REVISED POPULATION PROJECTIONS FOR SRI LANKA (2022–2047): ACCOUNTING FOR THE IMPACTS OF COVID-19 AND THE ECONOMIC CRISIS

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Abstract:

This study provides updated population projections for Sri Lanka for 2022–2047, explicitly accounting for the demographic impacts of the COVID-19 pandemic and the ongoing economic crisis. These events have disrupted fertility, mortality, and migration patterns, leading to lower fertility rates, delayed marriages, over 16,000 COVID-19-related deaths by 2023, and altered migration flows. Using a cohort-component projection model, fertility, mortality, and migration parameters were adjusted to reflect these shocks. The revised projections indicate a slower population growth compared with earlier estimates, such as those by Dissanayake (2016), highlighting the need for realistic medium-term population forecasts. These findings provide crucial insights for policymakers, emphasizing the importance of adaptive health, social, and economic policies to ensure population well-being and sustainable development in the face of ongoing demographic and economic challenges.

Keywords: COVID-19, fertility rates, mortality, migration, economic crisis, population projections

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Introduction

The COVID-19 pandemic has profoundly influenced Sri Lanka's population and demographic trends, affecting the economy, education, healthcare systems, social behavior, migration, and family planning decisions. Population projections may also be altered due to the pandemic's effects on fertility, mortality, and migration patterns.

Dissanayake (2016) projected Sri Lanka's population to reach 22.16 million by 2022 and 23.1 million by 2037. However, the pandemic may have disrupted these trends. A decline in fertility rates has been observed, with delays in marriage and childbearing attributed to economic uncertainty and health risks. Historically, fertility rates tend to rebound once crises are resolved, as couples regain confidence in starting or expanding their families.

The pandemic has also contributed to increased mortality rates, with Sri Lanka reporting 16,856 COVID-19-related deaths by 2023. Disruptions in healthcare systems could lead to long-term increases in mortality rates, impacting life expectancy and population projections.

Changes in migration patterns are another potential impact. Restrictions on international migration, job losses, and shifts to remote work may alter internal and international migration trends, further affecting population distribution and demographics.

Beyond the pandemic, Sri Lanka's economic crisis compounds these challenges. Economic instability and job losses may depress fertility rates and intensify migration. Reduced access to healthcare and increased poverty could elevate mortality rates, further impacting life expectancy and population growth. Migration trends may shift as individuals seek better opportunities within or outside the country.

The combined effects of the pandemic and economic crisis underscore the importance of realistic medium-term population projections that consider future fertility, mortality, and migration scenarios. Policymakers must closely monitor these trends and adapt policies to ensure the population's health and wellbeing.

Data and Methods

Population projections estimate future population size and characteristics based on assumptions about fertility, mortality, and migration. This study uses the Cohort-Component Projection Methodology, with the following steps:

Step 1: Data Collection and Baseline

The study uses the medium-term population projection by Dissanayake (2016), based on the 2012 Sri Lankan census conducted by the Department of Census and Statistics (DCS). Since the COVID-19 pandemic disrupted population trends from January 2020 onward, the baseline projection is adjusted to the year 2017.

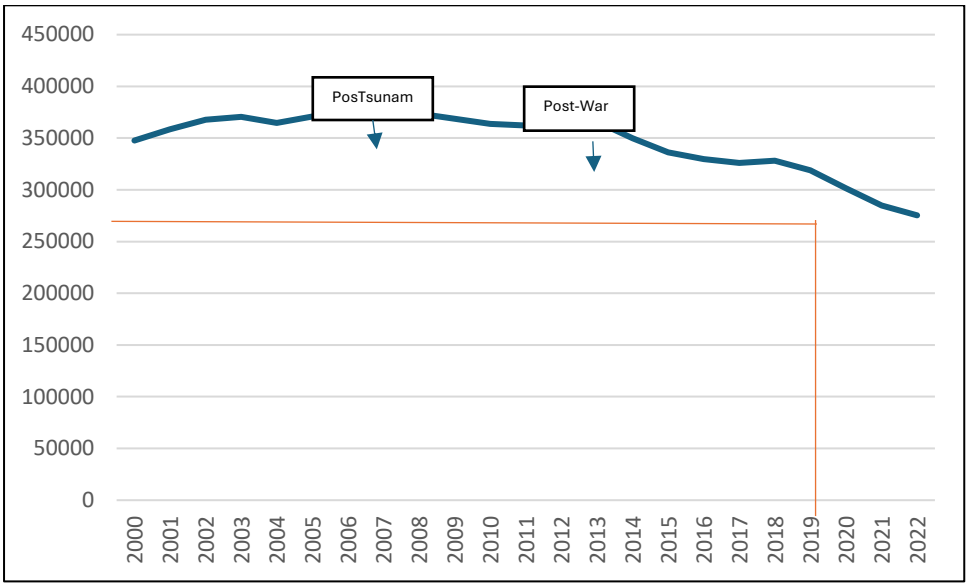
Step 2: Fertility Assumptions

Future fertility rates are projected using historical trends and expert analysis. The COVID-19 pandemic and subsequent economic crisis caused significant delays in marriage and childbearing among younger women and those of childbearing age. Registrar General's records indicate:

- A decline of 17,304 births from 2019 to 2020.
- A smaller decline of 16,859 births from 2020 to 2021.
- By 2022, annual births dropped below 27,000, compared to over 31,000 before 2020.

These trends suggest a fertility rebound as the pandemic subsides, echoing past recoveries seen post-2004 tsunami and post-2009 war. Based on these patterns, a fertility rebound in Sri Lanka is hypothesized to begin in 2023 (Figure 1).

Figure 1 : Distribution of Births by Year, 2000-2022



Source: Drawn from the data obtained from the Registrar General's Department

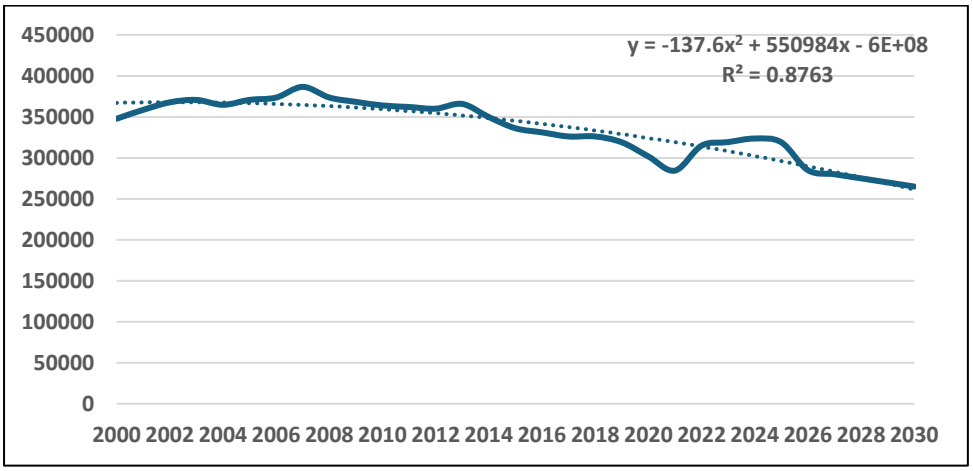
Historical evidence indicates that post-transitional fertility changes are typically temporary adjustments by couples in response to disasters (Coale,1973). This pattern is relevant to Sri Lanka's experience with the COVID-19 pandemic and economic uncertainty. Similar fertility rebounds were observed after the 2004 tsunami and the 30-year civil war (Dissanayake, 2009).

From 2005 to 2009, 27,491 additional births were recorded alongside 21,862 deaths, equating to 1.26 extra births per death. Using this ratio, the 16,808 COVID-19-related deaths by December 2022 are projected to result in 21,178 additional births from 2022 to 2027, averaging 4,236 births annually. Figure 2 illustrates this trend, showing a fertility rebound from 2023 to 2025 before returning to pre-pandemic levels with a gradual decline. A second-order polynomial curve fit ($R^2 = 0.8763$) supports this projection.

The fertility decline due to the economic crisis is assumed to persist until late 2024, given the gradual economic recovery through the IMF loan facility, debt restructuring, and adjustments to taxation and price hikes. After 2024, fertility may temporarily increase as postponed marriages and

childbearing resume, with total fertility rate (TFR) likely stabilizing at replacement levels in the latter half of the 2020s.

