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Parenthood Expectancy in India: A State-level Analysis

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Abstract

India is undergoing broad demographic shifts, reflecting changes in population structure, fertility patterns, and longevity. This study applies the Parenthood Expectancy (PEX) framework—originally conceptualized by Striessnig and Trimarchi (2023)—to the Indian context, estimating the number of years an average individual can expect to live as a parent. Using nationally representative data from NFHS (Rounds 3–5) and SRS life tables, we estimate state-wise PEX for women and men across 2005–06, 2015–16, and 2019–21. At the national level, motherhood expectancy declined from 39.5 to 33.8 years, and fatherhood expectancy from 24.8 to 20.9 years between 2005–06 and 2019–20. Counterfactual decomposition reveals that this decline was driven more by fertility postponement (–4.2 years for women; –3.2 years for men) than by life expectancy changes (–1.4 years for women; –1.1 years for men). Regional trends show that northern and western states—particularly Rajasthan, Uttar Pradesh, and Maharashtra—experienced the steepest PEX declines due to delayed childbearing and modest survival gains. In contrast, southern states like Tamil Nadu and Kerala exhibited more stable or improving PEX, aided by early fertility transition and sustained gains in longevity. This analysis highlights the importance of jointly tracking fertility and mortality dynamics to understand shifts in the parental life course and inform intergenerational support policies.

Keywords

Demographic Transition, Fertility Postponement, Life Expectancy, Parenthood Expectancy

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Background

Over the past half-century, demographic regimes around the world have undergone profound transitions, marked most prominently by declines in mortality and shifts in fertility timing. Together, these changes have altered the timing and duration of intergenerational relationships, raising important questions about how much of their lives individuals can expect to spend as parents. As life expectancy has increased and childbearing has been increasingly postponed, individuals now tend to become parents later and live longer after doing so—reshaping family roles, caregiving expectations, and demographic support ratios (Billari et al., 2011).

While demographic research has long measured fertility and mortality separately, efforts to capture their joint implications for the parental life course remained limited. To fill this gap, Striessnig and Trimarchi (2023) proposed a novel summary indicator called Parenthood Expectancy (PEX)—defined as the number of years an average person can expect to live as a parent, conditional on becoming one and assuming no child mortality. Calculated by subtracting the mean age at first birth (MAFB) from period life expectancy, PEX captures how trends in fertility timing and longevity combine to shape the remaining lifetime individuals share with their children. This measure provides a population-level lens to assess the temporal space available for parental support, grandparental involvement, and intergenerational exchange, and is particularly relevant in an era where both fertility intentions and caregiving capacities are increasingly shaped by perceived time constraints (Billari et al., 2011; Striessnig & Trimarchi, 2023).

Globally, the net trend in PEX has been shaped by two opposing forces. On one hand, rising life expectancy extends the potential duration of parenthood. On the other hand, rising MAFB—driven by higher education, urbanization, changing gender roles, and economic uncertainty—reduces it, as individuals become parents later in life (Ní Bhrolcháin & Beaujouan, 2012; Neels et al., 2017). For most high-income countries, these forces have largely offset each other in recent decades, with modest increases in PEX observed overall, and significant cross-national and gender differences emerging due to variations in marriage patterns and mortality improvements (Striessnig & Trimarchi, 2023). However, this dynamic remains poorly understood in low- and middle-income countries, where fertility and mortality transitions have been more recent and regionally heterogeneous.

India presents a particularly compelling case for examining parenthood expectancy. As the world's most populous country (United Nations, 2023), it is home to immense variation in demographic indicators across states, castes, and social groups. In terms of fertility, India has experienced a gradual postponement of first births, with the national MAFB slowly rising over the past two decades. This delay is strongly associated with female educational attainment and delayed marriage, particularly in urban areas and southern states (Dommaraju, 2009; James, 2011). However, large pockets of the population, still experience early parenthood

due to prevailing norms of early marriage and low secondary education completion among girls (Singh et al, 2024). National survey data show that while the MAFB for Indian women is edging closer to 22 years, this masks wide regional and socioeconomic disparities (IIPS & ICF, 2021).

In parallel, India has seen substantial gains in life expectancy, from just over 60 years in 2000 to nearly 70 years by 2020, with female life expectancy now surpassing that of males (UNDP, 2020; Aburto et al., 2020). These improvements are driven by reductions in infant and maternal mortality, expanded immunization coverage, and public health investments (Banerjee et al., 2010). Yet, as with fertility, mortality improvements are not uniform. States like Kerala and Himachal Pradesh report life expectancies approaching those of upper-middle-income countries, while Uttar Pradesh and Bihar continue to lag behind (Kulkarni, 2021). Importantly, while early gains in survival came from reductions in child and maternal mortality, recent improvements have increasingly resulted from declines in adult and elderly mortality, which more directly shape PEX (Wilmoth, 2000; Aburto et al., 2020).

