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# HOW DOES ABORTION AFFECT BIRTH RATES AND DEMOGRAPHY?

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## INTRODUCTION

The global population was 2.5 billion in 1950 and recently passed 8 billion. Depending on the model used, it is expected to climb to about 10 billion by the end of the century before declining. No one knows for sure what precise trajectory will occur, but the current trend is clear - population growth will slow and then reverse.

The fear of overpopulation, initiated by Malthus (1766 – 1834), gave rise to a population control movement that sought to exert itself through a range of measures, many of which constituted serious breaches of human rights such as forced sterilisations and abortions. Over the years the movement has changed tack but maintained its focus on promoting population decline and is arguably still involved in breaches of human rights.<sup>1</sup> Despite how spectacularly wrong the predictions of catastrophe were from authors like Paul Ehrlich (*The Population Bomb, 1968*), there are many who still consider overpopulation to be humanity's foremost challenge – a “multiplier” for everything else that is wrong with the planet.<sup>2</sup> Recent warnings from scientists call for “an increasing focus on slowing human population growth”<sup>3</sup>, and “a global appeal... to choose none or at most one child”.<sup>4</sup> Some philosophers have recently gone further, arguing for “voluntary human extinction” by which “all of humanity’s problems could be solved”.<sup>5</sup> Well, obviously, but at quite a cost.

Despite increasing global population, the reality is that for many countries population decline is already happening, and fast. So much so that for countries like Japan, the population is expected to drop by 33% over just 50 years.<sup>6</sup> At the same time, the working-age population will nearly halve. Population declines amongst most Western nations, as well as China, Russia and many Asian countries, is now on the radar for the obvious reason that economies will struggle with fewer workers to support rapidly aging populations, leading to considerable economic and social disruption. Many strategies have been tried to stimulate fertility, but with little effect.

When fear of overpopulation was the dominant narrative, and still is for many, one of the key strategies to reduce fertility was increased spending on global family planning, a code phrase for contraception and abortion. But now that population decline is seen as a threat to many nations’ economic stability, if not to their very existence, solutions now seem to include everything *but* reducing contraception and abortion, even though there can be no doubt that they, and the policies societies choose to regulate them, are intimately tied to fertility.

This paper will focus on abortion in relation to fertility and explore the somewhat limited empirical evidence that exists. What happens to fertility when abortion rates climb or fall, or when specific policy changes affect the availability of and access to abortion? Is it possible that the availability of abortion might influence contraceptive and sexual behaviour, which in turn influence fertility? If nations really wish to turn rapid population decline around, or at least slow it, might their policies about abortion need to change?

These are to a certain extent practical and testable questions, even though the moral questions about abortion will always remain central to whether it should or should not happen, questions faced by individuals as well as communities. But the social reality must also be faced that policy and culture interchangeably affect one another. Liberal abortion policies, so common in many nations, embed abortion as a cultural norm to deal with unwanted pregnancy. Another social reality might be population decline and all that goes with it.

## **DECLINING FERTILITY, CAUSES AND POLICY RESPONSES**

Fertility is typically measured in two ways. First, as a birth rate per thousand women of reproductive age, usually from 15 to 44; and second, as the total fertility rate (TFR), that is, the lifetime number of children born per woman. TFR is more commonly used as a measure of impact on population. If the TFR falls below 2.1, the replacement rate, and there is no net immigration, a population will decline over time; conversely if it rises above 2.1 then population will grow.

The global TFR is currently 2.4 and hence overall population is increasing. However, when examined by country it becomes apparent that some nations have quite high rates and some quite low.<sup>7</sup> For example, most African countries have rates well above 2.1; for example, Niger 6.7, Uganda 4.4, Nigeria 5.1. TFR for the most populated countries is as follows: India 2.0, China 1.2, US 1.7, Indonesia 2.1, and Pakistan 3.3. Most of Europe has low rates: UK 1.6, Germany 1.5, Italy 1.3, France 1.8, Spain 1.3. Eastern bloc countries are mostly below replacement: Czech Republic 1.7, Russia 1.5, Ukraine 1.3, Poland 1.5. Those with the lowest include Hong Kong 0.8, South Korea 0.9, Singapore 1.0, Japan 1.3.

Low fertility results not only from fewer children per woman, but also from an increase in childlessness.<sup>8</sup>

To a certain extent, immigration can offset low fertility, a strategy used by many nations including the UK, Australia, and Canada. But a time will likely come when declining fertility occurs across all nations, including those that currently serve as sources of immigration, to the extent that it will become an unsustainable strategy.