Figure 2: Predicting Number of Births, 2021-2030, Sri Lanka



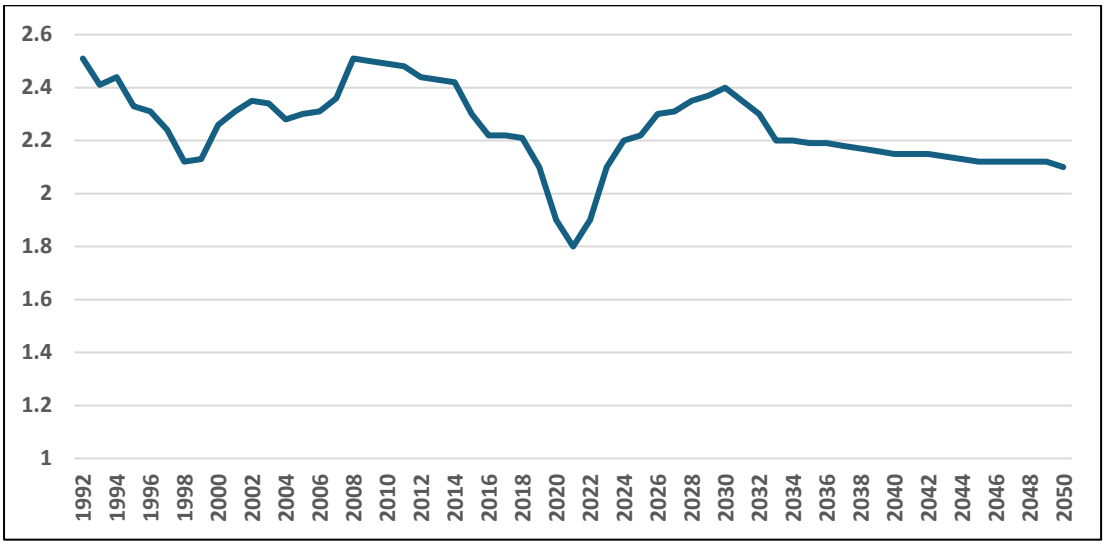
Source: Author's calculations

The Total Fertility Rate (TFR) was previously projected to reach replacement level by 2022 (Dissanayake, 2017). Sri Lanka likely achieved replacement-level fertility in 2022 due to the COVID-19 pandemic. While TFR may have fluctuated slightly below replacement levels until mid-2023, an upsurge to around 2.4 is expected, driven by:

- **Postponed marriages** during the pandemic and economic crisis, leading to resumed procreation.
- **Delayed childbearing**, resulting in an accumulation of births within a short timeframe.

Using the Trussell variant of the Brass P/F ratio technique (IUSSP,n.d), age-specific fertility rates (ASFR) and TFR were adjusted and predicted to 2050 via a logistic function. The hypothesis assumes TFR dipped below replacement in 2022 but rebounded above replacement thereafter. Figure 3 presents these TFR projections.

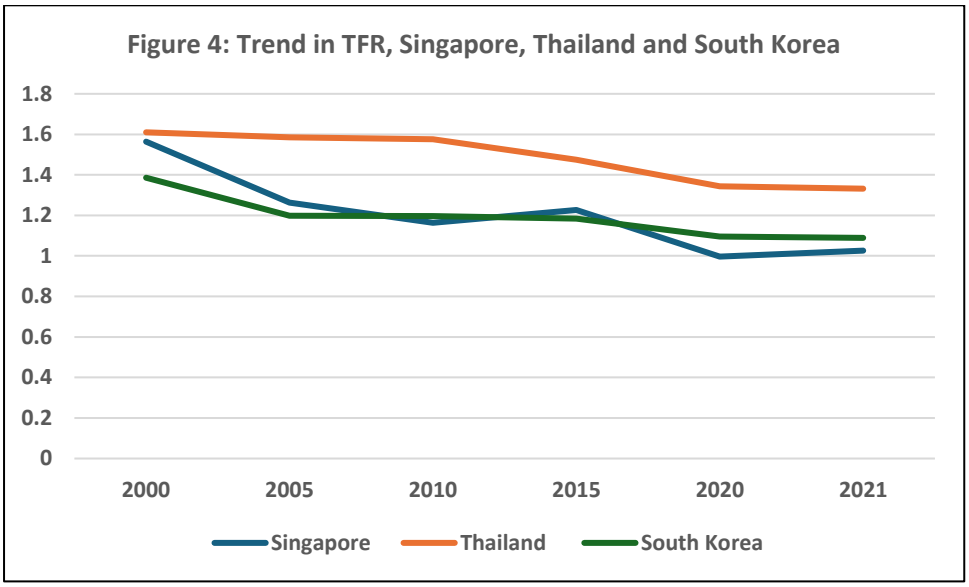
Figure 3: Predicted TFR for Sri Lanka, 2022 to 2050



Source: Author's Calculations

Given the projection period extends to 2047, assumptions about the TFR's future trajectory are necessary. Sri Lanka's TFR is expected to decline during the COVID-19 pandemic and economic crisis, rise temporarily after 2024, and then gradually decrease to replacement level, as shown in Table 1 under standard fertility assumptions. Once the decline resumes, it is anticipated to slow, consistent with trends observed in other Asian countries (Figure 4). This study predicts TFR under three scenarios, outlined in Table 1.

Figure 4: Trend in TFR, Singapore, Thailand and South Korea



Source: Drawn from data of the United Nations, World Population Prospects 2022

Table 1: Assumed Total Fertility Rates, 2017 to 2047

	Low	Standard	High
2017-22	1.67	1.90	2.09
2022-27	2.09	2.31	2.56
2027-32	2.12	2.30	2.50
2032-37	1.98	2.18	2.40
2037-42	1.92	2.15	2.35
2042-47	1.89	2.12	2.30

Source: Author's calculations

Step 3: Mortality Assumptions

This study considers changes in life expectancy and mortality rates primarily influenced by the COVID-19 pandemic and the economic crisis. These factors are assumed to impact mortality trends from 2020, with effects lasting until the end of 2024. Variables such as access to healthcare, disease prevalence, and lifestyle changes inform future mortality estimates, guided by historical data and expert analysis.

Impact of COVID-19

The pandemic significantly influenced global mortality rates. Key factors included age distribution, severity and duration of the pandemic, vaccination rates, and healthcare effectiveness. In Sri Lanka, early lockdowns, high testing rates, and social distancing measures kept infection rates low. The government allocated 0.1% of GDP for quarantine measures, contributed $5 million to the SAARC COVID-19 Emergency Fund, and mobilized healthcare workers. Military, police, and intelligence resources were used effectively for detection, isolation, and tracing efforts.

Economic Crisis Effects

The economic downturn exacerbated by the pandemic worsened living conditions, reduced healthcare access, and increased poverty, all contributing to higher mortality. Sri Lanka's pre-existing debt trap and prolonged lockdowns intensified the crisis, with economic recovery anticipated only after 2024.

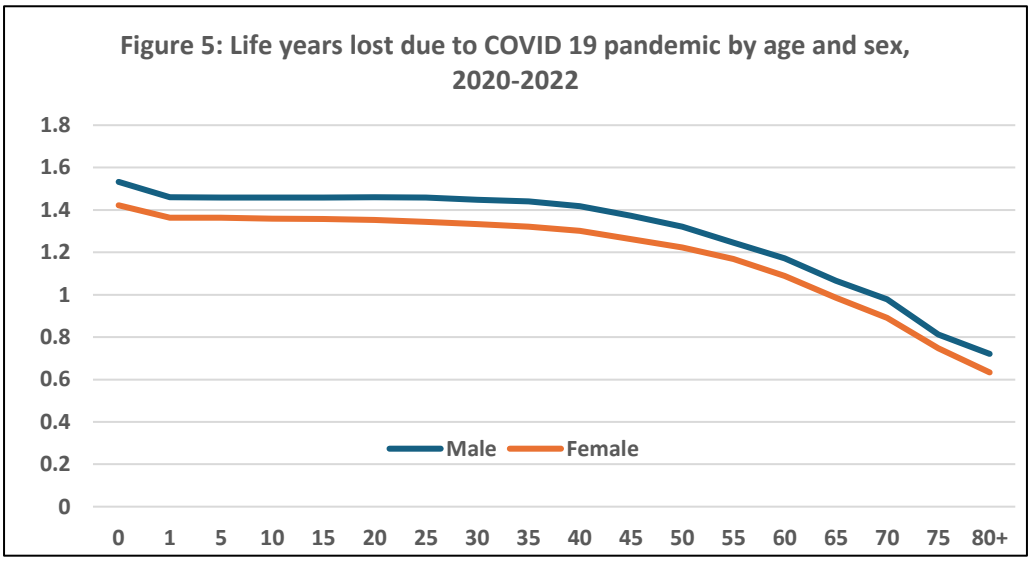
Mortality Projections

Projections relied on epidemiological data, vital statistics, and socioeconomic indicators. Statistical models, such as time-series analysis and simulations, informed age-sex-specific mortality calculations. Due to a lack of comprehensive age-sex-specific mortality data from the Registrar General's Department (RGD), assumptions were based on 2017–2019 mortality patterns under normal conditions.

- Life tables for 2020–2022 incorporated age-specific COVID-19 deaths derived from hospital records, with adjustments for 2,872 unrecorded deaths.
- Pandemic mortality reduced life expectancy at birth by 1.53 years for men and 1.42 years for women.

Figure 5 illustrates the age- and sex-specific loss of life years due to the pandemic.

