1. DEMOGRAPHIC TRENDS, THE PROFILE OF OLD PEOPLE, AND THE EMERGING ISSUES

Population aging is a universal phenomenon, but it looms particularly large for Sri Lanka: not only is its population among the oldest in the non-developed world, but Sri Lanka is also one of the fastest aging countries in the world. Sri Lanka’s share of population over 60 years old in 2000 was 9.2 percent, which exceeded the average of all regions in the world except OECD countries, Eastern Europe and the former Soviet Union (Figure 1.1). And population projections show a record aging of population: in 2050, the share of Sri Lankan population over 60 years old is projected to reach 28.5 percent, an increase in comparison to 2000 matched by very few countries.1

Figure 1.1: Demographic aging, Sri Lanka and world regional averages (percentage of population over 60 years old, 2000-2050)

![Graph](image)

Source: De Silva (2007), for Sri Lanka; World Bank (1994), for other

1.1 This chapter probes into the demographic factors that explain the aging of Sri Lanka’s population, and sets out the broad challenges confronting the country. Its first section details the demographic challenge faced by Sri Lanka by summarizing the future demographic trends and discussing its two main drivers: falling fertility and increasing longevity. The next section sketches a portrait of the current population of old people in Sri Lanka, summarizing their social characteristics and reviewing their socio-economic conditions. Based on these building blocks, the third section highlights the key challenges emerging in each of the four areas focused upon by the report: informal support for old people, old age income support, healthcare of old people, and the labor market. The annex to the chapter provides a description of the World Bank 2006 Sri Lanka Aging Survey, a special aging survey conducted specifically for this report.

---

1 One of the few countries with a similar projected increase of the share of old people is China – a country where government has been actively involved in limiting the number of children families may have and where UN projections show an increase from 10.1 percent in 2000 to 31.1% in 2050.
A. **DEMOGRAPHIC TRENDS**

1.2 **Sri Lanka’s population was enumerated at 18.7 million in the 2001 census, and will increase modestly to 21-23 million by 2020-2030, before beginning to decline** (de Silva, 2007). Projections show that the era of continuous population growth will soon be in the past. Sri Lanka will experience a contracting population from the fourth decade onwards (Figure 1.2), comparable to the situation in Japan today, assuming fertility rates continue at low levels (Figure 1.3, see discussion below) and in the absence of substantial inward migration.

1.3 **The main driver of the slowing momentum of population growth has been rapid fertility decline since the 1950s.** The total fertility rate (the number of children that the average woman will bear during her lifetime) fell below the replacement level of 2.1 by 1994. It has continued to fall, reaching 1.7-1.9 currently, paralleling experience in several countries of East Asia (Japan, Korea, Taiwan, Thailand), and it is already lower than in certain developed countries with high birth rates, such as the USA.

1.4 **Increasing life expectancy is the next most important driver of Sri Lanka’s population aging, with life expectancy already higher than in some OECD economies.** Sri Lankans are living longer, helped by investments in human development—health and education, resulting in an increasing proportion of Sri Lankans living to an advanced age. On present trends, life expectancy will reach the current average OECD level of 77.8 years by 2050 (OECD, 2005). However, a critical aspect of life expectancy trends in Sri Lanka is that male adult life expectancy has stagnated since the 1970s, even whilst female life expectancy has rapidly increased. The population projections assume that in future male life expectancy will keep pace with improvements in female life expectancy (Figure 1.44), but if it does not, the old people will be even more a predominantly female population than they are set to be already.

1.5 **Central to Sri Lanka’s demographic aging will be an increase in the share of the old people in the population, with an increase in the proportion of the old people who are very old.** The share of the population aged 60 years and more will increase from 11% currently to 16% in 2020 and 29% by 2050, before peaking at 34% in 2080. At the same time, there will be a process of aging of the old people, as the oldest old people aged more than 80 years, who are the ones most likely to be frail and dependent, will increase from one tenth of the old people population to almost one third. By 2050, the 80+ year age group will account for more than 5% of the overall national population (Figure 1.5).

