



GROWING OLD BEFORE BECOMING RICH

CHALLENGES OF AN AGING POPULATION
IN SRI LANKA

DECEMBER 2019

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Preface

One prism through which we view progress in achieving various social indicators is demographic change, such as in the age composition of a country's population. Improvements in health are reflected over time in the increased share of the working-age population followed by a slow decline. That decline is accompanied by a larger share of old people. Against this backdrop, the Asian Development Bank's Sri Lanka Resident Mission, under a technical assistance project, TA 9454: Supporting Delivery of Knowledge Solutions, conducted this study on the aging population in Sri Lanka and the challenges it presents.

Sri Lanka's progress on various social indicators is well documented and widely acknowledged. It ranked 76th in the Human Development Index and outperforms countries at a similar level of development. Sri Lanka will likely undergo profound demographic changes as the share of elderly or elders in the population increases over the rest of the 21st century. This report provides an analysis of the state of the elderly in Sri Lanka, and the challenges as well as the opportunities an aging population may bring. It sheds light on their sources of income and living arrangements, vulnerability to poverty, participation in the labor market, social security, and health care and long-term care.

An aging population can have several implications. These include impact on growth through changes in labor force participation and productivity; savings and consumption behavior over the life cycle; and fiscal impact through increase in pension, costs of health and long-term care. A multifaceted policy response is needed to address these challenges.

Sri Lanka has achieved a milestone as it graduated to upper-middle-income status. The prism of population projection offers a glimpse of the challenges Sri Lanka will likely face as it continues its development journey. To sustain its growth momentum, the country must encourage women to take on productive employment opportunities, which will offset the decline in the working-age population. Reforms to address policy constraints on productivity will be crucial. Equally important are measures to ensure old-age social security and long-term care for elders. As some of the costs are likely to fall on the exchequer, the government will need to take steps to improve the fiscal situation to respond to an aging population.

In Sri Lanka, the demographic shift to an aging society is far more rapid than in many other countries at a similar level of development, and occurring at the same speed as in countries with much higher per capita income. This phenomenon has been set in motion by changes over a long time and will likely happen. It is encouraging that the government has acknowledged the impending challenge and has started to take measures to respond. It is essential that the country use the intervening decades to put in place the necessary systems and policies to respond to the impending challenges of an aging population.



Hun Kim

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Abbreviations and Currency Equivalents

APPF	approved provident and pension fund
ADL	activities of daily living
A/L	advanced level
CSPS	Civil Service Pension Scheme
DCS	Department of Census and Statistics
EPF	Employees' Provident Fund
FPS	Farmers' Pension Scheme
GDP	gross domestic product
HIES	Household Income and Expenditure Survey
IADL	instrumental activities of daily living
IHP	Institute for Health Policy
IMF	International Monetary Fund
LFPR	labor force participation rate
LFS	Labor Force Survey
LTC	long-term care
MOH	Ministry of Health
NCD	noncommunicable disease
NGO	nongovernment organization
OECD	Organisation for Economic Co-operation and Development
OPD	outpatient department
PPP	purchasing power parity
PRC	People's Republic of China
SSB	Social Security Board
US	United States
WHO	World Health Organization
WWOP	Widows, Widowers, and Orphans Pension

CURRENCY EQUIVALENTS

(as of 26 November 2019)

Currency unit	-	Sri Lanka rupee/s (SLRe/SLRs)
SLRe1.00	=	\$0.0055
\$1.00	=	SLRs183.26

Executive Summary

Demographic changes provide insights into a country's development journey and future prospects. Across many economies in Asia and the Pacific, populations are growing older, slowly but surely. The graying of the population is a phenomenon widely associated with East and Southeast Asian economies, but it looms significant for Sri Lanka. Like many other social development indicators, Sri Lanka is ahead of other South Asian countries in demographic transition as it is aging relatively faster.

A well-established stylized fact is that development is accompanied by a transition from high birth and death rates, which is typically seen at early stages of development and low level of per capita income, to high birth rate and low death rate, and subsequently to low birth and death rates with growth and development. These lead to changes in age composition—an increase in the share of the working-age population in total population, i.e., a bulge in the working-age population, and as life cycle progresses the share of the elderly in the population increases. These changes typically come in the midst of improvements in health and education, which reduce fertility rate, lower infant mortality rate, and increase life expectancy; as well as changes in household reproductive decisions as labor market opportunities and other opportunity costs increase.

Population projections for Sri Lanka show that population growth will taper off. Under current trends, based on the United Nations population projections, Sri Lanka's population of 21.2 million as of 2018 is likely to peak to around 22.2 million by 2038 before beginning to contract. The population is growing older and will age more rapidly than most of the other developing economies. Sri Lanka's age composition is shifting from a pyramid to a pillar shape. The share of working-age population (those aged 15 to 64) in total population has started declining, and the absolute number of working-age population will also start dropping by 2030. In Sri Lanka, these changes are happening at a much earlier stage of development than in many other economies that are facing aging.

This report discusses the state of the elderly, and the pattern and trend of aging in Sri Lanka, in the process identifying the broad challenges that the country is likely to face. The first chapter summarizes demographic trends based on population projections. Chapter 2 presents the current state of the elderly in Sri Lanka and reviews sociocultural norms such as living arrangements. This chapter also discusses poverty among the elderly and their sources of income. An overview of existing pension and old-age income support schemes, existing gaps, as well as policy recommendations are provided in Chapter 3. Chapter 4 discusses the implications of an aging population on labor force participation followed by policy recommendations to address potential labor shortages. Chapter 5 discusses the impact of aging on health and long-term care costs and recommends effective responses to the needs of an aging population. Chapter 6 concludes the report.

Aging brings with its several challenges. The falling share of working-age population and an aging population can be a drag on growth. Consumption and savings behavior vary over the life cycle of an individual and a changing age composition can affect savings. As people age, they may dip into their savings to meet expenses, and the youth may save more as they anticipate improved longevity after retirement. Aging has fiscal implications also as pension costs and other forms of old-age income security and the costs of providing health care and long-term care (LTC)

increase. A multidimensional policy response is needed—from addressing constraints on growth, improving labor force participation, and addressing fiscal imbalance to create fiscal space for additional expenditure.

Extreme poverty, as measured by \$1.90 a day (2011 purchasing power parity), fell to low single digits in Sri Lanka in 2016. Incidence of extreme poverty for older persons is no different. However, if the poverty line is set a bit higher at the national poverty line or at \$3.20 a day (2011 purchasing power parity), poverty among older persons is higher than the rest of population—a sign that older people have limited income, which makes them vulnerable. Poverty incidence at the national poverty line, though higher among elders compared with the rest of the population, is in single digits. This is largely because most of the elders in Sri Lanka continue to live with their families, so living standards of the older people largely resemble that of the typical household. However, the elderly have few independent sources of income. Income from work falls sharply after age 60, reflecting the relatively low retirement age norms in the formal sector. Only in rural areas, probably owing to the lack of alternatives, do significant numbers of older people continue to work.

While social norms still largely ensure that the family looks after their elders, the number of elders living alone has increased, albeit from a low level. This trend is in fact just as rapid as Japan experienced in the 1970s. The evolving living arrangements will need to be factored in as the government may have to bear a larger part of the burden of old-age income support.

Just as an increase in the share of the working age contributes to gross domestic product (GDP) growth, a decline in the share of working-age population can put the brakes on growth directly and also impact productivity through a change in age-productivity profile. Efforts should focus on raising labor force participation so that a greater proportion of the population is engaged in productive activities. In addition, attention needs to be given to raising the productivity of workers in the economy.

One potential source of labor supply to offset an aging population is female labor force participation, which in Sri Lanka remains low despite high educational attainment among women. Policies to improve female labor force participation such as maternity leave, raising awareness about sharing of household responsibilities, flexible hours, work from home, and provision of childcare facilities will be essential to attracting women into the labor force.

Policies to improve overall productivity in the economy must be part of the response to aging. These include addressing constraints on attracting new investment as well as improving workforce quality. The experience of other Asian economies indicates a key focus should be on upgrading the skills of all workers, including elderly. The broader challenge is to build learning systems that allow for continuous skill upgrading of workers across the life cycle. The education and training systems need to evolve from the conventional pattern of learning during childhood only, followed by work and retirement, to one where learning and skill upgrading happen seamlessly not only during formative years but also while working and after retirement.

Technological advancements can be leveraged to improve productivity, increase labor force participation, improve health and extend working life spans as well as longevity, and create a more flexible workplace.

As Sri Lanka's population ages, the costs of looking after the needs of the elderly will increase and may translate into increased fiscal costs for government. However, to what extent this happens critically depends on the strategic choices that the government makes in the areas of old-age income support, health, and LTC.

Sri Lanka will need to develop a coherent and unified policy framework to ensure that the elderly have access to income support. While workers in the formal and informal sectors have several pension schemes, a large coverage gap remains, with effectively half the population lacking access to any arrangement, and those with pension schemes especially in the informal sector having inadequate coverage.

Challenges from aging require a realistic approach based on sound economic principles. Purely contributory schemes may not provide adequate old-age income support for low-income and informal workers. Hence, public pension schemes with a redistributive element may have to be an integral part of any coherent policy framework consistent with the country's political economy. That is already evident with the only major change in old-age income security policies being the introduction of the Senior Citizens Allowance in 2012. Making old-age income security affordable for the society and economy will likely require the lengthening of working lives to match increased life expectancy, so that the number of workers or years spent in work aligns better with the number of retirees or years spent in retirement. This points to a central challenge which policy makers face in creating a realistic pension strategy, i.e., how to raise retirement ages and change norms.

The other two drivers of aging-related fiscal costs are health and long-term care. In this, Sri Lanka still has room to maneuver. Older people experience more illnesses, have a different disease profile with higher incidence of chronic and noncommunicable diseases, and are more likely to need medical and dependent care than the young, so increases in health costs are inevitable with aging. Sri Lanka's health system has managed to keep the costs of health-care delivery low, and expanding health-care financing through efficiency gains. If the past efficiency gains in the health sector can be maintained, much of the increased aging-related health-care costs will dissipate, and overall fiscal costs will remain manageable. Safeguarding the progress made in the health sector would significantly enable the effort in extending working lives in response to aging.

Sri Lanka faces a growing need for LTC services. LTC has different elements which the Ministry of Health and Ministry of Social Welfare provide, along with some private and civil society groups. These LTC-related services need improvement, integration, and oversight. An identified focal agency with sufficient authority should be appointed to coordinate implementation. Further, a single point of entry for delivering integrated care and clear responsibility for case management would help to avoid fragmentation in the LTC system. Workforce planning and training are needed to increase the numbers, quality, and capacity of the LTC workforce. This includes LTC training for health and social welfare staff as well as developing a cadre of workers to provide social care support in the home and community. A communication campaign to raise public awareness and engagement is also essential.

Looking ahead, it is inevitable that Sri Lanka will need to provide and finance LTC for the increasing number of dependent elders. Currently, public provision and financing of LTC is nonexistent, and formal private sector provision is negligible. However, the experience of developed countries suggests that LTC costs may need to be met by some kind of public financing. Given that any LTC policy will need to be rooted in Sri Lanka's realities, attention should be paid to the experience of advanced economies with similar approaches to social welfare policy, such as Australia; Hong Kong, China; and New Zealand, as well as economies with different approaches such as Japan and the Republic of Korea.

Demographic transition is slow and the changes that Sri Lanka will see over the next few decades have been set in motion decades ago. These changes, barring any major shocks, are likely to materialize. The duration over which these changes are expected to happen allows all stakeholders to start planning for the transition as actions would be needed at the level of the government, companies, and individuals to adapt to an aging society. Sri Lanka has successfully managed its social progress in the past, and with planning and coordination, it can likewise manage effectively the next wave of change.

Sri Lanka's Demographic Transition: Growing Old Before Becoming Rich

Population Aging in Sri Lanka: Demographic Trends and Prospects

Population aging is a common phenomenon across advanced economies and in Asia and the Pacific in East and Southeast Asian economies, but it looms significant for Sri Lanka, being one of the fastest aging countries in South Asia. It is well established that economic development is accompanied by improvements in health indicators, from high fertility and high mortality to low mortality and low fertility, which changes the age composition of the population over a long period. As the age composition changes, the share of the working-age population in total population increases, i.e., a bulge in the working-age population, and as life cycle progresses the share of the elderly (or elders) in the population increases. These changes in age composition typically follow improvements in health and education, which reduce fertility rate, lower infant mortality rate, increase life expectancy, and alter household decisions on having children as labor market opportunities and other opportunity costs increase.

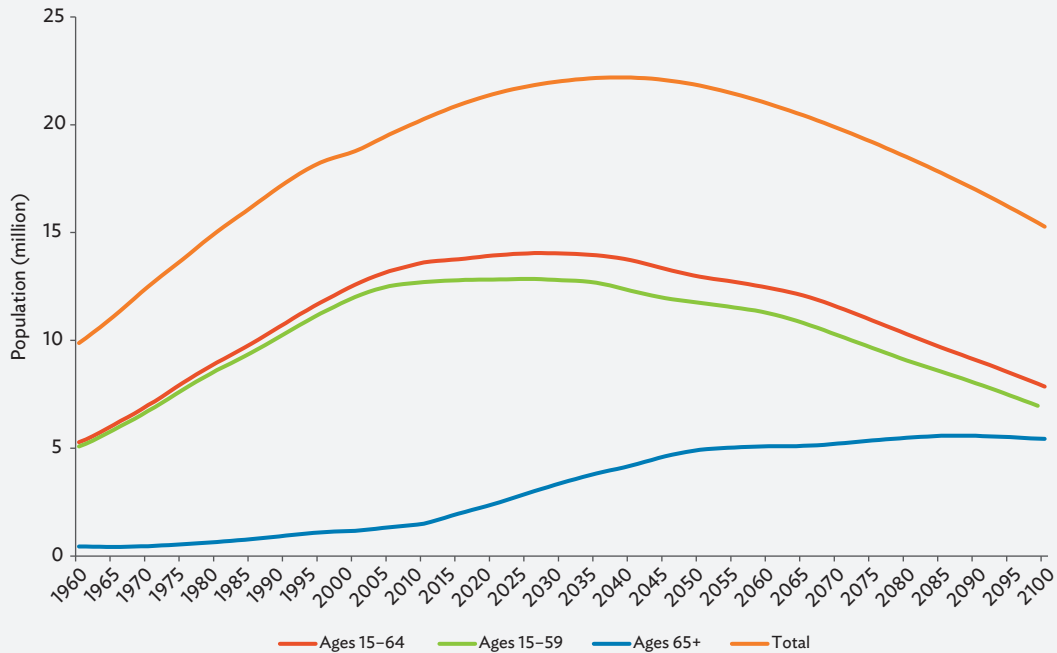
The 2012 census recorded Sri Lanka's population at 20.4 million. Using population projections from the World Population Prospects 2019 (United Nations 2019), Sri Lanka's total population is expected to increase modestly to 22.2 million by 2038, before beginning to decline, i.e., the era of continuous population growth is projected to end in about 2 decades (Figure 1). Sri Lanka will experience a contracting population after 2038, assuming fertility rates continue at low levels and there is no substantial inward migration. The working-age population, i.e., those aged 15–64, will reach a peak in 2027 before starting to decline; whereas the 15–59 age group will reach a peak in 2026.¹ The number of older persons, i.e., those aged 65 or more will double by 2040 compared with 2015.²

A key characteristic of Sri Lanka's demographic future that stands out from the population projection is that the age structure will gradually switch from a pyramid structure, typical of most developing economies, to a pillar shape (Figure 2), similar to that of many developed economies. The shift in shape is the result of a rapid rise expected in the share of population over 65 years in Sri Lanka's total population from 9.4% in 2015 to 21% by 2045 and to 35.6% by 2100. As shown later, the rapid increase in the share of the elderly in Sri Lanka is projected to happen much faster than in developed economies, and at a lower level of per capita income. These changes in population

¹ A commonly accepted definition of the elderly is those aged 65 and over. However, in Sri Lanka those aged 60 and over are considered elderly as 60 is the retirement age from public service. There are obvious caveats to the use of age 60 as the threshold as those in the private sector may choose to retire once they have access to their pension fund (at the age of 50 for females and 55 for males). For the purposes of comparing Sri Lanka's demographic changes in an international perspective, ages 65 and above is used as the definition of the elderly. In the following chapters, discussion on the state of the elderly in Sri Lanka refers to those aged 60 and above.

² Alternative projections which use more recent fertility data show population peaking around 2065 but the broad pattern of demographic transition is the same and delayed by a decade or so (Abeykoon 2018). Projections by de Silva and de Silva (2015) show a youth bulge as there has been an uptick in fertility since the end of the civil war, a point discussed later in this report.

Figure 1: Projection of Sri Lanka's Population, 1960–2100



Note: Medium variant of population projection as reported in the World Population Prospects is used.

Source: Authors' estimates based on data from United Nations, Department of Economic and Social Affairs, Population Division. 2019. *World Population Prospects 2019*. New York. <https://population.un.org/wpp/> (accessed 21 August 2019).

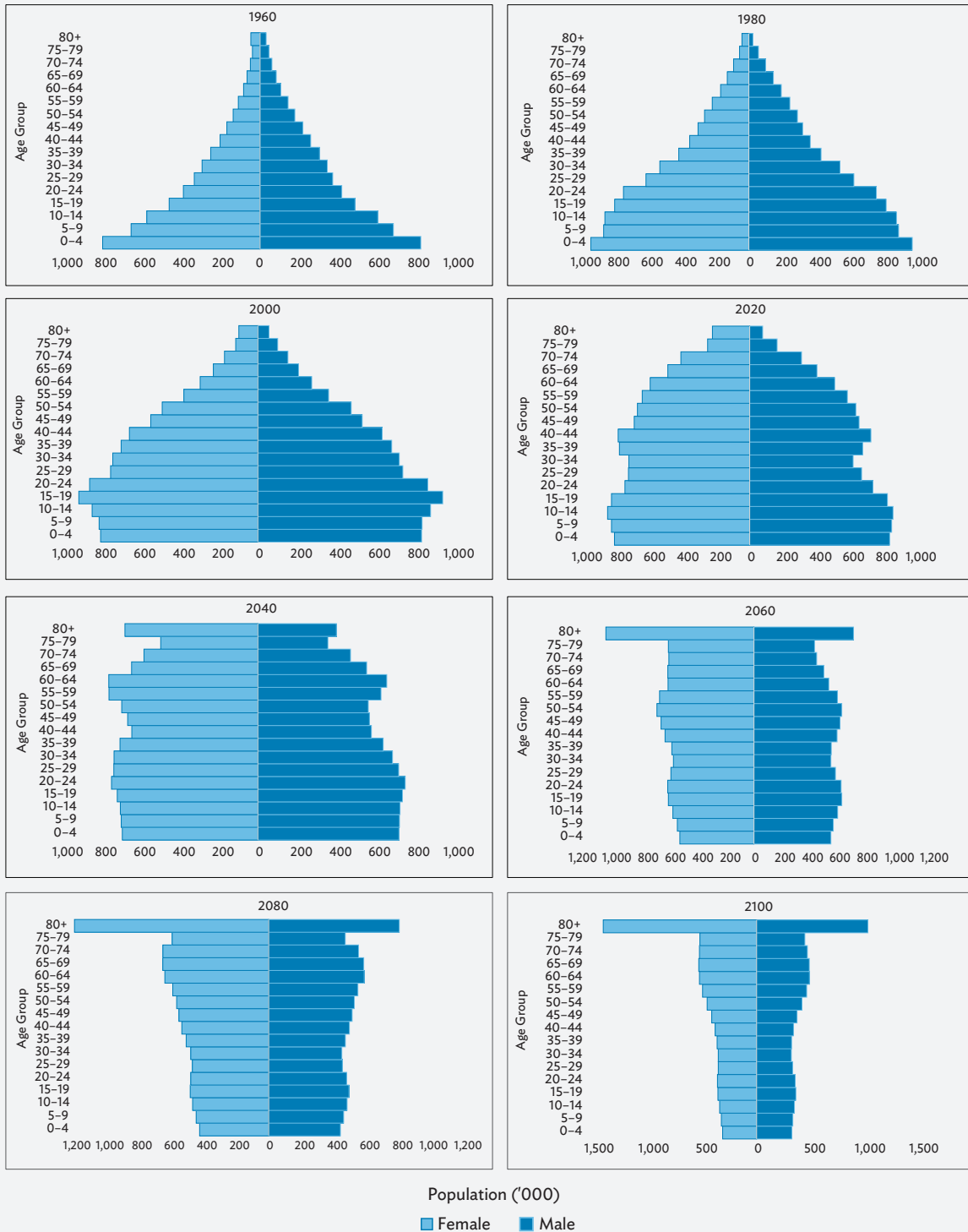
age structure will result in a rapid rise in the dependency ratio. Old-age dependency ratio (ratio of population aged 60 years or more to the population aged 15–59 years) has been increasing since the early 1970s while there has been a corresponding fall in the child dependency ratio (ratio of population aged less than 15 years to the population aged 15–59 years), though the former has remained below the latter thus far (Figure 3).³

However, the two will roughly balance around 2030 and thereafter, old-age dependency is projected to remain higher than child dependency ratio. Total dependency ratio will increase rapidly from 60% in 2010 to reach 80% by 2040 and then to 120% by 2100, with the entire increase being driven by increase in old-age dependency ratio. The old-age dependency ratio will nearly double from 2020 to 2050, meaning that each working-age adult will have twice as many elderly to support, as will be the case in 2050. This change in the dependency ratio will have important implications for future policies.

Changes in fertility rate, infant mortality rate, and life expectancy create a pattern whereby a transition takes place from high birth and death rates (typically seen at the early stage of a country's development and at a low level of per capita income) to low birth and low death rates as the economy advances in its development. As this dynamic plays out, age composition shifts from a relatively young population to an increasing share of the older persons. During this transition, an economy is likely to see, for an extended period, a bulge in the share of the working-age population, also referred to as the demographic dividend. The United Nations Population Division

³ Dependency ratio is measured with respect to ages 15–59 for the reasons mentioned in footnote 1.

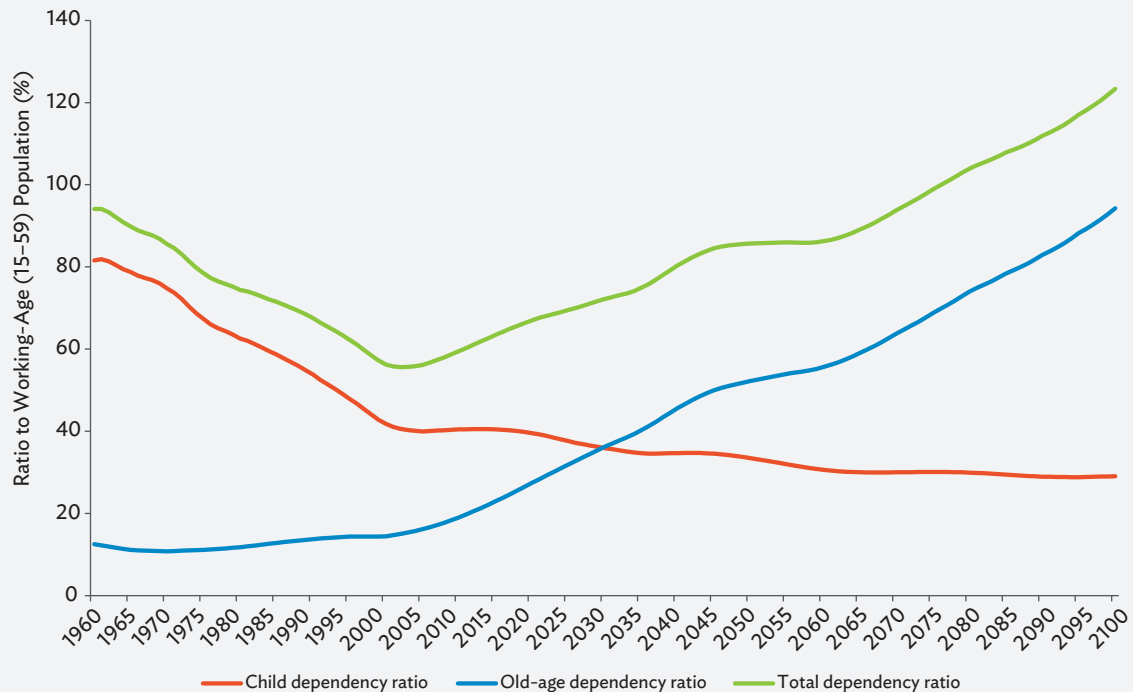
Figure 2: Population Pyramid for Sri Lanka, 1960–2100



Note: Medium variant of population projection as reported in the World Population Prospects is used.

Source: Authors' estimates based on data from United Nations, Department of Economic and Social Affairs, Population Division. 2019. *World Population Prospects 2019*. New York. <https://population.un.org/wpp/> (accessed 21 August 2019).