Gender differences in mortality are also evolving. Indian women now outlive men by several years, particularly in urban areas (UNDP, 2020). This trend mirrors global observations where lifestyle, rather than biology alone, drives mortality differentials (Luy, 2003; Crimmins et al., 2019). Nonetheless, in rural and marginalized communities, high maternal mortality and limited healthcare access continue to pose challenges to female survival, particularly during the reproductive years (Sanneving et al., 2022).

Given the opposing trajectories of rising MAFB and increasing life expectancy in India, the net trend in PEX remains ambiguous. It is plausible that improvements in survival have offset some of the temporal losses due to fertility delay, but this balance is unlikely to be uniform across regions or between men and women. Moreover, the lack of harmonized national data on paternal fertility has limited our understanding of gendered differences in PEX—despite the fact that union formation and parental roles are deeply gendered in the Indian context (Bledsoe et al., 2000; Rindfuss et al., 1983). Understanding how much time Indian parents can expect to spend with their children thus offers crucial insights not only for demographic modeling but also for shaping reproductive policy, eldercare planning, and family support systems in the decades to come.

This paper presents the first India-specific application of the parenthood expectancy framework. Using nationally representative data on mean age at first birth (MAFB) from the National Family Health Surveys and period life expectancy from Sample Registration System life tables, we estimate state-wise PEX for Indian women (and where possible, men) across three time points—2005–06, 2015–16, and 2019–21. In addition to computing observed PEX values, we construct two counterfactual scenarios to decompose changes over time: one holding MAFB constant to isolate the effect of life expectancy improvements, and another holding life expectancy constant to isolate the contribution of fertility postponement. Through this

decomposition, the study quantifies the relative impact of survival gains and delayed parenthood on the length of parental life across India's diverse demographic landscape. This work not only extends the PEX methodology to a large lower-middle-income country context but also provides a framework for understanding how demographic transitions shape parental support potential, intergenerational time allocation, and reproductive trajectories in the Indian population.

Data and Methods

This study estimates Parenthood Expectancy (PEX) for Indian states using two primary data sources: the National Family Health Surveys (NFHS) for mean age at first birth (MAFB), and the Sample Registration System (SRS) life tables published by the Registrar General of India (RGI) for period life expectancy.

MAFB data for females and males were derived from NFHS Rounds 3, 4, and 5, corresponding to the periods 2005–06, 2015–16, and 2019–21, respectively. Period life tables for males and females were taken from SRS reports for 2007–11, 2015–19, and 2016–20, ensuring temporal alignment with the NFHS data for consistent PEX estimation. These data allow for the construction of state-level and gender-specific estimates across three time points.

In line with prior research (Striessnig & Trimarchi, 2023), Parenthood Expectancy (PEX) is calculated as the remaining life expectancy at the mean age at first birth, assuming negligible child mortality. This assumption is considered reasonable in low-infant-mortality contexts but may lead to slight overestimation of PEX in states with persistently high infant mortality rates, where child deaths could shorten the actual time individuals live as active parents. Due to the unavailability of consistent, age-disaggregated child mortality data across states and time, IMR-adjusted calculations were not implemented.

Formally, for each state (s), gender (g), and year (y), PEX is defined as:

$$PEX_{s,g,y} = e_{MAFB_{s,g,y}} - MAFB_{s,g,y}$$

Where:

- $e_{MAFB_{s,g,y}}$ is the remaining life expectancy at MAFB for the corresponding state, gender, and year.
- $MAFB_{s,g,y}$ is the observed mean age at first birth.

As MAFB is reported in decimals (e.g., 20.58), and life tables provide ex values for completed ages, linear interpolation is used to estimate life expectancy at exact ages. For a given $MAFB_{s,g,y}$ = a + f, where a is the integer part and f is the fractional part, the interpolated life expectancy is calculated as:

$$e_{MAFB_{s,g,y}} = e_{\,a,s,g,y} + f.(e_{a+1,s,g,y} - e_{\,a,s,g,y})$$

Where:

- $e_{\,a,s,g,y}$ is life expectancy at age a,
- $e_{a+1,s,g,y}$ is life expectancy at age a+1,
- f is the fractional component of MAFB.