Declining fertility has multiple causes, many of which are difficult if not impossible to quantify in any meaningful way. Moreover, the various factors affecting fertility may vary over time such that some may be more evident at one time in one place while others may be broad and exert an impact over a long period of time. As commentators have noted:

“The factors that influence birth rates are not entirely well understood and have moreover been observed to swing unpredictably.”<sup>9</sup>

Potential factors for fertility decline can be grouped within at least four domains.

First, the reproductive domain. Contraception and abortion influence fertility. The development of the contraceptive pill had an enormous impact upon women’s control of their fertility, influencing decisions about sexual behaviour, workforce participation, and relationships. In addition, the promise of reproductive technology has contributed to delayed childbearing that resulted in fewer children than desired, in part because of misconceptions about its efficacy.<sup>10</sup> The liberalisation of abortion also impacts fertility and will be addressed in the next section.

Second, the changing role of women in many societies. The link between women’s educational attainment and fertility has been well established – women with higher educational attainment have lower fertility via increased

workforce participation and greater financial independence.<sup>11</sup> However, this factor is complicated. Whereas increased workforce participation initially led to lower fertility, workplace and other social changes such as subsidised childcare and paid parental leave have enabled some countries to have both high female work participation and reasonable fertility – for example, the US, Sweden and Norway.<sup>12</sup> Nevertheless, the impact of higher female employment, wages, and prestige, which constitutes an opportunity cost of having children, has led to an overall decline in birth rates.

Third, cost of living pressures, financial instability and uncertainty, which are all reasons cited by American adults for having fewer children.<sup>13</sup> Historically, birth rates declined during the Great Depression and after each of the recessions of the early 80s, 90s and 2007. Available finances affect how couples think about children. This is why cash payments via “baby bonuses” can lead to a short-term increase in births.<sup>14</sup> The financial cost of raising children is also influenced by changing perceptions about necessities.

“ ... divergent views about the material necessities in life and associated expenditure patterns may partly explain the fact that the people who can least afford it are having the largest families.”<sup>15</sup>

Additional financial factors in more recent years include increased housing costs (rental and mortgage) and, in the US at least, increasing childcare costs and rising student debt burdens.<sup>16</sup>

Finally, fewer tangible factors can influence fertility. The changing nature of marriage and divorce has increased relational instability making it less likely that couples will bring children into those relationships. As Weston and Parker note, the “fragility of relationships may disrupt opportunities for childbearing”.<sup>17</sup> There is also a link between religiosity and fertility, and while this is not constant across different countries, there is some evidence from the US that the religion of one’s upbringing is positively correlated with fertility, to the extent of an increase in TFR of half a child or more.<sup>18</sup> Therefore, the current decline in US religiosity may be contributing to lower fertility. However, the link between religiosity and fertility could also mean that certain subpopulations may grow because high-fertility groups have more children who themselves maintain patterns of high fertility.<sup>19</sup>

While the above reasons have contributed to fertility decline at various times and places, recent data from the US necessitates consideration of factors that may be even less tangible, even though they may still be linked to the reasons so far identified. In the US, birth rates dropped immediately after the Great Recession of 2007 and were expected to recover just as they had done for past economic shocks. However, that did not happen, and instead, the decline has continued steadily till the latest data of 2020.<sup>20</sup> In their analysis of this period of decline, Kearney and Levine speculated that the primary factor was “shifting priorities across cohorts of young adults”.<sup>21</sup> By this they mean that the nature of parenting, life aspirations, and preferences for having children have changed. Parenting intensity has changed as couples devote more resources to fewer children. Using South Korea with its extremely low fertility rate as an example, parents’ “steadfast drive to have competitive and successful children” has led to “education fever” where limited resources are poured into just one child.<sup>22</sup>

Life aspirations have changed too – “recent cohorts of women were likely to be raised with stronger expectations of having life pursuits outside their roles of wives and mothers”.<sup>23</sup> Rather than limiting these changes to women, others have suggested that broader cultural developments also affecting men, such as the emergence of stronger individualism, play a role.