1.6 **The increase in the numbers of old people and reductions in the youngest age groups will change Sri Lanka’s age structure** from the pyramidal structure typical of most developing countries to a flat pillar shape similar to that evolving in the most developed countries today (Table 1.6). This process will largely be complete by 2050. What can also be foreseen is that because of the decline of the fertility rate below replacement level in the early 1990s, there each age cohort born after the late 1990s may be smaller than the preceding one, resulting in a narrowing at the base of the age structure, which is already apparent today.
Figure 1.2: Sri Lanka’s population, 2001-2100

Figure 1.3: Projected trends in total fertility, Sri Lanka 2001-2100

Source: De Silva (2007)

Figure 1.4: Projected trends in life expectancy by sex, Sri Lanka 2001-2100

Figure 1.5: Share of the old people age groups, Sri Lanka 2001-2100

Note: Life expectancy assumptions in the mid-range standard projection

Source: De Silva (2007)
Figure 1.6: Changes in age structure of Sri Lanka’s population 2007-2075

Source: De Silva (2007)
These changes will result in a rapid increase in the dependency ratio starting in slightly over a decade (from 2020). Although the old age dependency ratio (proportion of population aged 60 years or more versus the proportion aged 15-59 years) has been increasing in recent decades, there has been a corresponding fall in the child dependency ratio (proportion of population aged less than 15 years versus the proportion aged 15-59 years). The two trends will roughly balance until 2025, implying that some of the increase in social costs in aging might be met by savings in the need for investments in children. However, from 2025, the total dependency rate will begin to increase rapidly from 55% to reach more than 75% by the middle of the century (Figure 1.7). This change in the dependency ratio has important implications for policies as noted below.

Forecasting the Future Fertility Trend

The future fertility trend is the most difficult to forecast. The population projections used in this study, De Silva (2007), assume that fertility will continue to fall for the next two decades to a forecast range of 1.3–1.7, before beginning to recover upwards to reach a range of 1.5–2.1 towards the end of the century (Figure 1.3: 3). However, this is inherently speculative, and the recent experience of European and Asian societies shows that fertility has continued to fall to previously unimaginable levels of 1.3-1.4, but in only some has there been a rebound to higher levels. Even in the latter, fertility has rarely reached replacement level.

The phenomenon of low fertility (below replacement level) is a recent phenomenon, which started in Europe at the end of the 1960s, but is now most marked in advanced East Asian economies. Almost thirty countries have what are termed “very low fertility” rates, defined as less than 1.5 births per woman. Although declining fertility was originally seen as a common feature of advanced industrialized nations, it has become increasingly clear that very low fertility is not universal in all high-income economies, and that there are clear differences between countries. In particular, very low and persistent fertility is a particular feature of two groups of countries (Figure 1.8): (i) predominantly Catholic, southern European nations such as Spain and Italy, and (ii) East Asian societies such as Japan, Korea, Taiwan, Hong Kong SAR and Singapore. In these societies fertility has continued to fall to about 1.3, and has dipped below 1.2 in some (Korea, Taiwan, Singapore).
There are reasons to anticipate that fertility in Sri Lanka may follow a similar trajectory to East Asian countries, such as Korea and Japan. In developed countries, fertility decline has been driven partly by the availability of contraception, and changing norms about the ideal number of children. In addition, socio-economic changes, such as increasing education of women and increased female labor force participation, have led to increased age at marriage and reduced marital fertility. These factors have also been present in Sri Lanka. However, in some OECD countries, such as UK, France and USA, this has been accompanied by dramatic changes in social norms, which can be termed a sexual revolution, in which child-birth outside marriage has become common, and in some cases accounts for half of all births (Cho, 2006). In the very low fertility OECD economies, such as Korea, Japan and Spain, social norms have not changed in this way, and the marital fertility rate has dominated fertility decline. It is also thought that the strong antenatal policies pursued by Asian governments in the 1970s may have inculcated today’s younger adults with norms encouraging low fertility. Given that social norms in Sri Lanka may be more akin in these respects to Korea and Japan than they are to the USA and UK, it is possible that as the economy develops fertility will fall to and persist at levels as low as they are now in these Asian countries. In summary, there exists considerable uncertainty over the future trend in fertility, because global experience of such low fertility levels is limited to the past few decades and a few countries.

B. SOCIO-ECONOMIC CHARACTERISTICS OF OLD PEOPLE

To understand how population aging will affect future generations of old people and economic growth in general, it is useful to review key socio-economic characteristics and conditions of the current generation of old people in Sri Lanka.