The resulting PEX is a period measure, capturing fertility and mortality conditions prevailing in a specific timeframe. While it does not reflect the lived experiences of actual cohorts, it offers a robust synthesis of

population-level timing and survival dynamics relevant to the time of observation.

Counterfactual Scenarios

To decompose the contributions of fertility postponement and survival improvement to changes in PEX, two counterfactual scenarios are constructed following Striessnig and Trimarchi (2023):

1. Constant MAFB (Varying LE)
   This isolates the effect of mortality improvements by fixing MAFB at its historical minimum $MAFB_{s,g}^{min}$. PEX is recalculated for each year assuming life expectancy at that fixed MAFB:

$$PEX_{s,g,y}^{Constant\ MAFB} = e_{MAFB_{s,g,y}^{min}} - MAFB_{s,g}^{min}$$

2. Constant LE (Varying MAFB)
   This isolates the effect of fertility postponement by fixing life expectancy at the level observed when MAFB was at its minimum:

$$PEX_{s,g,y}^{Constant\ LE} = e_{s,g}^{ref} - MAFB_{s,g}$$

   Where:

   - $e_{s,g}^{ref}$ is the life expectancy in the reference year (the year in which $MAFB_{s,g}^{min}$ occurred.

Both counterfactuals are constructed using the reference life table corresponding to the year of minimum MAFB. These decompositions are implemented for each gender and state across three time points: 2005–06, 2015–16, and 2019–21. By comparing observed PEX values with those from the counterfactuals, this study quantifies the independent contributions of fertility delay and mortality gains to changes in parental life expectancy across Indian states.

Results

Figure 1 presents trends in Mean Age at First Birth (MAFB) and Life Expectancy at Birth in India across three time points—2005–06, 2015–16, and 2019–20—disaggregated by rural and urban residence.

Nationally, the mean age at first birth increased from 19.18 years in 2005–06 to 20.58 years in 2019–20. This upward trend was observed in both rural and urban areas. Among rural women, MAFB rose from 20.13 to 21.38 years, while among urban women, it increased from 18.76 to 20.20 years over the same period.

Life expectancy showed relative stability between 2005–06 (71.40 years) and 2015–16 (71.10 years), followed by a decline to 67.20 years in 2019–20 at the national level. Rural life expectancy decreased from 74.20 to 71.00 years, while urban life expectancy declined from 69.70 to 66.00 years between 2015–16 and 2019–20.

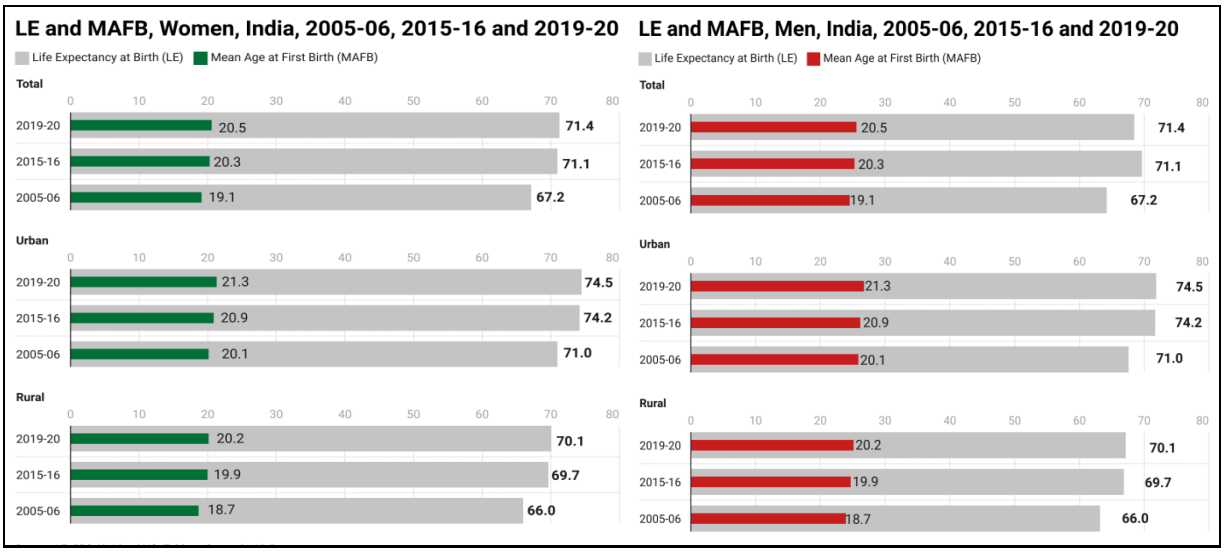

Figure 1 Trends in Life Expectancy (LE) and Mean Age at First Birth (MAFB) in India