Figure 5: Life years lost due to COVID 19 pandemic by age and sex, 2020-2022



Source: Author's calculations

COVID-19 disproportionately affects older adults and individuals with pre-existing conditions, leading to higher mortality rates in these groups while younger, healthier individuals experience lower rates. Indirect effects, such as healthcare disruptions, delayed treatments, mental health challenges, and socioeconomic impacts, also contribute to excess mortality (Jayasekara, 2021).

To estimate excess mortality, a detailed analysis of data compared to historical trends was conducted. For reliable mortality projections in Sri Lanka up to 2047, a logistic function was used. This mathematical model, characterized by an S-shaped curve, effectively describes growth patterns and plateaus observed in life expectancy (Lee et al., 2023).

The logistic function fits historical life expectancy data to estimate parameters like initial values, growth rates, and saturation points, enabling trend analysis and future projections within reasonable bounds (U.S Census Bureau. (n.d.)).

Table 2: Assumed Life Expectancy Values by Sex, 2017 to 2047

Period	Males			Females		
	Low	Standard	High	Low	Standard	High
2017-22	70.06	73.44	79.42	74.85	79.96	81.58
2022-27	70.74	71.97	80.02	75.68	78.81	82.47
2027-32	71.38	72.34	80.51	76.47	79.31	83.25
2032-37	72	72.94	80.91	77.22	80.08	83.93
2037-42	72.6	73.51	81.23	77.93	80.81	84.53
2042-47	73.16	74.06	81.49	78.61	81.47	85.06

Source: Author's calculations

Step 4: Migration Assumptions

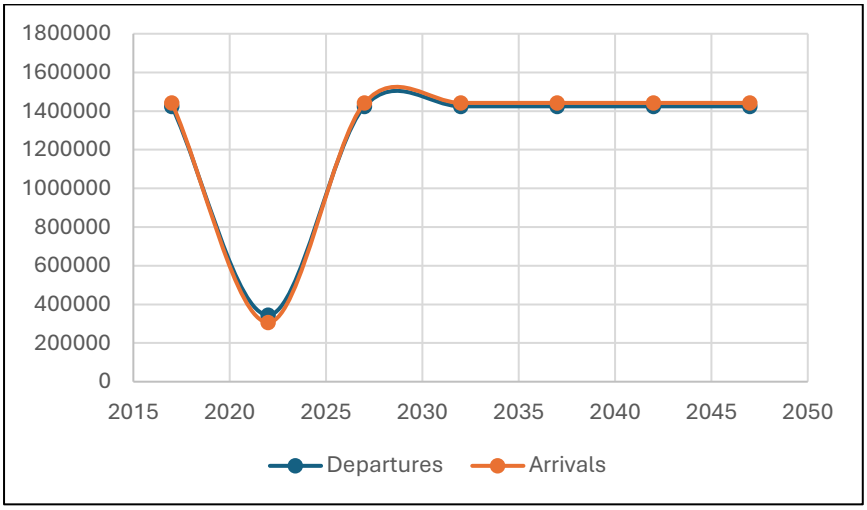
Migration patterns are influenced by historical trends, economic factors, policy changes, and global events like the COVID-19 pandemic. While migration is harder to predict than fertility or mortality, it is significantly shaped by national and destination policies, socio-economic conditions, and disasters. In Sri Lanka, migration trends have been impacted by the pandemic, with restrictions and the economic crisis affecting both emigration and immigration.

Historically, Sri Lanka has been an emigration country, particularly since 1948, with a significant rise in unskilled migration to the Middle East and South-East Asia after 1977. The pandemic drastically reduced outward migration, with a 56% drop in the first half of 2020 compared to 2019. However, repatriations surged, and many migrants returned due to job losses, wage cuts, and other negative impacts of the pandemic. Migration resumed in 2021, especially among youth seeking better opportunities abroad, as shown by the Sri Lanka Opinion Tracker Survey (SLOTS), which found that 27% of Sri Lankans, particularly the young and educated, would emigrate if given the chance (Institute for Health Policy, 2021).

Before the pandemic, Sri Lanka's economy showed signs of weakness, with slow growth and rising fiscal deficits (World Bank. (n.d.)). The ongoing crisis, including high unemployment and increased poverty, has led to large-scale migration, especially among youth seeking better job

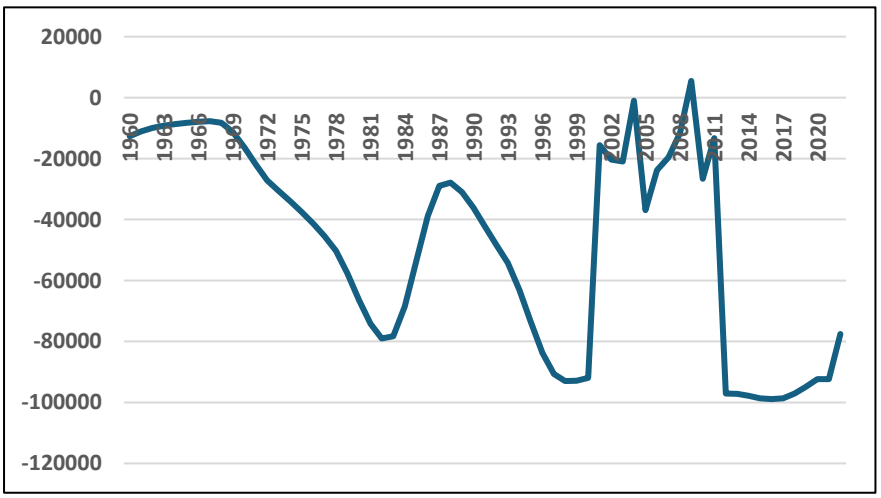
prospects. Data from 2017 to 2022 show a sharp drop in international arrivals and departures due to pandemic restrictions, but trends began normalizing by 2023, accelerating with the economic crisis. It is assumed that migration levels will remain high until 2047, as supported by the international net migration and migration rate data (World Bank. (n.d.)).

Figure 6: International Departures and Arrivals



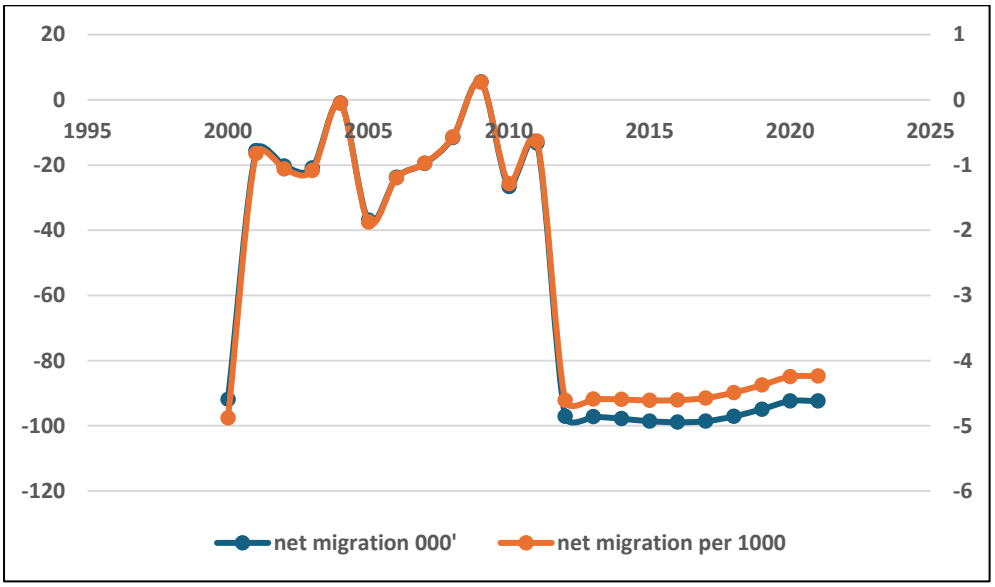
Source: Statistical Abstracts, Department of Census and Statistics (various years)

Figure 7: International Departures and Arrivals



Source: World Bank Data

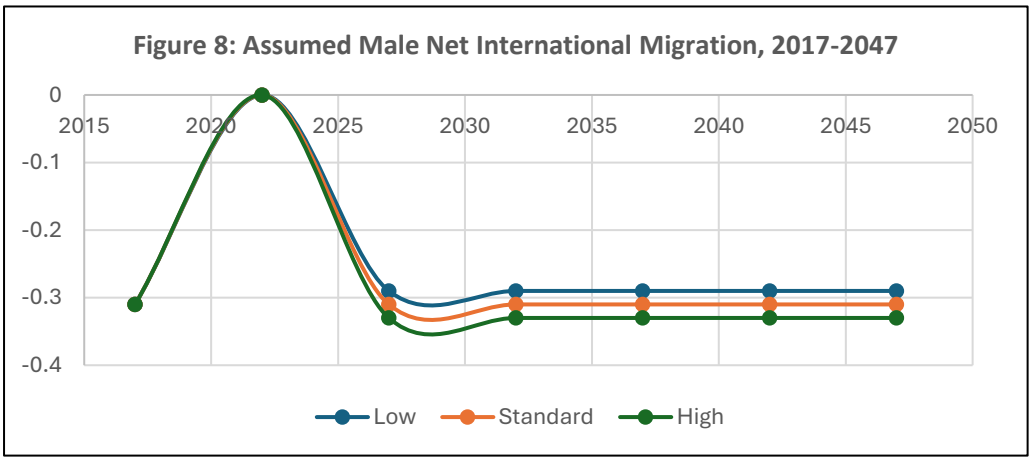
Figure 8: International Departures and Arrivals