“ ... people have become increasingly concerned about achieving self-realisation, autonomy, and freedom from the bonds of traditional forces, including religion, and ... these values are incompatible with parenting.”<sup>24</sup>

In the last decade or so there may be another factor as well, at least with respect to the speed of change. The development and widespread use of social media, particularly by younger generations, can contribute rapidly to shifts in cultural norms. This could even be seen as a form of social contagion whereby movements gain traction through channels previously unavailable.<sup>25</sup> The growing phenomenon of antinatalism as a philosophical

proposition, both to limit human impact on the planet and minimise suffering, has occurred on social media platforms to advance its ideas.<sup>26,27</sup> Similarly, the phenomenon of “motherhood dread” amongst millennials can propagate rapidly, reaching and influencing large numbers of young potential mothers.<sup>28</sup> One example of such dread can be found in Yuni’s list, one of TikTok’s viral videos for 2022. It cynically lists every conceivable downside of pregnancy, childbirth, and parenting (350 cons; along with some misinformation), while reluctantly acknowledging a mere 35 pros (mostly with caveats).<sup>29</sup> The impact of what might seem laughable should not be underestimated.

Also relevant is the alarm associated with climate change. Despite being identified as a factor in avoiding childbearing<sup>30</sup>, a recent survey of 2700 Canadian women places it tenth behind many other factors that align more closely with those already noted, particularly the shifting priorities identified by Kearney and Levine. The top 5 were “Want to grow as a person”, “Need to focus on career”, “Overall low income”, “Desire for leisure consumption”, and “Desire to save money”.<sup>31</sup> Hence, fear of climate change may instead “operate more as a rationalization for postponed fertility than as motivating permanently lower fertility”.<sup>32</sup> In other words, it may appear more selfless to cite concern for the planet instead of reasons that are actually self-oriented.

How have governments responded to declining population? Is it considered enough of a problem to act upon, and if so by what means?

Governments have increasingly responded to population decline by introducing strategies designed to reverse it. The number of countries with policies specifically intended to promote fertility rose from 19 in 1986 to 55 in 2015.<sup>33</sup> Strategies include various financial benefits such as one-off payments, subsidised childcare, paid parental leave, child allowances and tax credits. Mostly, the effects have either been modest or temporary, or both. Japan for example has some of the most extensive pronatalist policies and yet the fertility rate remains stubbornly one of the lowest on the globe.<sup>34</sup> Similarly, South Korea, with the lowest TFR of any country, has poured billions into encouraging couples to have children and yet nothing seems to be working.<sup>35</sup>

## ABORTION AND THE FERTILITY RATE

“Abortion ... has profound demographic implications. No society has achieved low fertility without recourse to abortion ... ”<sup>36</sup>

At face value, it seems obvious that abortion would influence the fertility rate. After all, for any pregnant woman, barring miscarriage, if there weren’t an abortion there would be a birth. But at the population level it’s more complicated than that for at least two reasons.

First, the availability of abortion can affect decisions related to the probability of pregnancy, namely sexual behaviour and contraceptive use, sometimes termed contraceptive intensity<sup>37</sup>; and second, abortion acceptability and availability create cultural norms that synergistically interact with other factors related to fertility such as relational stability, the changing role of women, and the shifting priorities described earlier. Both mean that abortion is not independent of other reproductive decisions or from other factors that affect demography. Another way of thinking about this is to ask to what extent these other factors may have changed had abortion liberalisation not occurred. That is of course unknown but remains an intriguing question.

At the population level, there is an interaction between pregnancy, abortion, and birth. If abortions decline, births will go up, but only if the pregnancy rate remains unchanged. If abortions decline, but at the same time pregnancies also decline, the birth rate may remain unchanged, or potentially also decline if the pregnancy decline outstrips the fall in abortions. Therefore, an increase in births could be achieved by a fall in abortions or an increase in pregnancies, or by a greater margin if both occurred. The implication of this interplay is that to properly understand what is happening, evidence about changes in the birth rate should take account of what is known about the pregnancy rate and the abortion rate, neither of which are always accurately known.

The relationship between abortion and fertility has been studied in two contexts – when abortion policies have become less restrictive; and conversely, when they have become more restrictive. The short answer is that when policies become less restrictive, the birth rate decreases, and when they become more restrictive, the birth rate increases.

When considering the evidence, it is important to keep in mind that an increase in abortion restrictions may not necessarily produce a result that is the reverse of a decrease in restrictions. The legalisation of abortion in many Western nations in the 60s and 70s was interwoven with cultural changes that have now had decades to embed, whereas the recent introduction of restrictions in the US for example, which are so recent as to have been studied to a limited extent with respect to birth rates, have had little time to influence those cultural changes.