Source: LE: SRS Abridged Life Tables, MAFB: NFHS Rounds 3-5

Table 1 Trends in Motherhood and Fatherhood Expectancy in India by residence

Parenthood Expectancy	Residence	2005-06	2015-16	2019-20
Motherhood Expectancy (PEXf)	Total	39.45	34.19	33.88
	Rural	38.65	37.75	33.8
	Urban	35.56	35.04	35.25
Fatherhood Expectancy (PEXm)	Total	24.75	21.58	20.84
	Rural	24.4	25.27	20.78
	Urban	20.27	22.9	21.9

Table 1 displays trends in Motherhood Expectancy (PEXf) and Fatherhood Expectancy (PEXm) in India across three time periods—2005–06, 2015–16, and 2019–20—disaggregated by place of residence.

For women, PEX declined from 39.64 years in 2005–06 to 34.19 years in 2019–20 at the national level. PEXm also declined nationally, from 34.45 years in 2005–06 to 31.64 years in 2019–20. A similar declining trend is seen in both rural and urban areas for both men and women.

Tables 2 and 3 present state-wise trends in fatherhood expectancy (PEXm) and motherhood expectancy (PEXf), respectively, for the years 2005–06, 2015–16, and 2019–20, along with the net change over the 15-year period. At the national level, both measures exhibit a declining trajectory. PEXm declined from 24.75 years in 2005–06 to 20.84 years in 2019–20, while PEXf declined more sharply, from 39.45 years to 33.88 years over the same period.

Table 2 Trends in Motherhood Expectancy (PEXf) by State, India (2005–2020)

States	2005-06	2015-16	2019-20	Δ (2019-20 over 2005-06)
Andhra Pradesh	39.40	40.11	39.56	0.16
Assam	35.04	31.93	31.48	-3.56
Bihar	38.86	36.44	37.01	-1.85
Chhattisgarh	-	30.83	30.15	-
Gujarat	39.18	35.38	35.29	-3.90
Haryana	40.23	34.86	35.12	-5.10
Himachal Pradesh	35.92	38.34	37.74	1.81
India	39.45	34.19	33.88	-5.56
Jammu & Kashmir	35.97	36.65	35.49	-0.48
Jharkhand	-	30.10	36.13	-
Karnataka	39.61	38.19	33.40	-6.21
Kerala	36.39	38.56	35.98	-0.41
Madhya Pradesh	37.38	31.75	34.18	-3.20
Maharashtra	40.69	40.32	34.92	-5.76
Nct Of Delhi	-	39.12	37.69	-
Odisha	36.52	33.47	33.92	-2.60
Punjab	35.31	35.16	34.77	-0.55
Rajasthan	42.05	35.83	35.46	-6.59
Tamil Nadu	33.98	35.50	35.30	1.32
Uttar Pradesh	37.39	31.06	30.78	-6.61
Uttarakhand	-	35.24	35.46	-
West Bengal	40.66	40.81	41.10	0.44

Among states, Bihar (28.40 years), Jharkhand (27.77 years), and Rajasthan (25.97 years) recorded the highest PEXm values in 2019–20, while Karnataka (17.72 years), Kerala (18.72 years), and Assam (18.57 years) reported the lowest. For PEXf, the highest values in 2019–20 were observed in West Bengal (41.10 years), Himachal Pradesh (37.74 years), and Tamil Nadu (35.30 years), whereas the lowest were in Uttar Pradesh (30.78 years), Chhattisgarh (30.15 years), and Assam (31.48 years).

The most pronounced declines in fatherhood expectancy occurred in Andhra Pradesh (-6.98 years), Jammu & Kashmir (-5.28 years), Punjab (-5.02 years), and Haryana (-4.88 years). For motherhood expectancy, the sharpest reductions were seen in Uttar Pradesh (-6.61 years), Rajasthan (-6.59 years), Karnataka (-6.21 years), and Maharashtra (-5.76 years). Declines were observed across most states, though the extent of change varied considerably. A few states demonstrated gains or relative stability in both indicators. West Bengal showed increases for both fathers (+1.74 years) and mothers (+0.44 years), and Tamil Nadu also recorded gains for both (+0.99 years for PEXm, +1.32 years for PEXf). In contrast, Andhra Pradesh, Haryana, Punjab, and Maharashtra experienced simultaneous declines. Mixed trends were evident in states such as Madhya Pradesh (increase in PEXm, decline in PEXf) and Kerala (slight increase in PEXm, marginal decline in PEXf).