Source: United Nations, Department of Economic and Social Affairs, Population Division, 2024

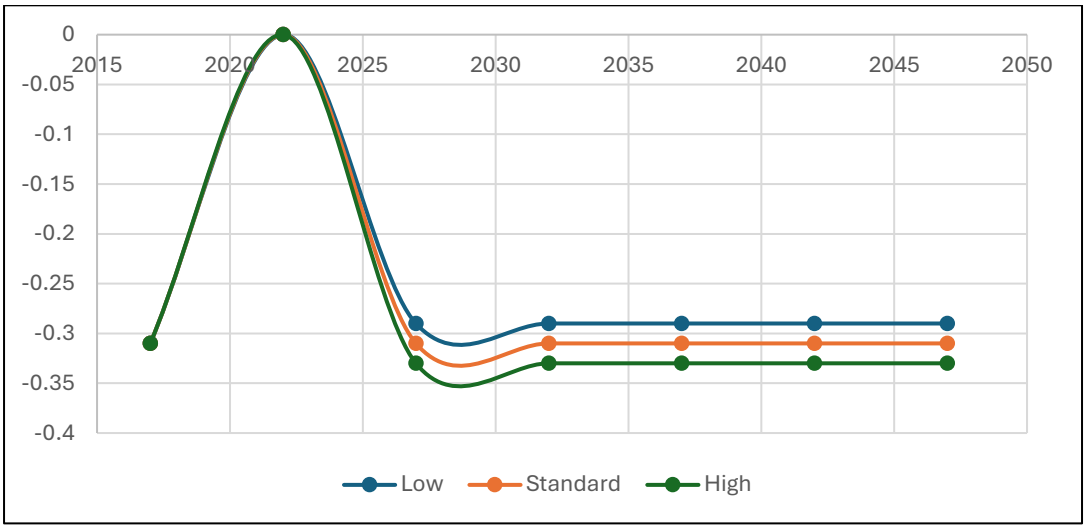
By analyzing these trends in international migration patterns, the net migration for both men and women was hypothesized, as shown in Figures 9 and 10.

Figure 9: Assumed Male Net International Migration, 2017-2047



Source: Author's calculations

Figure 10: Assumed Female Net International Migration, 2017-2047



Source: Author's calculations

Evolution of the Age-Sex Structure of the Population

The changing age structure of Sri Lanka's population has significant implications for various sectors, including social, economic, and healthcare. Analyzing the age structure helps policymakers anticipate shifts in healthcare needs, such as increased services for chronic diseases and long-term care for an ageing population or investments in maternal and child health for a youthful population. It also informs labor market policies, as an ageing population may lead to a declining working-age population, while a youthful one offers potential for economic growth through education and employment opportunities.

Economic implications include changes in consumption patterns, savings, and labor force participation. An ageing population may drive higher healthcare costs and reduced productivity, whereas a larger working-age population can spur economic growth. Social dynamics also shift, with changing intergenerational relationships and caregiving responsibilities, highlighting the need for social policies to address evolving needs.

Studying the age structure is crucial for long-term planning, allowing for informed decisions on infrastructure, education, healthcare, and social welfare policies. Figures 11 to 16 illustrate the evolving age-sex structure

of Sri Lanka's population from 2022 to 2047 based on this study's projections.

