Fewer births, fewer plans: Unpacking the recent fertility declines in post-transitional societies

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1 Introduction

From the perspectives of both empirical trends and fertility theories, the 2010s and the early 2020s represent a turning point in the history of low fertility. Low fertility has become a truly global phenomenon, with more than half of the countries experiencing a fall in the period total fertility rate (TFR) below the replacement-level threshold of 2.1 births per woman (UN 2024a). Many middle-income countries saw their period fertility rates dropping to very low or „ultra-low" levels and their reproductive trajectories shifted towards later parenthood. This brought an end to the era in which higher-income countries were distinct in their low and delayed fertility patterns. Today, an increasing number of middle-income countries including Brazil, Chile, China, Iran, Thailand, Turkey and Uruguay, have a period TFR at a range of 1.0 to 1.6, i.e. levels which used to be common among higher-income countries. During the last 15 years many countries also repeatedly experienced new record lows in their period fertility rates, often achieved during the spells of strong and unexpected fertility drops. For instance, the TFR in China fell from 1.8 in 2017 to 1.0 in 2024 (UN 2024b) despite the country abandoning its restrictive birth-limiting policies that had been in place since 1979 (Scharping 2018; Attané 2022).

Many countries with a long history of low fertility also experienced unexpected fertility shifts during the last 15 years. The TFR in several East Asian settings, South Korea, Hong Kong and Taiwan, dropped to extreme low levels at 0.7-0.8 in 2023-24, challenging the established terminology and definitions around very low, ultra-low and lowest-low fertility rates. Period TFR also fell sharply in the Nordic countries and in Western Europe, in countries and regions which used to serve as examples of relatively stable and high (i.e., close to the replacement level) fertility rates. Because these fertility declines progressed in times of economic growth and relatively low unemployment rates during the 2010s, when many theoretical arguments would suggest a stable or rising fertility, observers often refer to these fertility trends as unexpected, puzzling and challenging the established theories (e.g., Neyer et al. 2022; Hellstrand et al. 2020 and 2022). More recently, the COVID-19 pandemic and its aftermath, as well as new global crises, conflicts and uncertainties further contributed to fertility drops and fluctuations across the low-fertility world (Winkler-Dworak et al. 2024; Jasilioniene et al. 2024).

Curiously, the unexpected trends in fertility rates in the 2010s occurred at a time when new theoretical perspectives emerged to shed light on what looked as a new fertility divide within the low-fertility world. Rindfuss et al. (2016) argued that „bifurcation" had occurred among economically advanced countries since the turn of the 21st century. They distinguished between low-fertility countries with near-replacement fertility and those with very low fertility, with a TFR at or below 1.5. Their study and many other contributions perceived the fertility divide as an outcome of different institutional conditions in these two groups of countries. Demographic, sociological and economic

research explored the institutional conditions underpinning higher fertility, highlighting the role of social and economic development (Myrskylä et al. 2009 and 2011, Luci-Greulich and Thévenon 2014), the rise of gender equality and gender-egalitarian attitudes and policies (Esping-Andersen and Billari 2015; Goldscheider et al. 2015; Anderson and Kohler 2015; Arpino et al. 2015; Myrskylä et al. 2011), the expansion of family-friendly policies, especially childcare provision and paid parental leaves, and the incorporation of women and mothers in the labour market (Ahn and Mira 2004; Engelhardt and Prskawetz 2004; Feyrer et al. 2008). The new theoretical frameworks, including the *gender revolution* framework (Esping-Andersen and Billari 2015; Goldscheider et al. 2015; Arpino et al. 2015) and the a the *new economics of fertility* (Doepke et al. 2023) were important not only for explaining fertility trends and differentials between countries, but also for their predictive capacity. They implied that societies which reach high levels of development, gender equality and women's and mothers' labour force participation will eventually achieve a higher fertility. Some, like the *gender revolution* framework predicted a U-shaped trend in fertility over time as societies developed and became more gender egalitarian and enhanced their family-friendly policies. They also offered a potential blueprint for policy-makers keen to boost fertility rates.

However, fertility trends in the last 15 years were often at odds with these new grand narratives of fertility change. Although many contributions have addressed the unexpected fertility declines after 2010, especially in the Nordic countries, we still lack a holistic understanding of the recent fertility trends in contemporary high-income countries. Many studies have emphasised the role of uncertainty as a central factor in contemporary fertility dynamics. Vignoli et al.'s (2020) *narratives of the future* framework views this uncertainty as a broad force, going beyond narrow conceptualisations based on the "objective" indicators such as unemployment, inflation or GDP growth. The framework also emphasises the paramount role of ideas, concepts and imaginations of the future in fostering the perceptions of uncertainty and influencing fertility decisions. Given that the recent period has indeed been characterised by considerable degree of instability and the occurrence of multiple crises, the *narratives of the future* serves as a fitting concept for these uncertain times. However, research on the recent fertility dynamics has identified multiple driving factors, which point out at a deeper fertility transformation beyond uncertainty and worries about the future. These include gradual changes in partnerships, sex and contraceptive use (i.e., proximate determinants of fertility in Bongaarts' (1978) conceptualization), structural factors including stagnating incomes among young adults, unaffordable housing and inflation, as well as a broader shift towards lower and more uncertain fertility preferences among younger generations.

This study aims to map the new low-fertility landscape in higher-income countries and outline its key features, both new and old. Among the long-lasting factors, I look at the continuation of the shift towards delayed partnership and family formation and higher lifetime childlessness. Among the more recent factors and explanations, I highlight the accelerated drop in fertility among younger women and women with lower socioeconomic status, a decline in the share of unplanned pregnancies and births, but also a trend to more uncertain and lower fertility preferences among young adults. I also discuss how different theoretical frameworks and narratives on fertility align with these recent trends and highlight uncertainties about global fertility futures.