Table 3 Trends in Fatherhood Expectancy (PEXm) by State, India (2005–2020)

States	2005-06	2015-16	2019-20	Δ (2019-20 over 2005-06)
Andhra Pradesh	28.76	26.42	21.78	-6.98
Assam	15.79	18.01	18.57	2.78
Bihar	29.59	27.97	28.40	-1.19
Chhattisgarh		23.56	22.85	-
Gujarat	25.14	21.75	25.98	0.84
Haryana	25.61	26.35	20.73	-4.88
Himachal Pradesh	20.95	27.28	20.82	-0.13
India	24.75	21.58	20.84	-3.91
Jammu & Kashmir	28.22	23.00	22.94	-5.28
Jharkhand		22.29	27.77	-
Karnataka	18.04	25.86	17.72	-0.32
Kerala	18.29	20.93	18.72	0.43
Madhya Pradesh	24.65	16.51	26.43	1.79
Maharashtra	20.46	29.18	21.91	1.44
Nct Of Delhi		24.71	25.15	-
Odisha	24.00	20.18	20.59	-3.41
Punjab	26.47	22.45	21.45	-5.02
Rajasthan	27.55	26.59	25.97	-1.59
Tamil Nadu	18.58	20.32	19.57	0.99
Uttar Pradesh	25.06	25.69	25.14	0.08
Uttarakhand		19.89	19.84	-
West Bengal	20.83	21.92	22.57	1.74

Overall, the trends reflect substantial regional heterogeneity. Northern and western states like Punjab, Haryana, Rajasthan, and Uttar Pradesh report the steepest declines across both indicators. In contrast, parts of the east and south—particularly West Bengal and Tamil Nadu—exhibit more stable or improving trajectories. Central states such as Madhya Pradesh and Chhattisgarh show mixed patterns, while southern states including Kerala and Karnataka report consistently lower PEX values with comparatively slower rates of decline.

Figures 2A and 2B present the counterfactual decomposition of changes in Parenthood Expectancy for men and women, respectively. Each panel shows the total change in PEX between consecutive periods, disaggregated into two components: life expectancy gains (shown in blue) and fertility postponement losses (shown in red). The figures are to be read as net change in PEX over time, where upward blue bars indicate gains from longevity improvements, and downward red bars represent losses due to delay in MAFB.

At the national level, the net decline in PEX is driven predominantly by fertility postponement, particularly among women. Between 2005–06 and 2019–20, India lost approximately 4.2 years of motherhood expectancy due to delayed childbearing, compared to a relatively modest loss of 1.4 years attributed to changes in female life expectancy.