Figure 3: Trends in Dependency Ratios, 1960–2100



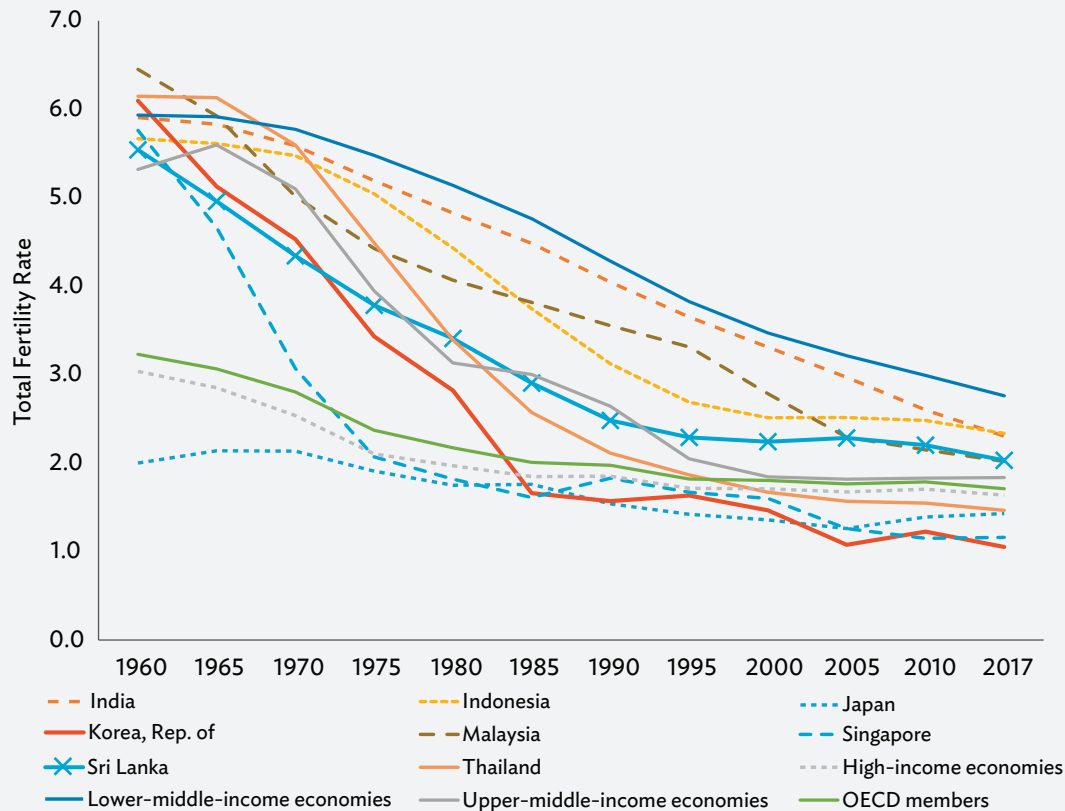
Note: Medium variant of population projection as reported in the World Population Prospects is used.

Source: Authors' estimates based on data from United Nations, Department of Economic and Social Affairs, Population Division. 2019. *World Population Prospects 2019*. New York. <https://population.un.org/wpp/> (accessed 21 August 2019).

defines demographic dividend as the period in which the share of children under 15 years falls below 30% and the share of people 65 years and older is still below 15%. The demographic dividend in Sri Lanka opened a window of opportunity in the mid-1990s, which is expected to close by 2030. It is usually argued that it is important to utilize this demographic opportunity for economic growth, and many East and Southeast Asian economies leveraged the opportunity during the time they witnessed high economic growth. Indeed, one-third of the high per capita income growth in East Asia during 1960–1990 can be attributed to the demographic dividend (World Bank 2016).

One of the main drivers of the slowing momentum of population growth has been the rapid decline in fertility rate from 5.5 in 1960 to 2.0 in 2017 (Figure 4). Sri Lanka has narrowed the gap with the Organisation for Economic Co-operation and Development (OECD) member economies (average fertility rate of 1.7 in 2017), upper-middle-income economies (average fertility rate of 1.8 in 2017), and also high-income economies (average fertility rate of 1.6 in 2017). Recent data show that fertility has rebounded since 2007, and the total fertility rate reached 2.2 in 2016 (Department of Census and Statistics and Ministry of Health, Nutrition, and Indigenous Medicine 2017). The recent increase in fertility in Sri Lanka may be a temporary phenomenon following the end of the conflict in 2009, resembling the postwar baby boom in the United States (US) in the 1940s and 1950s. If it is temporary, fertility may eventually fall again. In Sri Lanka, the key drivers of the early and rapid fertility decline include early improvements in child survival, female empowerment, and limited barriers to spread of social norms

Figure 4: Total Fertility Rate in Sri Lanka and Selected Asian Economies and Income Groups, 1960–2017



OECD = Organisation for Economic Co-operation and Development.

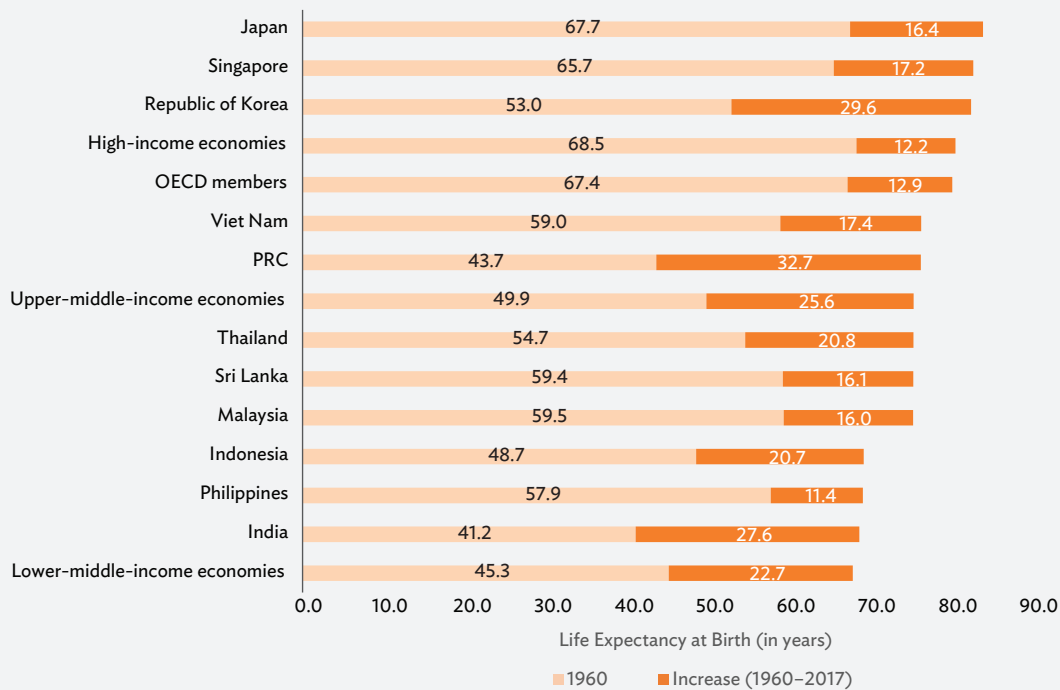
Source: World Bank. World Development Indicators. <https://data.worldbank.org/indicator/sp.dyn.tfrt.in> (accessed 20 August 2019).

in favor of smaller families. Good access to and awareness of contraceptive services, and economic pressures from the 1970s that encouraged late marriage were also contributory factors. A key element in population projection is future fertility trends, which are not easy to forecast.

Along with the decline in fertility rate, which slows the entry of the young population, increasing life expectancy is the next most important driver of change in a population's age composition. Helped by investments in human development, Sri Lankans are living longer, resulting in the increased proportion of the elderly, a higher share of whom are living longer. High levels of access to and coverage by health-care services have been very important. As early as 1960, life expectancy in Sri Lanka was comparable to that of the average of upper-middle-income economies and even better than some of the Asian economies (Figure 5). Since then, Sri Lanka has managed to close the gap with average life expectancy of high-income economies and OECD economies.

However, a critical aspect of Sri Lanka's demographic experience is that male adult life expectancy stagnated for 2–3 decades from the 1970s, even while female life expectancy rapidly increased. This was probably due initially to the high incidence of smoking among Sri Lankan men, followed by limited access to treatment for noncommunicable diseases (NCDs) from the 1990s. Recent data suggest that this stagnation has ceased,

Figure 5: Life Expectancy in Sri Lanka and Selected Asian Economies and Income Groups, 1960 and 2017



PRC = People's Republic of China, OECD = Organisation for Economic Co-operation and Development.

Notes: Light bars show life expectancy in 1960 while dark bars show the increase in life expectancy from 1960 to 2017. The full length of the bar shows life expectancy in 2017.

Source: World Bank. World Development Indicators. <https://data.worldbank.org/indicator/sp.dyn.le00.in> (accessed 20 August 2019).

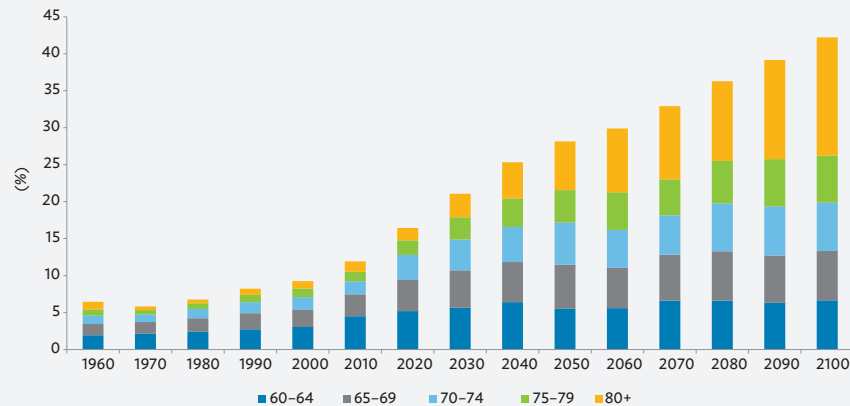
possibly due to recent improvements in access to NCD care. If this improvement in male life expectancy does not continue, the population of older people will be even more predominantly female than currently projected.

Another feature of aging in Sri Lanka is a sharp increase in the proportion of people who are very old (i.e., those aged 80 years and above). Sri Lanka is moving rapidly from “aging” (share of 65+ in total population is reaching 7%), to “aged” (share of 65+ in total population is 14%), to “super-aged” (share of 65+ in total population is 21% or over). The share of the population over 60 years was 9.3% in 2000 and is expected to continue increasing to 16.4% in 2020, 28.1% in 2050, and 42.2% by 2100 (Figure 6). At the same time, there will be a process of aging among the older persons, i.e., those who live beyond the age of 80 and who are more likely to be frail and dependent. The share of those aged 80 and above in the population of those aged 60 and above is projected to increase from 12% in 2010 to almost 38% by 2100 (Figure 6). The projected increase in the share of older persons aged 80 years and above will play a determining role in the quantum and quality of social and health-care services required by the elders.

Figures 7–9 help contextualize Sri Lanka’s demographic transition vis-à-vis speed of aging in other economies. Sri Lanka is not the only country to be facing an aging population, but three things stand out:

- (i) Sri Lanka is aging rapidly—the share of those aged 65 and above is increasing rapidly compared with the number of years it took for other economies (Figure 7).

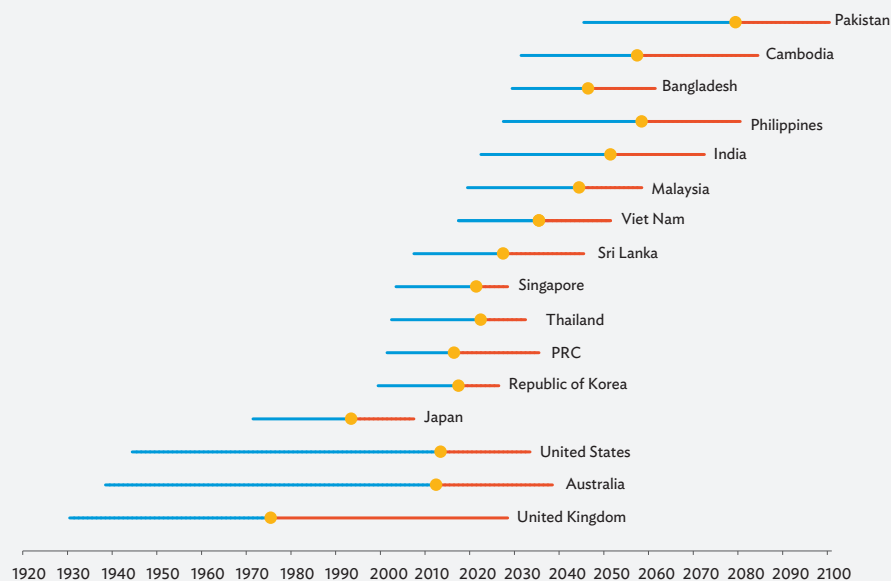
Figure 6: Share of the Elderly (Aged 60 Years and Over) in Sri Lanka's Total Population, 1960–2100



Note: Medium variant of population projection as reported in World Population Prospects is used.

Source: Authors' estimates based on data from United Nations, Department of Economic and Social Affairs, Population Division. 2019. *World Population Prospects 2019*. New York. <https://population.un.org/wpp/> (accessed 21 August 2019).

Figure 7: Speed of Aging, Sri Lanka and Selected Economies



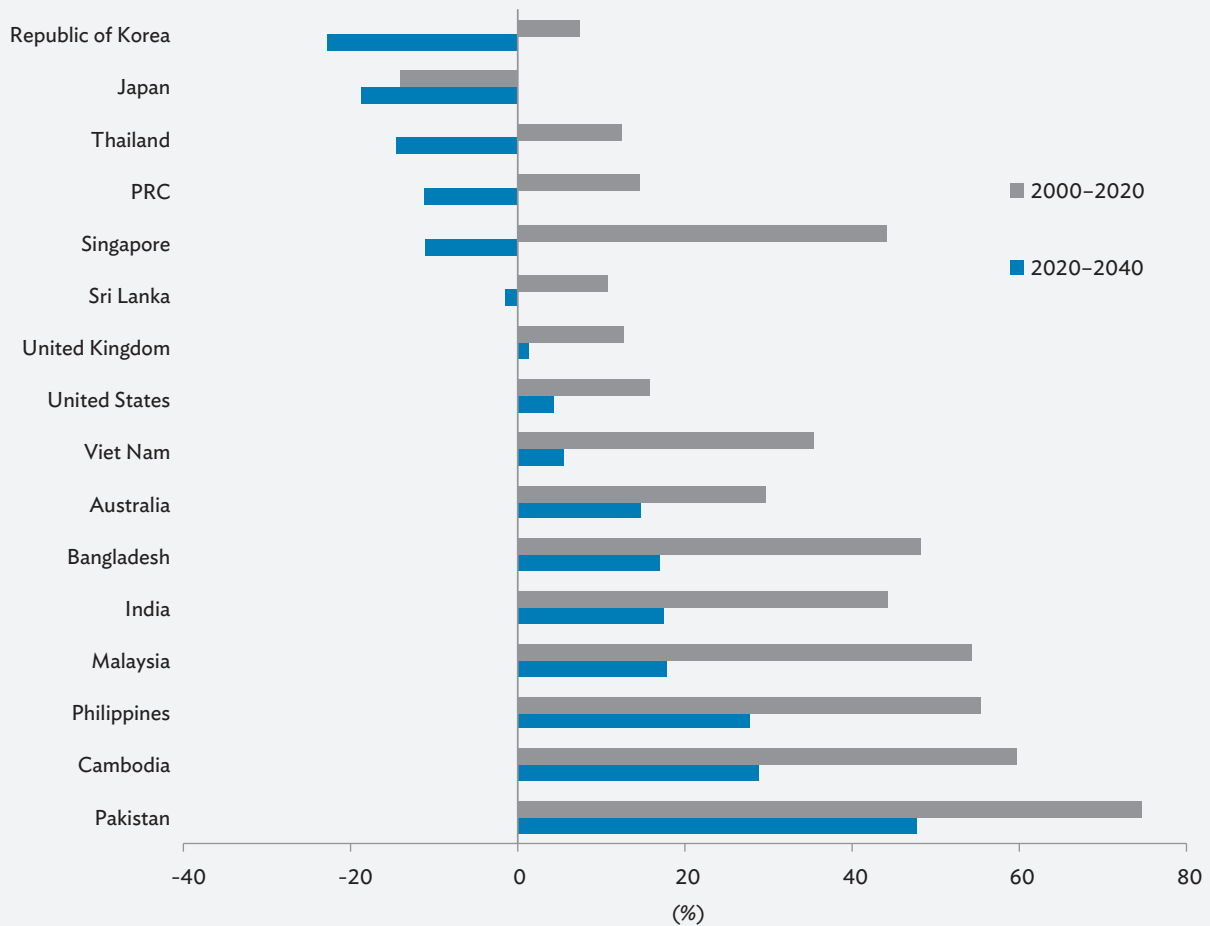
PRC = People's Republic of China.

Notes: The length of the blue line shows the number of years over which the share of the population aged 65 and over is projected to rise from 7% to 14%. The length of the red line shows the number of years over which the share of the population aged 65 and over is projected to rise from 14% to 21%. Medium variant of population projection as reported in World Population Prospects is used.

Sources: Authors' estimates based on data from United Nations, Department of Economic and Social Affairs, Population Division. 2019. *World Population Prospects 2019*. New York. <https://population.un.org/wpp/> (accessed 21 August 2019). Data for Australia, the United Kingdom, and the United States are from W. He, D. Goodkind, and P. Kowal. 2016. *An Aging World 2015: International Population Reports*. Washington, DC: United States Census Bureau. <https://www.census.gov/content/dam/Census/library/publications/2016/demo/p95-16-1.pdf>.

- (ii) While other economies are aging just as rapidly, Sri Lanka is one of the few expected to see a declining working-age population by 2030 (Figure 1 and Figure 8).
- (iii) The increase in the share of population aged 65 and above, and the decline in working-age population are occurring at a lower level of per capita GDP, meaning Sri Lanka, based on current demographic projections, is likely to grow old before getting rich (Figure 9).

Figure 8: Change in Working-Age (15–64) Population in Sri Lanka and Selected Economies, 2000–2040



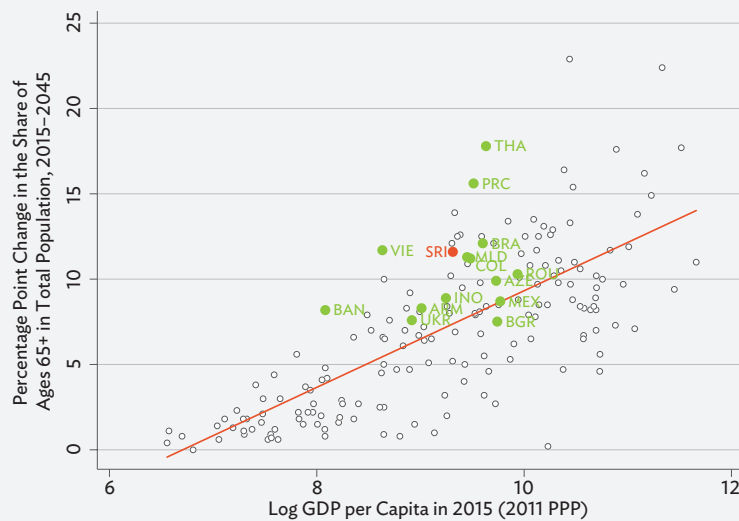
PRC = People's Republic of China.

Note: Medium variant of population projection as reported in the World Population Prospects is used.

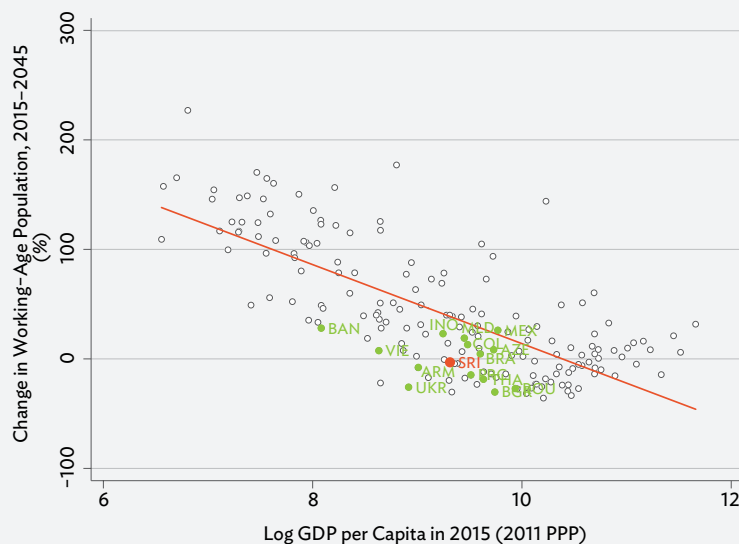
Source: Authors' estimates based on data from United Nations, Department of Economic and Social Affairs, Population Division. 2019. *World Population Prospects 2019*. New York. <https://population.un.org/wpp/> (accessed 21 August 2019).

Figure 9: Gross Domestic Product per Capita and Projected Demographic Changes: Sri Lanka from a Global Perspective

Panel A: Change in Share of Ages 65+ and GDP per Capita



Panel B: Working-Age Population and GDP per Capita



ARM = Armenia, AZE = Azerbaijan, BAN = Bangladesh, BGR = Bulgaria, BRA = Brazil, PRC = People's Republic of China, COL = Colombia, GDP = gross domestic product, INO = Indonesia, MEX = Mexico, MLD = Maldives, PPP = purchasing power parity, ROU = Romania, SRI = Sri Lanka, THA = Thailand, UKR = Ukraine, VIE = Viet Nam.

Note: Medium variant of population projection as reported in the World Population Prospects is used.

Sources: Authors' estimates based on data from United Nations, Department of Economic and Social Affairs, Population Division. 2019. *World Population Prospects 2019*. New York. <https://population.un.org/wpp/> (accessed 21 August 2019); and World Bank. World Development Indicators. <https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD> (accessed 21 August 2019).

Macroeconomic Implications of an Aging Population

Change in population and its composition on any dimension such as gender or age are long-term trends and are the result of changes that have been set in motion in earlier decades but show significant results much later. Improvement in social indicators, such as decline in infant mortality rates, higher life expectancy, improvements in public health, increase in educational attainment, and greater awareness lead to a transition from high birth and high death rates to low birth and low death rates. This is reflected in a change in the age composition over several decades. In other words, using the prism of population projection, one can gauge long-term trends and also anticipate challenges that may lie ahead.

Discussion in the previous section shows that Sri Lanka is facing a changing population structure, with the share of the working-age population in the total population expected to decline, followed by an absolute decline in the working-age population. These demographic changes will have manifold effects on the economy. These changes will require policy interventions and behavioral changes not only from the perspective of the elderly but across the life cycle of all individuals including the young today. In other words, preparing for an aging society, a transition that—barring any major natural catastrophe or policy change—is certain to happen, requires early planning, policy changes, and actions from across the age spectrum. Implications of the demographic transition to an aging population are discussed below.

A simple growth accounting exercise shows that growth in the share of the working-age population contributes directly to higher economic growth as measured by the growth rate of GDP per capita. Of course, this assumes that supporting conditions such as infrastructure, capital, and the necessary policy environment are in place. In other words, a youth bulge is not a sufficient condition for higher economic growth. Past research has shown that nearly 33% to 44% of the growth witnessed in East Asia during 1960–1990 can be attributed to a bulge in the working-age population (Bloom, Canning, and Malaney 2000; Bloom and Williamson 1998; Kelley and Schmidt 2005; World Bank 2016). On the flip side, recent research also shows that a decline in the share of the working-age population can, in the absence of corresponding productivity increases, adversely impact growth (Bloom, Canning, and Finlay 2010).

Aging can also have an adverse impact on productivity, which, as is well known, is a key determinant of growth. Aging is typically associated with a decline in physical and cognitive capacities, which affects productivity. Firm-level studies on peak productivity and age show that the age–productivity profile varies by economy and industry, and that the timing of the peak also varies (ADB 2018). Peak productivity, on average, tends to be around ages 30–45. On the other hand, there are other studies that do not find an impact of aging on productivity. For example, Borsch-Supan and Weiss (2016) find that at a truck assembly plant in Germany, productivity peaks at the age of 60. At the country level, studies show that aging lowers productivity and therefore growth (ADB 2018). Using the projected change in age composition of Germany’s labor force during 2003–2025, Wasiluk (2014) estimated that an aging labor force lowered the average annual rate of productivity growth by 0.11 percentage points during 2010–2025, and by 0.17 percentage points if retirement is postponed by 2 years. A study by the International Monetary Fund (IMF) concludes that an aging workforce will be a “significant drag” on European productivity growth. The study estimates that a 1-percentage-point increase in size of the 55–64 age group will lower total factor productivity by about three-fourths of a percentage point. This will reduce total factor productivity growth by 0.2 percentage points per year from 2014 to 2035.

An aging population will have implications for both household and public savings, which can in turn impact investment. Household savings may increase or decrease depending on which of the two opposing effects

dominate—a higher share of older people in the population may reduce savings as the elderly run down savings; and the young may choose to start saving more in anticipation of a longer life expectancy post saving. Critical to addressing the impact on savings will be developing the capital market and removing inefficiencies to effectively use savings for investment (World Bank 2016).

There will also be a decline in public savings as an aging population will increase fiscal costs, largely in the areas of pensions, health, and LTC provision. These present challenges for Sri Lanka because of its already high debt levels and long-standing structural fiscal deficit. The cost of providing pensions and old-age income security to a larger share of the population and one that is expected to live longer (Figure 6) presents potentially large fiscal costs. While these costs may be manageable today, fiscal risks in the future may arise from pressure to expand coverage. With a health-care system dominated by public provision of health-care services, an aging population will exert pressure on the system to meet the health needs of those who may have a different ailment profile, requiring long-term and specialty care, compared with a young population. Similarly, provision of LTC may add to government expenditure.

Park and Shin (2011) quantify the impact of demographic change on per capita GDP. The study captures the effect of change in youth and old-age dependency on GDP per capita through various channels such as labor force participation, savings, capital accumulation, and total factor productivity. Results show that economies such as Hong Kong, China; the Republic of Korea; and Singapore will likely see a net drag on growth in 2011–2020, which will increase further over 2021–2030. Other economies such as the People's Republic of China (PRC), Thailand, and Viet Nam will see negative contribution from demographic change as the share of the elderly in their respective population increases. Available evidence thus suggests that demographic transition from a young to an aged population may have a negative impact on growth.