Much of the evidence about the impact of abortion restrictions on fertility comes from the US, and there are several changes that have been amenable to study. The first was the legalisation of abortion in several states around 1970 prior to *Roe v Wade* in 1973. This permitted interstate comparisons between these states (repeal states) and others that kept abortion illegal. Then following *Roe*, the repeal states could be used as controls for legalisation in the remaining states. Several studies in this pre-*Roe* period found an increase in abortions and a decline in births in the repeal states.<sup>38,39,40</sup> Levine summarises these and other studies as follows: “the birth rate dropped by roughly 25 percent in the period following legalization, and ... perhaps one quarter to one half of this decline can be attributed to abortion legalization”.<sup>41</sup>

Levine and co-workers then conducted more robust studies that found a decline in births of the order of 5% after legalisation in the repeal states.<sup>42</sup> But when travel from states without legalisation to those with it was accounted for, the estimate was 11%. In other words, travel from neighbouring states into legalising states reduced the birth rate in the neighbouring states too, diluting the difference. If that had not happened, then the relative difference in birth rates would have been about 11%. The decline in births was most pronounced for teens, women aged 35-44, non-whites and unmarried women.<sup>43</sup> Moreover, most of the decline in births could be attributed to women who remained childless throughout their fertile years.<sup>44</sup> Levine *et al.* calculated that at the time of publication (1999) a reversal of abortion legalisation across the US would result in 440,000 extra births (11% of the estimated 4 million births per year).<sup>45</sup>

What happened to pregnancy rates at the same time? Even though this data was difficult to derive, Levine concluded that while the pregnancy rate did not appear to change during the early 70s – and hence the declining birth rate was matched by the increasing abortion rate – later in the 70s the pregnancy rate increased substantially.<sup>46</sup> This can be interpreted as more pregnancies occurring that ended in abortion as the birth rate stabilised. Levine also found a surprising increase in “natural fetal loss” that could be interpreted as abortions being recorded as miscarriages, a finding in keeping with recent work by Studnicki.<sup>47</sup>

The later rise in pregnancies is likely an example of abortion liberalisation influencing decisions about sexual behaviour and contraceptive intensity. This suggests that the availability of abortion was being used as a failsafe, or as has been suggested, a form of insurance against sexual liberty and uncertain contraceptive efficacy.<sup>48</sup> It is unlikely that this psychological construct has changed markedly since.

What happens when abortion restrictions in the US subsequently *increased*, for example through parental involvement laws, Medicaid funding restrictions, mandatory delay requirements, and provider availability? These forms of abortion restriction led to a substantial body of research that will not be addressed in detail here. However, it was reviewed by Levine in 2004, leading to the conclusion that the restrictions caused a decline in pregnancies and abortions but with no effect on births; although there is some evidence that a slight decrease in births may have occurred as the drop in pregnancies outstripped the drop in abortions.<sup>49</sup>

What these observations imply is that a large change in abortion policy, such as legalisation, has a significant effect on birth rates, whereas a lesser change, albeit in the opposite direction via various restrictions on

abortion availability, had little if any effect on birth rates, even though abortions declined. A similar outcome was found for Eastern European countries where modest restrictions did not affect the birth rate even though abortions declined by 25%.<sup>50</sup> Stronger restrictions however, increased the birth rate by 10%, which is a similar amount to that which resulted from legalisation in the US, but in the opposite direction.

A 10% change may not sound like much, but because the ratio of abortions to births is about 1:4, a 10% increase in births could be brought about by a 40% decline in abortions, assuming the pregnancy rate remained the same. If the pregnancy rate also declined, the decline in abortions could have been far greater than 40%.

In a different type of analysis conducted in 1985, Frejka attempted to calculate what would happen to the TFR if there were no abortions at all. Even though that is an unlikely scenario, such a thought experiment does focus attention on what impact the total number of abortions has upon fertility. Frejka performed the analysis for a range of countries and found that with no abortions the TFR would have been higher by between 20% and 90%.<sup>51</sup> Continuing the thought experiment to the current time, that could mean countries with TFRs around 1.5 could instead have a TFR near or above replacement.