Gender composition and marital status. Among old people, there is a large share of women and widows. The old people aged over 60 years numbered 2.1 million in 2006, representing 10.6 percent of the population, The female share of the old people is higher than male, owing to the increased life expectancy of women compared to men since the 1960s. The female share increases with advancing age, from 53% in the 60-64 year age group, to 60 % in the 70-74 year age group to almost 70% in those aged
over ninety years (Figure 1.9). At the same time, the likelihood of being a widow also increases with age, so that the majority (66%) of the oldest old people (>80 years) are widowed, compared with only 29% of the young old people (Figure 1.10).

**Figure 1.9: Numbers of old people by sex and age, 2006**

![Figure 1.9: Numbers of old people by sex and age, 2006](image)


*Note:* Percentages indicate percentage of each age group that is female.

**Figure 1.10: Marital status of old people, 2006**

![Figure 1.10: Marital status of old people, 2006](image)


1.13 **Residence.** As in most developing countries co-residence rates are high in Sri Lanka. Almost 80 percent of old people live with their children, and many rely on their children for financial and other support. Only 6 percent of elderly live alone. Most elderly also reside in rural areas and in the more developed regions of the country. According to the results of the SLAS, 80 percent of the old people lived in rural areas, compared with 13 percent in urban areas and 6 percent in the estate sector. The results of the 2001 national census indicate that the old people share is highest in Western (9.9%) and Southern
Provinces (11.2%), and lowest in North-Central Province (6.5%) and Uva (7.4%). The explanations for this pattern may lie in the higher fertility levels seen in the poorer provinces and possibly in the higher life expectancy of those living in the more developed areas.

1.14 Poverty profile. Poverty does not affect old people disproportionately more than the population as a whole, but the incidence of poverty among the very old is large, and it affects more old women than men. According to 2002 data from the household income and expenditure survey, the total rate of poverty in Sri Lanka was 22.7 percent, and among the old the poverty rate was significantly below that and only for the people older than 85 it approached the national average (Figure 1.11). In contrast, the poverty rate among the young was above the national average, and for the group of 5-14 olds it amounted to 30.8 percent. According to Gamiratne et al, (2004), old women are more likely to be poor than old men – women aged 70-79 were about 5 percentage points more likely to be poor than men in that age group (interestingly, the poverty statistics for 60-69 year olds were about the same for men and women). Note that the above results assume that resources are shared equally within the household, irrespective of gender and age, and that some empirical studies have found that men tend to consume more their a proportional share.

![Figure 1.11: Poverty incidence by age groups (2002)](image)

Source: Own computations, based on HIES 2002.

1.15 Health profile. Overall health indicators for Sri Lanka’s population are better than for almost all low and low-middle-income countries, with life expectancy and mortality rates comparable to some of the poorer OECD countries. However, overall positive life expectancy trends mask important differences in gender. Female adult life expectancy has continued to increase, but male older adult life expectancy has largely stagnated, resulting in men living eight years on average less than women. The failure to improve older adult mortality has been due primarily to increasing mortality in older adults from non-communicable disease, particularly ischemic heart disease (IHD), strokes and diabetes. Also worrisome, the disability rates in the old people in Sri Lanka are not declining, as they are in most developed countries. The rates of blindness, and disability in limbs, hearing and speaking generally rose in Sri Lanka (but blindness in the young old people decreased). Thus, as in all countries, old people are

---

2 It has to be emphasized that a similar poverty profile by age cohort emerges even if poverty rates are calculated by adjusting household income per capita for the age composition of families (Gamiratne et al, 2004). Poverty is based on an absolute poverty line of Rs. 1,423, corresponding to the per-capita consumption expenditure providing nutritional intake of 2030 kilocalories (Department of Census and Statistics 2004).

3 Though somewhat contrary to this finding, the self-assessed health ratings of old people did not change between 1991 and 2006.
more likely to suffer from a chronic illness, and more likely to be disabled than the young. (See also chapter 4.)