About the Report

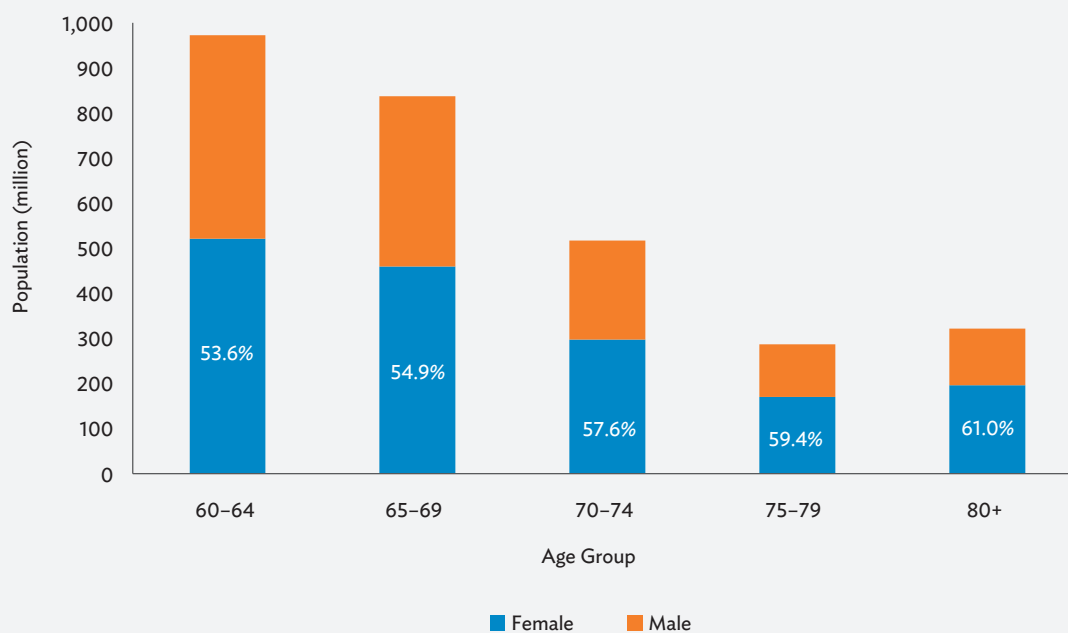
This study looks at the state of the elderly and the challenges that an aging population poses for Sri Lanka. Chapter 1 summarizes future demographic trends and the impending demographic transition as well as a comparative picture. Chapter 2 presents the current state of the elderly in Sri Lanka and reviews sociocultural norms such as living arrangements. It also discusses poverty among the elders and their sources of income as well as how they vary across female and male elders and over the life cycle. Chapter 3 provides an overview of existing pension and old-age income support schemes and the gaps that exist. Chapter 4 discusses the implications of the aging population on labor force participation followed by policy recommendations to address potential labor shortages. Chapter 5 discusses the impact of aging on health and long-term care costs and provides recommendations to effectively respond to the needs of an aging population. Chapter 6 concludes the report.

2 The State of the Elderly

The Elderly and Their Living Arrangements

Defined as those aged 60 years and over, the elderly numbered 2.6 million in 2015 and represented 12.4% of the total population. Elderly females make up a greater share of the population than elderly men because females have had a higher life expectancy than males since the 1960s. The share of females in the elderly population increases with age: from 54% in the 60–64 age group, to 58% in the 70–74 age group, to 60% in those aged 80 years and over (Figure 10). The share of females in the total population has increased over the years and currently is higher than males. Female share in total population was 47% in the 1946 census, which increased to 52% in 2012 (Department of Census and Statistics 2015). The likelihood of being a widow also increases with age: 66% of elders aged 80 years and over are widowed, in contrast to the 60–69 age group (Figure 11).

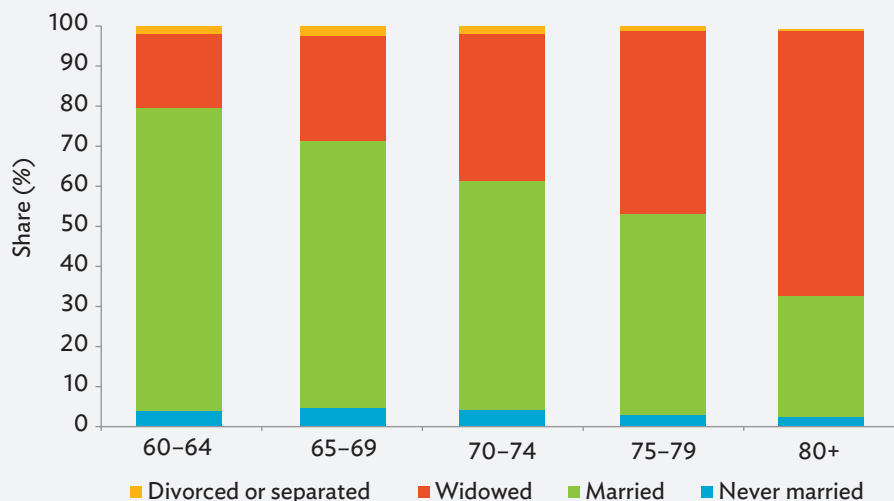
Figure 10: Number of People Aged 60 Years and Over, by Age Group and Sex, 2015



Note: Medium variant of population projection as reported in the World Population Prospects is used.

Source: Authors' estimates based on data from United Nations, Department of Economic and Social Affairs, Population Division. 2019. *World Population Prospects 2019*. New York. <https://population.un.org/wpp/> (accessed 21 August 2019).

Figure 11: Marital Status of People Aged 60 Years and Over, by Age Group, 2016

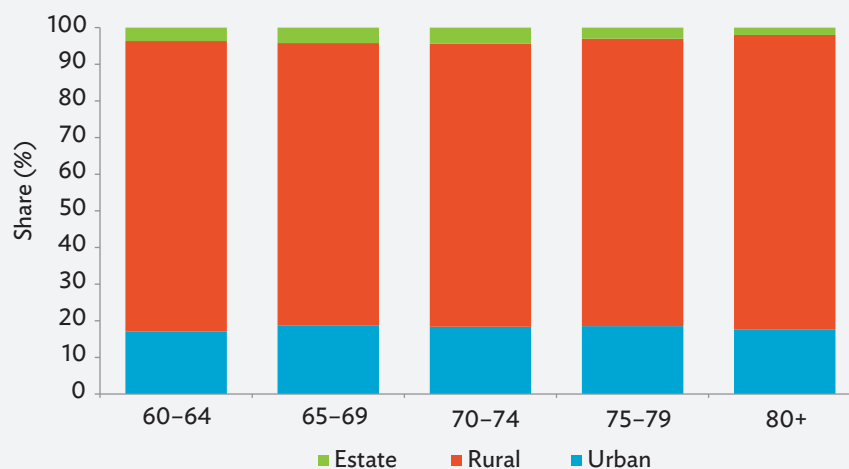


HIES = Household Income and Expenditure Survey.

Source: Authors' estimates based on data from the 2016 HIES.

Urbanization has increased marginally over the years, from 15% living in urban areas in 1946 to 18% in 2012 (Department of Census and Statistics 2015). A majority of the elders live in rural areas (78%), compared with 18% in urban areas and 4% in the estate sector (Figure 12).⁴ The definition of urban and rural sectors in official statistics is based purely on administrative definitions and the classification by local authorities. In the context of

Figure 12: Distribution of People Aged 60 Years and Over, by Sector, 2016



HIES = Household Income and Expenditure Survey.

Note: The definition of "urban sector" is based on the current administrative definition of urban areas by the Department of Census and Statistics.

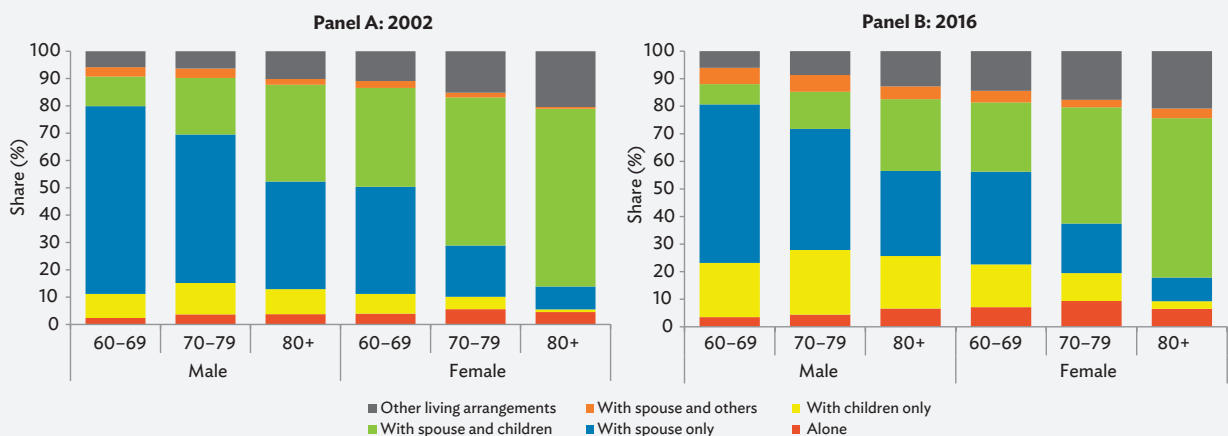
Source: Authors' estimates based on data from the 2016 HIES.

⁴ Plantation areas, which are more than 20 acres (around 8 hectares) with not less than 10 residential laborers, are considered as estate sector.

Sri Lanka, it is widely recognized that many rural or peri-urban areas should in practice be probably considered urban. Some recent estimates suggest that the effective urban population of Sri Lanka is as much as 45% of the total population (Institute of Policy Studies 2016).

As in many Asian economies, co-residence rates are high in Sri Lanka. Living arrangements of older people in Sri Lanka have not changed significantly in recent decades. A majority of elders live with their spouses and/or adult children, with very few living on their own. The number of older people living alone has been increasing over time across all age groups 60 years and above. Older people initially live with their spouse, or spouse and children, and after the demise of their spouse when they can no longer support themselves independently, they co-reside with their adult children. More females live with their children because females outlive their partner (Figure 13). The elderly, especially females, are a source of support to their children and help look after the grandchildren, particularly in families with working parents.

Figure 13: Living Arrangements of People Aged 60 Years and Over, by Age Group and Sex, 2002 and 2016



HIES = Household Income and Expenditure Survey.

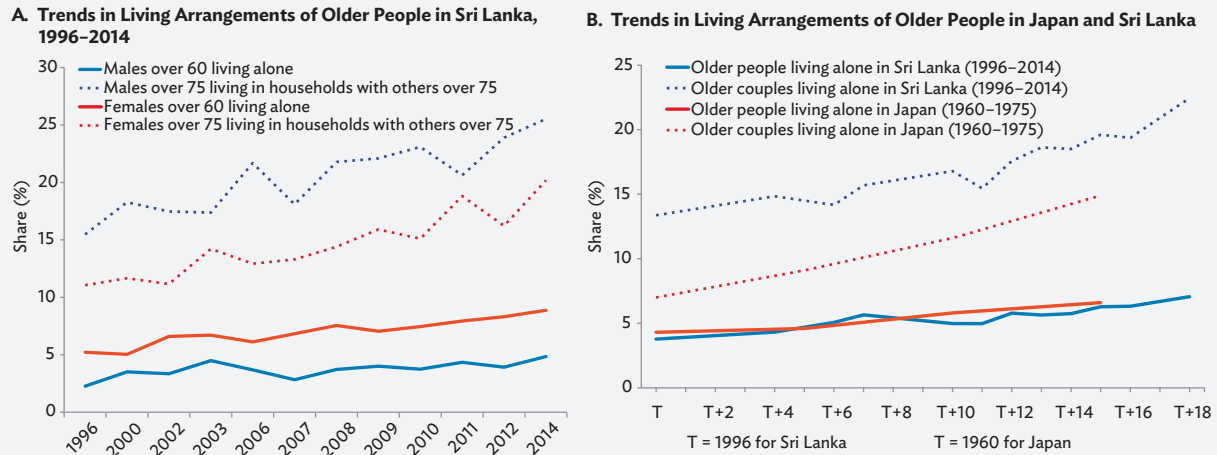
Note: Since the 2002 HIES did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2016 HIES to maintain comparability across the years.

Source: Authors' estimates using data from the 2002 and 2016 HIES (Department of Census and Statistics, various years).

The proportions of elders living alone and of those over the age of 75 living in households in which all the other residents are also above the age of 75 increased steadily from 1996 to 2014. While the rate of increase might seem slow, they are comparable to the rate of increase observed in Japan's aging process during the 1960s and 1970s (Figure 14). That period in Japan preceded an era when aging became a major social and economic challenge for the country and rose to the top of the policy agenda. This might suggest that Sri Lanka is on the verge of experiencing the transformation of living conditions of the elders that may require policy makers to take note and respond in a more substantial way.

The living arrangements of the elderly are similar across sectors. Most of them live either with their spouse and children, or with children only. The percentage of elders living in other living arrangements is higher in the urban sector (17%) compared with the rural (10%) and estate (14%) sectors (Figure 15). The reason for this could be distribution of elder care homes, which are mostly located around urban areas, as well as the greater incomes of some urban elders, which might permit them to maintain economic independence longer with increasing age.

Figure 14: Trends in Living Arrangements of Older People in Japan and Sri Lanka during Comparable Phases of Aging, Various Years

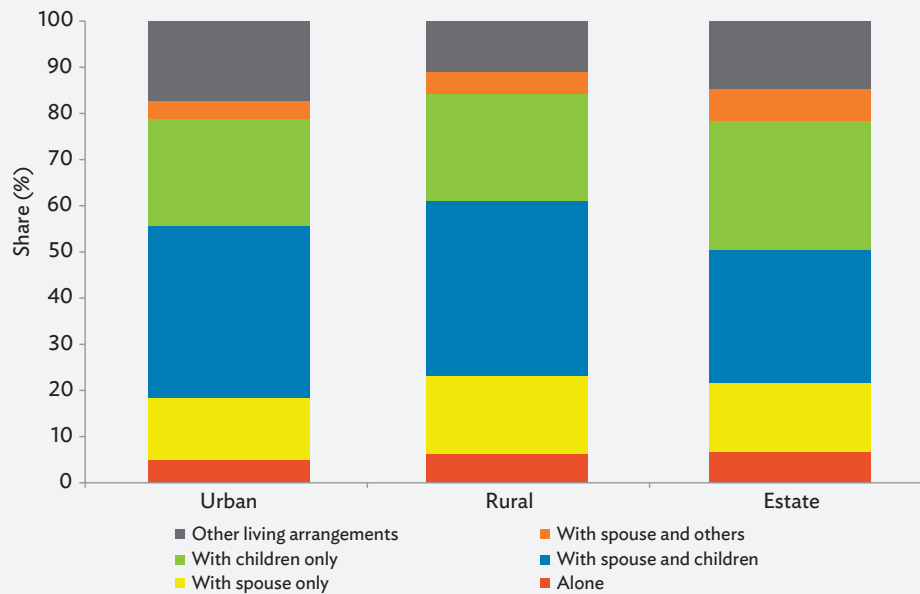


LFS = Labor Force Survey.

Note: Earlier rounds of LFS did not cover the Northern and Eastern Provinces. Therefore, estimates exclude data from the Northern and Eastern Provinces to maintain comparability across the years.

Sources: Authors’ estimates using data from Labor Force Surveys 1996–2014 (Department of Census and Statistics, various years); and Kojima (1995).

Figure 15: Living Arrangements of People Aged 60 Years and Over, by Sector, 2016



HIES = Household Income and Expenditure Survey.

Note: The definition of urban sector is based on current official definitions of urban areas by the Department of Census and Statistics.

Source: Authors’ estimates using data from the 2016 HIES.

In Sri Lanka as in many other Asian economies, the family usually takes care of their older members. However, shrinking family size, migration for work, and increased female participation in the labor force are diminishing the family's capacity to provide care to their older members. Marriage (54%) and work (10%) are the main reasons for internal migration (Department of Census and Statistics 2015). Internal migration for work purposes reduces traditional family support to elders as working-age people move to urbanized areas, leaving parents at their usual residence. The quality of life for elders is affected significantly by their living arrangements. Those who live alone tend to have a poorer quality of life than those who live with spouses, children, or others since living alone is linked to loneliness and poorer mental health (Rathnayake and Siop 2015). Older people often experience a decline in intrinsic capacity to some degree due to cellular aging and its effects. For some older adults, a loss of intrinsic capacity inhibits their ability to live independently without support from others. Taking care of the more dependent elderly is challenging for family members. Currently, the family typically takes care of such elders. There is very limited support available to families such as community or formal care arrangements in providing complex care.

Although the elderly in Sri Lanka largely live with other family members, the number of those living alone is increasing at a similar rate to Japan 40 years ago. This trend plus other socioeconomic trends such as increasing internal migration for work and urbanization of the population are likely to lead to an increasing number of the elderly living alone. This was Japan's experience. Sri Lanka will have to deal eventually with the challenges of large numbers of elderly living alone. The government will need to provide support to meet the economic and social needs of the elderly, as well as introduce policies that facilitate an adequate quality of life for them.

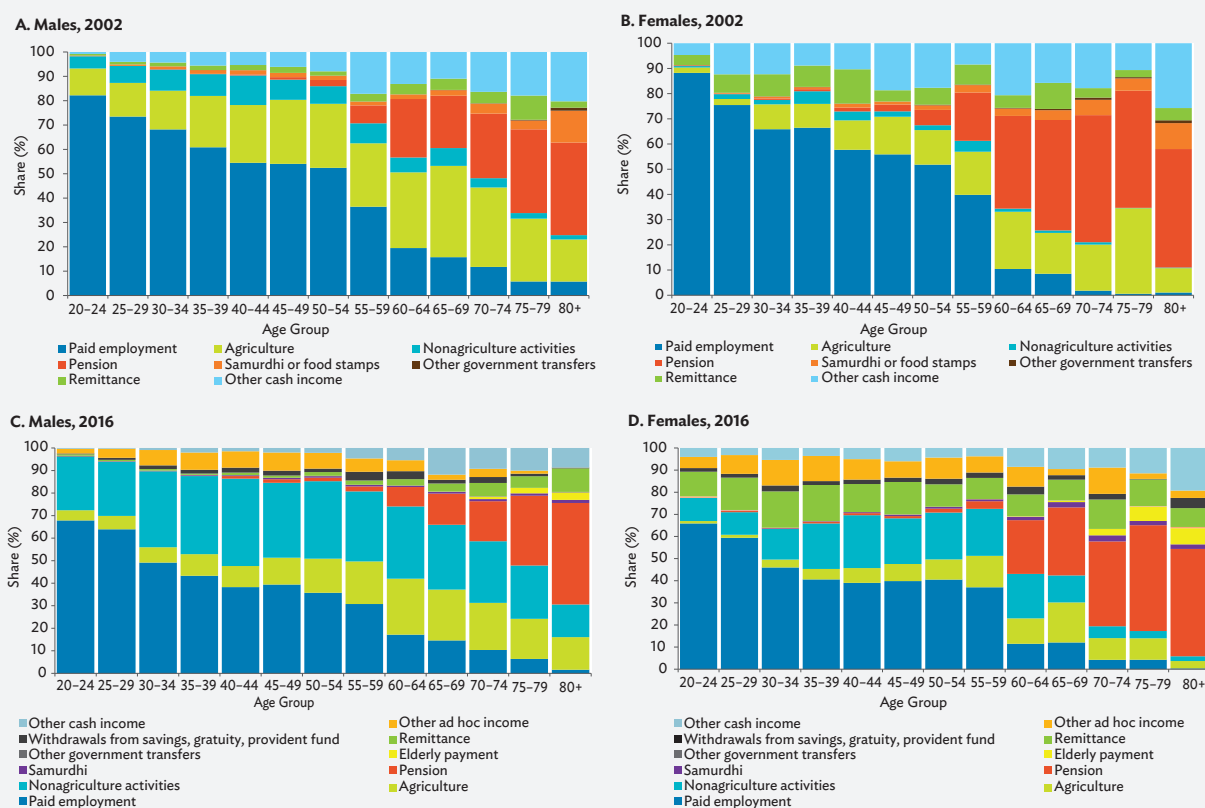
Income of the Elderly

Paid employment is not a substantial source of income for Sri Lankans aged 55 years and above. This reflects labor market norms, where most formal sector workers leave their job at 55–60 years of age—60 years (mandatory retirement age) for those in the public sector; or 55 years (for males) and 50 years (for females), which are the eligible ages for private sector employees to withdraw the balance of their Employees Provident Fund (EPF). This section profiles the changes in the sources of income by age using data from the 2002 and 2016 rounds of the Household Income and Expenditure Survey (HIES).

The change in source of income with age can be seen from a decline in income earned from paid employment at ages 55–59 and a sharp drop at the 60–64 age group for both females and males (Figure 16). At younger ages, both females and males receive most of their income from paid employment. This changes at ages 55–64 as pension and other sources become significant income sources. Older females derive most of their income from pensions, which could be because females live longer than males and are eligible to receive a widows' pension after the death of their spouse, if their spouse was in civil service. The pattern has not changed much over the years from 2002 to 2016, as paid employment is the main source of income at younger ages, shifting to pension and other sources for ages 55 and above. The importance of government transfers for the poor, such as Samurdhi and food stamps, has declined over the years. Samurdhi is a government transfer for poor households, which does not necessarily target elders.

There has been a change in income sources of younger Sri Lankans during 2002–2016. Paid employment had a predominantly larger share among the younger people in 2002. But the role of nonagriculture income (income from mining and quarrying, manufacturing, construction, trade, transport and other services) has increased over the years and has shown a larger share among younger age groups in 2016. Contribution from agriculture has declined among both men and women (Figure 16).

Figure 16: Distribution of Per Capita Income, by Source, Age Group, and Sex, 2002 and 2016



HIES = Household Income and Expenditure Survey.

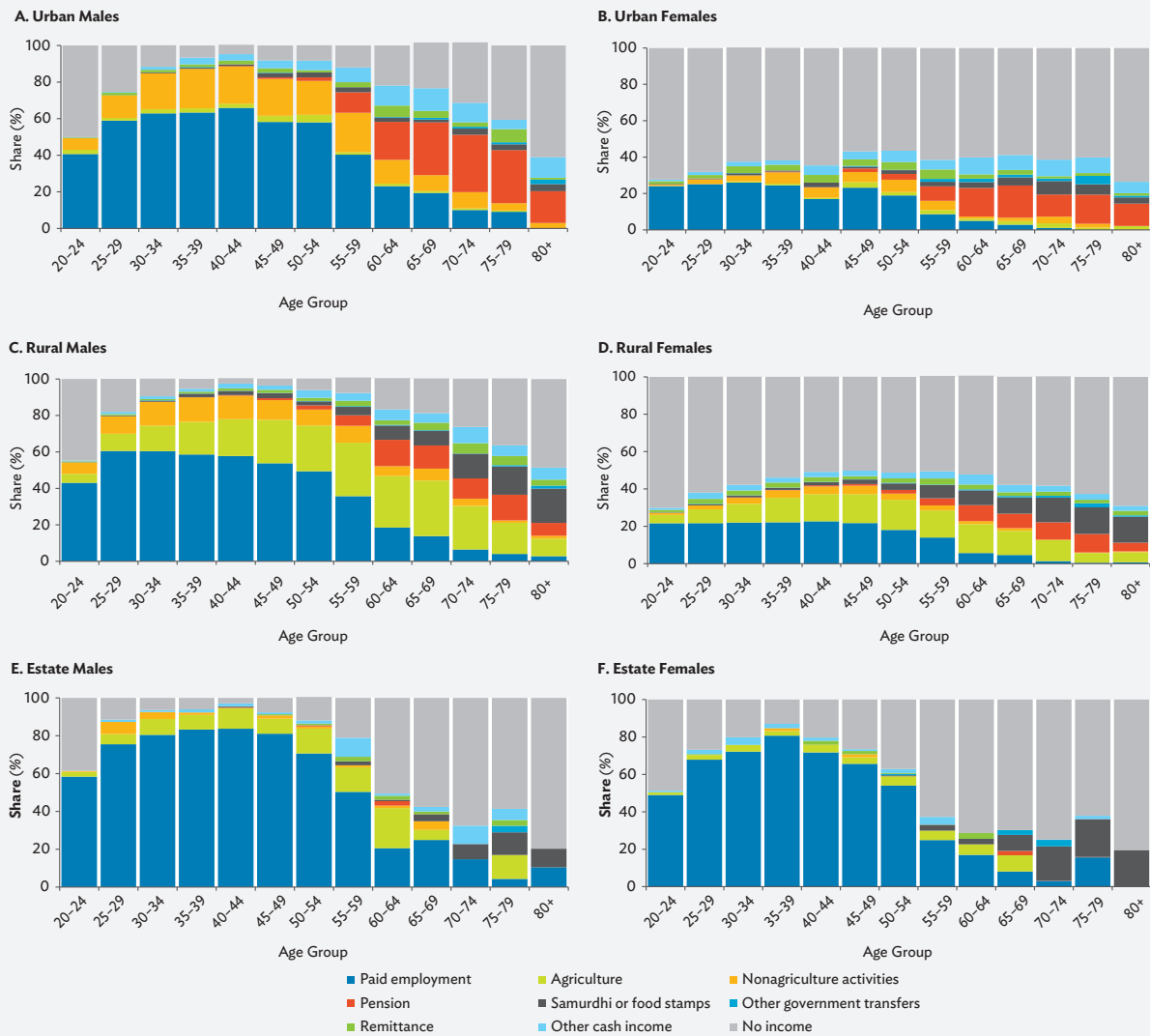
Note: Since the 2002 HIES did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2016 HIES to maintain comparability across the years.

Source: Authors' estimates using data from the 2002 and 2016 HIES (Department of Census and Statistics, various years).

It is not possible to analyze the income from EPF refunds from HIES data since the survey does not capture it separately. In Figure 16, it is included in the other cash income category in 2002 (Panels A and B); or in the category for withdrawals from savings, bank deposits, gratuity, and provident funds in 2016 (Panels C and D). However, there is an increase in the share of this type of income at ages 55–59 for males compared with other age groups. For females there is no noticeable change at those ages, which could be because females can withdraw the EPF balance at an early age, for example, at the time of marriage.

Figure 17 and Figure 18 present the shares of income earners by main source of income, sector, age group, and sex for 2002 and 2016, respectively. This analysis considered regular income sources as per the HIES questionnaire and excluded ad hoc income such as loans, compensation, and withdrawals from savings, bank deposits, gratuity, and provident funds. The highest income source of an individual was considered their main source of income. More than 40% of males in the 20–50 age group in both urban and rural sectors engaged in income-generating activities while 60%–70% of females did not have any income in 2002 (Figure 17). The number of younger females engaged in income-generating activities has increased over the years in the urban sector. More females engage in work in the estate sector than in the urban and rural sectors, which could be because plantations provide employment opportunities for females. Also, lower income and higher poverty in the estate sector may be influencing the decision of both females and males to engage in work (Figure 17).