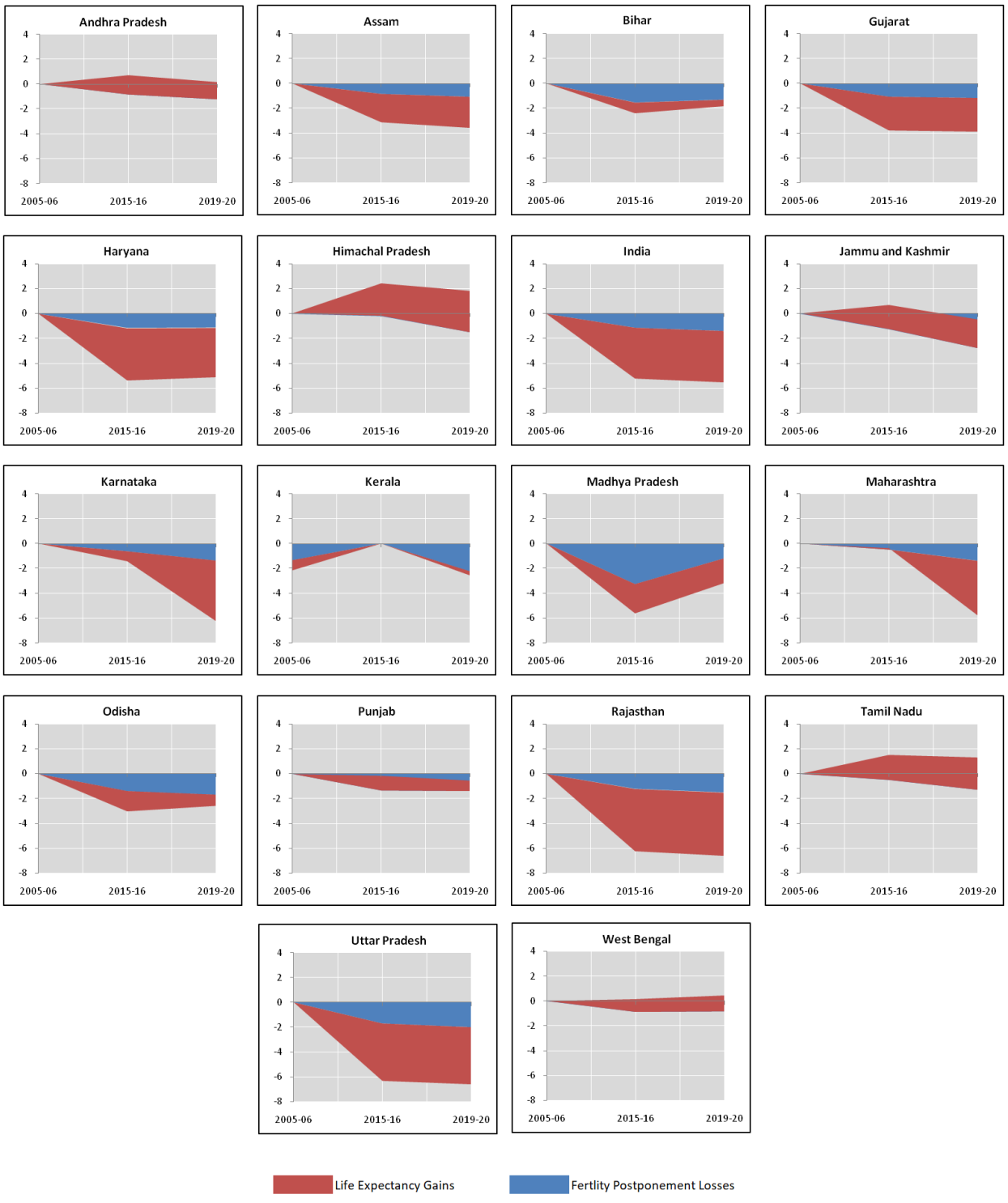

Figure 2A Counterfactual Analysis of Motherhood Expectancy (PEXf)