Figure 11: Population Pyramid 2022

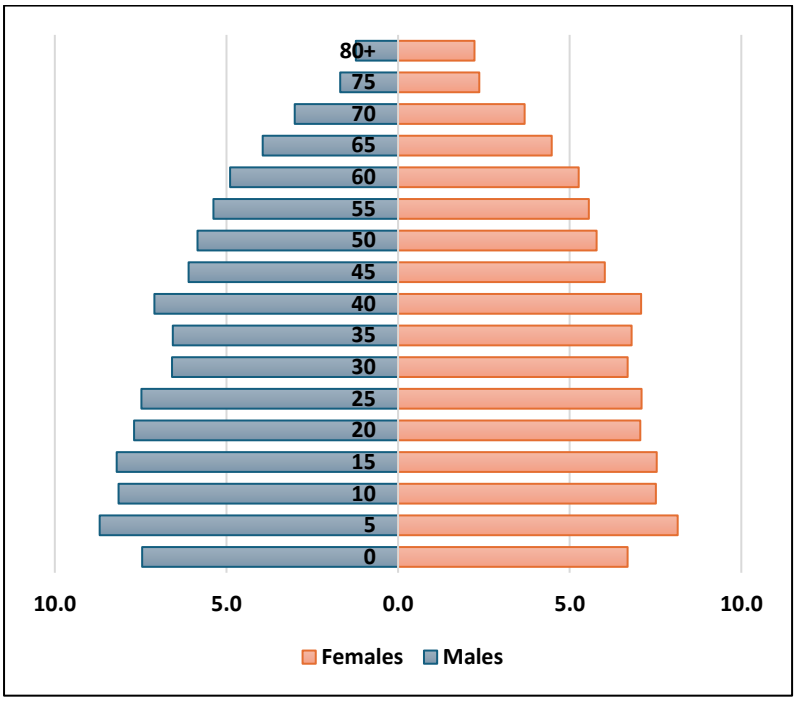


Figure 12: Population Pyramid 2027

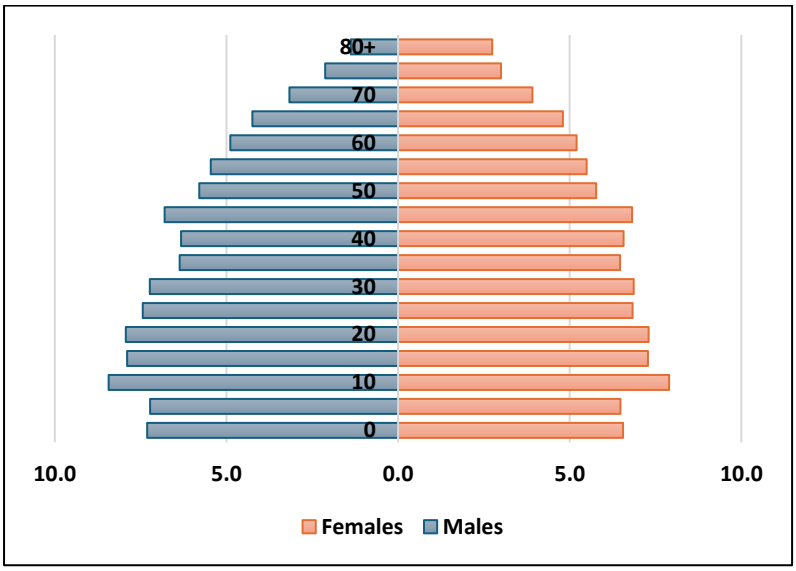


Figure 13: Population Pyramid, 2032

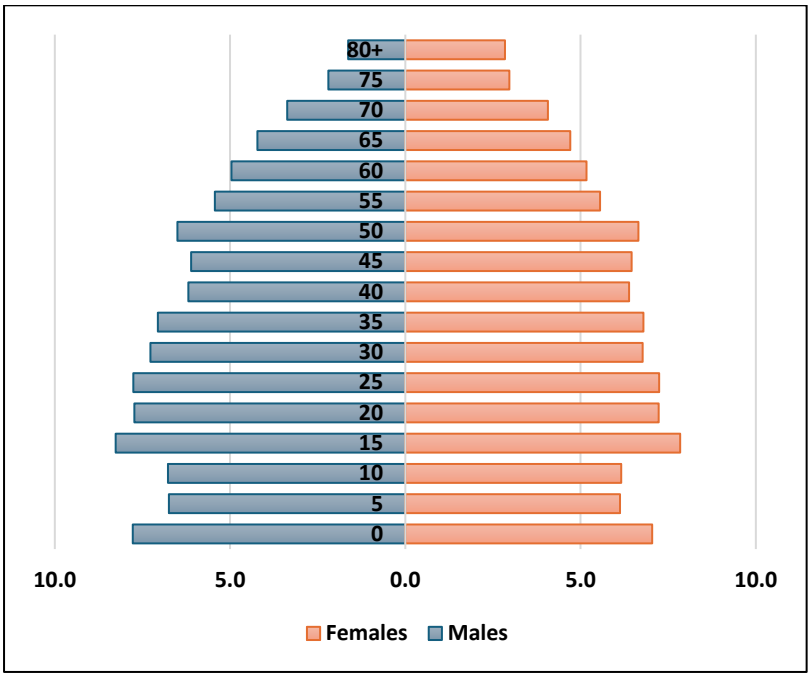


Figure 14: Population Pyramid, 2037

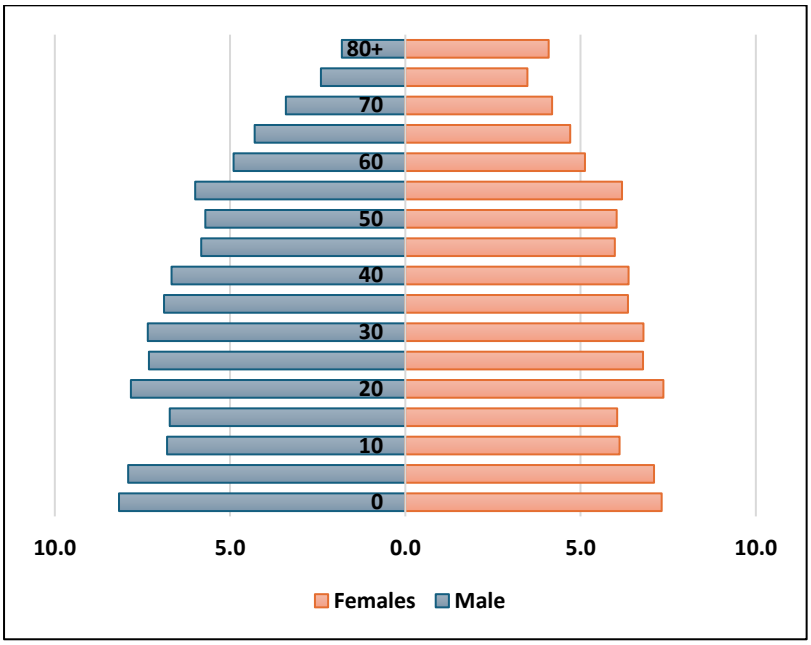


Figure 15: Population Pyramid, 2042

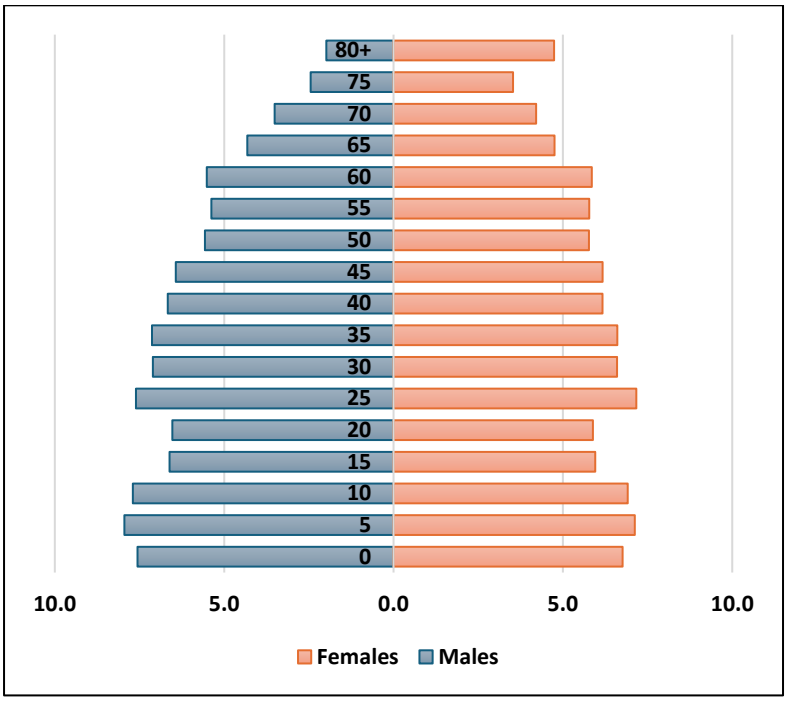
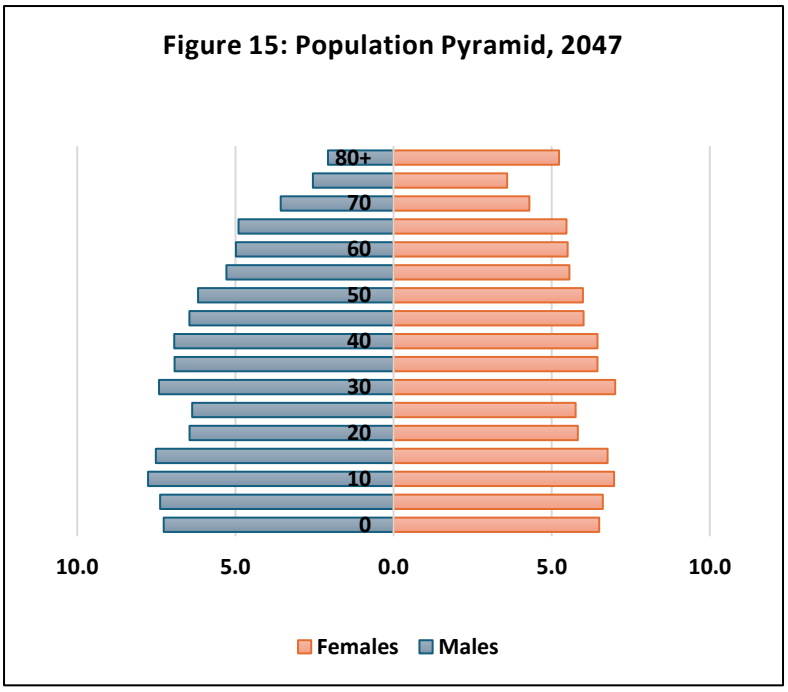


Figure 16: Population Pyramid, 2047



Sri Lanka's age structure has been shaped by significant events, including the 2004 tsunami, the 30-year civil war ending in 2009, the COVID-19 pandemic, and the ongoing economic crisis. These events are clearly reflected in projected future population structures. Notably, the birth loss during the COVID-19 period and its continuation due to the economic crisis will affect future cohorts, particularly those aged 20-29 by 2047. However, a predicted fertility surge after 2024 will partially offset the declining labor force by increasing fertility, especially in the 10-19 age cohort.

A key observation is the rising number of older women, which can be attributed to improved survival rates in contrast to men. This improvement is due to Sri Lanka's healthcare investments, maternal and child health programs, women's empowerment, and social welfare systems. On the other hand, older men face lower survival rates due to biological, lifestyle, and healthcare access factors. Men tend to have higher rates of risky behaviors and are less likely to seek medical care, which contributes to reduced life expectancy. Addressing these issues requires promoting healthy lifestyles, preventive healthcare, and gender-sensitive policies.

The projected increase in women aged 80 and above brings important policy implications. These include:

1. **Healthcare and Long-Term Care**: Ensure access to quality healthcare, geriatric care, and long-term care services like home-based or institutional care.
2. **Social Protection and Financial Security**: Strengthen social welfare programs, pensions, and targeted financial assistance to combat economic insecurity.
3. **Gender-Specific Concerns**: Address challenges such as gender-based violence, social isolation, and caregiving responsibilities, while promoting gender equality.
4. **Social Inclusion and Active Ageing**: Encourage older women’s participation in social, cultural, and recreational activities to enhance their well-being.
5. **Caregiver Support**: Provide support for caregivers, including respite care, training, and financial assistance.

6. **Research and Data Collection**: Prioritize data collection on older women to inform evidence-based policy decisions.

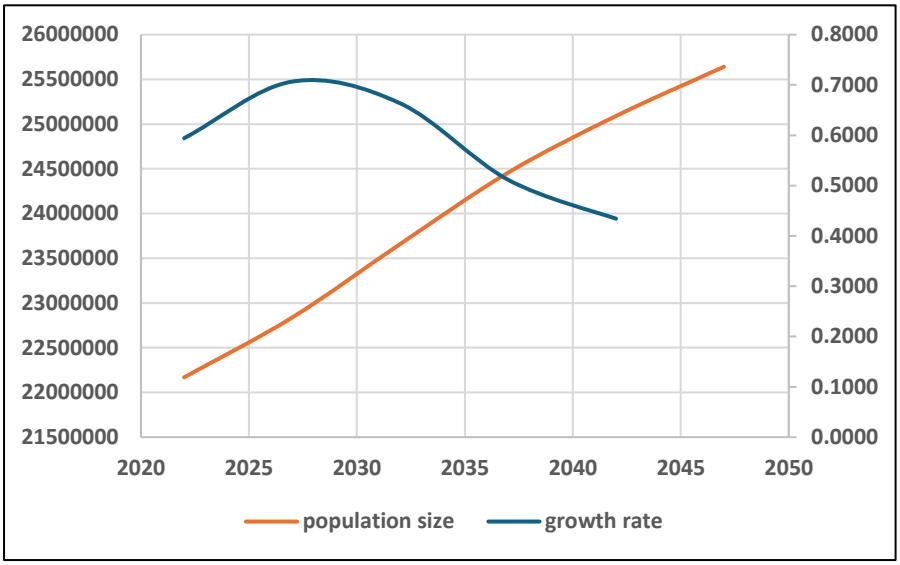
A multi-dimensional approach is necessary to ensure the dignity and well-being of older women in Sri Lanka, promoting a society that supports its aging population.