Figure 17: Share of Income Earners, by Main Income Source, Sex, and Sector, 2002



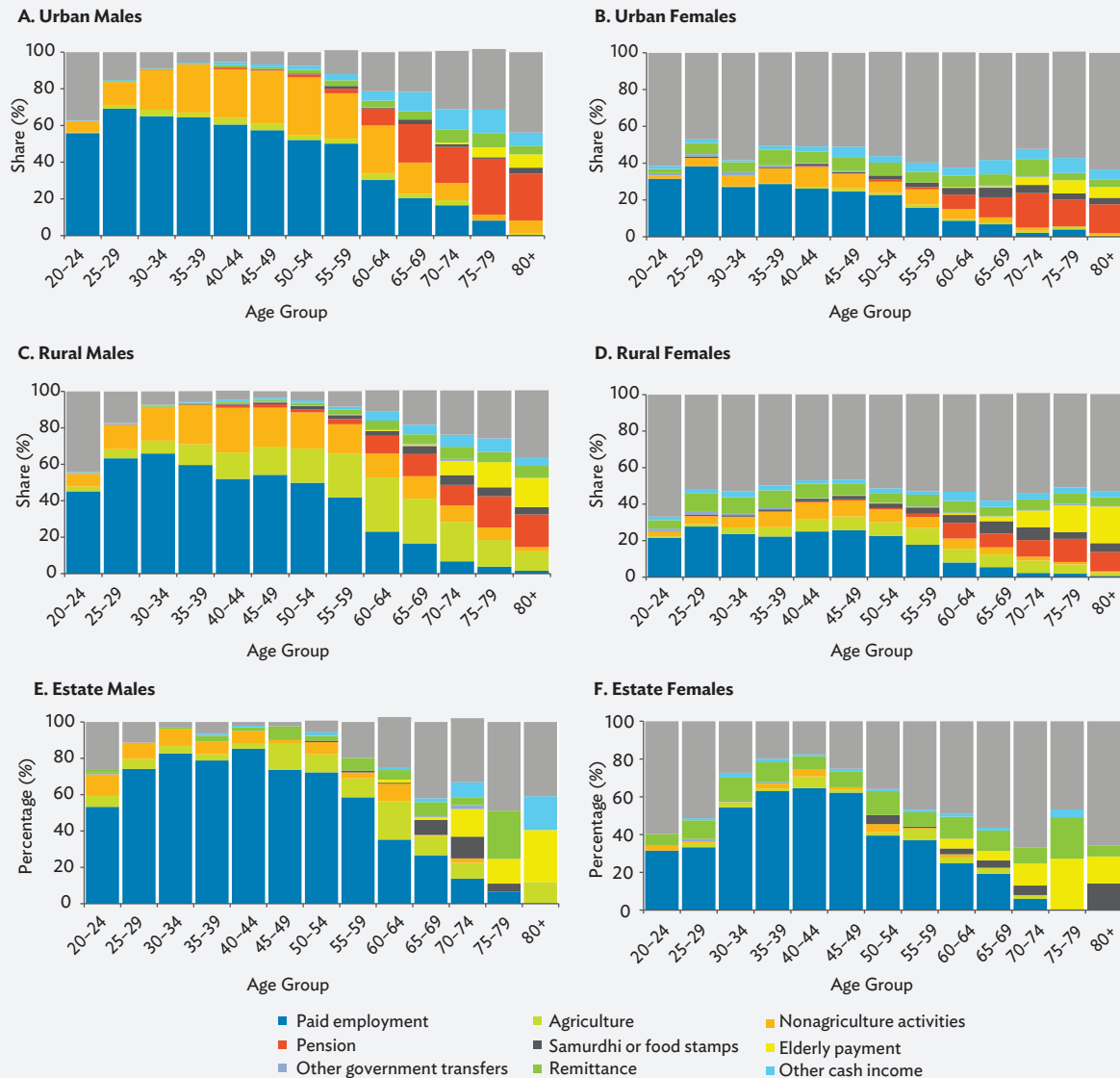
HIES = Household Income and Expenditure Survey.

Notes: The source of the highest income is considered the main income of the individual. These estimates consider regular income sources only and exclude income sources for ad hoc income gains.

Source: Authors' estimates using data from the 2002 HIES (Department of Census and Statistics 2002).

Females and males in the rural sector engaged in agricultural activities at younger ages and many continue to work even after 70 years (Figure 17 and Figure 18). In the urban sector, there are very few individuals whose main income is from agriculture. The share of income from nonagriculture activities is higher, and is the second-largest main income source among younger urban females and males. The share of people aged over 60 years without any income has decreased over the years in all three sectors. Samurdhi, the government transfer scheme for the poor, was a main income source for more females and males aged over 70 years in 2002 in the rural sector. However, the share of the elderly receiving income from Samurdhi had declined by 2016. This was replaced by a senior citizens allowance, a new income security scheme introduced for people over 70 years, which has provided income for more than one-tenth of individuals over 70 years in the rural sector (Figure 18).

Figure 18: Share of Income Earners, by Main Income Source, Sex, and Sector, 2016



HIES = Household Income and Expenditure Survey.

Notes: The source of the highest income is considered the main income of the individual. These estimates consider regular income sources only and exclude income sources for ad hoc income gains. Since the 2002 HIES did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2016 HIES to maintain comparability across the years.

Source: Authors' estimates using data from the 2016 HIES (Department of Census and Statistics 2016).

Cash and in-kind transfers from children also provide support to the elderly. According to the 2006 Sri Lanka Aging Survey, about half of all the elderly in Sri Lanka receive cash assistance from adult children as a primary source of income (World Bank 2008). Over 75% of elders receive food, material goods, and other in-kind transfers from adult children. The share of the elderly receiving food and/or material goods from their adult children in Sri Lanka is similar to that in Singapore and Thailand, while the share of those who receive cash

transfers from children is lower than in Singapore and Thailand (World Bank 2008). The survey showed that elders with a pension are only 40% as likely to receive a cash transfer from children compared with elders without a pension.

Turning away from shares to actual income, the HIES 2016 results show that individual average income from paid employment increases and reaches its highest at 40–44 years of age and thereafter decreases with age, particularly for elders (Table 1 and Table 2). This could be because employment opportunities available for people over 60 years are either part-time or on a contractual basis, which pay less. There is a notable difference in average income earned from paid employment by females and males in all the age groups. Males aged 60 or over received on average SLRs10,000–SLRs21,000 while females received SLRs4,000–SLRs11,000 in 2016 from paid employment—although the data do not allow us to say if this also reflects differences in hours worked. Average income from paid employment declines with age after 60 years. The income of people over 80 years drops to half of the income earned by much younger elders from paid employment (Table 1 and Table 2).

For females and males aged 60 years or over who received pensions, monthly pension income averaged SLRs21,000–SLRs25,000 in 2016 (Table 1 and Table 2). Some pension income is also reported at younger ages by dependents entitled to survivor pensions, mostly from the Widows, Widowers, and Orphans Pension (WWOP) scheme paid to dependents of civil servants and armed forces after their death. HIES 2016 collected data on income from government cash transfers to elders as elderly payments, which was not included in earlier rounds of HIES. There are several government allowances paid to poor people, which would have been recorded under elderly payment in addition to the senior citizens scheme introduced in 2012. People aged over 60 years received an average Samurdhi payment of SLRs1,400–SLRs2,000. Withdrawals from savings, bank deposits, gratuity, and provident funds is high at ages 55–59 for males, perhaps because the minimum age for males to withdraw EPF balances is 55 years (Table 1). However, such a pattern could not be observed for females because they can withdraw their EPF balances at an earlier age if they leave their job due to marriage.

The average total income received by a male aged 60 years or over was SLRs18,000–SLRs38,000 per month, while females aged 60 years or over received SLRs12,000–SLRs19,000 in 2016. The average income declines with age for both females and males (Table 1 and Table 2). The decline in average income with age is explained by cohort effect and age effect (Gaminiratne 2004). Age effect refers to the depletion of assets and the reduction in income-earning potential with age. Age effect has greater impact when elders live many years after their retirement. Cohort effect reflects the past performance of the economy and pension policies. Young elders may have higher income than older elders, because of the cohort effect with higher savings and hence higher future consumption levels (Gaminiratne 2004).

The 2006 Sri Lanka Aging Survey revealed that more than half of EPF members spent their accumulated balances after withdrawal without keeping it for the future, while only 10% invested or saved the money (World Bank 2008). People who did not completely spend their EPF balance tended to be workers in higher-income households. Three-fourths of the bottom expenditure quintile in 2006 had spent their EPF refund. Most workers lack financial literacy and do not pay attention to old-age income security. A retirement planning survey in 2006 showed that around 58% of workers aged 29–59 were not planning for their retirement (World Bank 2008). This is particularly prevalent among casual workers and the self-employed. Despite the rapid rate of aging in Sri Lanka, there appears to be little public awareness of the importance of saving for old age. In 2006, most elders (87%) surveyed expected their children to provide financial support in their old age, which resembles the situation in other countries in the region (World Bank 2008). Very high shares (85%–89%) of old people in Indonesia; the Republic of Korea; the Philippines; Taipei, China; and Thailand also expect their children to take care of them in old age. In contrast, only 12% of elders in the US expect their children will support them in the future (World Bank 1994). Such expectations may change over time, as they have in other economies.

Table 1: Income Source per Month (Males), by Source and Age Group, 2016 (SLRs)

Age Group	Income Source											Total Monthly Income
	Paid Employment	Agriculture	Nonagriculture Activities	Pension	Samurdhi	Elderly Payment	Other Government Transfers	Remittance	Withdrawals from Savings, Bank Deposits, Gratuity, Provident Funds	Other Ad Hoc Income	Other Cash Income	
20-24	21,815	25,811	49,834	-	2,115	-	8,921	12,554	12,761	11,501	19,100	26,432
25-29	27,412	25,346	50,736	40,776	2,244	350	1,765	10,068	17,044	15,094	11,041	33,866
30-34	31,038	23,610	75,274	47,253	2,532	-	4,728	14,752	36,253	22,586	22,658	46,545
35-39	32,383	24,778	71,361	26,839	2,597	1,039	1,523	9,831	30,730	22,084	25,422	50,507
40-44	34,714	20,998	80,963	35,873	2,806	-	8,559	17,132	38,851	24,757	18,653	56,181
45-49	32,986	21,595	72,618	31,330	2,577	1,278	4,606	10,608	42,939	24,279	16,972	52,452
50-54	30,223	23,334	72,517	29,239	2,368	1,564	6,767	13,151	31,917	20,584	14,206	49,292
55-59	27,249	24,719	75,226	26,667	2,197	801	1,809	10,807	63,514	19,496	28,689	46,343
60-64	20,840	22,400	65,410	24,412	1,887	718	2,482	8,726	42,963	17,875	18,694	38,246
65-69	20,659	21,276	58,514	23,686	1,816	736	1,572	9,147	21,833	9,267	28,132	34,360
70-74	21,324	17,117	55,105	21,695	1,531	1,675	2,133	9,325	27,214	16,740	14,579	26,769
75-79	20,659	14,544	47,103	23,595	1,660	1,911	1,203	7,890	12,714	5,339	11,960	21,126
80+	10,246	12,184	46,366	22,930	1,739	1,937	2,141	9,750	4,370	477	9,315	18,086
20 years and above	29,382	22,594	69,872	24,829	2,250	1,624	4,054	10,605	36,454	20,647	19,688	43,607

- = not available, HIES = Household Income and Expenditure Survey.

Notes: Agriculture income includes income from paddy, seasonal crops, and other agriculture activities. Other cash income include rent from properties, boarding fees, etc. and dividends and/or interests.

Source: Authors' estimates using data from the 2016 HIES.

Table 2: Income Source per Month (Females), by Source and Age Group, 2016 (SLRs)

Age Group	Income Source										Total Monthly Income	
	Paid Employment	Agriculture	Nonagriculture Activities	Pension	Samurdhi	Elderly Payment	Other Government Transfers	Remittance	Withdrawals from Savings, Bank Deposits, Gratuity, Provident Funds	Other Ad Hoc Income		Other Cash Income
20-24	17,411	9,744	25,611	-	1,511	-	2,173	14,607	20,412	6,279	14,044	17,303
25-29	25,109	10,093	28,930	46,258	2,031	279	1,220	17,602	21,568	11,180	14,038	24,116
30-34	27,407	10,655	36,427	39,094	2,607	397	569	23,444	32,396	13,250	20,704	30,064
35-39	25,696	12,740	40,477	29,524	2,268	1,130	754	23,613	20,058	12,046	14,662	29,320
40-44	26,367	14,093	43,917	27,153	2,688	1,177	1,155	24,026	18,740	11,997	22,883	32,453
45-49	22,485	12,898	38,571	22,937	2,050	437	1,563	25,890	24,452	9,798	21,633	28,050
50-54	22,867	13,903	36,370	22,378	2,051	454	2,013	16,924	30,200	10,750	12,099	25,455
55-59	23,609	16,254	36,926	22,440	1,662	574	1,069	12,661	30,091	10,146	10,323	24,716
60-64	10,853	12,144	28,775	25,070	1,515	423	2,202	9,517	20,173	12,334	11,518	18,633
65-69	11,116	14,648	20,531	22,239	1,572	719	2,275	7,472	14,385	4,647	9,008	14,804
70-74	11,045	9,381	17,389	23,374	1,821	1,585	1,052	10,373	20,691	26,048	10,366	15,042
75-79	11,620	8,187	12,059	21,193	1,430	1,809	1,909	7,831	3,201	9,602	9,186	11,940
80+	4,067	6,897	16,201	23,509	1,563	1,940	4,998	6,369	59,994	14,114	19,429	12,034
20 years and above	23,278	13,010	35,926	23,467	1,909	1,340	1,336	18,058	23,479	11,303	14,580	24,588

- = not available, HIES = Household Income and Expenditure Survey.

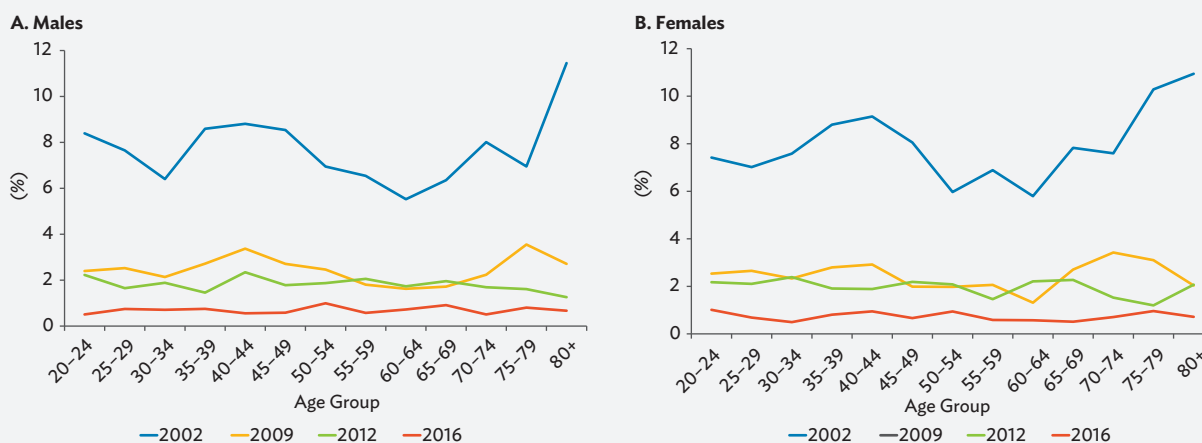
Notes: Agriculture income includes income from paddy, seasonal crops, and other agriculture activities. Other cash income include rent from properties, boarding fees, etc. and dividends and/or interests.

Source: Authors' estimates using data from the 2016 HIES.

Poverty among the Elderly

Using the international poverty line of \$1.90 a day (2011 purchasing power parity [PPP]), the poverty rate in Sri Lanka has dropped significantly during the last 15 years among all age groups including the much older ages (Figure 19). At the extreme poverty line of \$1.90 a day (2011 PPP), there is no substantial difference in poverty rates in Sri Lanka for people aged 60 and above compared with other age groups, except for a small increase in incidence among the very old. Poverty rates varied between 0.6%–0.9% in age groups over 60, and between 0.6%–1.0% in age groups below 60 years in 2016, suggesting that old age has not created additional poverty in Sri Lanka. Also, there is no notable difference in poverty between females and males (Figure 19).

Figure 19: Poverty Headcount Ratio at \$1.90 a Day (2011 PPP), by Age Group and Sex, 2002–2016



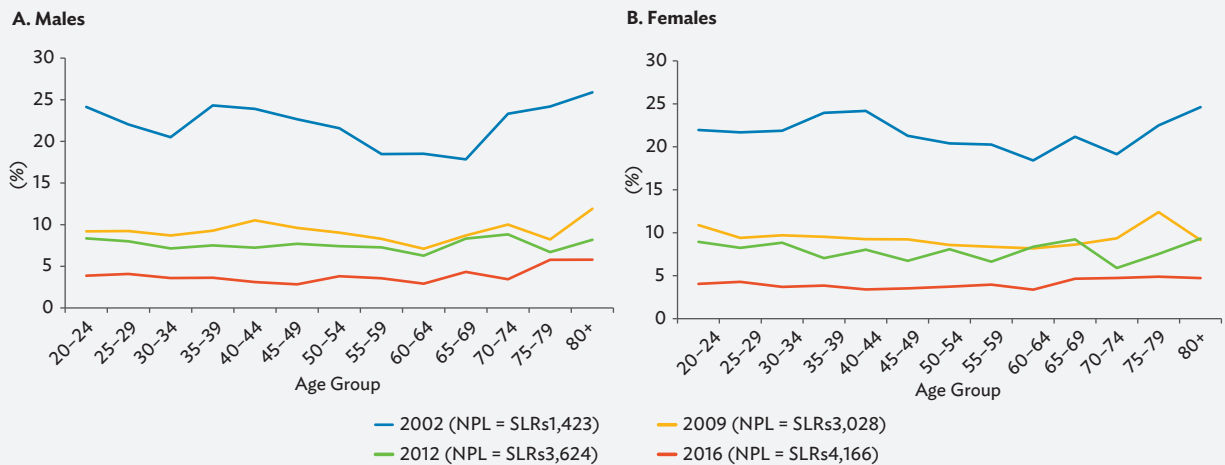
HIES = Household Income and Expenditure Survey, PPP = purchasing power parity.

Note: Since the 2002 HIES did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2016 HIES to maintain comparability across the years.

Source: Authors' estimates using data from HIES 2002, 2009, 2012, and 2016 (Department of Census and Statistics, various years).

Poverty rates estimated using the national poverty line computed by the Government of Sri Lanka's Department of Census and Statistics, reveals a slightly different picture. Poverty headcount ratio among people aged over 20 years in 2002 was 22% at national poverty line and 3.8% in 2016 (Figure 20). The poverty rate inches up among females and males aged 65 and above. In 2016, the highest poverty headcount ratio at 5.8% among males was for those aged 80 years and over while the lowest poverty rate of 2.8% was in the 45–49 age group; whereas the poverty rate among males ages 20 and above was 3.7%. The highest poverty headcount ratio for females in 2016 was 4.9% in the 75–79 age group and lowest in the 40–44 age group at 3.4%; whereas the poverty rate among females ages 20 years and above was 3.9%. The national poverty line, which is above \$1.90 a day (2011 PPP), shows a different pattern of higher poverty among elders compared with the international poverty line, indicating that the elderly are vulnerable to falling to extreme poverty.

Figure 20: Poverty Headcount Ratio at National Poverty Line, by Age Group and Sex, 2002–2016



HIES = Household Income and Expenditure Survey, NPL = national poverty line.

Notes: The NPL is calculated in each HIES round. Since the 2002 HIES did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2016 HIES to maintain comparability across the years.

Source: Authors' estimates using data from HIES 2002, 2009, 2012, and 2016 (Department of Census and Statistics, various years).

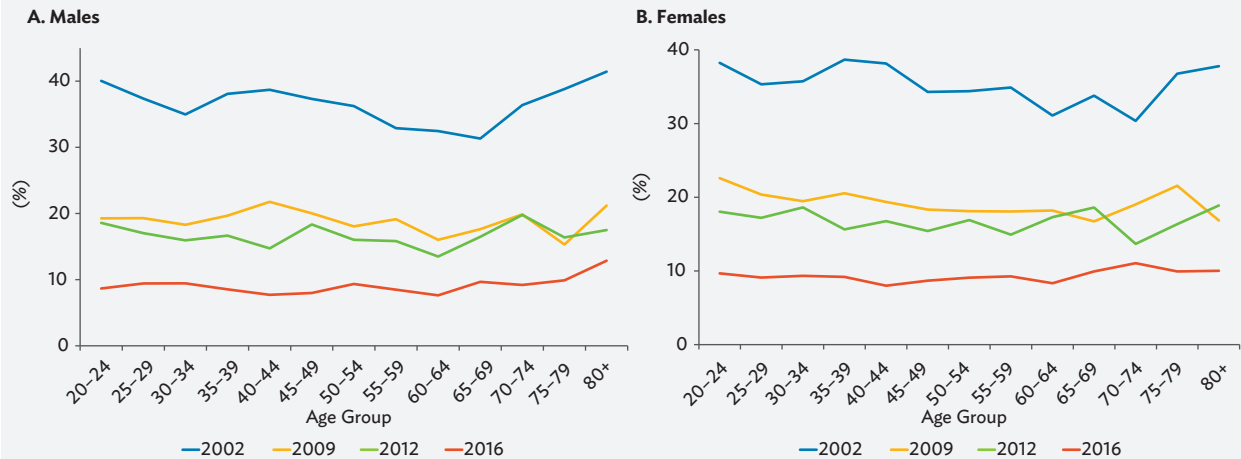
The poverty rates for all age groups and in particular for the elders increase further when the poverty line used is \$3.20 a day (2011 PPP). The poverty incidence, using \$3.20 a day (2011 PPP) as poverty line, was 8.8% for males and 9.2% for females aged 20 years and over in 2016. Poverty incidence among females and males aged above 65 years is higher than the average poverty rate for those aged 20 years and above for the respective groups (Figure 21). A comparison of poverty rates across all age groups in Figure 20 and Figure 21 once again highlights that a significant number of people remain vulnerable.

Poverty among the elders dropped considerably from 2002 to 2016 in all sectors among both females and males (Figure 22). Poverty in the estate sector in 2016 continued to be relatively high compared with urban and rural sectors among people in all ages. Poverty in the estate and rural sectors increased with age in 2002, while poverty among urban elders was the same in older ages. This could be because elders living in urban areas are pensioned and are more financially literate. Another reason could be that even though elders in rural and estate sectors may have access to various pension schemes or Samurdhi, the amount received may not be enough.

The lack of a significant difference in poverty among the elderly and the younger age groups in Sri Lanka is probably driven by social norms. Since many elderly people live in multigenerational households, only a few of them are exposed to poverty arising from lack of income and other means of support, and the poverty rate among the elderly inevitably tends to correlate closely with poverty rates in the overall population. Estimates of poverty by living arrangements of the elderly show that to be mostly the case (Table 3).⁵ The ability or likelihood of the elderly living alone may be facilitated by having independent sources of income, such as pensions or other wealth; thus, living alone may be negatively correlated with the risk of poverty.

⁵ Poverty estimates for the 80+ age group need to be interpreted with caution as the number of people over 80 years in the sample is comparatively small.

Figure 21: Poverty Headcount Ratio at \$3.20 a Day (2011 PPP), by Age Group and Sex, 2002–2016

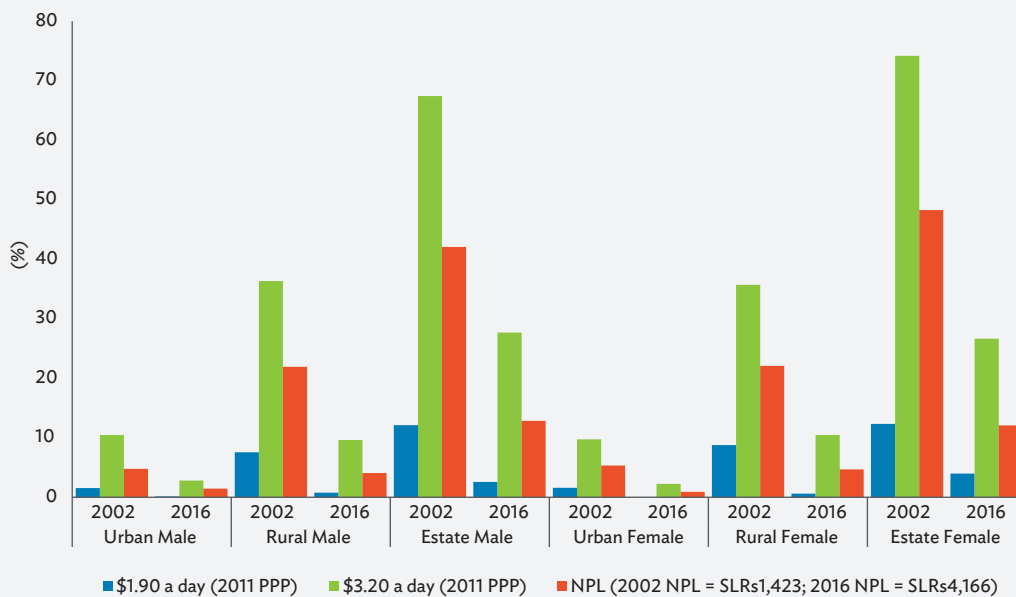


HIES = Household Income and Expenditure Survey, PPP = purchasing power parity.

Note: Since the 2002 HIES did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2016 HIES survey to maintain comparability across the years.

Source: Authors' estimates using data from HIES 2002, 2009, 2012, and 2016 (Department of Census and Statistics, various years).

Figure 22: Poverty Headcount Ratio of People Aged 60 Years and Over at Different Poverty Lines, by Sector and Sex, 2002 and 2016



HIES = Household Income and Expenditure Survey, NPL = national poverty line, PPP = purchasing power parity.

Note: Since the 2002 HIES did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2016 HIES to maintain comparability across the years.

Source: Authors' estimates using data from the 2002 and 2016 HIES (Department of Census and Statistics, various years).