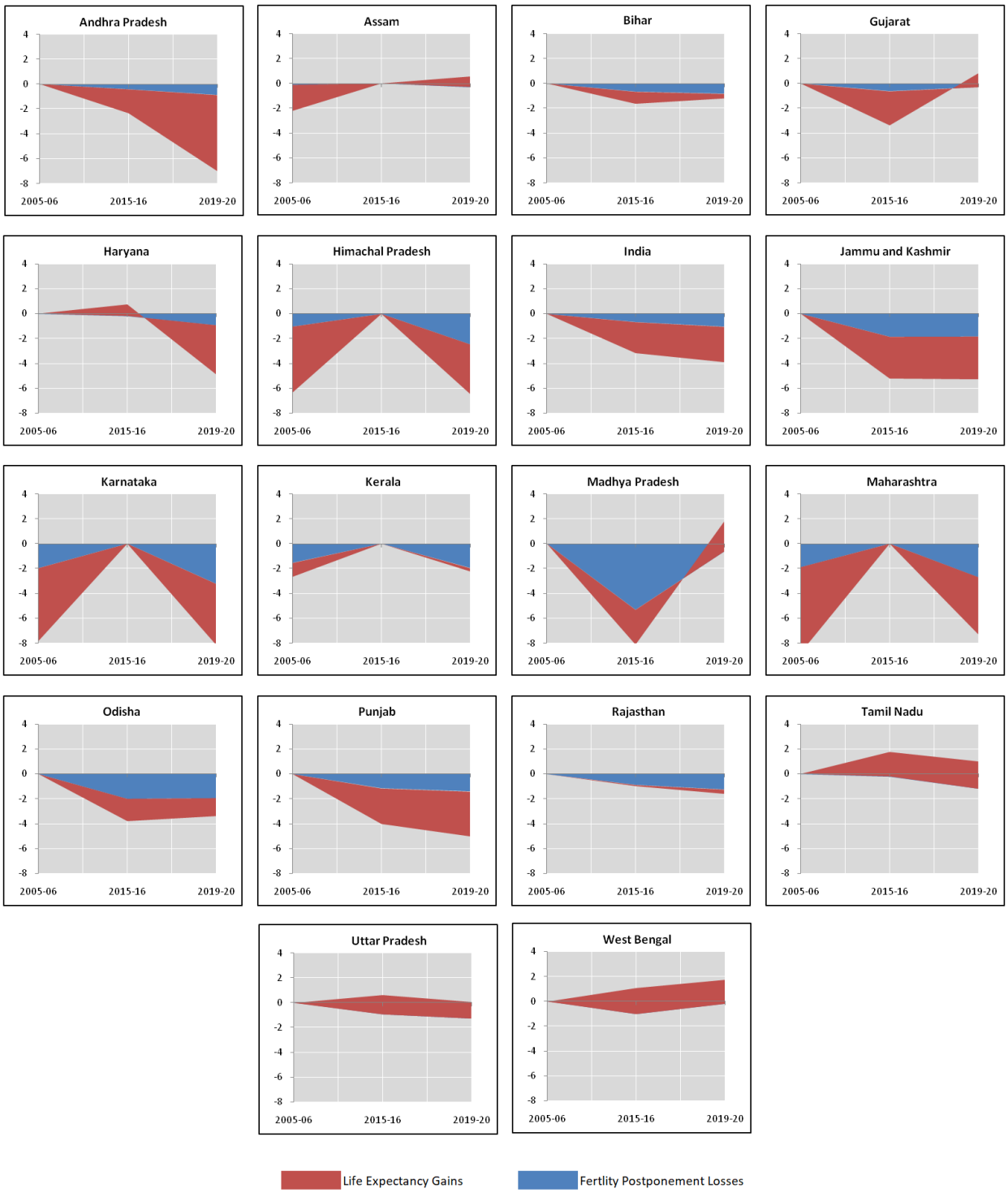

Figure 2B Counterfactual Analysis of Fatherhood Expectancy (PEXm)

A similar but less pronounced trend is seen for men, with fertility postponement losses exceeding life expectancy gains.

Among states, the pattern is highly heterogeneous. States such as Rajasthan, Uttar Pradesh, and Karnataka show steep declines in PEXf almost entirely due to postponement

losses, with minimal or even negative contributions from life expectancy change. For example, in Rajasthan, women lost over 5 years of PEXf from fertility postponement between 2005–06 and 2019–20. Conversely, states such as Tamil Nadu and West Bengal saw modest postponement losses that were offset by gains in life expectancy, resulting in relatively stable or even increasing PEX over time.

In terms of gender contrasts, while most states follow similar directional trends for both men and women, the magnitude of postponement losses is consistently greater for women. For instance, in Haryana and Gujarat, female postponement losses exceed 4 years, whereas male losses remain around 2–3 years or less. In Madhya Pradesh, male PEX gains from life expectancy improvements notably offset the earlier decline due to fertility postponement, a trend not mirrored in the female data.

States showing balanced profiles include Tamil Nadu, West Bengal, and Kerala, where moderate fertility postponement was largely compensated by gains in survival, resulting in near-zero net PEX change.

Finally, the point at which life expectancy gains are offset by fertility postponement losses — referred to as the break-even point — occurs around 2005–06 in most Indian states, indicating an early and persistent influence of delayed childbearing on parenthood expectancy. However, in states like Karnataka, Kerala, and Maharashtra, this intersection is observed around 2015–16. This suggests that in these states, early improvements in adult survival temporarily outweighed the negative impact of fertility postponement, delaying the onset of PEX decline. The later break-even in these states reflects a more gradual fertility transition or stronger early gains in life expectancy, underscoring the varied pace and sequencing of demographic change across regions.

Discussion

This study adopted the Parenthood Expectancy (PEX) framework proposed by Striessnig and Trimarchi (2023) to examine how changing patterns in fertility timing and longevity have altered the number of years Indian women and men can expect to live as parents. Using state-level estimates of mean age at first birth (MAFB) from NFHS and remaining life expectancy from SRS life tables for the years 2005–06, 2015–16, and 2019–20, the study calculated PEX and implemented counterfactual decompositions to assess how changes in survival and fertility timing independently contributed to shifts in PEX. Trends and decomposition results were visualized across Tables 1–3 and Figures 4A and 4B.

Findings show that, at the national level, both PEXf and PEXm declined over time, with sharper declines observed among women. Counterfactual analysis revealed that these declines were primarily driven by increases in MAFB, while gains in life expectancy offered only partial compensation. These results broadly mirror the international evidence from Striessnig and Trimarchi (2023), where the negative effect of fertility postponement increasingly counterbalanced longevity improvements across countries undergoing advanced fertility transitions.