Population Size and Growth

Population projections in this study, based on assumptions about future births, deaths, and migration, indicate that Sri Lanka's population will increase by 3.5 million from 2022 to 2047, growing from 22.2 million to 25.6 million. This represents an average annual increase of 0.139 million people. After 2025, population growth is expected to accelerate due to a fertility increase anticipated post-COVID pandemic, reversing the earlier slowdown caused by the pandemic and economic crisis. However, growth will likely slow again after the 2040s as these temporary effects subside.

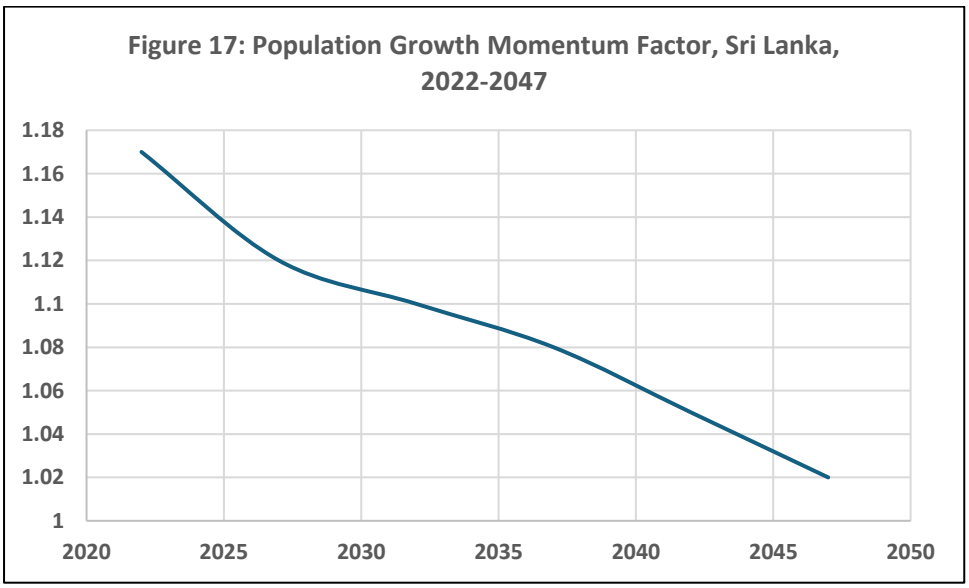
The population will continue to grow due to a high concentration of women in reproductive years and the fertility increases following the tsunami, war, and the COVID-19 pandemic. Population momentum, driven by the birth cohorts already born, will sustain growth even as fertility rates decline. Sri Lanka's momentum factor (MF) was 1.17 in 2022, indicating continued population growth, with projections suggesting that it will remain above 1 for the first half of the 21st century, preventing population decline during this period.

Figure 17: Population Size and Growth Rate, Sri Lanka, 2022-2047



Source: Author's calculations

Figure 18: Population Growth Momentum Factor, Sri Lanka, 2022-2047



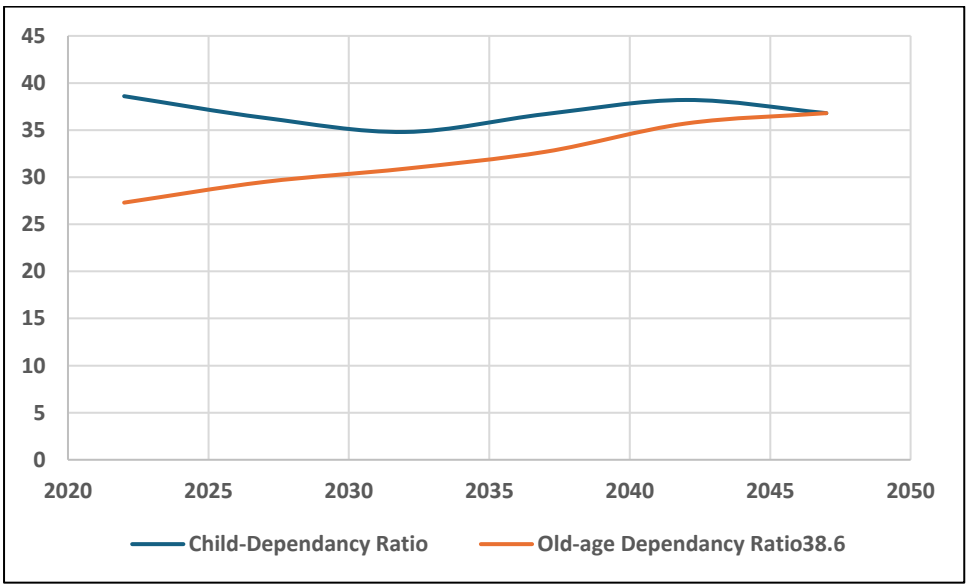
Source: Author's calculations

Size and Growth of Different Categories of Population

Figure 18 shows that Sri Lanka's workforce population will start declining by 2035, while the child and older populations will have equal proportions by 2047. Currently, the child dependency ratio (38.6%) is higher than the old-age dependency ratio (27.3%), but by 2047, both will reach 36.8%, leading to a double burden on the workforce. To address this, policies like raising the retirement age and creating better employment opportunities are necessary. The child dependency ratio is expected to decrease post-COVID, offering an opportunity to redirect savings into other economic areas.

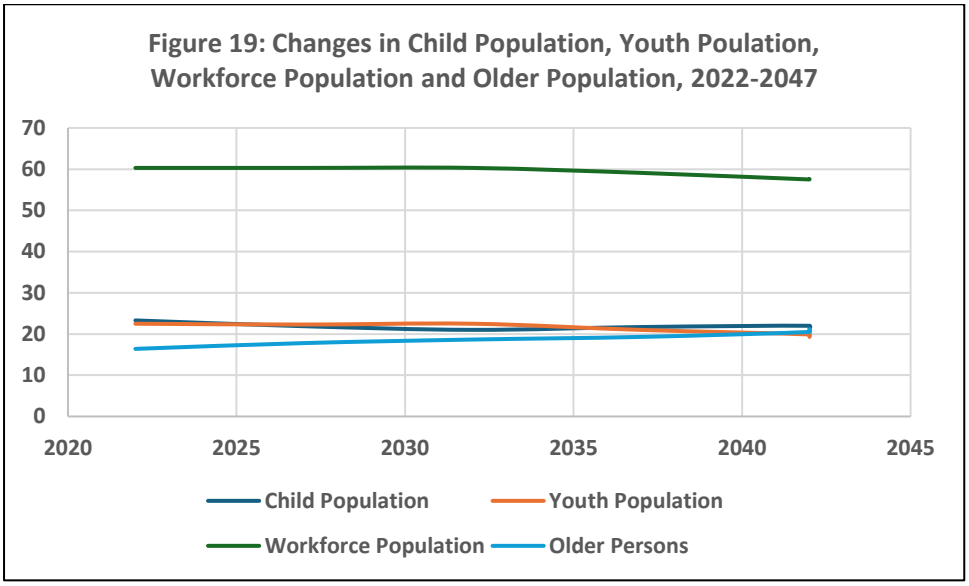
A notable trend is the decline in the youth population, which will impact Sri Lanka's economy by reducing the labor force, leading to a shortage of skilled workers and lower productivity. To counter this, long-term policies are needed, including education and skills development, promoting innovation, and adapting social welfare systems to support an aging population.