1.16 **Labor market profile.** In comparison to other countries in the region, fewer Sri Lankans over 60 years of age participate in the labor force (but participation rates of old persons in Sri Lanka exceed those in developed countries). For both men and women, labor force participation rates have remained largely constant since late 1990s. A vast majority of old workers are self-employed or casual workers engaged in the informal sector, where both men and women are working mostly as skilled workers, in full-time jobs in agriculture, manufacturing, and wholesale and retail trade. Unemployment among the elderly is very low (relative to young people). The labor market duality in Sri Lanka (a small well protected formal sector co-existing with a large un-protected informal sector) carries over to old age and importantly determines the fate of old people: the majority of formal sector workers in public and private sector retire early, most of them before they reach 60, and for work-related reasons (including mandatory retirement); in contrast, a large share of self-employed and casual workers continues to work full-time into very old ages, perhaps longer than they would wish, and most of them withdraw from employment for health reasons. (See also chapter 5.)

C. **EMERGING ISSUES**

1.17 Above we showed that Sri Lanka’s population will age rapidly in the decades to come, partly because Sri Lanka is becoming a victim of its own success—what implications does this predicament have for economic growth, public and private outlays for old age income support and healthcare, as well as for the fight against poverty, both among young and old?

1.18 **Will rapid aging and modernization put a strain on the traditional family support to old people?** The modernization of Asian societies is associated by several mechanisms that affect family support of old persons, and they may apply to Sri Lanka as well (Cowgill and Holmes 1972, Hermalin 2002, Martin and Kinsella 1994, and World Bank 1994): (i) lower fertility translates into fewer children available to provide familial support higher rates of non-marriage; (ii) higher education levels increase the information gap between old parents and children, which may lead to differences in attitudes and perceptions of obligations to provide familial support; (iii) increased female labor force participation decreases the number of caregivers available to provide support to older family members; and (iv) rural-urban migration is drawing younger persons out of rural areas and into urban areas to find employment. While modernization is affecting Asian societies in different ways, these studies show that there is evidence of declining levels of familial support in some Asian countries (including China, India, as well as more developed countries such as Japan and South Korea). Sri Lanka will face the challenge of how to reinforce traditional family support to old people and how supplement it with formal systems without damaging the family support. (These issues are taken up in Chapter 2.)

1.19 **Sri Lanka provides the most comprehensive social security system in South Asia, but will this system be ready to support an increased elderly population?** As the ratio of old people to working age persons grows, the problems of low coverage, inadequate pensions and a growing pension liability—all characteristics of the current pension system—will weigh heavily on society, potentially straining intergenerational relations. How to modify existing pension systems to improve their fiscal sustainability in the face of aging workforce? Will the country be in a position to take advantage of new initiatives to expand sustainable coverage and provide greater protection for the poorest elderly, including widows? Such approaches are particularly attractive because it may be increasingly difficult for families in the lower part of the income distribution to cope with the tradeoffs that arise in joint family structures, and especially households with more dependent members, children, disabled and old people may end up in poverty. (These issues are taken up in Chapter 3.)
1.20 Sri Lanka also provides universal health care to its population, but how to adapt this system to caring for an increasingly old population? Specific issues that will confront the health system include: How to improve healthcare and long-term care to support an aging population? How to orient health care towards the needs of old people, and facilitate continued improvements in healthy life expectancy amongst the old people? How to reorganize the system, including management of human resources, to strengthen its emphasis on primary health care and to rationalize treatment of NCDs and the elderly? How to improve the provision of long-term, institutional care of the frail, dependent old people? (These issues are taken up in Chapter 4.)

1.21 How to mitigate the slowdown of GDP growth, as population aging will translate into a contraction of labor force? Projections show that Sri Lankan labor force will continue to grow for another two decades, and it will shrink thereafter in a foreseeable future (calculations show that labor force will stop growing around 2030, and will thereafter start to shrink, dropping to the current size of the labor force in about 30 years – see Chapter 5). Population aging will also significantly change the age composition of the labor force, with the share of workers younger than 30 years significantly shrinking and the share of those older than 50 years strongly increasing. The challenge in the area of labor market will thus be to counter the shrinking of the labor force resulting from the aging of population – indeed, projections show that it will take 7 percent per annum growth to reach Japan’s income at the same point in its aging process (Figure 1.12). Faced with the prospect of shrinking and older workforce, will Sri Lanka be able to sustain solid GDP growth? The key questions that need to be addressed are: How to promote higher worker productivity? How to prolong working lives – and options of employment for old workers? How to improve employability of old workers? (These issues are taken up in Chapter 5.)