In India, the effects varied substantially across states. In states like Kerala and Karnataka, our counterfactuals reveal that life expectancy gains in earlier periods had temporarily masked the onset of PEX decline, but were eventually overtaken by MAFB increases—explaining the more recent downturns in PEXf. These results align with existing studies showing that in Kerala, fertility postponement accelerated alongside universal female schooling, delayed marriage, and longer life expectancy (Ram, 2012; Dommaraju, 2009). In Tamil Nadu and West Bengal, however, PEXf increased over time, suggesting that life expectancy gains were sufficiently strong to outpace the MAFB effect. These cases resemble countries like France and Sweden in Striessnig and Trimarchi (2023), where balanced demographic transitions allowed for stable or even rising PEX.

States such as Uttar Pradesh, Rajasthan, and Madhya Pradesh, by contrast, show declining PEXf largely due to fertility postponement, with little offset from life expectancy gains. These are also the states where the transition to higher MAFB has been slow, but has recently picked up due to delayed marriages and improved schooling among women (IIPS & ICF, 2021; Ram, 2012). Their fertility and mortality transitions remain midstream—resulting in a temporal disjuncture between gains in childbearing timing and gains in adult survival. In the absence of strong adult mortality improvements, fertility postponement directly translated to a drop in PEX.

The study findings also corroborate claims made by James (2011) that India's demographic transition has been profoundly state-specific. States entering a "second demographic transition" (SDT)—marked by fertility postponement and expanded life planning—do not uniformly benefit in terms of increased shared parental years. Our study quantifies this paradox: in states like Maharashtra and Andhra Pradesh, despite early success in fertility control and improvements in mortality, recent fertility postponement has led to net declines in PEX. The counterfactual analysis helps substantiate this insight by showing that had MAFB remained at its earlier levels, these states would have gained additional years of PEX from longevity improvements alone. In other words, our study not only confirms but quantifies the demographic sequencing effect described in prior literature.

Gender-wise, the study affirms that PEXm remains significantly lower than PEXf across states and time. This is in part due to men's later age at marriage and parenthood (Singh et al., 2023)—commonly 3–5 years older than women—and shorter life expectancy at birth, particularly due to mid-life mortality from external causes such as occupational hazards, injuries, and cardiovascular risks (Borah G., 2021). Unlike women, whose MAFB increases are driven by social factors like education and delayed marriage, men's later fatherhood is more a product of age at union and labor market entry (Dommaraju, 2009). These differences create a consistent gender gap in PEX, aligning with the findings of Striessnig and Trimarchi (2023), where male PEX was found to be lower in nearly all settings.

In high-income countries, shortened PEX due to fertility delay may often be offset by broader social support systems, including paid

parental leave, geriatric services, and childcare support. In India, such infrastructure remains limited, particularly in rural areas. As a result, the shortening of parental lifespan—as reflected in declining PEX—has direct implications for intergenerational care, especially in households without access to institutional eldercare or shared familial caregiving. National Family Health Survey data (IIPS & ICF, 2021) suggest increasing postponement of childbearing in urban areas, declining parity, and delayed age at marriage. These changes may indicate a compression of active parenting years into later adulthood, without the buffering support seen in Western welfare regimes.

Our counterfactual results also highlight a critical policy point: even in states with life expectancy exceeding 70 years, rising MAFB can significantly erode the duration of shared parenting years. For instance, in Andhra Pradesh and Maharashtra, women's PEXf would have been nearly 1–1.5 years higher in 2019–20 had MAFB remained at 2005–06 levels. These losses are not trivial, as they reflect diminished time for parental caregiving, reduced overlap with children's life events, and potentially less involvement in grandparental roles. These consequences may exacerbate dependency burdens, especially in joint families transitioning toward nuclear arrangements.

Overall, this study extends the parenthood expectancy framework into a complex demographic environment like India, where mortality and fertility trends remain deeply stratified. By capturing these intersecting forces through PEX, we offer a novel lens for evaluating family time availability, generational overlap, and social timing—all of which are crucial for future health, welfare, and reproductive planning.

Conclusion

This study provides the first empirical application of the Parenthood Expectancy (PEX) framework in India, offering a novel lens on how mortality improvements and fertility postponement jointly shape the expected parental lifespan. Our findings reveal substantial regional and gender disparities in PEX, with sharper declines observed among women, and in states undergoing rapid fertility transitions. The decomposition of PEX trends underscores the growing demographic trade-offs between delayed parenthood and increased longevity—particularly in states where survival gains are tapering. These insights have implications for intergenerational care, family planning policies, and demographic aging in India. Future research should explore PEX disaggregated by rural-urban residence, socioeconomic strata, and caste groups to better understand the unequal distribution of parental time and its policy consequences.

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