Figure 19: Child and Old-age Dependency Ratios, 2022-2047, Sri Lanka



Source: Author's calculations

Figure 20: Changes in Child Population, Youth Population, Workforce Population and Older Population, 2022-2047



Source: Author's calculations

Demographic Dividends

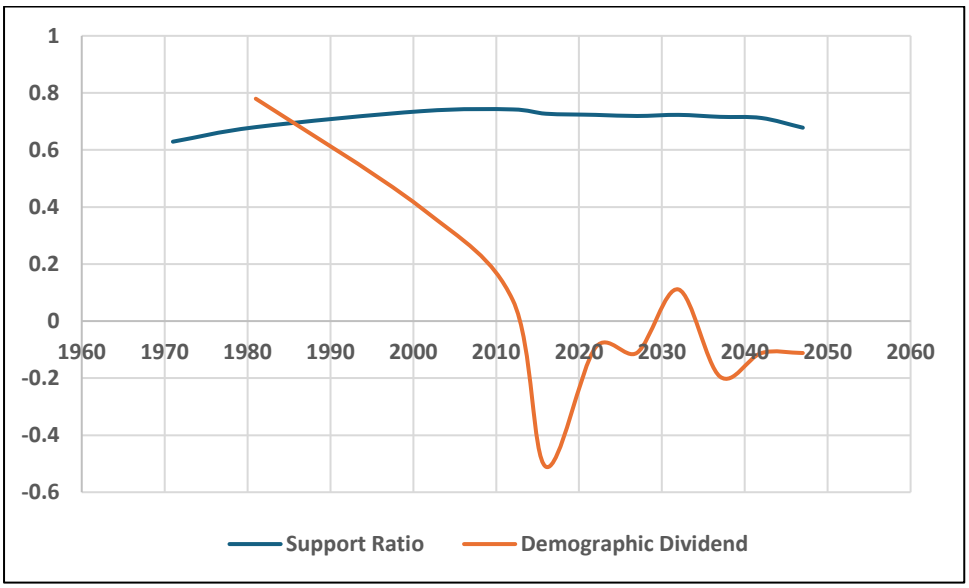
Understanding the first demographic dividend is crucial for assessing economic growth potential, labor dynamics, poverty reduction, and long-term planning. Sri Lanka's demographic window closed in 2018, but a rebound occurred in the early 2020s due to an upsurge in fertility around 2000, especially among older women. This fertility surge led to an increased labor force entering in the 2020s. Despite the pandemic and economic crisis, fertility rebounds are expected to continue into the 2030s, presenting an opportunity for economic growth if properly leveraged.

To maximize this demographic advantage, Sri Lanka should invest in education and skills development, promote job creation through supportive policies for SMEs, encourage Foreign Direct Investment (FDI), invest in infrastructure, foster innovation, and ensure gender equality and women's empowerment. Other strategies include promoting balanced regional development, implementing social protection measures, ensuring environmentally sustainable growth, and regularly

evaluating policy impacts to optimize the benefits of the demographic dividend.

Additionally, the decline in the support ratio since 2000 reflects demographic shifts, with increased fertility leading to a larger age base. The National Transfer Accounts (NTA) estimates indicate that the support ratio—measuring the number of workers available to support consumers—will remain steady at about 7 workers for every 10 consumers until 2040 (UNFPA,2021). These insights are essential for effective policymaking and addressing emerging demographic challenges.

Figure 21: Support Ratio and First Demographic Dividend, Sri Lanka



Source: Author's calculations

Sri Lanka has not fully capitalized on the demographic window of opportunity for economic growth, unlike many East Asian countries during their first demographic dividend. This study, however, highlights the potential to leverage the second demographic dividend to address the challenges of an aging population. While the two anticipated rebounds in the first demographic dividend will delay the aging issue until the 2040s, they present an opportunity to increase economic productivity by expanding the working-age population.

With a larger workforce, economic output can rise, generating revenue to address the aging population's needs. Additionally, increased savings and investments can be facilitated by policies promoting decent jobs and savings programs, contributing to infrastructure development and social welfare for the future. A growing working-age population allows governments to strengthen social security systems, including pensions, healthcare, and long-term care, providing a foundation for managing the aging population's challenges.

Although the first demographic dividend stage has passed, Sri Lanka can still benefit from these rebounds by investing in economic and social development, sustainable policies, and long-term planning. Additionally, older workers can pass on their expertise through mentorship and skill development programs, ensuring the preservation of human capital. Effective use of these rebounds will help Sri Lanka mitigate the future impacts of an aging population.

Population Projections

Standard Projections

Table S1: Projected Population by Age and Sex, 2022

Age	Males	Females	Total
0	798553	766354	1564907
5	931135	933623	1864757
10	872196	860786	1732982
15	877989	863593	1741582
20	823736	808741	1632477
25	800821	812993	1613814
30	705329	766508	1471838
35	702857	779759	1482616
40	760331	811468	1571799
45	653590	690270	1343860
50	625859	662885	1288744
55	576142	636951	1213093
60	524120	603098	1127218
65	422436	513047	935483
70	322477	422579	745056
75	180560	271235	451794
80+	131688	255202	386890
Total	**10709817**	**11459093**	**22168910**

Table S2: Projected Population by Age and Sex, 2027

Age	Males	Females	Total
0	805835	774400	1580235
5	796425	765436	1561861
10	929609	933002	1862611
15	870259	860084	1730343
20	874488	862467	1736955
25	820039	807273	1627313
30	797311	811109	1608421

Table S2: Projected Population by Age and Sex, 2027 – Continued

Age	Males	Females	Total
35	701465	764132	1465597
40	696917	776171	1473087
45	749819	805518	1555338
50	638527	681862	1320389
55	601577	649172	1250749
60	538787	614608	1153395
65	467933	567450	1035383
70	348925	462462	811387
75	234098	354404	588503
80+	151839	324032	475871
Total	**11023854**	**11813582**	**22837436**

Table S3: Projected Population by Age and Sex, 2032

Age	Males	Females	Total
0	935920	898396	1834315
5	803861	773483	1577344
10	795242	764958	1560200
15	927718	932286	1860004
20	867070	859033	1726103
25	870895	860996	1731891
30	816763	805516	1622279
35	793305	808748	1602053
40	696008	760840	1456848
45	687874	770799	1458674
50	733479	796274	1529753
55	615041	668652	1283693
60	564102	627729	1191831
65	482724	580290	1063014
70	388134	514530	902664
75	254413	391726	646138
80+	187722	424270	611993
Total	**11420271**	**12238526**	**23658797**

Table S4: Projected Population by Age and Sex, 2037

Age	Males	Females	Total
0	964748	924953	1889701
5	933918	897379	1831297
10	802810	773034	1575844
15	793794	764411	1558205
20	924649	931225	1855874
25	863889	857674	1721562
30	867807	859256	1727063
35	813080	803339	1616420
40	787705	805512	1593217
45	687775	755962	1443738
50	673898	762529	1436427
55	708069	781875	1489944
60	578773	648155	1226927
65	507632	595003	1102635
70	402540	529569	932109
75	284435	440508	724943
80+	213891	517216	731107
Total	**11809413**	**12647601**	**24457013**

Table S5: Projected Population by Age and Sex, 2042

Age	Males	Females	Total
0	916096	877296	1793392
5	963047	924026	1887073
10	932842	896893	1829735
15	801521	772525	1574046
20	791423	763598	1555021
25	921615	929847	1851462
30	861163	856058	1717221
35	864290	857091	1721381
40	807853	800340	1608193
45	779140	800690	1579830

Table S5: Projected Population by Age and Sex, 2042 – Continued

Age	Males	Females	Total
50	674878	748408	1423287
55	651852	749565	1401418
60	668225	759374	1427599
65	523227	616607	1139834
70	425476	546131	971607
75	296579	457693	754272
80+	240478	614916	855395
Total	**12119707**	**12971058**	**25090765**

Table S6: Projected Population by Age and Sex, 2047

Age	Males	Females	Total
0	900836	861143	1761980
5	914804	876483	1791287
10	962128	923556	1885684
15	931589	896337	1827926
20	799496	771759	1571255
25	789229	762532	1551761
30	919175	928193	1847369
35	858205	854029	1712233
40	859498	854078	1713576
45	800146	795825	1595971
50	766121	793142	1559264
55	654992	736437	1391429
60	617804	729076	1346880
65	607620	724309	1331929
70	442310	568817	1011127
75	316093	475766	791859
80+	256928	692985	949913
Total	**12396974**	**13244466**	**25641441**

Low Projections

Table L1: Projected Population by Age and Sex, 2022

Age	Males	Females	Total
0	762084	733001	1495086
5	929317	932611	1861927
10	871496	860378	1731874
15	877190	863109	1740299
20	822498	808051	1630549
25	799313	812041	1611354
30	703947	765364	1469311
35	701308	778271	1479579
40	758118	809380	1567498
45	650866	687687	1338552
50	622060	659032	1281092
55	571140	631020	1202159
60	517808	593976	1111784
65	415705	500382	916087
70	316175	405629	721804
75	176791	253753	430543
80+	130946	225251	356197
Total	**10626762**	**11318934**	**21945695**

Table L2: Projected Population by Age and Sex, 2027

Age	Males	Females	Total
0	757466	728202	1485668
5	759455	731754	1491209
10	927444	931754	1859198
15	869170	859411	1728581
20	873051	861567	1734618
25	818071	806049	1624120
30	795065	809471	1604536
35	699346	762133	1461480
40	694390	773437	1467827

Table L2: Projected Population by Age and Sex, 2027 - Continued

45	746110	801445	1547554
50	633983	676573	1310557
55	595392	641067	1236459
60	530979	602048	1133027
65	458731	548377	1007108
70	340148	436945	777093
75	227271	322617	549888
80+	149078	267524	416602
Total	**10875150**	**11560374**	**22435524**