Figure 1.12: Comparison of needed rate of GDP per capita growth to catch up with Japan at the same point of population aging and historical growth record, Sri Lanka and regional comparators

![Per capita income growth in $US](image)

Source: Palacios (forthcoming).
ANNEX 1.1: DESCRIPTION OF THE WORLD BANK 2006 SRI LANKA AGING SURVEY

For the purposes of this report, a special aging survey – the World Bank 2006 Sri Lanka Aging Survey (SLAS) was administered. The survey is based on a representative sample of 2,413 Sri Lankan old people (persons 60 years old or above).

Sampling Process

The Sample Survey Division of the Department of Census and Statistics designed the sample framework. The sample process consisted of the following steps:

- Selection of targeted population (people in the age bracket 60+). Targeted population was estimated to be 9.2 percent of the total population (around 1.5 million).
- Selection of districts. North-Eastern provinces were excluded, and among other districts, 13 districts were covered out of the 17 districts (districts with escalating tensions arousin from the ethnic conflict were excluded – see below the selection of districts).
- Random selection of 260 Primary Sampling Units (PSU), based on the 2001 census of housing and population framework in the urban, rural and the estate sector.
- Obtaining basic personal information on household members in all households in selected PSU (“listing exercise”).
- Random selection of secondary sampling units (households), based on completed the listing results, by DCS. In each PSU, 10 households (Secondary Sampling Units) were selected.

The listing exercise started in October 2005 and was completed by the end of December 2005. The following table present 260 PSU listing results at aggregate levels.

<table>
<thead>
<tr>
<th>Total number of HH</th>
<th>60-74 yrs households</th>
<th>75 + yrs households</th>
<th>Above 60 yrs. households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of households</td>
<td>14,080</td>
<td>3,616</td>
<td>1,164</td>
</tr>
<tr>
<td>Average number of households</td>
<td>54</td>
<td>14</td>
<td>4</td>
</tr>
</tbody>
</table>

Field work

The field work commenced in February 2006 and was completed in April 2006. There were up to three interviews in each household: (i) with the selected old person; (ii) with one adult child (15+) – every second surveyed household; and (iii) with the household head or the most knowledgeable person. In addition, a community-level questionnaire was administered to the Grama Niladhari (village head) corresponding to the PSUs chosen. On an average, each interview took about one and a half hours to complete. In exceptional cases (including, for example, impaired hearing and reading ability), interviews were lengthier and were broken down to several parts. Sometimes proxies were utilized for answering questions.

4 Should the Head of the Household not be available, the housewife or a person most knowledgeable about household matters, income and expenses was interviewed
The detailed breakdown by district of the sample is as follows:

<table>
<thead>
<tr>
<th>District</th>
<th>Household</th>
<th>Elders</th>
<th>Adult Child</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colombo</td>
<td>249</td>
<td>289</td>
<td>77</td>
<td>30</td>
</tr>
<tr>
<td>Gampaha</td>
<td>257</td>
<td>277</td>
<td>65</td>
<td>30</td>
</tr>
<tr>
<td>Kalutara</td>
<td>192</td>
<td>217</td>
<td>70</td>
<td>22</td>
</tr>
<tr>
<td>Kandy</td>
<td>192</td>
<td>218</td>
<td>58</td>
<td>23</td>
</tr>
<tr>
<td>Nuwara- Eliya</td>
<td>108</td>
<td>131</td>
<td>36</td>
<td>15</td>
</tr>
<tr>
<td>Galle</td>
<td>176</td>
<td>203</td>
<td>44</td>
<td>22</td>
</tr>
<tr>
<td>Matara</td>
<td>168</td>
<td>208</td>
<td>65</td>
<td>20</td>
</tr>
<tr>
<td>Kurunegala</td>
<td>205</td>
<td>233</td>
<td>47</td>
<td>25</td>
</tr>
<tr>
<td>Puttlam</td>
<td>123</td>
<td>131</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>Anuradhapura</td>
<td>117</td>
<td>140</td>
<td>33</td>
<td>15</td>
</tr>
<tr>
<td>Badulla</td>
<td>96</td>
<td>107</td>
<td>26</td>
<td>14</td>
</tr>
<tr>
<td>Monaragala</td>
<td>65</td>
<td>67</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>Ratnapura</td>
<td>167</td>
<td>192</td>
<td>47</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,115</strong></td>
<td><strong>2,413</strong></td>
<td><strong>609</strong></td>
<td><strong>260</strong></td>
</tr>
</tbody>
</table>