CHAPTER 1

Demographics of Population Ageing in India

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Introduction

A major emerging demographic issue of the twenty-first century is the ageing of populations as an inevitable consequence of the demographic transition experienced by most countries. Across the world, declining fertility and increased longevity have resulted in higher numbers and proportions of older persons 60 years and above. This trend is expected to continue as the estimated 737 million older persons in 2009 (United Nations, 2009) were projected to increase to 2 billion by 2050 at which time the proportion of the population age 60+ years will outnumber the proportion of the population who are children (of 0–14 years age). The oldest-old age segment (80 years and above) is the fastest growing segment and by 2050 about 20 per cent of older persons will be 80 years and above. The coming decades therefore will be characterized by the ageing of the aged. Of particular relevance is the fact that in 2009 two-thirds of the world's older persons lived in developing countries (55 per cent in Asia alone), regions that are much less prepared to deal with this aspect of population dynamics compared to more developed countries. The ageing of populations has significant implications for older persons themselves, as well as the families and societies they live in. This recognition resulted in the World Assembly on Ageing being held in 2002 with 159 countries adopting the Madrid Plan of Action on Ageing (MPAA) which focuses on how the needs of older persons can be mainstreamed into development.

For many years population ageing was considered to be a phenomenon of importance only to the more developed countries of Europe and North America and to Japan in Asia. At 21 per cent of the total population in 2009, the proportion of older persons 60 years and above is much higher in the more developed regions compared to the 8 per cent in the developing regions. However, both groups are expected to have vastly increased proportions in the near future (33 per cent and 20 per cent respectively in 2050) with as many as 1592 million older persons in the developing regions. This is a development that must receive attention from policymakers and social scientists across the world.

In India, the proportion of the population age 60 years and above was 7 per cent in 2009 and was projected to increase to 20 per cent by the year 2050. In terms of absolute numbers, the elderly population in 2009 was approximately 88 million and is expected to sharply increase to more than 315 million by 2050. The more developed states in the southern region and a few others such as Punjab, Himachal Pradesh and Maharashtra have experienced demographic transitions ahead of the other states in the country and are growing older faster than the other states. Certain regions, primarily in the central and eastern part of the country, still have high fertility and mortality levels, and therefore, younger population age structures. While improvements in health, declines in fertility and increases in longevity are desirable, the projected increase of the elderly population over the next few decades is a development concern that warrants priority attention in making economic and social policies.

This chapter explores the demographic profile of older persons aged 60 years and above in the country using the 2001 census data along with projections up to 2026 to build a knowledge base that will help to better understand the implications of the changing age and sex distribution of the population for improved development planning. The data for this chapter are drawn from censuses for the period from 1961 to 2001 and may be viewed as an update of an earlier analysis (including Rajan et al., 1999) based on previous census data. Projection data are taken from the Population Projections for India and Its States, 2001–2026, prepared by the Technical Group of Population Projections, the Registrar General & Census Commissioner of India (2006). The analysis is also carried out by clusters of states that are experiencing population ageing at varying degrees.

Socio-Demographic Profile of Older Persons

According to 2001 Census, the total number of older persons in India was approximately 70.6 million 10 years ago and is expected to cross 173 million by 2026 as the life expectancy at birth is projected to increase to 69.8 years for males in 2021–2025 (from 61.6 years in 1996) and 72.3 years for females (from 62.2 years in 1996). At the same time, the total fertility rate (TFR) declined to 3.2 per women in 2001 and is expected to drop further to replacement level by 2021–2025. However, this demographic transition is not taking place uniformly across all the states in the country as described in more detail in section 'Regional Variations in Population Ageing'.

The evolving population dynamics in India arising out of the joint effects of declining fertility and increasing longevity and the consequent shifting of the population age structure cannot be ignored. The trend in the median age (in years) of the population is presented in Table A.8 for the period from 1961 to 2026. Until recently, India, like other developing countries, had a young age structure with the median age remaining at about 20 years from 1961 to 1981, and increasing marginally to 22.5 years in 2001. However, the projections suggest that the country is gradually but surely transiting away from a young age structure with a steady increase in the median age to 31 years by 2026.

The **index of ageing** indicates the shift in balance between the child and older populations and is expressed as the number of persons above 60 years for every 100 children below the age of 15 years. In India, the index of ageing increased slowly between 1961 and 2001, but is expected to increase more rapidly in the following 25 years (Table A.9). In 2001, the index of ageing was 23.4 elderly persons for every 100 children, and this number is projected to increase rapidly to 53 elderly persons for every 100 children by 2026, signifying that the pace of ageing will be increasing in the coming decades.