Table 3: Poverty Headcount Ratio by Living Arrangement at Different Poverty Lines, by Age Group and Sex, 2002 and 2016

Sex		Living Arrangement		\$1.90 a day (2011 PPP)							
				2002				2016			
				60-69	70-79	80+	60+	60-69	70-79	80+	60+
Male	Alone	0.0	2.4	...	2.1	0.0	0.0	0.0	0.0		
	With spouse only	0.4	4.4	13.0	3.3	0.3	0.0	0.0	0.2		
	With spouse and children	6.3	8.8	13.0	7.5	1.0	0.8	1.4	1.0		
	With children only	8.8	7.7	9.0	8.4	1.9	1.5	0.0	1.3		
	With spouse and others	1.8	4.3	...	3.2	0.0	0.0	...	0.0		
	Other living arrangements	8.1	7.4	14.3	8.9	0.0	0.0	1.3	0.2		
	All	5.9	7.6	11.5	7.0	0.8	0.6	0.7	0.7		
	Female	Alone	0.0	9.4	4.0	4.2	0.0	0.0	0.0	0.0	
With spouse only	3.0	10.3	...	5.3	0.0	0.5	...	0.1			
With spouse and children	6.3	9.5	19.8	7.4	0.7	1.3	1.8	0.8			
With children only	8.4	7.0	9.4	8.0	0.8	0.7	0.7	0.7			
With spouse and others	5.8	2.1	...	4.6	0.0	0.0	0.0	0.0			
Other living arrangements	7.6	13.6	13.4	10.8	0.7	1.1	0.6	0.8			
All	6.7	8.7	10.9	7.8	0.5	0.8	0.7	0.6			

Sex		Living Arrangement		\$3.20 a day (2011 PPP)							
				2002				2016			
				60-69	70-79	80+	60+	60-69	70-79	80+	60+
Male	Alone	15.3	8.2	...	13.3	4.5	3.6	0.0	3.5		
	With spouse only	15.3	31.2	21.2	22.0	2.9	6.1	8.5	4.5		
	With spouse and children	34.6	39.4	44.8	36.7	10.1	12.4	19.2	11.2		
	With children only	36.6	37.6	47.1	39.4	11.9	9.1	13.0	11.0		
	With spouse and others	24.2	49.8	...	33.3	8.3	7.0	...	8.0		
	Other living arrangements	28.9	40.3	36.8	33.9	6.3	5.2	6.9	6.1		
	All	32.0	37.4	41.4	34.8	8.6	9.5	12.9	9.2		
	Female	Alone	15.8	32.6	21.0	23.0	1.9	6.0	2.8	3.5	
With spouse only	21.8	29.7	...	23.9	3.9	8.7	...	5.3			
With spouse and children	35.1	36.2	56.1	36.0	10.8	16.6	12.0	12.0			
With children only	33.4	31.9	37.7	33.5	9.8	9.4	11.2	9.9			
With spouse and others	37.6	26.5	...	34.7	9.0	19.4	0.0	9.9			
Other living arrangements	30.5	34.1	34.8	32.5	10.9	8.9	9.3	10.0			
All	32.3	32.9	37.8	33.1	9.1	10.6	10.0	9.6			

continued on next page

Table 3 continued

Sex	Living Arrangement	National Poverty Line							
		2002				2016			
		60–69	70–79	80+	60+	60–69	70–79	80+	60+
Male	Alone	3.3	5.6	...	5.6	2.0	0.0	0.0	1.0
	With spouse only	11.5	15.5	13.7	13.3	0.6	3.0	4.6	1.8
	With spouse and children	19.3	25.5	27.5	21.7	4.4	6.0	8.7	5.1
	With children only	20.5	24.8	28.9	24.2	5.2	3.9	4.9	4.6
	With spouse and others	13.9	32.2	...	21.1	3.0	2.6	...	2.7
	Other living arrangements	20.1	24.7	24.3	22.3	1.6	1.8	4.9	2.2
	All	18.2	23.7	25.9	20.8	3.6	4.4	5.8	4.0
Female	Alone	4.4	21.1	21.0	12.9	1.5	0.5	1.6	1.1
	With spouse only	14.1	14.8	...	14.5	1.4	4.0	...	2.2
	With spouse and children	20.4	23.4	33.1	21.4	4.1	10.6	1.8	5.3
	With children only	22.4	19.2	24.4	21.5	5.3	3.7	6.1	4.8
	With spouse and others	24.2	26.5	...	24.0	2.8	9.3	0.0	3.8
	Other living arrangements	16.1	22.0	23.4	19.5	5.1	2.7	3.6	4.1
	All	19.7	20.5	24.6	20.5	4.0	4.8	4.7	4.3

... = not calculated, HIES = Household Income and Expenditure Survey, PPP = purchasing power parity.

Notes: Poverty rates are not calculated in some cases due to the small number of people in the living arrangement and age groups. Since the 2002 HIES did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2016 HIES to maintain comparability across the years.

Source: Authors' estimates using the 2002 and 2016 HIES (Department of Census and Statistics, various years).

3 Pensions and Old-Age Income Support

Overview of Arrangements

In Sri Lanka, old-age income support consists of several government-established pension schemes that cover both civil servants and specific groups of private sector workers; a system of mandatory provident funds; and a mix of social assistance transfers, some of which are specifically intended for the elderly people. These pension schemes and social transfers are largely funded by general revenue taxation. The financial capacity of various schemes (contributory, farmers', fishermen's, self-employment) has fallen in the past decade. This has led the government to rely on tax revenue to pay benefits, especially in the case of farmers' pension. In contrast, the individual-based provident funds remain wholly funded by individual contributions.

Social Transfers That Provide Income Support for the Elderly People

Samurdhi

Samurdhi, the government's flagship poverty alleviation transfer scheme, provides a welfare grant to eligible households. In 2016, 18% of the population aged 65 years and above lived in households receiving Samurdhi. The welfare grant under Samurdhi consists of monthly cash transfer to families with incomes lower than SLRs6,000 per month. The cash transfer is made directly to the beneficiaries' bank account in Samurdhi banks. The amount of the cash transfer received by a family depends on the size of the family. Samurdhi is a general transfer scheme and does not specifically target older people in poverty. However, only 41% of those aged 65 years and above and who were living below the national poverty line in 2016 benefited from the scheme, indicating that there is room to improve targeting. The amount paid under the scheme is also modest. In 2016, the average payment was SLRs683 per beneficiary in households that include elders (i.e., those aged 65 years and above).⁶

Pin Padi

Pin Padi, a public assistance program, operated by the Ministry of Social Empowerment and Welfare, provides a small monthly allowance to a number of identified poor households. The amount under this program is modest, typically SLRs150–SLRs250 per household. It does not target the poor elders specifically, although beneficiaries

⁶ Authors' calculations using HIES 2016 data.

do include some elders who are poor. While the scheme may have a limited impact on old-age poverty owing to the small size of the benefit and the small numbers benefiting, it helps to improve the status of the elders living in multigenerational households (Daily FT 2013).

Senior Citizens Allowance

The Senior Citizens Allowance (Wadihiti Saviyata Jeshta Purawasi Deemanawa) is the largest income transfer scheme that specifically targets the elderly living in poverty. Established in 2012 to provide income support for the elderly, it covered 386,000 people or 13% of those aged 60 years and above in 2016. The scheme pays SLRs2,000 a month to enrolled beneficiaries. The main criteria to be eligible for the scheme are to be over the age of 70 years; have a monthly household income below SLRs3,000; and be living alone or with a spouse, but not with children.

For purposes of assessment, all cash income sources are counted, including payments from other pension schemes such as the Farmers' Pension Scheme (FPS). Eligible older people apply to the office of the local *grama niladhari* (village officer), who then verifies that the applicant meets the eligibility conditions. The application is then submitted by the *grama niladhari* to the social service officers at the divisional secretariat who forwards the recommendation to the ministry for coverage. It is mandatory that the beneficiary collect the allowance within 7 working days of it being made available at the post office. In case the beneficiary is unable to do so, that month's allowance is permanently forgone. This rule could be placing an additional burden on the elders who may not find it easy to collect the money if they are dependent on additional help to visit the post office and collect their allowance. As per eligibility conditions, the elderly person should not be living with their children, so either they may have to wait for children to visit them or rely on help from the community.

Since its announcement in 2012, the number of elderly people applying and qualifying for the scheme have always surpassed the anticipated level, and the outlay needed has exceeded the budgeted amount. A waiting list was introduced in 2013 for approved applicants to join the scheme and receive benefits. However, the waiting list has also continued to increase and has reached 98,000 by 2018. If all those on the waiting list had been paid, total expenditures in 2015 would have been about SLRs9.4 billion, and not the actual SLRs7.7 billion.

In 2017, to ensure the welfare of the most aged citizen, the government approved an allowance of SLRs5,000 per month for those over 100 years of age (CBSL 2019).

Pension Schemes

In Sri Lanka, pension or provident fund schemes perform differently with respect to coverage, adequacy, and sustainability. The key characteristics of the major schemes are discussed below and a comparison is provided in the following section.

Civil Service Pension Scheme

The Civil Service Pension Scheme (CSPS) is Sri Lanka's largest pension scheme, covering 570,000 former civil servants and their dependents (as of 2016). Established in 1947, the CSPS consists of three components.⁷ The primary one pays a pension equivalent to typically 65%–85% of the last salary to qualifying civil service retirees, depending on salary scale and the years of service. The Widows, Widowers, and Orphans Pension (WWOP) scheme extends this pension benefit to qualifying survivors of the permanent and pensionable civil servants, specifically their surviving spouse, orphaned children, or permanently disabled children. The WWOP scheme is a contributory scheme, requiring the public servant to contribute between 6%–7% of their salary. The third component is the Armed Forces Pension Scheme and the WWOP benefit linked to it, which is similar to the CSPS and the corresponding WWOP, but covers members of the armed forces. The CSPS is a defined benefit scheme, and it is financed solely by the government budget, with no contributions, except for the WWOP. There is a separate pension for elected officials, which is also financed on a noncontributory basis.

Expenditure on the CSPS has remained relatively stable at 1%–2% of GDP since the 1990s. This is despite the CSPS covering a relatively constant share of 15%–20% of the 60+ population since the 1980s—a population segment that is increasing in absolute numbers. The main reason for this is that the CSPS does not have any provision for automatic adjustments in response to inflation though pension has been increased every few years by the government. These discretionary increases have tended to track inflation but come with a substantial lag and have provided flexibility to manage costs.

Farmers' Pension Scheme

The Farmers' Pension Scheme (FPS) was established by law in 1987. The FPS provided a defined benefit pension from the age of 60 years to all farmers who made the prescribed fixed contributions. For more than 2 decades, the FPS was effective in expanding coverage, reaching almost a million people or 10% of the labor force by 2010. However, the scheme collapsed in 2011 and the coverage is now less than 200,000.

Under the FPS, contributions were defined according to a fixed schedule based on the age of joining. They ranged from SLRs130 semiannual contributions for an 18-year-old person to SLRs690 for a person aged 55–59 years. The pension entitlement ranged from SLRs1,000 to SLRs4,166 per month, depending on the age of the contributor, the time of enrollment, and the total contributions. The minimum pension entitlement was SLRs200 at the inception, which was raised to SLRs500 in 1992 and to SLRs1,000 in 1995. The maximum pension entitlement remained unchanged at SLRs4,166. Despite the increases in benefits, the schedule of contributions was not amended after the inception of the scheme in 1987. In the case of permanent disablement, the member could also claim a gratuity payment of between SLRs6,000 and SLRs50,000 depending on the age of the individual and the disability. If the member chose not to take the gratuity, they could remain in the scheme without making further contributions and be eligible to still receive a pension at the age of 60. The death gratuity ranged from SLRs6,000 to SLRs25,000 according to the age of the contributor.

The FPS was originally designed to be a self-sustaining contributory scheme with a partial subsidy in the form of an initial government endowment and an operating subsidy to cover administrative expenses. In its basic design and ambition, the FPS resembled the Japanese scheme for farmers' pensions, and was also exceptional in terms of the percentage of the relevant population that was initially covered. However, lack of the originally required endowment subsidy, an inadequate contribution rate relative to pension benefits from inception, and subsequent

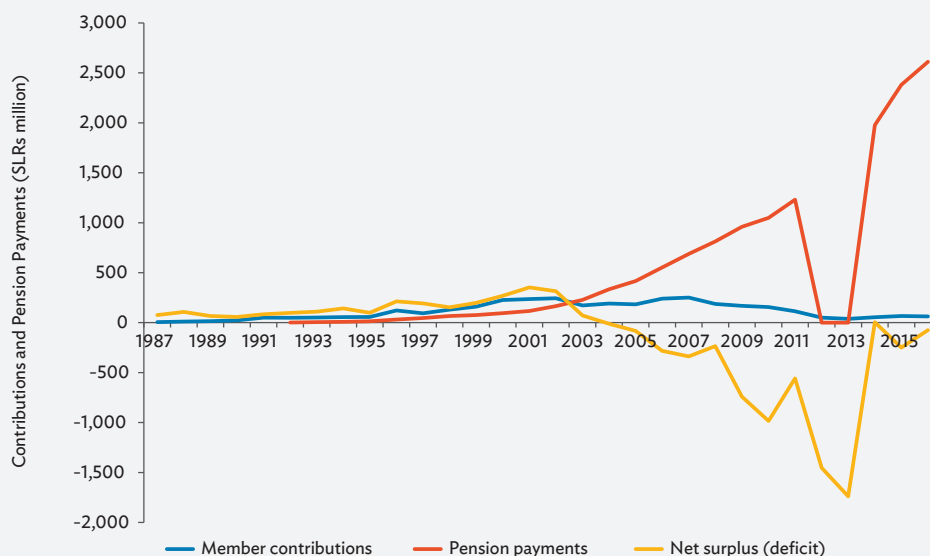
⁷ The Employees' Provident Fund (EPF) scheme covers more workers, but it is not considered a pension scheme as it does not provide an income stream to beneficiaries.

increases in the pension schedule without any increases in the contribution schedule, resulted in the FPS becoming insolvent in 2011.

The FPS ran a surplus in its early years and steadily built up its reserves as annual pension payments were much less than income from contributions. However, over time the mismatch between contribution and benefit increased and led to a decline in FPS fund balance from SLRs1.4 billion in 2008 to SLRs663 million in 2009 (Figure 23), and by 2011 the scheme became insolvent. At this point, the FPS ceased all pension payments, but continued to collect contributions from members who continued to pay. However, the government remained legally liable for pension payments, since the FPS was established as a statutory scheme with benefits guaranteed by law. The government then restarted the scheme in 2013 as a predominantly budget-financed pension with the treasury assuming the financial burden of providing the necessary funds. During the intervening period in 2011–2013, many of the scheme’s members stopped making contributions, probably believing that the scheme was defunct. Under the scheme’s regulations, the vast majority of members who stopped making contributors likely lost all their pension rights by being deemed delinquent contributors, which also effectively reduced the scheme’s liabilities.

In the revised scheme, government subsidies largely finance the scheme and payments by the treasury amounted to SLRs2 billion in 2014, which increased to SLRs2.5 billion in 2016. In the revised scheme, the contribution schedule is actuarially better matched with the increased pension payments. Contributions in the new scheme range from SLRs160 semiannual contributions for an 18-year-old member; to SLRs11,922 for a 55-year-old; and SLRs73,104 for a 59-year-old person. Pension entitlement ranges from SLRs1,000 to SLRs5,000. According to the new scheme, the contribution that has to be made by a 40-year-old farmer has increased more than fourfold compared with the original scheme. After the new scheme was established, no farmers have joined as new members, which may partially be because of the comparatively high contributions in the new scheme and the collapse of earlier scheme.

Figure 23: Member Contributions, Pension Payments, and Net Surplus or Deficit of Farmers’ Pension Scheme, 1987–2016



Source: Authors’ analysis of administrative data collected directly from the Agriculture and Agrarian Insurance Board of Sri Lanka.

Fishermen's Pension Scheme

The Fishermen's Pension and Social Security Benefit Scheme is a largely contributory and voluntary pension scheme that covers fishermen. It was set up by the Fishermen's Pension and Social Security Benefit Scheme Act No. 23 of 1990 to benefit those employed in the fishing industry. Any fisherman, defined in this act as a person who makes their living by fishing or fish farming in the sea, lagoon, or an inland body of water, and aged 15–59 years is eligible to join the scheme. Other conditions for a fisherman to be eligible for enrollment are as follows: the enrollee cannot own more than three mechanized boats whose combined weight does not exceed 6 tons; they cannot own more than 2 hectares (or 5 acres) of fish farms; they cannot be entitled to benefit from any other pension or provident fund; and they cannot be a person liable to pay income tax or receive a pension, or receive a pension upon the death of the spouse.

Contributions to the Fishermen's Pension and Social Security Benefit Scheme pension fund range from SLRs130 semiannually for a contributor aged 18, to SLRs690 to a contributor aged 55 years and above. The pension benefit varies between SLRs1,000 and SLRs4,166, similar to the farmers' scheme. Disability and death gratuities are dispensed at amounts similar to the benefits granted by the farmers' scheme. As a result of the amendment in 1995 that raised the minimum pension entitlement under the farmers' scheme, the minimum pension entitlement under the fishermen's scheme was also raised from an initial value to SLRs200 to SLRs1,000.

The financial status of the Fishermen's Pension and Social Security Benefit Scheme was always stronger than the FPS and it has never suspended pension payments, but there was a substantial drop in contributions and presumably active contributors from 2009. This may have been because of the adverse reports on the situation with the FPS. Membership at the time had reached almost 70,000 with over 60,000 active contributors. Subsequently, the number of active members declined to 1,300 in 2016, while the number of pensioners increased to 3,700. The fishermen's scheme covered 0.04%–0.12% of the population aged 60 years and above during 2006–2016. Annual collection of contributions declined while pension payouts increased over the years. As a result, the fund balance of the fishermen's pension scheme declined and became a negative fund balance of SLRs1.4 billion in 2011. The negative fund balance continued to increase and reached SLRs2.4 billion in 2016, raising concerns about the sustainability of the scheme.

Pensions for the Self-Employed

The Pension and Social Security Benefit Scheme for Self-Employed Persons was established by the Social Security Board (SSB) Act No. 17 of 1996. The scheme provides social security to self-employed persons during old age and disability to provide relief to their dependents upon the death of the individual, encourage individuals to remain in their occupations, encourage the youth to be self-employed, encourage self-employed persons to acquire the habit of saving, and improve the living standards of self-employed persons.

Individuals aged 15–59 years are eligible to join the scheme. According to the SSB Act and Gazette No. 948/10 in 1996, self-employed persons in the following sectors are entitled to join the scheme: production, excluding primary produce of agriculture, fisheries and livestock, forestry and hunting, mining and quarrying, manufacturing, storage and packing, building and construction, electricity, gas and water, transport, repair and maintenance, trade and commerce, insurance and banking, real estate and business services, communications, community, social and personal services, and occupation in any other sector excluding those covered by the farmers' and fishermen's pension and social security benefit scheme acts. The scheme targets mainly low-income self-employed persons, both female and male. These individuals are employed largely in the informal sector. Other than the age criteria, enrollees should not be eligible for membership in any other pension or provident scheme.

Contributions are made either on a regular (installment basis) or lump-sum basis. In significant contrast to the farmers' and fishermen's schemes, the self-employed scheme has six different contribution schedules (A, C, D, E, F, and G) to which individuals can choose to contribute. At the inception of the scheme in 1996, there was only one payment schedule, Schedule A, which was designed to be similar to the farmers' and fishermen's schemes. According to this schedule, a flat-rate fixed contribution must be made each year, with the rate set according to the person's age upon joining. The contribution itself must be paid in four installments during the year under normal circumstances.

Out of the six schedules, Schedule C was started in 1999, Schedule D in 2001, and the other three schedules in 2006. Quarterly contributions for an 18-year-old individual vary from SLRs50 to SLRs250; and for an individual aged 59 years, from SLRs235 to SLRs41,850 depending on the schedule selected. Monthly pension payments from SLRs500 to SLRs8,000 are offered depending on the schedule and the age at enrollment. A member of the scheme (referring to any of the schedules under the scheme) is entitled to receive a periodical pension upon reaching the age of 60, a lump-sum gratuity or a lump-sum gratuity and pension in case of permanent disablement, and a death gratuity. Five of the schedules were closed for new enrollments in 2012 as they were not economically viable in the long run partly because the schedules were not designed to collect adequate contributions to cover pension payments offered by the scheme.

Currently, Schedule F is open for new members and offers SLRs1,000 monthly pension payment after age 60 irrespective of enrollment age. The amount to be paid as quarterly contributions varies from SLRs100 for an 18-year-old person up to SLRs32,730 for a 59-year-old person. It is estimated that all six schedules currently have 31,000 active members and 10,000 pensioners. During 2006–2016, pension schemes for self-employed persons covered 0.2%–0.3% of the population aged 60 years and above.

Retirement Schemes for Private Sector Employees

There are no government-organized pension schemes for private sector employees in Sri Lanka. The EPF and the approved provident and pension funds (APPF) are provident funds available for private sector employees, and established by legislation. They are funded by a mandatory payroll deduction of 8% made by employees, and a 12% contribution made by employers. Funds collected are invested in a single pool and an annual payment made from the investment returns to all members in a fund, based on their individual account balances.

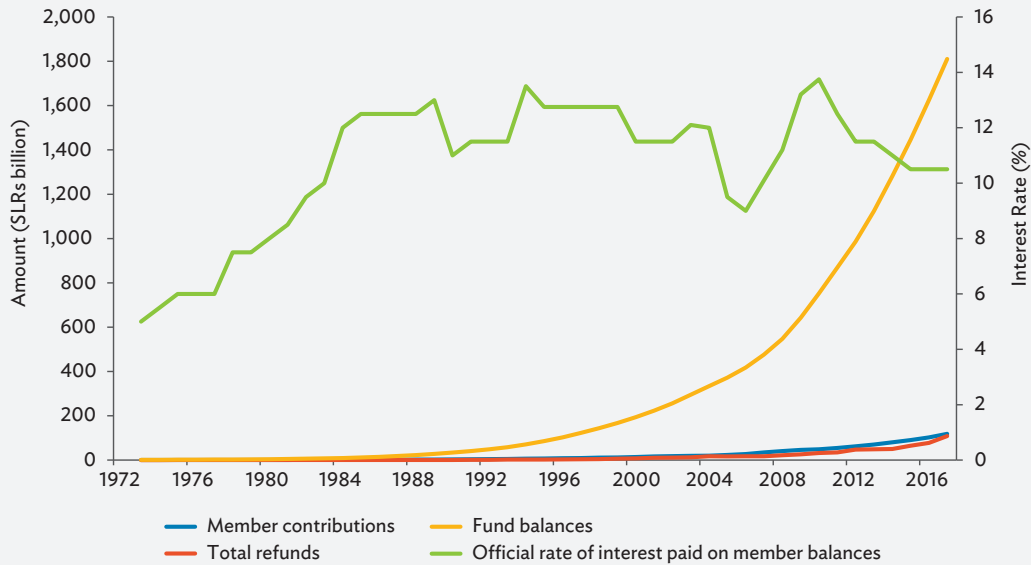
Employees' Provident Fund

The EPF was established under EPF Act No. 15 of 1958 to cover any employment, including any employment in the service of a corporation whose capital or a part of the capital is provided by the government.⁸ Under current legislation, any establishment, irrespective of the type or category of employment, becomes legally liable for payment of contributions to the EPF on recruitment of even a single employee, but household employees are excluded (Central Bank of Sri Lanka and Department of Labor 2005).

The EPF is the largest superannuation fund available for private and semi-government employees. The EPF had 2.4 million contributing members in 2016, representing 20% of the working-age population (18–60 years). Total fund balances had increased from SLRs1.0 billion in 1972 to SLRs1.8 trillion in 2016 (Figure 24). The Commissioner of Labor is in charge of the general administration of the act while financial responsibility is with the Monetary Board of the Central Bank of Sri Lanka.

⁸ This refers to state-sponsored institutions, statutory boards, and people's organizations.

Figure 24: Employees' Provident Fund Member Contributions, Refunds, Fund Balance, and Rate of Interest Paid on Member Balances, 1972–2016



Sources: Employees' Provident Fund (2016) and Central Bank of Sri Lanka (2017).

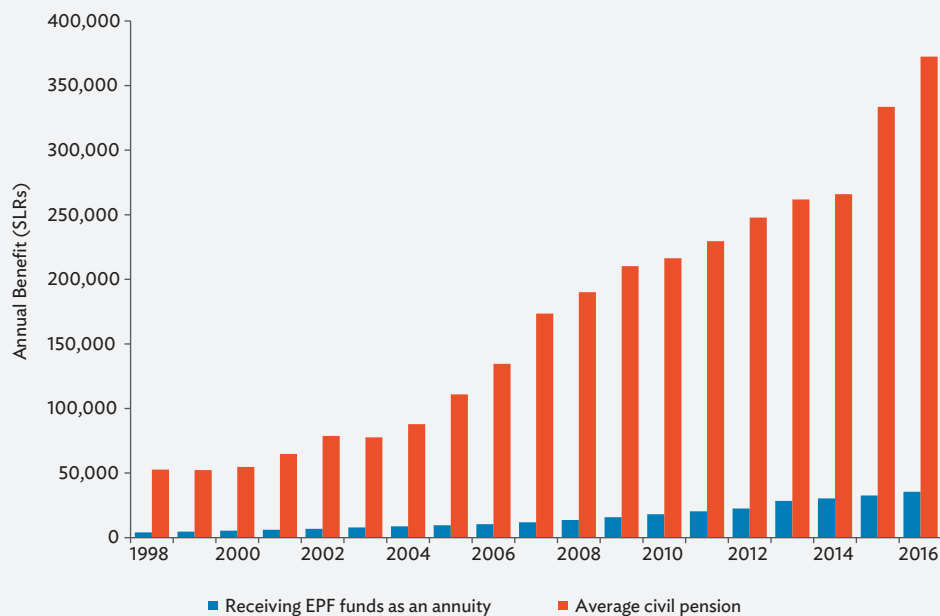
All employees, either permanent, temporary, apprentices, casual, or shift workers are considered to be covered, and enrollment in the EPF is mandatory. Under the EPF, as mentioned above, employer and employee are required to make monthly contributions to the EPF. Earnings for the period include salaries and wages, cost of living allowances, cash value of meals provided, and food allowances. Employers are prohibited from compensating themselves for this contribution through reduced wages. In the event this happens, the Commissioner can order the employer to pay the presumed difference in contributions. Employers are also not allowed to deduct the contribution amount from the employee's earnings.