2 Data and methods

This study focuses on the fertility trends in higher-income countries during the last 50 years (1975-2024), with the main focus on the unexpected fertility declines after the Great Recession, from 2010 to 2024. It combines a review of the recent empirical studies with an analysis of empirical macro-

level data on fertility, looking at summary indicators of fertility as well as more granular data on period and cohort fertility by age, birth order, education and other characteristics. These indicators come from the Human Fertility Database (HFD 2025), national statistical offices and databases, UN (2024b), and other sources. Geographically, this study mainly focuses on the „established" set of low-fertility regions (Europe, North America, East Asia, Australia, New Zealand), but I also pay attention to fertility trends in selected middle-income countries in Asia and Latin America.

3 The puzzling fertility shifts in higher-income countries in the 2010s and the early 2020s

This section provides a broad empirical summary of fertility shifts between 2010 and 2024, highlighting the main features and discontinuities in fertility patterns emerging in this period. This analysis reveals that the fertility decline after the *Great Recession* was driven by a combination of substantial falls in fertility at younger ages, especially among young adults below age 25, and a sharp slow-down in fertility "recovery" at later childbearing ages. While the long-term trend towards later parenthood persisted or even accelerated, and the *tempo effects* continued pushing the period total fertility rates to lower levels, the observed falls in fertility were also driven by declining *fertility quantum*, marked by drops in tempo-adjusted indicators of period fertility.

The following trends and features of the new low-fertility era will be explored in more detail

- *The new record lows:* Sudden drops in period fertility rates, the rising instability and lower predictability of period fertility trends from a short-term perspective. The new record-low fertility levels have been reached in most countries
- *The unexpected acceleration of fertility declines* in the later stage of the COVID-19 pandemic and the post-COVID period (2022-2025) in many countries
- *The end of the higher-low fertility rates:* The reordering of the regional variation in fertility across the low-fertility countries due to substantial fertility declines in all countries that used to have moderately low fertility level.
- *The counter-trend of temporarily rising fertility* in many countries of Central and Eastern Europe during the 2010s which largely ceased during and after the COVID-19 pandemic
- *The temporary convergence* in period fertility rates in Europe, with most countries having a period TFR within a narrow band between 1.2 and 1.6
- *The continuing postponement of parenthood and the "collapse" of fertility at younger ages*, especially below age 25
- *The stall in fertility recovery* at higher childbearing ages, occurring among women born around 1980 and younger, which will eventually lead to a decline in cohort fertility rates. This includes countries that had stable and relatively high (i.e., close to the replacement) fertility levels among women born in the 1960s and 1970s
- *The gradual rise in childlessness* among women born since around 1980
- *The interplay of tempo effect and quantum (level) declines* in fertility changes since 2010
- *The increasing relevance of international migration* as a key factor potentially offsetting low or very low fertility and driving population growth or decline

The following sections are envisioned in the paper:

4 Proximate determinants: changing partnerships, sex and contraception

This section will summarise and discuss the current evidence on the trends towards late partnership formation, more people living without a partner, changing sex behaviour (lower frequency of intercourse and more people not having sex), and changing contraceptive use.

5 Structural drivers of fertility decline

This section will discuss the evidence on the economic-structural factors behind recent fertility declines, including stagnating income among young adults, rapidly rising housing prices in many countries and cities, and, recently, higher inflation and stagnating incomes during 2022-2024. Rising perceptions of uncertainty about the future will also be considered.

6 Fertility drops were often concentrated among women with lower-SES status

This section will summarise the evidence on changing social status differences in fertility behaviour, focusing especially on education and migration status. Some research suggests that the recent fertility declines have been primarily driven by falling fertility among women with lower education, lower income, disadvantaged economic position or lower SES status, potentially leading to changing SES gradients in fertility behaviour. However, the evidence remains mixed, with considerable differences between countries.

7 Changing preferences: lower and more uncertain fertility intentions among Millennials and Generation Z

The available data and research suggest that younger generations often view parenthood as costly, difficult and challenging, with some having doubts about their abilities to become good parents. More important, younger generations born around 1990 and later seem to display lower and more uncertain fertility preferences, with more women and men open towards the possibility of remaining childfree.

8 The elephant in the room: social media and other „unknown factors" behind shifting fertility rates

The current debates also bring in new factors and issues into the spotlight, with social media taking a potentially important, although empirically little explored, role. Other potential drivers of recent fertility declines will also be covered, including rising infertility.

9 Discussion: the new low-fertility landscape

This section will summarise and discuss the current evidence on fertility declines in higher-income countries past 2010, and highlight the key elements of the new low-fertility "regime". It will discuss the relevance of these findings for the future and for family policies. It will critically assess the recent theoretical frameworks aiming to explain fertility change in higher-income countries and bring to the fore concepts and theories that seem to align well with the recent fertility shifts. A central finding stemming from this study is a likely persistence of low fertility and an unlikely future substantial recovery in period fertility rates. The recent fertility drops were driven by multiple factors, most of which are not going to cease soon. The new low-fertility pattern is also underpinned by lower and more uncertain fertility preferences. Therefore, the possibility that period or cohort fertility can recover and reach close-to-replacement levels in the foreseeable future is increasingly implausible.

As a result, our expectations, policies and institutional adjustments should accommodate to this new very low-fertility world.

References

(references to be added)