This picture is mirrored by the trends in the distribution of the Indian population by three **broad age groups**. Figure 1.1 (and Table A.4) shows that the proportion of the population in the age group 60 years and above is projected to increase while that of the 14 and below age group is projected to decrease rapidly. While the 15–59 years group remains the largest group up to the year 2026 as a result of past fertility levels, the increasing trend appears to be levelling off. The UN population projections show that soon after the

year 2050 the elderly population in the country will outnumber that of the population of children (United Nations, 2010). This **tipping point** is likely to occur in India approximately 5 years ahead of the less developed regions as a whole.

Among the older population one noticeable development, which is a result of improvements in health and longevity, is the increasing numbers of the **oldest old** or the 75 years and over population. The age distribution of the older population is presented in Table A.4 in the annex and in Figure 1.2. The data show that each age group

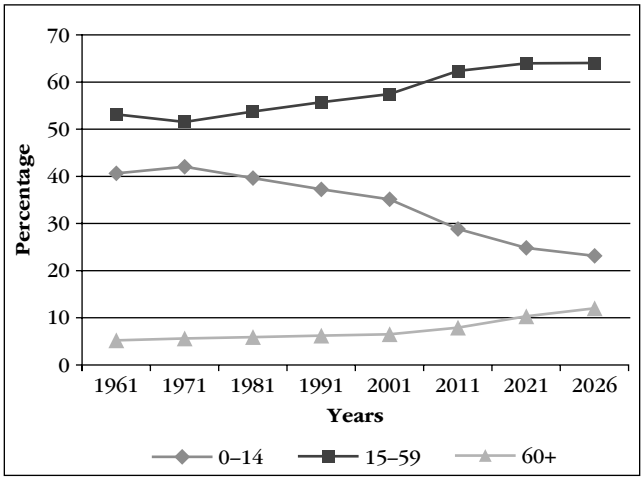

FIGURE 1.1: Population by broad age groups, India, 1961–2026

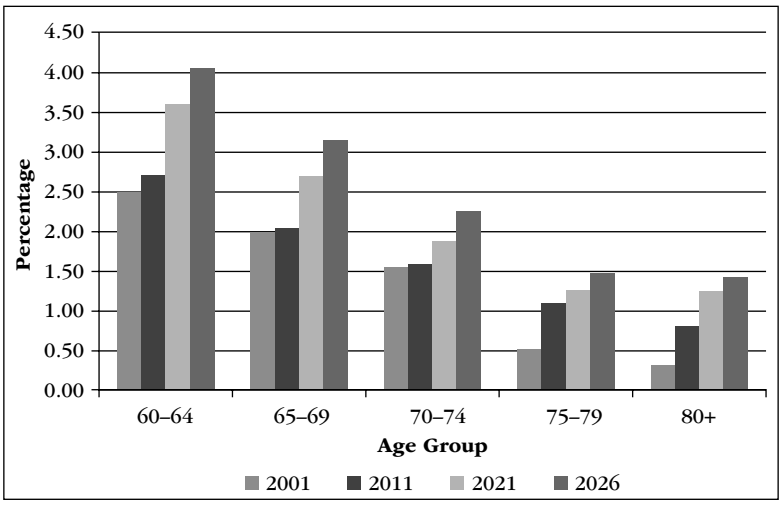

FIGURE 1.2: Age distribution of oldest among the old in India

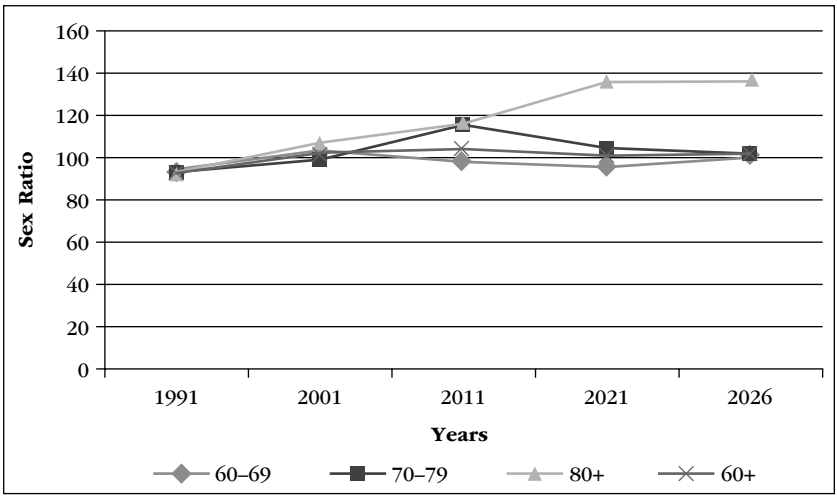

FIGURE 1.3: Sex ratio of elderly by broad age group, India, 1991–2026

within the elderly population is expected to grow significantly over the next 15 years.