The EPF mainly provides income security after retirement to contributing members. Members can withdraw their EPF account fund balance after reaching the age of 50 for females and 55 for males. The refunded amount consists of all accumulated contributions and accumulated interest. Members can also withdraw their account balance before reaching the specified age if they leave the workforce due to a permanent disability, migration, join a pensionable employment, or upon marriage for female employees. Members can nominate beneficiaries to be eligible to receive refunds if the member dies before reaching the prescribed age. The average value of the refund was nearly SLRs580,000 in 2016. Total contributions collected were SLRs118 billion and total refunds were SLRs108 billion during 2016. Investment of funds or surplus income of the fund in 1990 was SLRs11 billion, which has increased over the years to SLRs827 billion in 2016.

However, the EPF falls short of providing private sector employees income security in their old age. This is because (i) the EPF provides a lump-sum payment instead of a periodic income; and (ii) there is inadequate replacement income (Rannan-Eliya and Eriyagama 2003). Since the EPF refund is a lump-sum payment at retirement, it is the sole responsibility of retired persons to effectively manage that money to provide their own income security for life. Purchasing an annuity is not a realistic option for most members, since the annuity market in Sri Lanka is limited. Even if the individual was able to invest their EPF funds as an annuity, it would be inadequate income for most

individuals. For purposes of illustration, if the average payout in 2016 of SLRs580,000 was converted to a 25-year annuity with zero transaction cost and paying a return equivalent to the average official interest rate offered by EPF in recent years, it would only generate for the average worker an annual income stream of SLRs35,500 in current values.⁹ This would represent just one-tenth of the value of the average pension paid by the CSPS (Figure 25). The Employees' Trust Fund is another income security scheme for private sector employees. It is a non-contributory scheme to which only the employers contribute at the rate of 3% of the gross earnings of their employees.

Figure 25: Comparison of the Average Pension under the Civil Service Pension Scheme and Estimated Annuity Value of Average Employees' Provident Fund Payouts, 1998–2016



EPF = Employees' Provident Fund.

Sources: Authors' estimates based on data from EPF (2016); and Central Bank of Sri Lanka Annual Report 2017.

Approved Provident and Pension Funds

The EPF Act of 1958 allowed for the establishment of approved provident and pension funds (APPFs) or approved contributory pension schemes. Employers can contribute toward the APPF instead of the EPF. In 1996, legislation was introduced preventing the establishment of new APPF funds, although existing APPF funds were allowed to continue. There were 177 APPFs in 2006 with SLRs96 billion worth of assets, which decreased to 155 APPFs in 2016 with SLRs198 billion in total assets.

⁹ Twenty-five years is a conservative estimate of the life expectancy of an individual after the age of 55, the age at which workers are supposed to collect their EPF balances.

Assessment of the Major Schemes

This section summarizes all the major schemes in terms of coverage, adequacy, and financial sustainability. A summary is in Table 4.

Table 4: Key Indicators for the Major Old-Age Income Security Schemes in Sri Lanka, 2016

Indicator	EPF/APPF	CSPS	Farmers	Fishermen	Self-Employed	Senior Citizen
Members ('000)	2,602	1,158	171 ^a	1 ^a	31 ^a	
Beneficiaries ('000)	127 ^b	570	141	3	10 ^a	386
Mode of payout	Lump sum	Unindexed annuity	Flat nominal annuity	Flat nominal annuity	Flat nominal annuity	Flat nominal annuity
Financing	12% employer 8% employee	Government budget	Schedule with flat nominal amount by age and government budget	Schedule with flat nominal amount by age and government budget	Schedule with flat nominal amount by age	Government budget
Spending/GDP (%)	0.8	1.8	0.02	<0.01	<0.01	0.08
Administrative costs per member (SLRs)	617	...	701	3,936	3,965	...
Fund balances/GDP (%)	15	...	<0.01	<0.01	<0.01	...

... = not applicable, APPF = approved provident and pension funds, CSPS = Civil Service Pension Scheme, EPF = Employees' Provident Fund, GDP = gross domestic product.

^a Authors' estimates.

^b Beneficiaries for EPF only, data for APPF beneficiaries are not accessible.

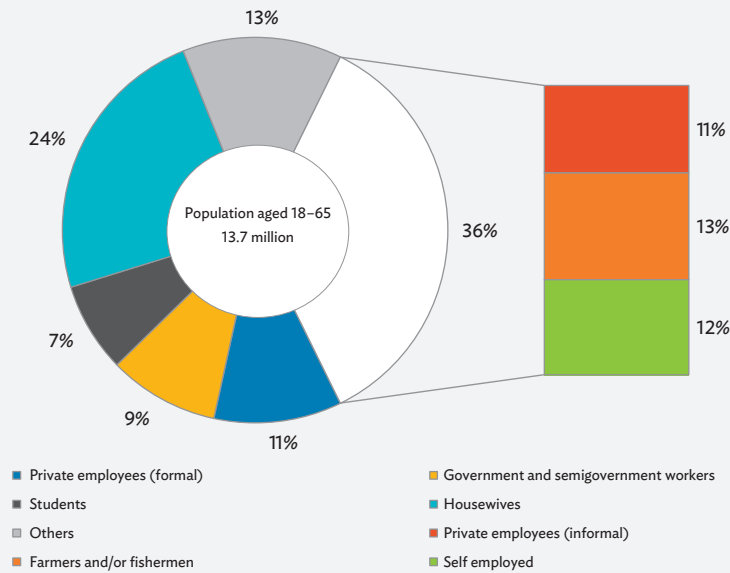
Sources: Agriculture and Agrarian Insurance Board, Sri Lanka Social Security Board, Pensions department and National Secretariat for Elders, Central Bank Annual Report 2017, 2018 budget estimates.

Coverage

The working-age population (assumed here as those aged 18–65 years) comprises workers who could be in the formal or the informal sector, or other types of workers as well as those who may not be in the labor forces such as students and homemakers (largely females) (Figure 26). Most of the potential participants in contributory schemes are likely to be found in the informal sector, with housewives and students typically not availing of such schemes. The five schemes shown—CSPS, EPF, and the three for the informal sector—cover around 31% of the population aged 18–65 (Figure 27). Despite informal sector workers being a significant number, only 218,000 out of the 5 million informal workers are enrolled in some pension scheme. Among those aged 60 years and above, the share of those who received pensions from existing schemes increased over the years from 19% in 1992 to 37% in 2016 (Figure 28).

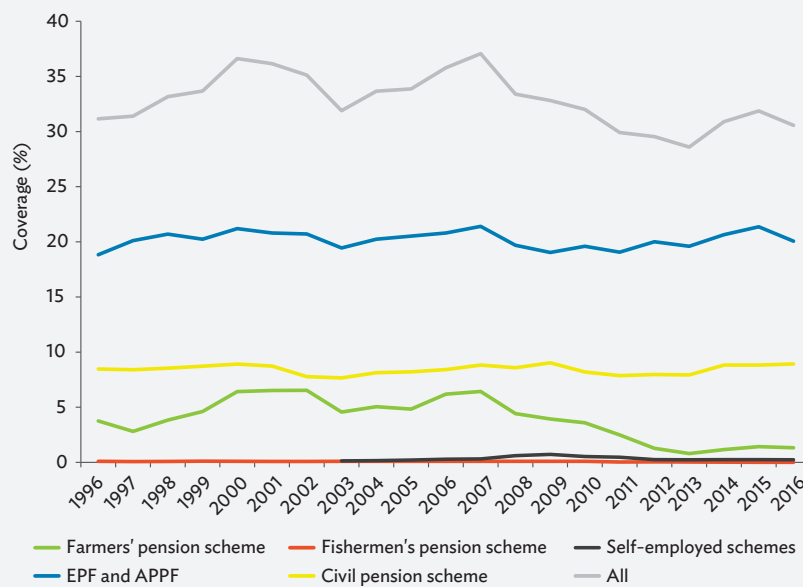
Progress was made during 1990–2000 to expand pension coverage, in particular, through pension schemes for the farmers and fishermen, and another one for the self-employed. As a share of the labor force, those covered by one of the schemes increased from 28% in 1990 to reach a high of 50% in 2000 and 57% in 2007, before falling to 45% by 2016 (Figure 29). The increase in coverage of informal sector schemes while modest are impressive given the challenge of attracting informal sector workers to make voluntary contributions to a pension scheme,

Figure 26: Composition of the Population Aged 18–65 Years, 2014



Source: Authors' estimates using microdata from Labor Force Survey 2014 (Department of Census and Statistics 2014).

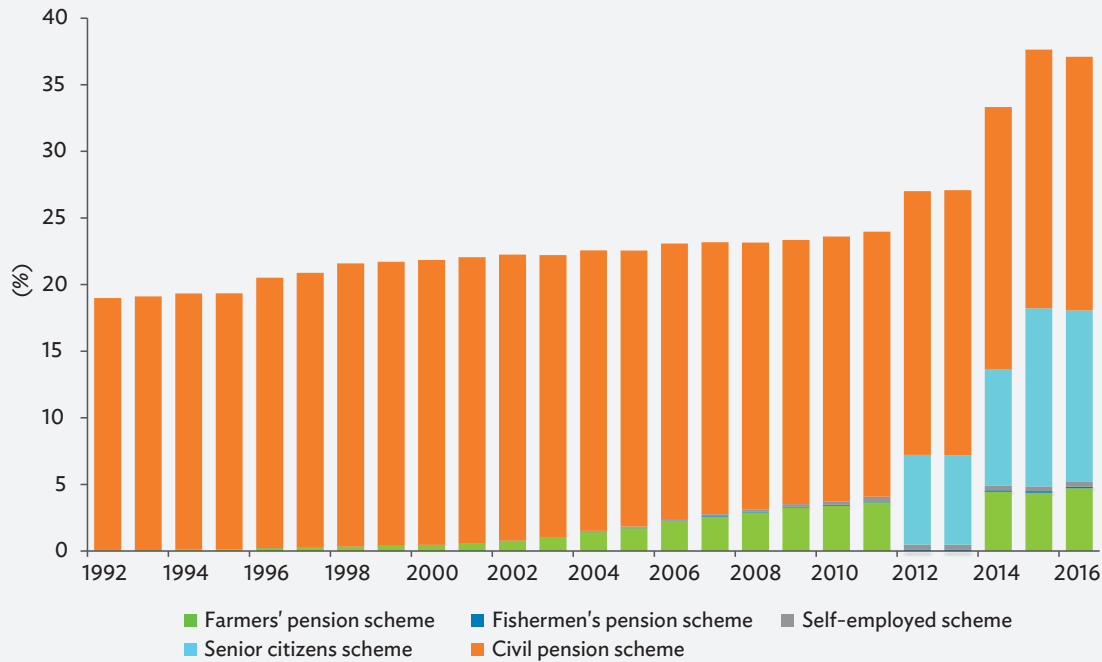
Figure 27: Coverage of Working-Age Population Aged 18–60 Years by Each Scheme, 1996–2016



APPF = approved provident and pension funds, EPF = Employees' Provident Fund.

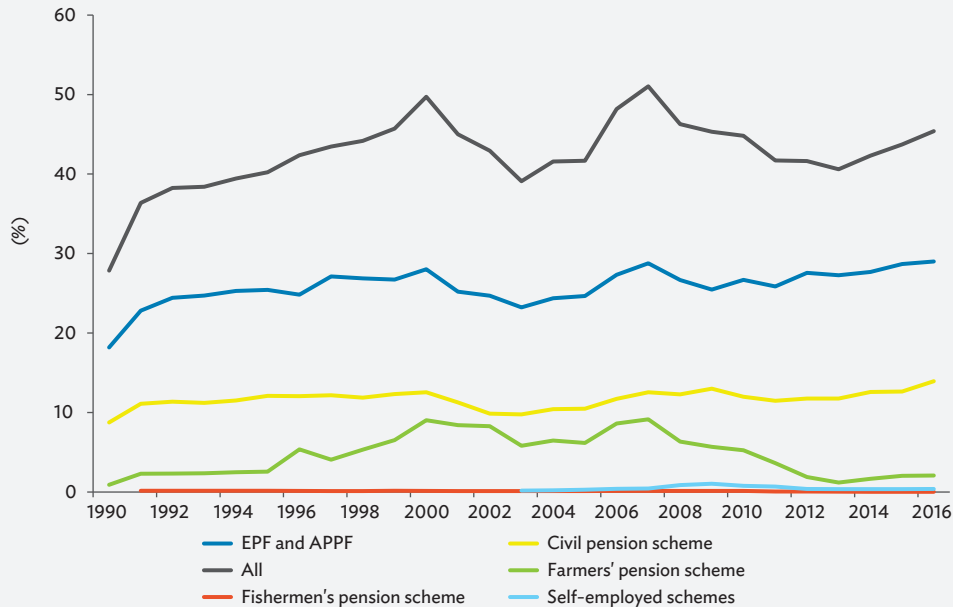
Sources: Authors' analysis of data for each scheme collected directly from relevant agencies; authors' estimates using microdata from Labor Force Surveys 1996–2016 (Department of Census and Statistics, various years); EPF (2016); and Central Bank of Sri Lanka Annual Report 2018.

Figure 28: Share of Population Aged 60 Years and Over Covered by Existing Pension Schemes, 1992–2016



Sources: Authors' estimates based on data for each scheme collected from relevant institutions; EPF (2016); and Central Bank of Sri Lanka Annual Report 2017.

a feat few economies have been able to achieve. Informal sector workers, many a time, do not have a regular income stream which makes contributing based on salary difficult, and hence the design of traditional schemes does not work well in these cases. Sri Lanka sidestepped this problem by designing the three schemes with fixed contributions (depending on the age at which a worker enrolls) and providing fixed benefits at retirement. Neither of these three schemes require verification of income but they do require continuous and uninterrupted contributions to maintain eligibility status. Some workers may find the condition of uninterrupted contributions difficult to comply with in the event of sudden shocks such as health problems, which could lead to temporary loss of income or unanticipated health expenditure, limiting their ability to make regular contributions. This could lead to disqualification; and data indicate high default rates on payments of contributions.

Figure 29: Coverage of Labor Force by Each Scheme, 1996–2016

APPF = approved provident and pension funds, EPF = Employees' Provident Fund.

Sources: Authors' estimates using data from each scheme collected from relevant institutions; EPF (2016); and Central Bank of Sri Lanka Annual Report 2017.

Adequacy

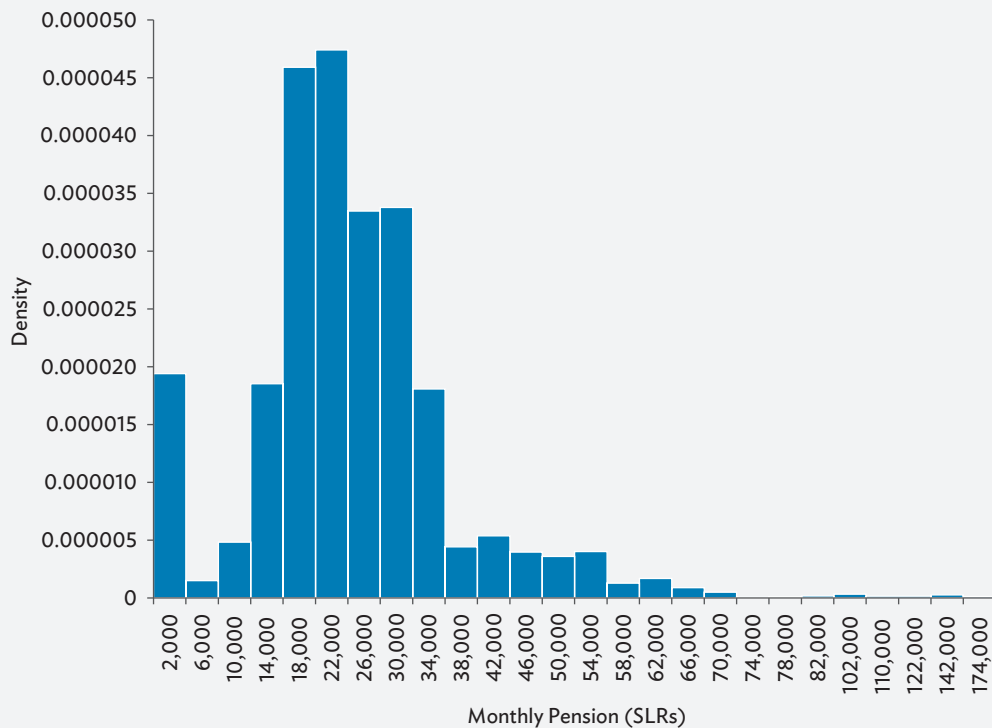
An important feature to assess the adequacy of any pension scheme is the target replacement rate, defined as the ratio of pension to earnings that the scheme is designed to produce for participating workers throughout their working lives (World Bank 2008). Sri Lanka's pension scheme system does not have an explicit target replacement rate. Sri Lanka is considered to be among the economies with the highest target replacement rates (World Bank 2008). This, the same study notes, is due to the relatively high contribution rate to the EPF.¹⁰ However, caveats arising from features of the EPF (it is a lump-sum withdrawal scheme and is not converted into an annuity at retirement) and assumptions made by the study's methodology (such as no withdrawals prior to the eligible age for withdrawal or the differential [1.5%] between the net rate of return and wage growth) need to be noted.

For assessing the replacement target rate of the CSPS, a defined benefit scheme which covers civil servants, the problems of lack of annuitization, early withdrawal, and rates of return do not arise. On the other hand, the indexation of the pension is done on an ad hoc basis, which adds an element of uncertainty and makes it difficult to assess the target replacement rate. Another study shows that the replacement rates under CSPS were higher in Sri Lanka than in other countries in South Asia; for example, those in India were about half of those in Sri Lanka (World Bank 2005, p. 11). However, the same study also showed that the ratio of civil service wages to average

¹⁰ The discussion on the EPF here is also applicable to the APPFs unless otherwise noted.

income was higher in India, indicating that pensions in Sri Lanka could be a form of deferred compensation.¹¹ Most pensions in Sri Lanka are concentrated between SLRs10,000–SLRs50,000 per month (Figure 30), compared with the average income per capita of SLRs16,377 in 2016 (based on the 2016 HIES estimates). The lowest pensions are typically received by the most aged pensioners and/or surviving spouses. While those with low pensions comprise a small share of the total, some of them may be falling below the poverty line.

Figure 30: Distribution of Monthly Pensions of Civil Servants, 2016

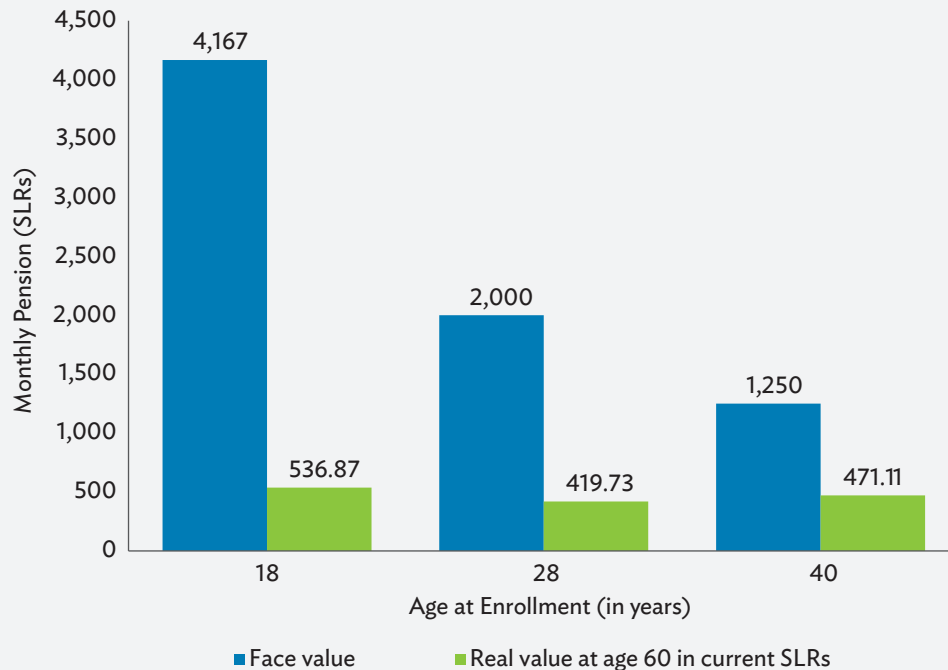


Source: Authors' estimates using data from the 2016 Household Income and Expenditure Survey.

Finally, as one would expect, the replacement rates of the two informal sector schemes are much lower than those of their formal sector counterparts as benefits are in nominal terms (Figure 31). Implicit replacement rates thus vary widely across the schemes. Scheme-centric features such as the lack of annuitization in the EPF, ad hoc indexation of pensions under the CSPS, and the use of nominal benefits in informal sector schemes, result in uncertainty about old-age income and its purchasing power.

¹¹ The contributory nature of the survivors' benefit in Sri Lanka's public sector, in contrast to India, which offers such benefit at no extra cost to its civil servants, complicates the comparison between the two schemes.

Figure 31: Real Value of Monthly Pensions of the Farmers' Scheme Prescribed at Different Selected Ages of Enrollment, 2016



Note: Inflation rate of 5% is used to arrive at the real value of current Sri Lankan rupees.

Source: Authors' estimates based on nominal value of pension payments specified in the scheme and in effect as of 2016.

Financial Sustainability

The third metric is the financial sustainability and the ability of the schemes to pay out the envisaged benefits and their fiscal costs, if any. The CSPA scheme (except for the survivors' benefit) is noncontributory and financed directly out of the budget. Future spending on pensions under the CSPA will depend on the age composition of the civil service, future wage levels, and importantly, adjustments to pensions. The age structure of the civil service is known, and its future structure is unlikely to vary much from this, but the practice of discretionary indexation and the impact of future wage policies introduces uncertainty in any projection. The Central Bank of Sri Lanka estimates that 80,000 additional pensioners are expected by 2020, and 800,000 additional pensioners over the next 30 years from 2020, which will escalate the fiscal cost of the CSPA as the scheme is noncontributory with defined benefits (CBSL 2019, p. 29). This burden will have to be borne by a shrinking labor force. Ad hoc revision to address pension anomalies will add further fiscal burden.

The situation is quite different for the self-employed, the farmers', and the fishermen's schemes as they are contributory in nature. Despite initially running on surpluses, the farmers' and fishermen's schemes have faced a large negative fund balance since 2010. The deficits are due to the contributions not being sufficient to fund the benefits. These schemes are all statutory schemes with their pension commitments underpinned by statute; if these schemes ever lack funds the responsibility for paying pensions will ultimately be on the government. So, in

practice, these schemes are generating some contingent liabilities for the government. In contrast, the EPF holds paper assets of close to 15% of GDP, and the debt is explicit. Pension expenditure, which is expected to increase in the context of a rapidly aging population, will present future governments with tough choices.

Policy Recommendations for Pension and Old-Age Income Support Schemes

Sri Lanka needs to develop a coherent and unified policy framework to ensure that the elderly have access to income support. There exist a large number of different schemes and initiatives, which provide income support to different groups of elderly people, but not to the population as a whole. Most of these initiatives have been set up at different times for a variety of motivations, and their objectives or underlying principles generally lack coherence.

Overall, a gap in coverage remains, with half the working-age population lacking access to income security post retirement. There has also been little change in the coverage of existing schemes in the past 2 decades, and there has been no significant improvement in the depth of coverage. Although measures taken by the successive governments to cover most of its population with some arrangement or another are creditable, they have not been able to expand on this, and in some years, coverage has dropped, for example when the FPS collapsed. With the exception of the CSPS, the adequacy of most schemes is low.

There has been an increasing shift toward reliance on general revenue financing. This is driven by attempts to move toward universal coverage and respond to public preferences. This shift has modestly increased fiscal costs, and this trend is likely to continue given the political and social pressures that appear to be driving this trend. In the long term, the main pressure on fiscal costs will also come from the lack of coverage and the problem of inadequate benefits in current schemes, leading to pressure to provide transfers such as the Senior Citizens Allowance, or to increase the benefit levels in schemes like the FPS.

Efforts to establish new schemes on a purely contributory basis have not materialized as expected mainly due to excessive reliance on contributions to cover the informal and low-wage workers. Although the FPS matched the coverage success of Japan's similar scheme, the FPS was not financially viable. While the Japanese scheme from inception built in a partial budgetary subsidy of one-third and more, rendering it sustainable, the Sri Lanka scheme attempted to rely wholly on contributions, until its collapse forced a 100% budget subsidy—which may have been more costly fiscally than mixing contributions and subsidies. Furthermore, ad hoc changes to benefit levels in the FPS, accelerated its collapse, in contrast to a more considered approach that would have recognized the need to regularly make parametric adjustments on both the benefits and contribution side.

The fundamental challenge in making any old-age income security scheme for Sri Lanka's aging population affordable and sustainable is to lengthen working lives to match the increased life expectancy. Whatever the financing mechanism, the ultimate cost of any arrangement for today's workers is dependent on the ratio of pensioners to workers, or the ratio of how many years people spend in retirement versus the number of years they remain in productive work. Increasing life expectancy and increased healthy life expectancy mean that Sri Lankans can also work longer than their predecessors; thus, lengthening life expectancy is not only the problem, but also the solution. Pension arrangements need to support this goal by facilitating higher retirement ages, as well as flexibility to account for future increases in longevity, as well as the needs of those workers who need to retire earlier for health reasons.

The current effective retirement age norms set by the CSPA and EPF of 50–60 years date back to the 1950s and need to be revisited in line with improvements in health and life expectancy. With the current life expectancy of 31 years for women at age 50, and 18 years for men at age 60, many affected workers can expect to live as many or more years in retirement as they spent actually working. This is unlikely to be sustainable. It is essential to build awareness on how raising the retirement age has emerged as a key reform for pension sustainability in other economies with similar demographic challenges to Sri Lanka such as Japan, the Republic of Korea, and Singapore. Also overlooked is the likely signaling effect of CSPA and EPF rules that shape social norms as to when retirement should take place.

Given the longer periods that most retirees can expect to live in retirement, the real value of pension benefits will erode after several years, just at the time retirees need the most help. While the ad hoc increase in benefits have been made in response, there is in general a lack of coherent policy on indexation of pension benefits. Instead, devising a mechanism to raise benefits in all schemes, and then controlling costs by limiting the rates of increase may be more sustainable as well as predictable.