With more recent changes in abortion policy in the US, the impact on birth rates has been examined further. Between 2011 and 2014, legal changes in Texas led to restrictions in the funding of abortions, the subsequent closure of half of all abortion clinics, and a decline in the abortion rate.<sup>52</sup> Depending on the study, this led to a 3% increase in births amongst Texan residents who lived more than 50 miles from a clinic,<sup>53</sup> or a 1.2% increase,<sup>54</sup> depending on the study. This type of restriction is relatively modest, especially considering travel to neighbouring states for an abortion was possible, and yet the resultant increase in births is unlike that occurring with the similarly modest restrictions described above, which resulted in no change in births or a small decline. There does not appear to be any straightforward explanation, but it is possible that the more widespread closure of clinics in Texas was sufficient to exert a greater influence on the abortion rate while at the same time producing a lesser decline in pregnancies, together leading to the modest rise in births. It is also possible that for women who were ambivalent about having an abortion, for which there is substantial evidence,<sup>55</sup> the increasing cost of abortion was sufficient to tip the balance in favour of birth.

In September 2021, Texas lawmakers then enacted a ban on all abortions where embryonic cardiac could be detected (Texas Senate Bill 8; SB8), leading to a 60% drop in abortions at Texas facilities in the first month.<sup>56</sup> Despite a six-fold increase in out-of-state abortions for Texan residents, the overall drop in abortions (in state and out of state) was still 38%.<sup>57</sup> This magnitude of fall might be expected to lead to more births even though contraceptive intensity may have increased leading to fewer pregnancies. Indeed, a recent study found an increase in births following the enactment of SB8 that varied by month from 1.7% to 5.1%.<sup>58</sup>

Since the passage of SB8, an even more restrictive abortion policy was enacted in Texas, enabled by the overturning of Roe in June 2022, a change that was replicated in many other US states. While it is probably too early to see what impact the reversal of Roe will have on births across the board, in a recent study looking at the first six months of 2023, there was a 2.3% increase in births in states that had restricted abortion laws compared with those that had not. This occurred despite interstate travel for abortions, an increase in mail-order medication abortions, and a surmised increase in contraceptive intensity.<sup>59</sup>

## CONCLUSION

While fear of overpopulation was and still is foremost in the minds of some, there are reasons to be more concerned about the rapid decline in fertility in many countries, and what it means for economic and social stability. Steadily falling TFR will change populations in some nations dramatically while at the same time demanding radical measures to maintain economies and provide for vulnerable citizens, especially the aged.

The massive funding provided to population control programs in the past has always been utilised to ensure widespread and readily available contraception and abortion, both of which are still seen as essential to reduce

population. And while the reasons for wanting or not wanting children are complex and varied, contraception and abortion remain the two key tools used to serve the desired outcomes of population control. This review has sought to understand the role of one of these, namely abortion, in relation to how birth rates change. Clearly, the abortion rate is influenced by the policies governments use to regulate abortions, and in turn, the abortion rate influences the birth rate depending on the strength of the abortion policy. Furthermore, the acceptability and availability of abortion influence contraceptive intensity and in turn the pregnancy rate. The most likely outcome of more restrictive abortion policy is fewer pregnancies, fewer abortions, and more births.

The various strategies used so far to attempt at least a slowing of demographic decline are not working and yet are costing some communities billions of dollars. But at the same time the cost of allowing demographic decline to continue will be far greater for those countries dealing with it. It is therefore time for different thinking that includes considering the impact of abortion on birth rates. Governments could introduce restrictions of various sorts that have already been shown to increase birth rates. But at the very least they could adopt methods designed to discourage abortion rather than encourage it. Special status given to abortion in the form of buffer zone laws, exceptional funding provisions not afforded other elective procedures, incentives to abortion providers, and so on, need to be considered within a framework that recognises the contribution of abortion to demographic decline. Moreover, it is time for the honest provision of information to women about the negative effects of abortion on their physical and mental health so they can make truly informed decisions.

This review has not been about the moral question of abortion in and of itself, despite its centrality. In a parallel fashion, there is much interest in the impact of abortion on women's physical and mental health and well-being, and yet the central issue will still be what an abortion actually is – the termination of the life of the unborn child. This does not mean that the impact of abortion on women is unimportant, or that the role of abortion in demographic decline is unimportant. They are both important issues that are intimately connected with abortion. And changes in abortion policy and the culture surrounding abortion affect both.

The fact that women want more children than they eventually have<sup>60</sup> tells us that the desire for more births comes not only from governments seeking to solve a variety of impending social problems, but from women themselves. Incentivising births has been tried and found wanting. And although the reasons for having fewer children might be complex, the *means* to achieve that end are not. Abortion is a big player, and it is time to discourage it to enable women to have the children they desire, which in turn will increase the overall birth rate.

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