While the number of older persons is increasing in general, the increase among oldest old of 80 years and above who will have special needs for health care and social support is particularly sharp. Furthermore, women constitute a major portion of this increase as they live longer than men, particularly after 75 years of age. In ageing societies the feminization of the elderly, or the higher number of women in the older age groups compared to men, is a commonly experienced phenomenon due to women's biological and social advantage after the reproductive years resulting in women living longer than men. In India, life expectancies, while on the increase, were on par for men and women until about 1986. Since then life expectancies have been a few years higher for women (see Table A.1a), indicating that women have only recently been able to benefit from their biological and social advantage. Accordingly, the sex ratio increased from 94 women per 100 men in 1991 to 102 in 2001 and remains a little over 100 in the years up to 2026 (Table 1.1), indicating that there is a trend towards the feminization of the elderly in our country. Among the oldest old (those in the 80 years and above age group), the sex ratio is expected to be as high as 136 women per 100 men by 2026. This trend poses more specific challenges relating to very old women who are also likely to be widowed.

TABLE 1.1

Sex ratio (number of females per 100 males) of the elderly in different age groups, India

Age Groups	1991	2001	2006	2011	2016	2021	2026
60–69	94	104	104	98	95	96	100
70–79	92	98	108	114	112	106	103
80+	92	108	103	116	126	135	136
All elderly (60+)	94	102	105	105	103	103	105

Source: Technical Group of Population Projections, Registrar General & Census Commissioner of India, 2001–2026.

Another aspect of the composition of the elderly population to be considered is their place of residence. The 2001 Census shows that 75 per cent of the elderly population lived in rural areas and 25 per cent lived in urban areas, mirroring the distribution of the general population by place of residence. The distribution of the elderly by place of residence (Table A.7) shows that the elderly as a proportion of the total population is increasing in both rural and urban areas. In 1961, 5.8 per cent of the total population in rural areas was over 60 years of age, while 4.7 per cent of the urban population was in the same age group. The corresponding figures had increased to 7.7 per cent and 6.7 per cent, respectively, by 2001. This trend is similar for both male and female older persons (Table A.12). Two important contributing factors are (a) the outmigration of working age population from rural areas and (b) access to better quality health care in urban areas leading to increased longevity.

The levels of **literacy** among the elderly population in the country vary greatly by sex and place of residence. While in general the level of literacy has increased for both men and women, as well as urban and rural elderly, the gap in literacy levels between men and women and between the elderly in urban areas and in rural areas remains significant. Older women in rural areas have the lowest level of literacy compared to general population as well as all other elderly, as seen in Table 1.2.

Regional Variations in Population Ageing

Census data in India show significant variations between states with respect to the proportion of elderly in the population. While all the states in the country showed an increasing trend from 1961 to 2001,

TABLE 1.2

Percentage literate among general population and population aged 60+, by sex and place of residence, India, 1991–2001

	General Population		Population Aged 60+	
	Males	Females	Males	Females
1971				
Rural	29.1	8.6	24.4	2.3
Urban	57.5	34.5	55.9	15.8
1981				
Rural	40.8	18.0	28.7	4.4
Urban	65.8	47.8	60.0	21.8
1991				
Rural	47.1	24.9	33.7	7.5
Urban	68.8	53.9	66.0	30.8
2001				
Rural	58.6	38.3	45.5	13.0
Urban	75.0	63.3	75.0	41.8

Source: Census of India, 2001.

generally, the southern states and Punjab and Himachal Pradesh have larger increases in the proportion of elderly, with Kerala registering the greatest increase. Projections for the next 25 years show a similar pattern, with the largest proportion of elderly in the southern states, Kerala in particular, along with West Bengal, Punjab and Himachal Pradesh. Northern states, Uttar Pradesh (UP) in particular, and eastern states have the lowest proportions of elderly in the country.

Similar trends are found in the other indicators of ageing. The median age for each state in 2001 was approximately the same as the India average of 22.5 years, except for Kerala and Tamil Nadu which had a higher median age of 29.9 and 29.1 years, respectively. The projections for the subsequent 25 years show an increase of more than 7 years for all the states, with the median age reaching 37 years in Kerala and TN, and 35 years in Himachal Pradesh. The state with the lowest median in 2026 is UP with 27 years.