The challenge for Sri Lanka is how to expand coverage in a way that is fiscally and politically sustainable, as well as effective. The following principles may be considered in doing so:

- (i) To bring coherence to overall policy, a national pensions policy framework should be developed that provides a consistent set of principles to all relevant schemes, including CSPA and EPF, and how they relate to each other, even if they remain separate.
- (ii) The national framework should explicitly recognize that tax financing will be needed to extend coverage outside the formal sector, enable low-wage workers to have adequate coverage, and support long-term sustainability of contributory schemes.
- (iii) A national pension strategy and scheme should be developed to provide coverage for the whole population on the basis of contributions linked to income, with subsidies to enable coverage for low-income Sri Lankans. Such a strategy would aim to provide all citizens with a basic but adequate level of income security. The subsidy would need to come primarily from general revenue taxation.
- (iv) A complementary arrangement, perhaps as part of a national pension scheme to allow higher-income workers to contribute toward a supplementary pension, should be developed to complement the EPF system, which may be difficult to change. This might be modeled on the superannuation system in Australia or the Social Security System in the US.
- (v) Encourage people to prolong their working lives so as to reduce the cost of income support in old age. The retirement age should be gradually increased, and a mechanism to adjust these or benefits with future increases in life expectancy eventually brought in, as in Japan and many other Organisation for Economic Co-operation and Development (OECD) economies. Such a policy would also need to have some flexibility to allow workers with health limitations to retire early, and allow workers who want to work beyond the official retirement age.

In this regard, the design for a nationwide contributory pension scheme proposed by the Central Bank of Sri Lanka may be considered (CBSL 2019, p. 40). According to this proposal, the government, employer, and employee would need to share the responsibility of paying for retirement—with employee and employer both contributing a defined percentage based on monthly earnings toward retirement, with the government contributing a defined amount indexed to inflation. The contributions can be invested in financial markets including a certain amount in government securities. At retirement, employees benefit in the form of an annuitized pension. Such a framework would have to go through extensive national stakeholder discussions, and refined as well as draw upon experiences of other countries. A nationwide contributory pension scheme would help address the challenges of fragmented pension schemes and their sustainability. It will also help reduce over time the fiscal burden of old-age income security, and help improve mobility of workers between sectors.

4 Labor Market and Population Aging

Overview of Sri Lanka's Labor Market

In Sri Lanka, the Department of Census and Statistics (2017) defines labor force as all economically active people aged 15 years and above who are either employed or unemployed during the reference period. In 2017, the labor force comprised 8.5 million of which 63% were males (Department of Census and Statistics 2017). The total labor force participation rate (LFPR) in Sri Lanka has remained in the 50%–55% range since 2000 with a surprisingly large gender gap. Nearly half of those employed are in the services sector (46%) followed by 28% in industry, and 26% in the agriculture sector (Department of Census and Statistics 2017). Although Sri Lanka has achieved a high rate of female education and low fertility, female LFPR is low compared with the Republic of Korea, Malaysia, Singapore, and Thailand (Solotaroff, Joseph, and Kuriakose 2018; ADB and ILO 2017). The gender gap is least among people with university education (Solotaroff, Joseph, and Kuriakose 2018). Lowest LFPR is reported among urban women while estate women reported the highest LFPR. Unemployment rate was 4.1% in the economically active population in the age group of 15 years and above while it was 2.7% among males and 6.4% among females in 2017 (Department of Census and Statistics 2017). Statistics reveal high unemployment rates among youth (aged 15–24) mostly among educated youth.

Migration for foreign employment is a significant feature of the labor market in Sri Lanka. Disparity in aspirations and available job opportunities has led the youth to seek foreign employment. While people refuse jobs that are considered low status at home, many are comfortable with similar jobs abroad due to social and cultural reasons (Jayathilaka and Jayawardhana 2009). Since 2002, on average 200,000 departures for foreign employment were recorded each year. In 1996, departures for foreign employment hovered around 163,000, and of those 73% were females. The female share declined over the years due to policy changes that encouraged migration of males over females. There were 243,000 departures in 2016 of which only 34% were females (Sri Lanka Bureau of Foreign Employment 2017). The majority of annual migrant workers were female housemaids (68% of total departures) in 1996, which dropped to 27% in 2016. The share of male migrant workers increased from 26% of total annual departures to 66% during the same period (Sri Lanka Bureau of Foreign Employment 2017). Sri Lanka supplied unskilled labor to foreign markets in the past but policies have changed focus toward supplying skilled labor. This has created a challenge as required skills are not available domestically with job seekers preferring foreign jobs.

Working in Old Age

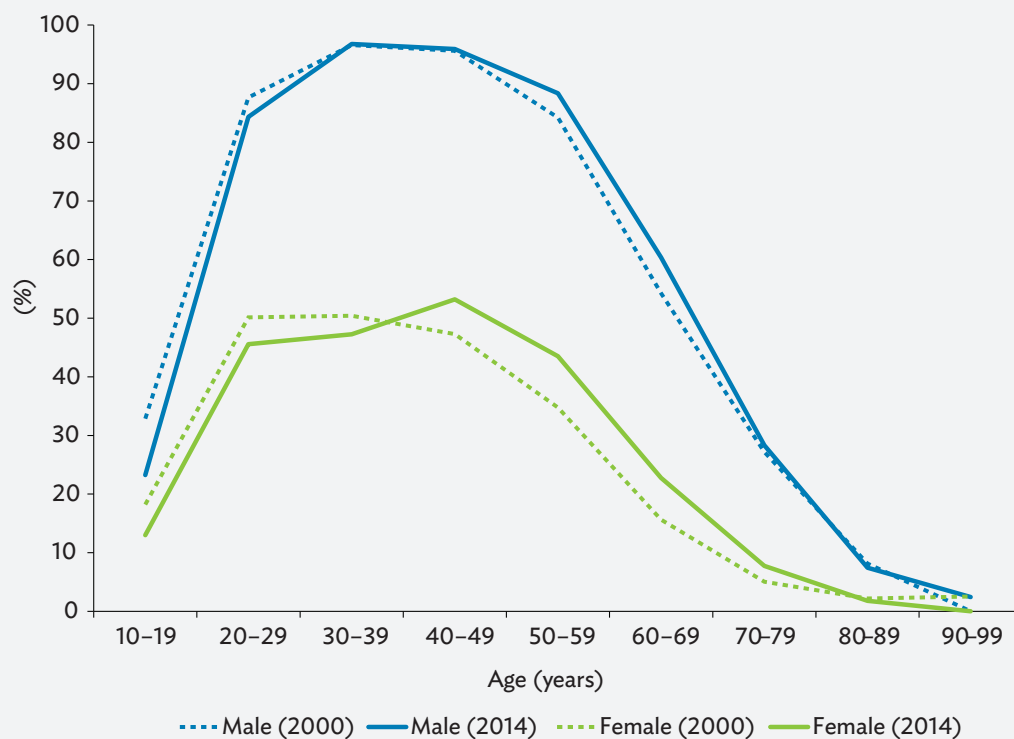
Consistent with the overall gender gap in the LFPR, male LFPR exceeded that of females for all age groups during 2000–2014 (Figure 32). Over the same duration, the LFPR of the elderly remained stable for men but showed an increase for women. The major change in pattern was an increase LFPR among women aged 50–59, from 34% in

2000 to 44% in 2014. In contrast, male LFPR in that age bracket showed no upward trend and remained in the 84%–88% range (Figure 32). For females and males, the LFPR shows two steep declines which are directly related to the retirement age and the age at which the EPF can be accessed. For women, in 2014, the LFPR for the age group 40–49 was 53%, which dropped to 44% in the age group 50–59, to 23% in the age group 60–69, and to 8% in the age group 70–79. For men, the LFPR for the age group 30–49 exceeded 95%, dropping to 88% in the age group 50–59 (but still higher than the LFPR of 84% for the age group 20–29), to 60% in the age group 60–69, to around 28% in the age group 70–79, and to around 7% in the age group 80–89.

The data also suggest that the age of withdrawal from the labor force has been increasing modestly for both men and women in recent years. There is a slight increasing trend in the LFPR in the 60–69 age group, while in ages over 69 years no change in the LFPR is noticed over the years (Figure 33).

While younger males have similar LFPR in all three sectors, the pattern changes for ages 50 years and above. Males in the estate and urban sectors leave the labor force earlier than those in the rural sector (Figure 34). Consistent with the national pattern of an increase in the LFPR from 2000 to 2014, the age of withdrawal from the labor force in estate and urban sectors has increased over the same duration. The male LFPR shows a decline twice, first for the 50–59 age group and then for the 60–69 age group. The reasons for the decline in the male

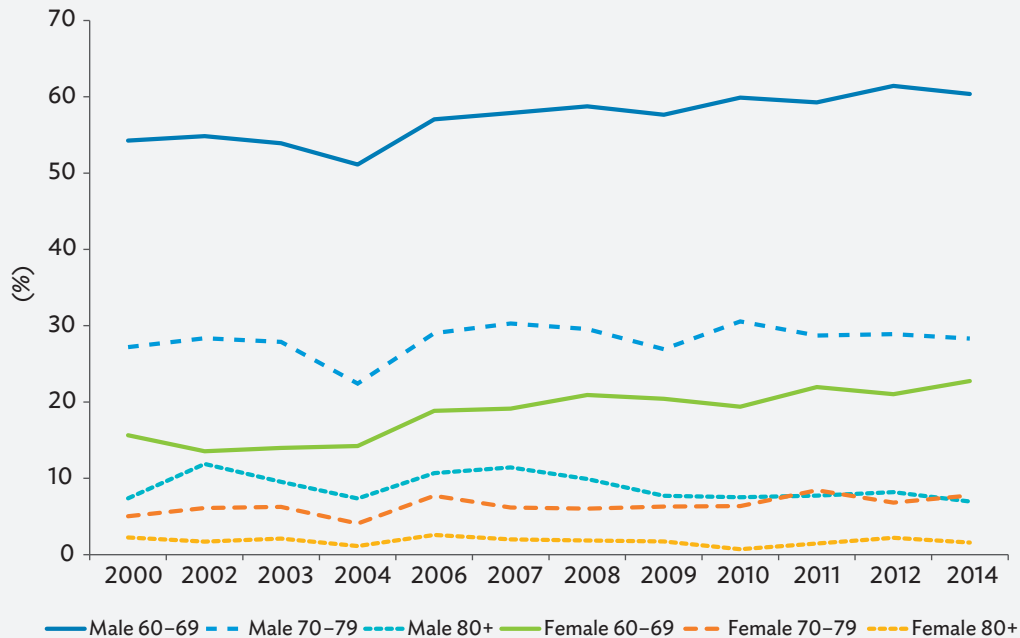
Figure 32: Labor Force Participation Rate by Age and Sex, 2000 and 2014



LFS = Labor Force Survey.

Note: Since earlier rounds of the LFS did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2014 LFS to maintain comparability across the years.

Source: Authors' estimates based on Labor Force Surveys 2000 and 2014 (Department of Census and Statistics, various years).

Figure 33: Labor Force Participation Rate of Workers Aged 60 Years and Over, 2000–2014

LFS = Labor Force Survey.

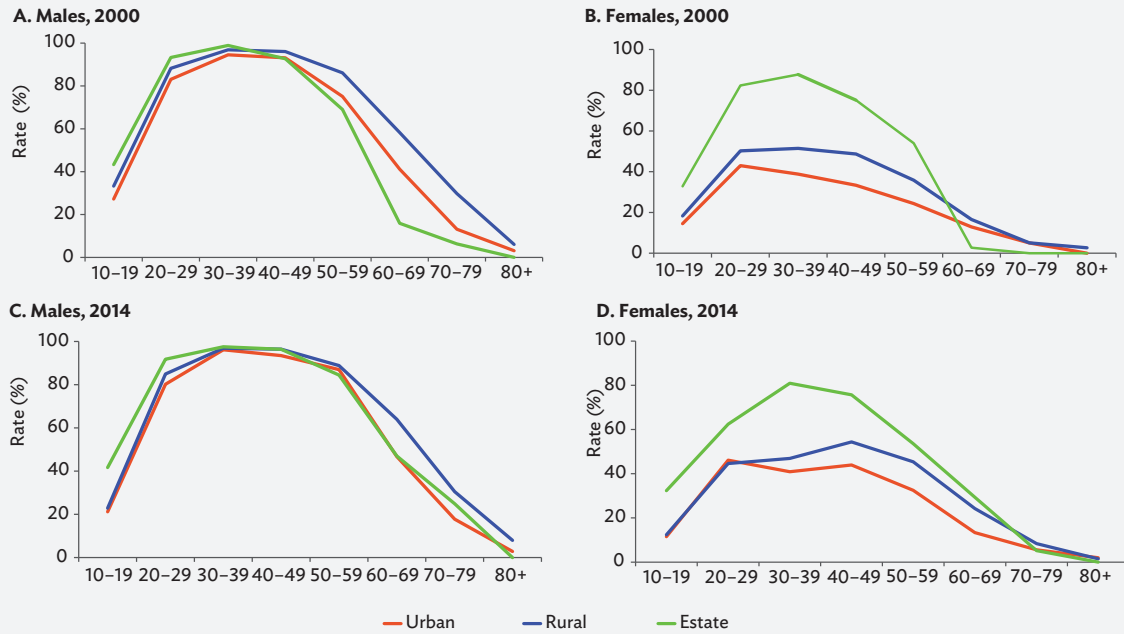
Note: Since earlier rounds of the LFS did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in all the years to maintain comparability across the years.

Source: Authors' estimates based on Labor Force Surveys 2000–2014 (Department of Census and Statistics, various years).

LFPR in the urban and estate sectors, however, are entirely different. In the urban sector, where males are likely to have formal sector jobs, access to the EPF and eligibility for pension may be driving the timing of withdrawal from the labor force. In the estate sector, jobs may be more physically strenuous, forcing individuals out of the labor force. This is partly reflected in the steeper drop in the LFPR in the estate sector in 2000 and to a lesser extent in 2014.

The female LFPR across sectors and over time from 2000 to 2014 shows different patterns, partly reflecting gender gaps and traditional roles assumed by women. The estate sector females have a much higher LFPR than males likely due to greater employability in the plantation sector (Figure 34). Urban females had lower LFPR than the other two sectors in 2000, and the female LFPR in urban areas declined steadily for ages 30 years and above which is likely because of marriage and childbirth. This pattern somewhat reversed by 2014. Two changes can be observed: (i) the female LFPR increases in both rural and urban sectors; and (ii) the female LFPR declines after the age of 30 years, but the decline is not secular and not as sharp, and then picks up during the 40s before declining for ages 50 years and above when the EPF becomes available for women. There is little explicit unemployment among older Sri Lankans. During 2000–2014, the unemployment rate for males aged 60–69 was close to 1% and negligible for those over 70 years; unemployment rates for older women were even lower (Figure 35).

Figure 34: Labor Force Participation Rate by Age, Sector, and Sex, 2000 and 2014

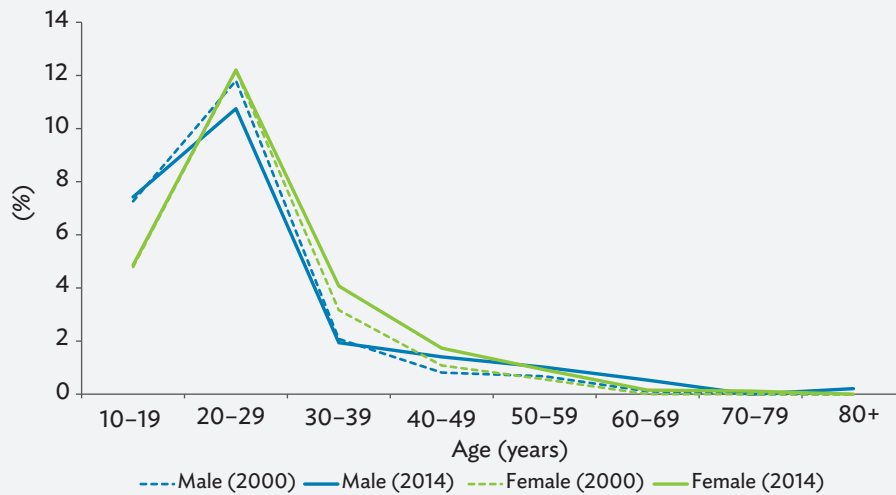


LFS = Labor Force Survey.

Note: Since earlier rounds of the LFS did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2014 survey to maintain comparability across the years.

Source: Authors' estimates based on Labor Force Surveys 2000–2014 (Department of Census and Statistics, various years).

Figure 35: Unemployment Rate by Age and Sex, 2000 and 2014



LFS = Labor Force Survey.

Note: Since earlier rounds of the LFS did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2014 survey to maintain comparability across the years.

Source: Authors' estimates based on data from Labor Force Surveys 2000 and 2014 (Department of Census and Statistics, various years).

Among those aged 60 years and above, the LFPR is highest for people who are less educated. While the gender gap persists, this pattern is similar for both females and males. Both female and male elderly people with low levels of education tend to work during old age compared with their educated counterparts. It could be because more educated people work in the formal sector, either in government or the private sector, which usually provide some sort of income security in old age through a pension or provident fund. In general, there is an increasing trend in participation rates across all educational levels over the years (Table 5).

Table 5: Labor Force Participation Rate of Workers Aged 60 Years and Over by Education and Sex, 2000, 2010, and 2014

Educational level	Age Group	2000		2010		2014	
		Male	Female	Male	Female	Male	Female
Below Grade 6	60–69	57.7	16.6	62.2	21.8	60.1	24.7
	70–79	28.0	4.9	30.0	6.8	26.5	8.3
	80+	4.3	2.3	7.8	0.8	7.3	1.9
Grades 6–10	60–69	55.2	13.9	61.7	18.1	64.9	23.2
	70–79	29.5	5.7	32.0	7.5	32.5	8.7
	80+	5.9	1.2	6.0	0.6	8.3	0.5
Passed GCE (O/L)	60–69	41.1	13.4	56.9	18.7	58.1	19.2
	70–79	21.2	5.2	27.2	1.0	27.2	4.6
	80+	–	0.0	–	0.0	2.2	0.0
Passed GCE (A/L) and above	60–69	54.7	23.6	49.6	12.0	47.5	18.3
	70–79	12.7	0.0	30.7	1.3	19.8	3.8
	80+	–	–	4.5	0.0	3.5	4.9

A/L = advanced level, GCE = General Certificate of Education, LFPR = labor force participation rate, LFS = Labor Force Survey, O/L = ordinary level.

– = LFPR are not calculated due to small number of people in the age and education group.

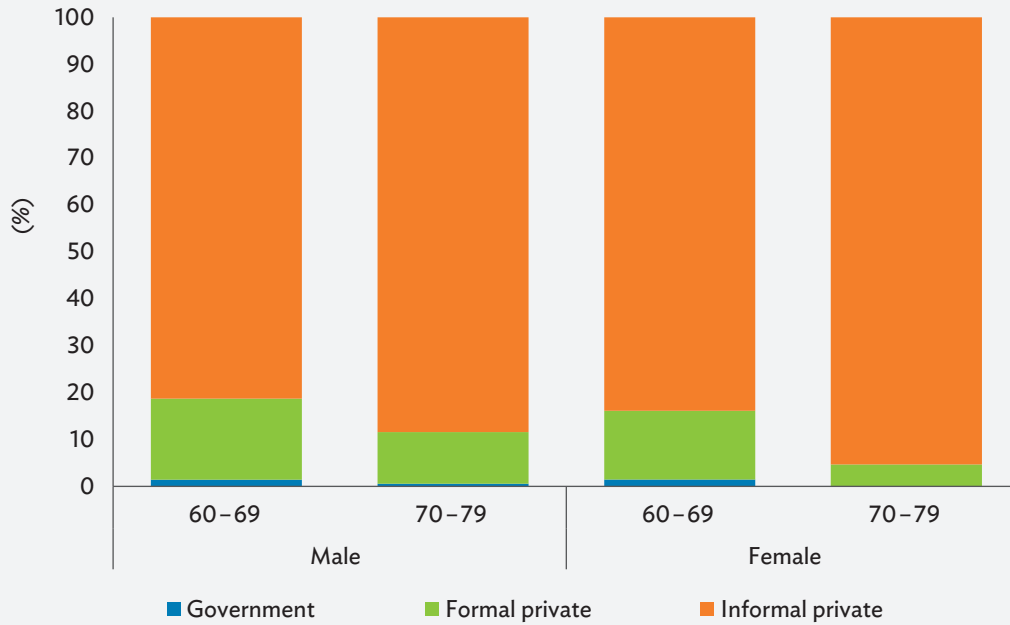
Note: Since earlier rounds of the LFS did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in all the years to maintain comparability across the years.

Source: Authors' estimates based on Labor Force Surveys for 2000, 2010, and 2014 (Department of Census and Statistics, various years).

The informal sector plays an important role in an economy especially in developing economies. In Sri Lanka, the contribution of the informal sector to employment was 60% in 2014 (Department of Census and Statistics 2017).¹² The vast majority of the working elderly are employed in the informal sector (Figure 36). This is partly due to mandatory retirement at age 60 in the government sector. Over two-thirds of males aged 60 years and over were self-employed while over one-third of females in the same age group were self-employed (Figure 37). A considerable share of females comprises unpaid family workers. Of the self-employed, almost all belong to the informal sector (Figure 37).

¹² An organization that satisfies any of the following criteria is categorized as formal sector: (i) the organization is registered in the EPF or with the Department of Inland Revenue, (ii) the organization keeps formal accounts, and (iii) the number of regular employees in the organization is 10 or more (Department of Census and Statistics 2017).

Figure 36: Workers Aged 60 Years and Over, by Sector of Employer, 2014



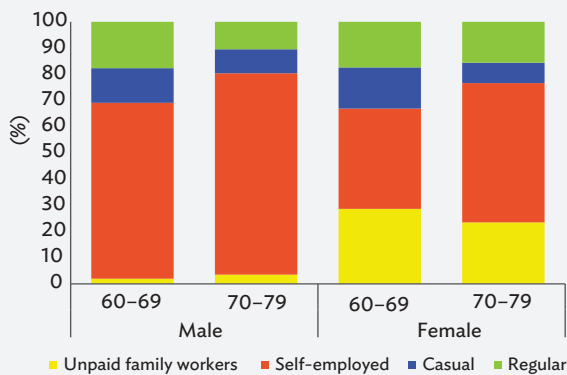
LFS = Labor Force Survey.

Note: Since earlier rounds of the LFS did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2014 LFS to maintain comparability across the years.

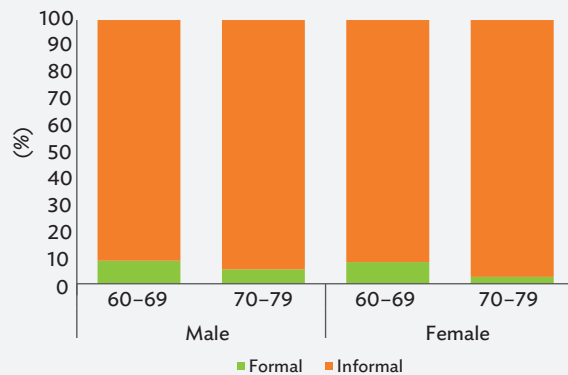
Source: Authors' estimates based on Labor Force Survey 2014 (Department of Census and Statistics 2014).

Figure 37: Distribution of Workers Aged 60 Years and Over by Type and Sector of Employer, 2014

A. Older Workers by Type of Employment



B. Older Self-Employed Workers by Sector of Employment



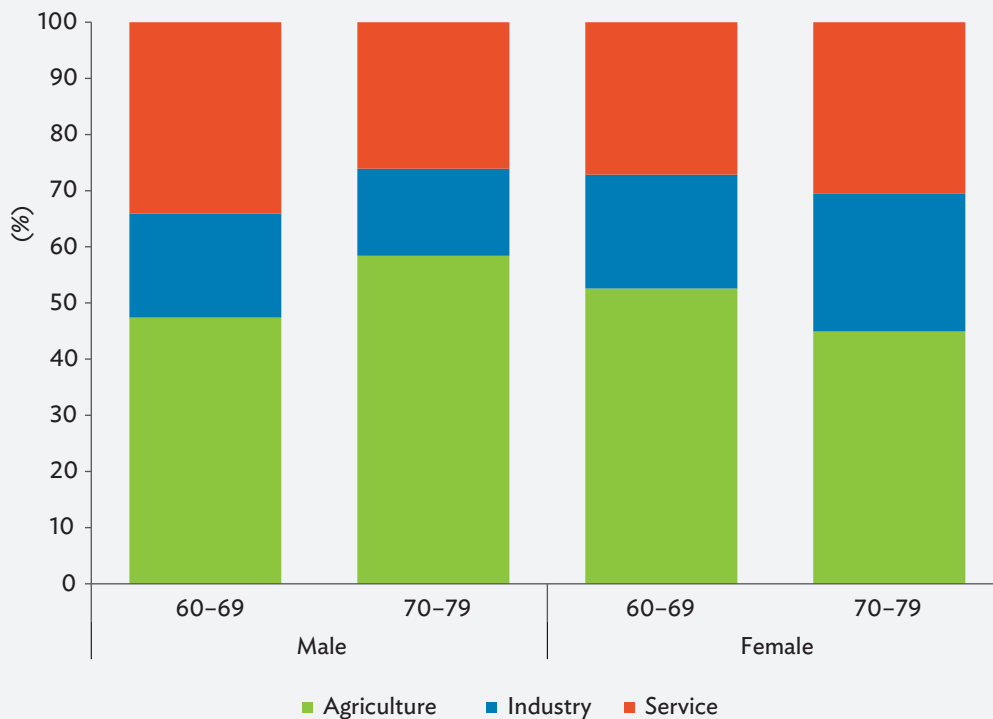
LFS = Labor Force Survey.

Note: Since earlier rounds of the LFS did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2014 LFS to maintain comparability across the years.

Source: Authors' estimates based on Labor Force Survey 2014 (Department of Census and Statistics 2014).

While majority of the employed population works in the service sector (45%) and the rest are split equally between the industry and agriculture sectors in 2014 (Department of Census and Statistics 2017), older workers over 60 years, both females and males, worked mostly in agriculture with a small proportion of the elderly in the industry sector (Figure 38). This could be a reflection of continued higher labor force participation in the rural sector after the age of 60 years.

