate from 1.4 to 2.8 from 2005 to 2014 (though provisional numbers indicate it has decreased to 1.9, though still higher than the national rate). The increased proportion of the town's budget for fertility from 2% to 3% pays for a "celebratory" birth gift of ¥300,000, children's 30% coinsurance payment, volunteer-led nurseries, a secondary school allowance, subsidised housing, babysitting services and baby goods. An example of a well-funded package of complementary policies."¹⁴¹

(Interestingly 300,000 Japanese yen equates to NZ\$4,185¹⁴² - at first glance seemingly generous. But New Zealand's Best Start introduced in 2018 is \$3,000 annually *for three years*.)



Data source: Japan Statistical Yearbook 2019, Standardised Vital rates and Reproduction rates, 2-19

Germany

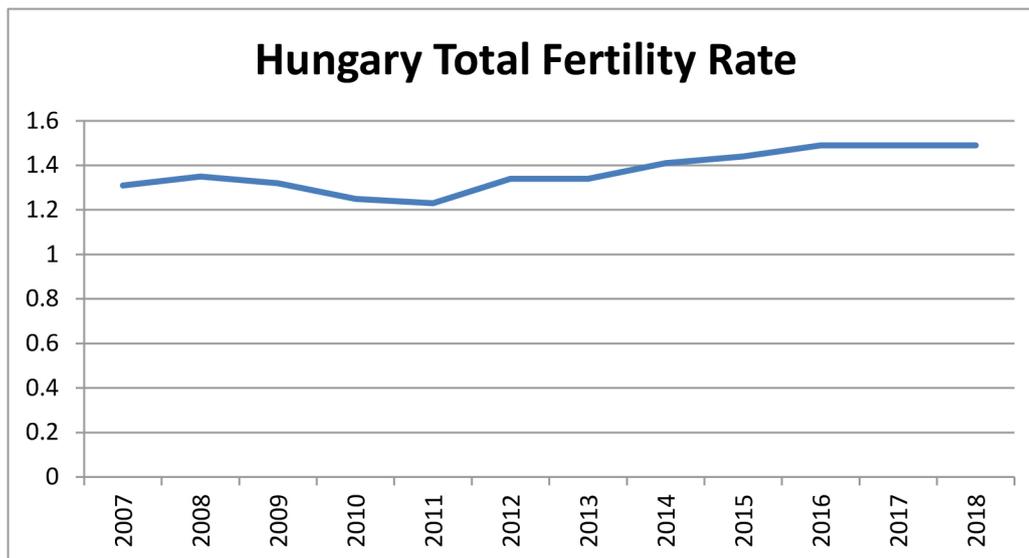
The Economist recently reported that Germany's TFR rose from 1.33 to 1.57 between 2006 and 2017 (though 2016 saw a higher rate of 1.59). Although around half of the boost is due to immigrant women who have higher fertility rates, combining employment and motherhood has also been made easier by guaranteeing infants nursery care from age one. Additionally, "...married couples are allowed to file joint income tax returns. This encourages mothers to stay at home by reducing their husbands' income tax bills if they do."¹⁴³

Married couples are allowed to file joint income tax returns. This encourages mothers to stay at home by reducing their husbands' income tax bills if they do.

Hungary

Hungary is pursuing a vigorous Family Protection policy. From July 2019 the following policies were introduced:

- [1] interest-free, all-purpose loan;
- [2] extension of loan program to support home purchase;
- [3] subsidy for car purchase for large families;
- [4] mortgage reduction;
- [5] exemption from personal income tax;
- [6] 21,000 new crèche places will be established over three years; and
- [7] childcare leave allowance for grandparents.¹⁴⁴



Data source: Hungarian Central Statistical Office, Population and Vital Events

Financial amounts are substantial. The equivalent of NZ\$53,000 is offered to married couples who have three children or more children. Pro-family policies have been in play since 2010 and the rising fertility rate - though recently flattening - has encouraged the government to move further. "The new family protection plan is the latest step in the government's efforts to support families, to encourage childbirth and open up opportunities to young people to start a family." The government also openly states that it does not want to rely on immigration to support population growth.

Bar these rare exceptions, over a range of scenarios (others touched on elsewhere in this paper) from the actively encouraging states of Scandinavia, Singapore and Australia to the recently permitting state of China, none are witnessing fertility growth. According to MercatorNet, "...fertility rates are near or below replacement level in all world regions except Africa, where growth is also slowing."¹⁴⁵

CONCLUSION

How worried should we be about the shrinking family?

To date, New Zealand has been complacent. Firstly, because fertility hovered at or just below replacement level up to 2015; and secondly, our rate has been relatively high compared to other developed countries.

The last three years have seen consecutive and non-projected falls however. Even before this decline Ian Pool summed up his view of the current problem for New Zealand:

"The central dilemma is how to cluster reproduction at the most fecundable ages after basic education and entering the job market (say 25–29 years), yet ensure gender equality in terms of postgraduate education or advanced training plus movement up career ladders."¹⁴⁶

This assumes that all women want careers *and* children (though in the US, one third of married women prefer not to work outside the home while raising children¹⁴⁷), and that it is the government's – and possibly the private sector's job – to make that possible. Existing evidence points, though, to the increasing inability of governments here and internationally to reverse the trend towards families with fewer or no children.

At the same time, while financial fertility incentives have waned in influence, they may remain more effective amongst the poor. As women generally become wealthier and better educated, care must be exercised not to shut out those from lower-socio-economic groups by trapping them with fertility rewards.