In 2001, the state with the highest index of ageing was Kerala, with 40 elderly persons for 100 children below 15 years of age. The next two states were Himachal Pradesh and Punjab with an index of

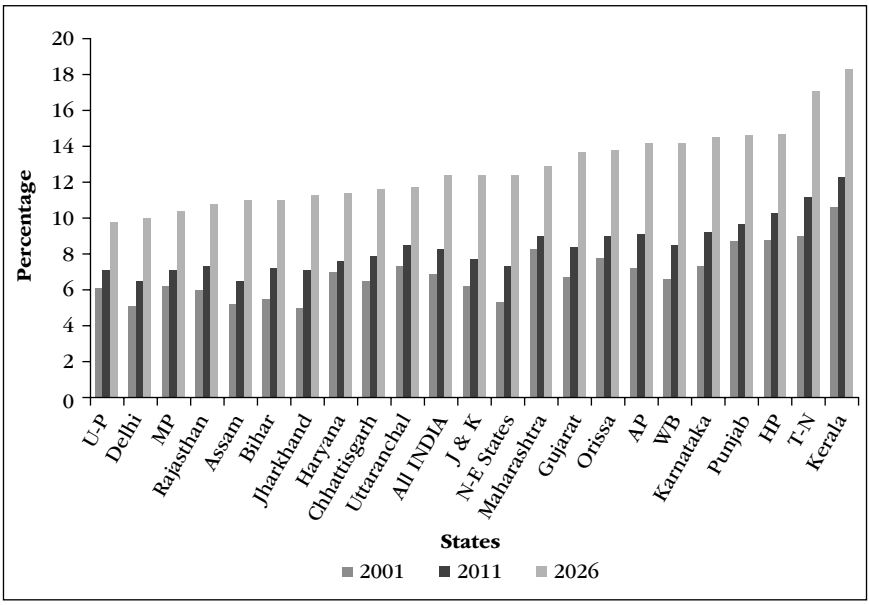

FIGURE 1.4: Proportion of elderly in India and its states, 2001, 2011 and 2026

about 28 persons. However, in 2026 the index of ageing is over 60 for many states, including Andhra Pradesh, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Orissa, Punjab, Tamil Nadu and West Bengal. Most notably Kerala is at the forefront of the demographic transition with an ageing index of 97 persons per 100 children. Uttar Pradesh is expected to age most slowly, with 34 elderly persons for every 100 children.

While most states are comparable to the average for the country with regard to the 0–14 years age population, a few states have higher child populations and younger age structures will age more slowly than others. In 2001, the child population in Bihar was 42 per cent, followed closely by UP with 41 per cent, Rajasthan with 40 per cent and Madhya Pradesh with 39 per cent. These states are projected to continue this trend of having high proportions of young age populations (ranging from 29 per cent in UP to 25 per cent in Bihar and Rajasthan). At the same time, the proportion of the working age group (15–59) remains more or less similar across all states, and ranges from 52 per cent in Bihar to 63 per cent in Kerala in 2001 and from 61 per cent in UP to about 67 per cent in Haryana and Delhi by 2026.

The differences in the future demographic scenario between states and consequent paces of their ageing process are best seen with the aid of age–sex pyramids.