Table L3: Projected Population by Age and Sex, 2032

Age	Males	Females	Total
0	870549	836016	1706566
5	755105	727051	1482156
10	758088	731148	1489236
15	925198	930803	1856001
20	865441	858020	1723461
25	868803	859631	1728434
30	814164	803737	1617901
35	790357	806365	1596722
40	693058	757810	1450868
45	684156	766411	1450567
50	727948	789410	1517358
55	608377	659481	1267858
60	555380	613574	1168954
65	472428	558649	1031077
70	377279	482874	860153
75	245819	352328	598148
80+	182536	337448	519983
Total	**11194687**	**11870757**	**23065443**

Table L4: Projected Population by Age and Sex, 2037

Age	Males	Females	Total
0	872688	836945	1709633
5	868147	834741	1702888
10	753896	726488	1480385
15	756429	730448	1486877
20	921586	929392	1850978
25	861652	856222	1717874
30	865093	857330	1722423
35	809809	800859	1610668
40	783867	802096	1585963
45	683689	751402	1435091
50	668550	755602	1424152
55	700136	770714	1470850
60	569532	633120	1202652
65	496303	572103	1068407
70	390578	495851	886428
75	273990	394553	668543
80+	206750	402264	609015
Total	11482695	12150131	23632826

Table L5: Projected Population by Age and Sex, 2042

Age	Males	Females	Total
0	839270	803884	1643154
5	870710	835819	1706528
10	866917	834137	1701054
15	752439	725845	1478284
20	753752	729408	1483160
25	917965	927564	1845529
30	858367	854079	1712446
35	860922	854458	1715380
40	803736	796892	1600628
45	774100	795745	1569845

Table L5: Projected Population by Age and Sex, 2042 – Continued

Age	Males	Females	Total
50	669257	741506	1410763
55	644384	738736	1383121
60	657411	741723	1399134
65	511375	593076	1104451
70	412459	511529	923988
75	285190	410086	695275
80+	231566	473301	704867
Total	**11709821**	**12367787**	**24077607**

Table L6: Projected Population by Age and Sex, 2047

Age	Males	Females	Total
0	798191	763184	1561375
5	837694	802866	1640560
10	869656	835245	1704902
15	865470	833436	1698905
20	750125	724873	1474998
25	751180	728041	1479220
30	914944	925352	1840296
35	854760	851362	1706122
40	855207	850434	1705641
45	794739	790890	1585629
50	759234	785768	1545003
55	647077	725795	1372872
60	607370	712117	1319486
65	593291	696840	1290130
70	428210	533336	961546
75	303338	426867	730204
80+	246855	528635	775491
Total	**11877339**	**12515041**	**24392379**

High Projections

Table H1: Projected Population by Age and Sex, 2022

Age	Males	Females	Total
0	880018	836536	1716555
5	932615	933867	1866482
10	873066	860914	1733980
15	879214	863762	1742976
20	825747	808991	1634738
25	802972	813333	1616305
30	707119	766918	1474037
35	705041	780325	1485366
40	763926	812339	1576265
45	658623	691451	1350074
50	633833	664773	1298606
55	588202	640011	1228213
60	542032	608005	1150037
65	445867	520131	965998
70	351282	432462	783745
75	206298	281925	488223
80+	164235	274903	439138
Total	**10960091**	**11590647**	**22550738**

Table H2: Projected Population by Age and Sex, 2027

Age	Males	Females	Total
0	955044	908161	1863205
5	879483	835850	1715334
10	932209	933444	1865653
15	872525	860440	1732965
20	878187	863000	1741187
25	824654	807990	1632643
30	801870	812048	1613918
35	705798	765301	1471099
40	702923	777878	1480801

Table H2: Projected Population by Age and Sex, 2027 – Continued

Age	Males	Females	Total
45	760048	808263	1568311
50	652781	685660	1338441
55	623759	655267	1279027
60	571398	624396	1195795
65	514277	582815	1097092
70	405399	483808	889208
75	296076	382325	678401
80+	227735	378587	606322
Total	**11604168**	**12165234**	**23769402**

Table H3: Projected Population by Age and Sex, 2032

Age	Males	Females	Total
0	1056997	1005354	2062350
5	954478	907451	1861929
10	879117	835500	1714617
15	931658	932969	1864627
20	871557	859739	1731296
25	877075	862011	1739086
30	823559	806809	1630368
35	800418	810463	1610881
40	703764	763085	1466849
45	699475	774243	1473718
50	753563	801966	1555528
55	642886	676590	1319476
60	606701	640390	1247091
65	543362	600234	1143596
70	469516	544737	1014253
75	344221	431178	775398
80+	325375	522818	848193
Total	**12283722**	**12775536**	**25059258**

Table H4: Projected Population by Age and Sex, 2037

Age	Males	Females	Total
0	1052925	1001717	2054642
5	1056388	1004619	2061008
10	954095	907097	1861191
15	878618	835103	1713721
20	930665	932259	1862924
25	870493	858820	1729313
30	875942	860835	1736776
35	822103	805340	1627442
40	798174	808272	1606447
45	700442	759764	1460206
50	693677	768571	1462248
55	742498	792006	1534504
60	625988	662249	1288237
65	577963	617112	1195075
70	497644	563254	1060898
75	400858	488677	889535
80+	416520	658299	1074819
Total	**12894992**	**13323994**	**26218986**

Table H5: Projected Population by Age and Sex, 2042

Age	**Males**	**Females**	**Total**
0	1054666	1003583	2058249
5	1052346	1001057	2053404
10	1055976	1004251	2060227
15	953574	906695	1860270
20	877714	834506	1712220
25	929562	931320	1860882
30	869392	857719	1727111
35	874422	859362	1733785
40	819846	803294	1623140
45	794500	804962	1599462

Table H5: Projected Population by Age and Sex, 2042 – Continued

Age	Males	Females	Total
50	694833	754540	1449373
55	683727	759524	1443251
60	723471	776118	1499590
65	597293	639593	1236886
70	530670	581100	1111769
75	426788	508144	934933
80+	509699	795332	1305031
Total	**13448481**	**13821101**	**27269582**

Table H6: Projected Population by Age and Sex, 2047

Age	Males	Females	Total
0	1053226	1002471	2055697
5	1054102	1002968	2057070
10	1051951	1000719	2052671
15	1055424	1003843	2059267
20	952640	906104	1858744
25	876712	833733	1710445
30	928419	930220	1858639
35	867924	856372	1724296
40	872093	857356	1729448
45	816196	800267	1616464
50	788375	799862	1588237
55	685326	746373	1431699
60	666817	745369	1412186
65	691508	751465	1442973
70	550518	605096	1155614
75	457989	528181	986170
80+	585787	909105	1494893
Total	**13955008**	**14279505**	**28234513**

Conclusion

This study provides revised population projections for Sri Lanka covering the period 2022–2047, incorporating the demographic impacts of the COVID-19 pandemic and the subsequent economic crisis. Using the cohort-component method with updated assumptions on fertility, mortality, and migration, the projections reveal a population that will grow modestly from 22.2 million in 2022 to approximately 25.6 million by 2047 under the standard scenario. However, this growth will be accompanied by profound structural shifts that carry critical social and economic implications.

The findings demonstrate that the pandemic and economic downturn temporarily depressed fertility rates, delayed marriages, and disrupted migration flows, while also contributing to increased mortality and a short-term decline in life expectancy. Nonetheless, consistent with Sri Lanka's demographic resilience observed after previous crises such as the 2004 tsunami and the 2009 post-war recovery, a moderate fertility rebound is expected from 2023 to 2025. This rebound, combined with a large base of women in reproductive ages, will sustain population momentum through the 2030s before fertility gradually returns to replacement level.

Despite short-term recovery, the long-term outlook points to rapid population ageing. By 2047, the old-age dependency ratio is projected to equal the child dependency ratio at 36.8%, resulting in a "double burden" on the working-age population. The labour force is expected to peak around 2035 and then begin to decline, highlighting the urgency for policy adjustments to maintain productivity and social welfare. Migration will remain a critical demographic determinant, with sustained outflows of youth and skilled workers shaping both domestic labour supply and remittance flows.

The demographic patterns identified in this study reaffirm that Sri Lanka's first demographic dividend has largely closed, yet a second demographic dividend remains achievable if policy responses are well-aligned. Leveraging this opportunity requires strategic investments in education, health, and employment creation; reforms to extend the retirement age; and the promotion of active ageing and lifelong productivity. Additionally, strengthening social protection systems and developing a sustainable

“silver economy” will be essential to mitigate the socioeconomic challenges of ageing while transforming them into opportunities for growth and innovation.

In conclusion, these revised projections offer a realistic and evidence-based demographic outlook for Sri Lanka’s medium-term future. They underscore the need for continuous demographic monitoring, integrated population and economic policies, and adaptive governance to ensure that the country’s demographic evolution supports inclusive and sustainable development amid ongoing global and domestic uncertainties.

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