Incentivising very young women to have children (sometimes to multiple partners) before completing an education and acquiring work skills incurs disadvantage for both mothers and children. Between 1999 and 2017, births increased most in the poorest quintile (though the trend may have recently reversed). Half of births to those aged under 20 were in the poorest quintile.¹⁴⁸

The positive news is most females still want children and stable partnerships – marriage or de facto. While delaying childbirth until those are in place is good for ensuing children, delaying too long risks having fewer children than desired or no children at all.

The United Kingdom initiative to raise awareness among young people of reducing personal fertility from late 20s has considerable merit. Similarly, there may be a case for social media education regarding the value of family and children.

The growing trend to one person households and sad repercussions warrant wider discussion. They need to be weighed against, "... greater career, education, travel and leisure opportunities available in the globalised contemporary world [to] young men and women ..."¹⁴⁹

Historically, when women had few options, they could be persuaded to increase their fertility. The future is a whole new ball of string though. In respect of freedom to choose, the genie is out of the bottle. What would force it back in? And on what basis could anyone argue that would be the right thing to do?

Environmental agitation about population reduction is somewhat redundant. Ironically, as the world's inhabitants have become richer and thus consumed more, their increased freedom and wealth makes childbearing a greater opportunity cost. Hence women are choosing to have fewer or no children. A departure from this behaviour is not looking likely any time soon.

Optimists can fantasise that women will somehow have a collective epiphany that as children bring happiness, the more, the merrier; or that government will 'do something'. But as the circumstances that led to declining fertility further embed, new norms are established.

Meanwhile, the crucial need to maintain economic growth persists, not only as the country deals with the dependency bulge presented by the ageing baby boom generation, but thereafter. To maintain (or locally grow) populations, politicians will continue to wrestle with the tricky issue

Our rate has been relatively high compared to other developed countries. The last three years have seen consecutive and non-projected falls however.

The positive news is most females still want children and stable partnerships

Ironically, as the world's inhabitants have become richer and thus consumed more, their increased freedom and wealth makes childbearing a greater opportunity cost.

of inward migration and what levels are both needed and sustainable as international competition for both skilled and unskilled labour heats up. They can at least exert greater influence in this sphere.

Ultimately personal fertility decisions rest with individuals and their own values and morality, notwithstanding these will be influenced by societal and cultural expectations.

At a national level, the matter of New Zealand's collective fertility is critical to the future. If not actively worrying about it, at the very least the topic should feature regularly in our private and public conversations.

Politicians will continue to wrestle with the tricky issue of inward migration and what levels are both needed and sustainable as international competition for both skilled and unskilled labour heats up.

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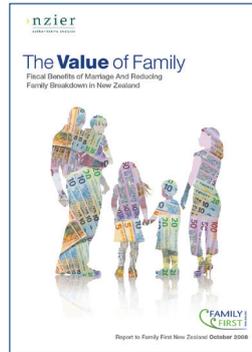
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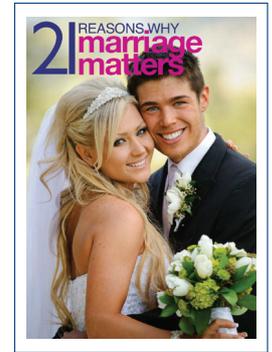
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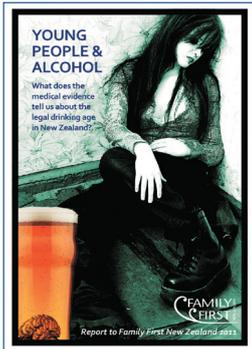
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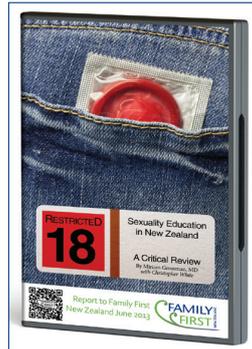
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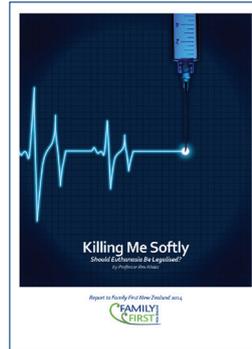
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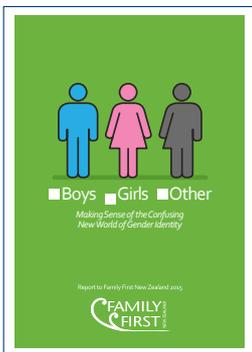
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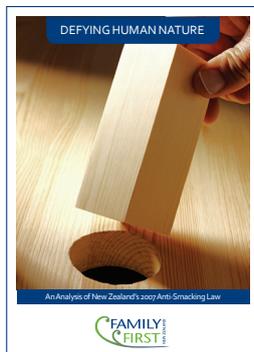
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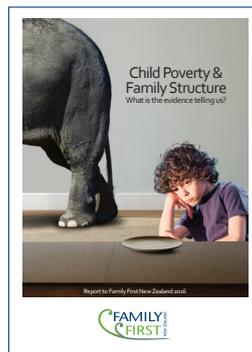
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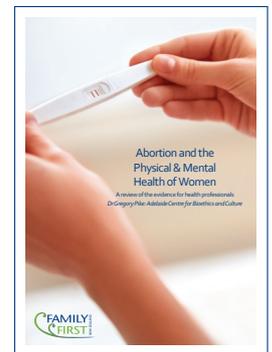
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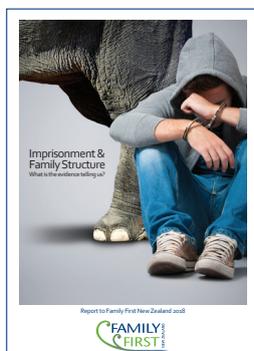
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