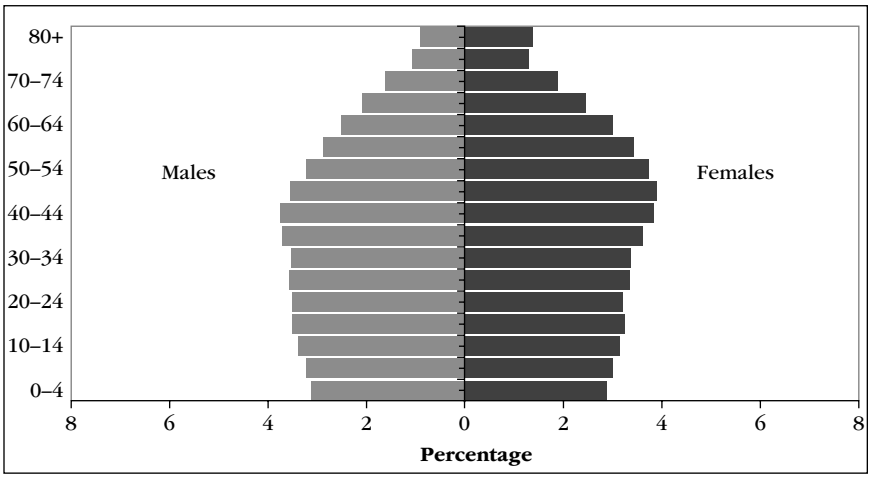

FIGURE 1.5: Age-sex pyramid, Kerala 2026

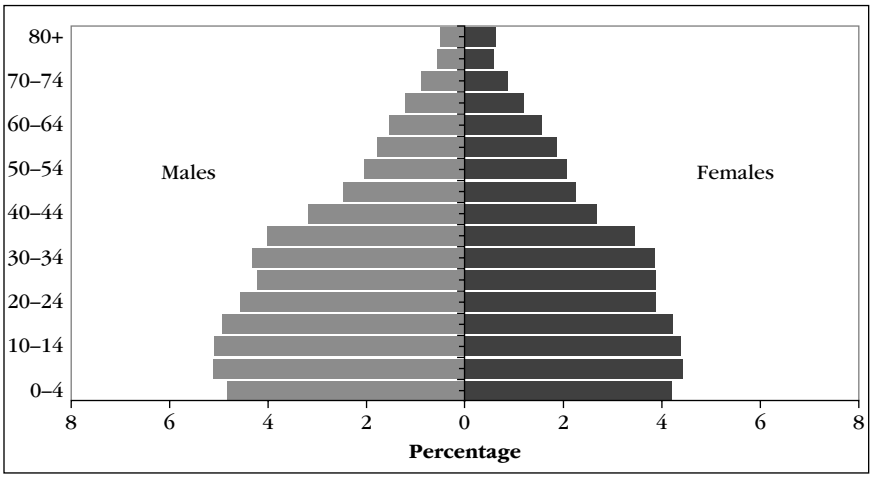

FIGURE 1.6: Age-sex pyramid, Uttar Pradesh 2026

The population pyramids for Kerala and Uttar Pradesh in 2026 show that 15 years from now Kerala's population will begin to resemble that of developed countries in terms of a stable age structure, while Uttar Pradesh will still have a very young age structure.

The inter-state variations in population ageing (Kerala and Tamil Nadu are projected to have 18 per cent and 17 per cent of elders by 2026 followed closely by Himachal Pradesh, Punjab, Karnataka, West Bengal and Andhra Pradesh) mean that the average for the country as a whole masks the fact that for some states the issues arising out of an ageing population structure are even more immediate. The rising

number of elders in all regions of the country makes the ageing of the population a compelling reason for the elderly to receive priority attention at policy and programme levels.

Specificities of Ageing in India

The shift to an older age structure has important implications for the country as well as for elders and their families as the need for socio-economic support increases for the older population. Fewer children available to support elderly parents, high numbers of older women experiencing widowhood, large numbers of elderly in the workforce are some of the areas of concern for the older population in India. This section discusses some dimensions of ageing that are specific to India.

Old Age Dependency

The ratio of the dependent population to that of the working age population is defined as the **dependency ratio** and is an important indicator of the economic burden carried by each worker.[1] Old age dependency is the ratio of older persons 60 years and above to the working age population. In 2001, the total dependency ratio for the country (from both the young and the old age groups) was significantly high at 73 mainly due to the population age structure in

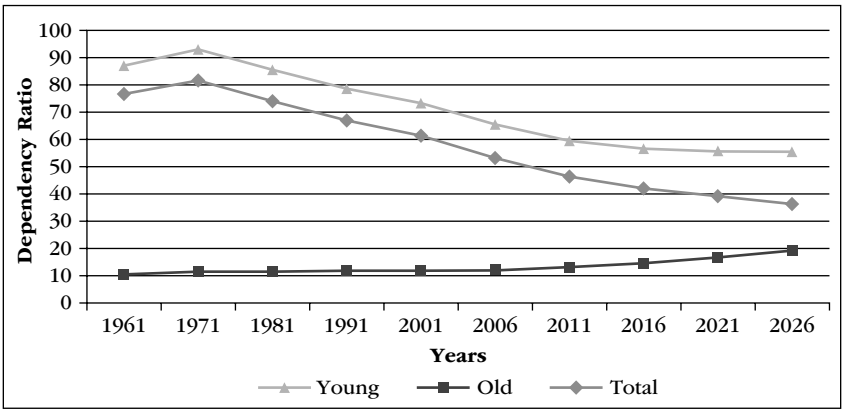

FIGURE 1.7: Dependency ratios, India, 1961–2026

[1] However, the actual dependency level is likely to be higher since not all those in the 15–59 age group are in the labour force.