Figure 38: Workers Aged 60 Years and Over by Type of Industry, 2014



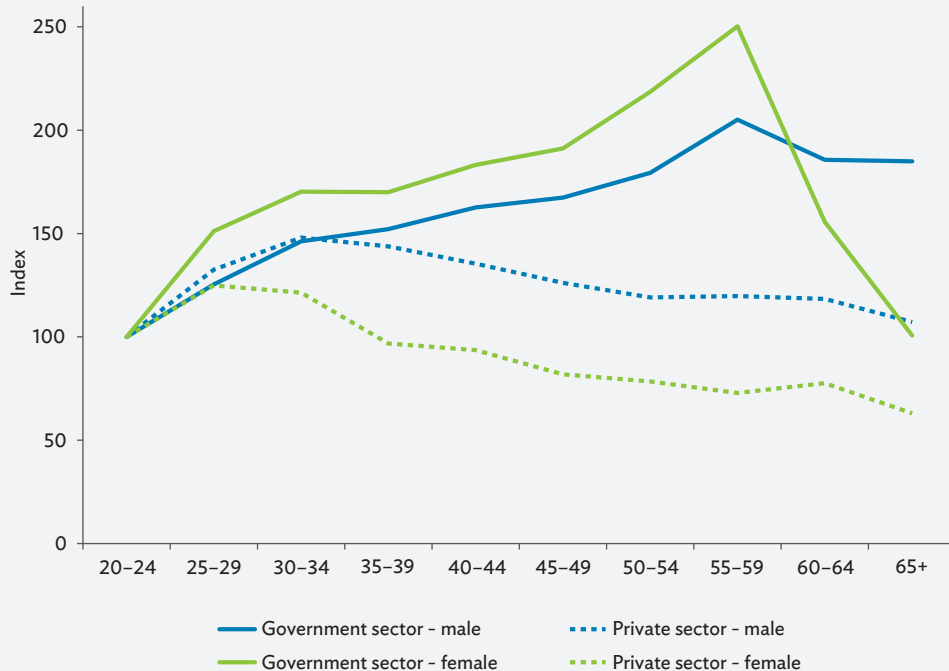
LFS = Labor Force Survey.

Note: Since earlier rounds of the LFS did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in the 2014 LFS to maintain comparability across the years.

Source: Authors' estimates based on Labor Force Survey 2014 (Department of Census and Statistics 2014).

In comparison to younger workers, workers aged over 60 years are paid less (Figure 39). The decline in the wages of workers in the public sector is sharper than the decline in the wages of those in the private sector. The reduction in the wages of female workers in the public sector is more marked than that of male workers. Female workers aged 60–64 earned barely over 60% of the earnings of workers aged 55–59, and those above 65 earn only about 40% of what workers aged 55–59 earned. Males in those age groups continue to earn 90% of the earnings of workers aged 55–59. Although the government has mandated retirement age at 60, there are exceptions where people over 60 are allowed to continue to work depending on the scarcity of the skills required in their job. In the private sector, the reduction of wages for workers above 60 years of age is more modest. One salient feature is that the age-wage profile of women and men in the private sector is much flatter than those in the government sector.

Figure 39: Average Age–Wage Profile of Workers by Sector and Sex, 2000–2014



LFS = Labor Force Survey.

Notes: Index = 100 for average wage of 25–29 age group. Since earlier rounds of the LFS did not cover the Northern and Eastern Provinces, these estimates exclude data from the Northern and Eastern Provinces in all the years to maintain comparability across the years.

Source: Authors' analysis of data from Labor Force Surveys 2000–2014 (Department of Census and Statistics, various years); and pooling data across the full period.

Policy Recommendations to Counter the Implications of Aging on the Labor Market

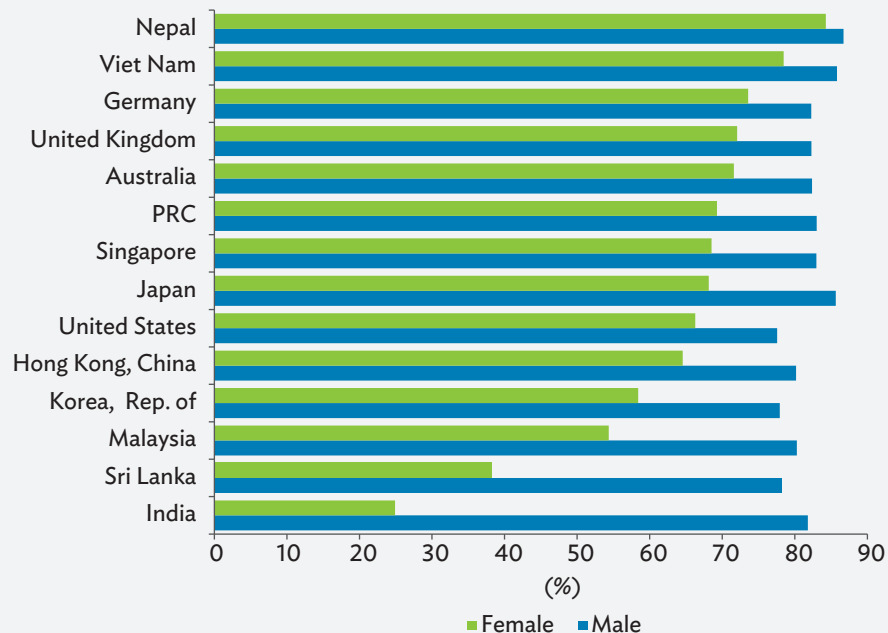
Demographic trends show that the age composition of Sri Lanka's labor force will alter significantly in the coming decades, with the share of workers younger than 30 years likely to shrink and the share of those older than 50 years on the rise. Labor force growth is one of the sources of economic growth, so demographic patterns that alter the rate of growth of the labor force or change its composition can have an impact on growth. It is well documented that a growing working-age population contributed to growth in advanced economies and East Asian economies, allowing them to reap the demographic dividend. Conversely, decelerated labor force growth and its shrinking may contribute to a slowdown in GDP growth. Martins et al. (2005) estimated that by 2050, aging will drag down GDP growth by 0.2%–0.3% in France, Germany, and Japan, which the study argues is driven by a decline in the labor supply. The immediate question that arises is how to counter the impending negative impact from the projected decline in labor in Sri Lanka. Answers may lie in attracting more working-age population into the labor force and by improving productivity.

The experience of developed economies and other regional economies can provide useful lessons into how Sri Lanka can address the central problem of labor force decline with aging. A common theme is to think holistically, so that policy acts across the life cycle with aging. The strategies that are likely to have greatest impact for Sri Lanka are those that focus on increasing female labor force participation and extending the productive life of older workers. Other supportive policies include encouraging immigration, subject to the country's regulations, to expand the labor force and raising fertility.

Female labor is the largest potential source of labor available in the country. The male LFPR in Sri Lanka is around 80%, which is similar to other economies in the region and to more developed economies, but female LFPR is unusually low compared with rates in other economies (Figure 40). Household roles and responsibilities expected from women including childcare and elderly care are some of the main barriers preventing women from entering and being retained in the workforce. A mismatch of skills with the job market and gender discrimination in recruiting, promotion, and wages are other reasons that keep women away from work (Solotaroff, Joseph, and Kuriakose 2018).

Increasing female participation in the workforce thus offers the largest and quickest potential gains for Sri Lanka. The gender disparity in Sri Lanka in the LFPR is large despite the lack of significant gender disparities in education. Recent analyses have shown that gradual increases in female labor force participation would prevent labor force decline in several Asian economies such as the PRC, the Republic of Korea, and Singapore until well into the middle of the 21st century, and in the case of Japan can compensate for half the expected fall in labor force size by 2040 (World Bank 2016). Given its large potential reservoir of relatively well-educated women, Sri

Figure 40: Labor Force Participation Rate for Population Aged 15–64 Years in Selected Economies, 2016



PRC = People's Republic of China.

Source: World Bank. World Development Indicators. <https://data.worldbank.org/indicator/SL.TLF.ACTI.FE.ZS> and <https://data.worldbank.org/indicator/SL.TLF.ACTI.MA.ZS> (accessed 8 May 2019).

Lanka can envisage large gains if it can draw women to the labor force and reduce the large gender disparity in employment. Simulations show that an increasing female LFPR in Sri Lanka by 20% could delay the reduction of labor force by 15 years (World Bank 2008). Similarly, calculations suggest that an increase of the female LFPR up to the average level in high-income countries will increase the overall labor force by 17% and offset the reductions in the workforce caused by population aging (ADB and ILO 2017).

Improving child and elder care services in the country and encouraging work policies related to flexible working arrangements and working hours for women will create a favorable working environment for women and increase female LFPR (Solotaroff, Joseph, and Kuriakose 2018; ADB and ILO 2017). Evidence from Japan suggests that improving maternity leave can have a positive impact on increasing retention of female workers after childbirth. Some steps have been taken in this direction. For example, the 2019 budget provided tax incentives for companies offering maternity leave (Ministry of Finance 2019).

Another intervention that is likely to have a positive impact on female labor force participation is provision of childcare as women in Sri Lanka have difficulty reconciling work hours with childcare demands, since school hours do not overlap with normal work hours. Current policies also seem to envisage that private providers would supply childcare independently of school, but the experience of countries such as Australia suggests that childcare might be more acceptable if provided as an extension to school services. This is already happening in a few schools in Sri Lanka, but not on a large scale particularly in the public sector. Other supportive policies include encouraging large employers to create more child-friendly workplaces by providing on-site crèches and childcare. Here, action by the public sector to initiate providing such facilities in large government offices can signal the private sector to make such change.

Labor regulations is another area where policy changes can improve female labor force participation, particularly those that restrict the types of work women can do and the number of hours they can work. Discussion on this needs to take into account the social and cultural aspects, but regulations should be modified to create more flexible work options for women, particularly those that restrict access to part-time and flexible work opportunities.

Increasing the labor force participation of old workers by reducing labor market rigidities is another potential way to increase the size of the labor force with aging. One of the reasons for withdrawing from the workforce is low retirement age or incentives to retire early such as the ability to withdraw the EPF, which leads to healthy older workers opting out of the formal labor market earlier than they might otherwise. Another reason could be negative perceptions about the adaptability and productivity of older workers, which leads to fewer opportunities being offered to them.

Extending working lives and increasing retirement age is also key to making the costs of old-age income security fiscally sustainable. Interventions that Sri Lanka may consider include raising the retirement age and linking these to future increases in healthy life expectancy. The aim should be for people to work some part of the additional healthy life years gained from improving health conditions and remove barriers that prevent those who want to work longer from doing so. Fiscal incentives to employers to promote longer working lives may be considered. Asian countries that provide fiscal incentives include Japan, the Republic of Korea, and Singapore, and approaches range from general subsidies to highly targeted financial grants (World Bank 2016).

There is a misconception that keeping older people at work will reduce employment opportunities for the young. Available global evidence and experience from other Asian economies indicate that this does not happen in practice. Indeed, extending employment in older adults has a net positive impact on employment of younger adults, because increasing labor participation by older workers boosts overall demand in the economy through an

income effect, thus creating more jobs for younger workers. This is reinforced by the fact that in general, the jobs that older workers retain are not substitutes for the jobs younger workers seek or are qualified for. Evidence from OECD economies and the PRC support this view (World Bank 2016).

Another potential source of labor supply is attracting back and retaining the temporary migrants who seek work abroad due to lack of opportunities at home. In recent years, the composition of temporary migrants has shifted, with the share of skilled workers increasing and in turn creating a skills shortage at home as the country relies on foreign labor while at the same time sending Sri Lankan workers overseas. To attract workers back and retain them, Sri Lanka would need to address the constraints and create attractive job opportunities; this in turn will require new investments to generate growth. While a discussion of the constraints is beyond the scope of this report, works by Athukorala et al. (2017), Center for International Development (2018), and World Bank (2015) provide several analyses.

Higher overall (multifactor) productivity and improvement in labor quality could also counter the potential drag created by population aging on economic growth. Driving productivity growth would entail unlocking new investment to drive innovation, attracting foreign investors to integrate Sri Lanka into regional and global value chains, driving urbanization forward and making cities a driver of growth, and improving labor quality.

Youth unemployment in Sri Lanka at 20% in 2014 is high; and even higher among the educated youth who passed the General Certificate of Education – Advance Level, or the General Certificate of Education – Ordinary Level (DCS 2017). Imparting workers with skills demanded by the employers and providing lifelong learning opportunities will help create a pool of labor to fill the gap created as elderly people drop out of the labor force (ADB and ILO 2017). Improving the productivity of the labor force through investment in skills of older workers and lifelong learning would also help counter the adverse impact on growth.

The number of women with technical and vocational education and training is lower than men. This could be because most vocational training programs available in the country are for mechanics and technician jobs, which are typically taken up by men, and only a few programs are available for females or both genders (Solotaroff, Joseph, and Kuriakose 2018). Introduction of vocational training programs to provide training for suitable skills and promoting those programs among young females and parents, would be a solution to skills mismatch. Promoting nontraditional roles for women that can change the gender norms will encourage women to learn skills in new areas and look for jobs other than the traditional unskilled and clerical jobs chosen by females (Solotaroff, Joseph, and Kuriakose 2018; ADB and ILO 2017). Population aging will create demand for health and social care jobs that were not required by society earlier. Caregiver jobs are not viewed in a positive light in the country. As a result, very few programs are available to train caregivers, and these programs do not receive enough applicants (ADB forthcoming). Changing the perception about new job roles, promoting these jobs, and extending training programs is necessary.

Another avenue for increasing work force participation and productivity is greater use of technology to overcome the challenges of a contracting and aging workforce as highlighted in ADB (2018). Technology can be harnessed in multiple ways to counter the impact of an aging population such as (i) using technological solutions to enhance productivity across age groups; (ii) creating a more flexible workplace by providing telecommuting and remote access options to not only older workers but also female workers to allow them to continue working; (iii) deploying adaptive technologies to help older people and others with impairments such as screen enlargement software for visual impairment or voice recognition software for hand and mobility disability, or an online reminder system for those with cognitive challenges; (iv) using advancement in biotechnology and medical science to improve physical health and lengthen working life spans as well as longevity; (v) adopting new

technology such as robots, automation, artificial intelligence, and machine learning; and (vi) tapping technology for learning and training to allow for lifelong learning not only for older persons but also for other age groups to upgrade their skills. Technology also has the potential to facilitate social connectivity and alleviate some of the loneliness many older people report. Technological advancement can provide solutions and open new opportunities to deal with demographic challenges.

5

Health and Long-Term Care for the Elderly

Elderly people are more likely to experience ill health and are also more likely to need greater medical and dependent care than the young. Above the age of 80 years, the incidence of frailty and physical dependence and the need for long-term care (LTC) is likely to be higher. With the share of the elderly in the population expected to be higher, the health system will need to adapt to manage a different profile of patients, one that may need chronic treatment for noncommunicable diseases (NCDs).

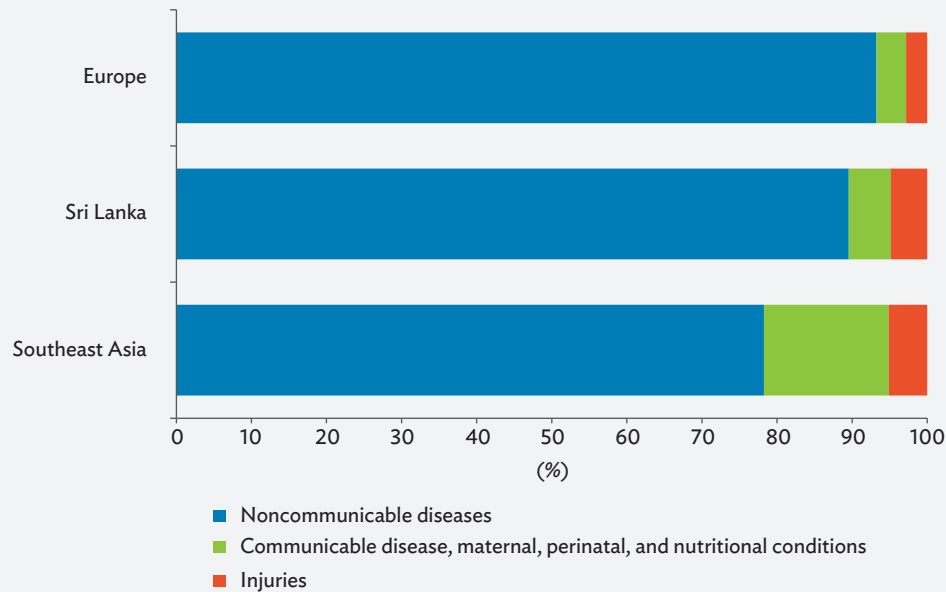
Health and Aging

Sri Lanka is more advanced in its health transition than comparable developing countries, with an epidemiological profile dominated by NCDs that resembles more a high-income European country than other countries in South Asia. Life expectancy at over 75 years in 2016 was already higher than in some OECD economies, and close to the level in the United States. Mortality among the elderly from NCDs in Sri Lanka is also closer to levels seen in advanced economies than in countries in the region (Figure 41). In 2016, NCDs accounted for 90% of deaths of people over 60 years in Sri Lanka, compared with 6% due to communicable disease, maternal, and perinatal conditions; and 5% due to injuries. The majority of NCD deaths were from cardiovascular disease (39% of all deaths), cancer (13% of all deaths), and diabetes (10% of all deaths).

The increase in mortality risk from NCDs is not an inevitable consequence of higher incomes. A study by Adeyi, Smith, and Robles (2007), showed that on an age-standardized basis, both NCD and communicable disease mortality rates tend to fall with increases in per capita GDP, and rates are higher in developing economies. An analysis of Sri Lanka's mortality data for 1991–2001 showed that age-standardized mortality rates for NCDs were already 20%–30% higher in Sri Lanka than in developed countries (World Bank 2008). Although overall NCD mortality rates have increased in the past, rates are now falling for some conditions such as cardiovascular disease. Sri Lanka may actually be converging with OECD countries in NCD mortality, with avoidable mortality from such conditions falling faster than other developing economies and most OECD economies (Ministry of Health [Malaysia] and Harvard T.H. Chan School of Public Health 2016).

The higher prevalence of NCDs and higher rates of NCD mortality in Sri Lanka appear to be driven more by underuse of known preventive and curative interventions than higher levels of risk factors, with a possible modest contribution by the legacy of fetal and early childhood undernutrition. While data are limited, indicative evidence points to increase in some risk factors for NCDs while others remain low. Studies in the 2000s reported obesity rates approaching or comparable with developed economies (World Bank 2008), but preliminary results from the most recent data from the 2019 Sri Lanka Health and Ageing Survey (SLHAS) indicate that 1 in 10 adults are obese, which is higher than in the PRC, the Republic of Korea, and Japan, but still lower than almost all OECD economies (OECD 2017).

Figure 41: Deaths by Major Cause among People Aged 60 Years and Over in Europe, Southeast Asia, and Sri Lanka, 2016



WHO = World Health Organization.

Notes: European and Southeast Asian regional groupings are as defined by WHO. Under WHO's grouping, Southeast Asia comprises Bangladesh, Bhutan, the Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste.

Source: World Health Organization (2018).

Studies have shown lipid levels in Sri Lanka to be comparable with that in developed economies. For example, a 1998–2002 survey found that total cholesterol levels were 200–236 milligrams per deciliter (mg/dl) in the Western Province (Sri Lanka Medical Association 2004), compared with 200–240 mg/dl in developed economies, and recent data from the 2019 SLHAS confirm this. The 1998–2002 survey also found low-density lipoprotein cholesterol levels of 117–151 mg/dl to be comparable with comparable developed economies. The reasons for high lipid levels despite low levels of obesity are not fully understood, but this may be due to high levels of saturated fat in the Sri Lankan diet. Studies show modest level or declining level of risk factors such as smoking and hypertension, but slightly over one-third of mortality among the aged was from cardiovascular disease.

The prevalence of diabetes in Sri Lanka is unusually high, and higher than most developed countries. One study, Wijewardene et al. (2005), reported that 14% of adults were diabetic, and preliminary results from the 2019 SLHAS indicate that levels have risen since then to around one in five adults in Sri Lanka. These are high by international standards compared with a prevalence of 9% in the US population in 2015 (Centers for Disease Control and Prevention 2017).

The prevalence of smoking among adults in Sri Lanka and the average consumption of cigarettes are low in comparison to developed and most other developing economies. Less than one in seven adults in Sri Lanka smoke according to the most recent data from the 2019 SLHAS, and earlier studies show that the number of

cigarettes consumed per capita is low in comparison to developed and most other developing countries with a declining trend (Rahman and Ramaboot 2003, Central Bank of Sri Lanka 2005, World Bank 2008). The 2019 SLHAS data also confirm that the prevalence of hypertension, at one in five adults, remains low and little changed from levels reported in the early 2000s (Wijewardene et al. 2005), with little difference between men and women. The prevalence of hypertension in Sri Lanka is much lower than those reported for most developed economies, such as 28% in the US and 44% in Europe (Wolf-Maier et al. 2003).

The prevalence of disabilities increases with age and difficulties in seeing, hearing, and walking also increase sharply after the age of 70 years. The prevalence of deterioration in cognition also increases sharply after 70 years, while difficulties in self-care increase sharply after 80 years (Table 6). The prevalence of all difficulties is in general higher among females—for walking in all age groups above 60, and for other difficulties in all age groups above 70. Half or more of older people with vision difficulties do not use an aid for their vision impairment while most older people do not use hearing aid for their hearing impairment. Use of assistive devices for vision and hearing difficulties is low in all urban, rural, and estate sectors (Figure 43).

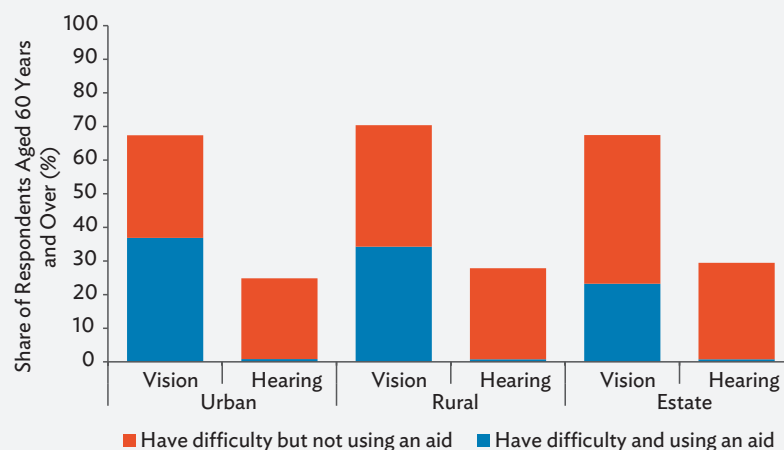
Table 6: Percentage of People Aged 60 Years and Over Facing a Disability or Difficulty, by Age Group and Sex, 2012

Type of Difficulty	60–64		65–69		70–74		75–79		80+	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Seeing ^a	13.6	14.9	17.4	19.9	22.5	26.8	30.6	33.6	37.6	40.8
Hearing ^a	3.8	4.0	7.2	7.5	12.6	13.7	21.4	21.9	33.1	35.1
Walking	7.9	11.2	12.4	17.2	19.2	25.5	28.0	35.9	41.6	50.5
Cognition	2.6	3.7	4.7	5.9	7.7	10.1	12.3	16.2	23.6	29.7
Self-Care	1.4	1.4	2.7	2.6	4.5	4.9	8.0	9.6	15.4	22.9

^a Even with the use of aids if they are used.

Source: Authors' estimates based on the 5% provisional sample in the Census of Population and Housing 2012 (Department of Census and Statistics 2015).

Figure 42: Use of Assistive Devices for Vision and Hearing Difficulties by Sector, 2006

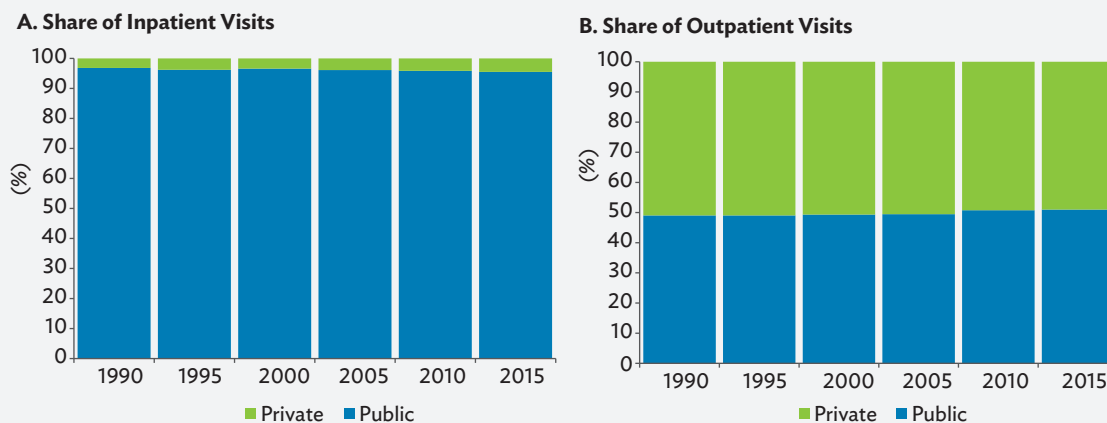


Source: World Bank (2008).

Accessibility and Adequacy of Health-Care Services for the Elderly

Sri Lanka's health-care system fares reasonably in terms of equity, efficiency, and effectiveness (Hsiao and Associates 2001, Fernando et al. 2004). The country's extensive health-care system consists of public provision of health-care services that are available to all citizens free of charge at point of delivery. The Ministry of Health (MOH) and nine Provincial Council Departments of Health provide public health-care services in an integrated way covering preventive, basic primary care, and complex hospital-provided tertiary care. The private sector dominates provision of ambulatory care. Private hospitals provide inpatient and tertiary services, much of which is concentrated in the region around Colombo and other leading cities. The public sector dominates inpatient provision, and visits to private sector hospitals are only a small share of total inpatient visits. For outpatient care provision, the private sector contributes to half of the visits (Figure 44).

Figure 43: Share of Inpatient and Outpatient Visits by Sector, 1990–2015



Sources: Public Hospital Statistics database (IHP 2018b); Private Hospitals and Nursing Homes database (IHP 2018a); authors' estimates based on microdata from Consumer Finance Survey 1997 and 2004; and Household Income and Expenditure Survey 1997, 2010, 2012 (Department of Census and Statistics, various years).

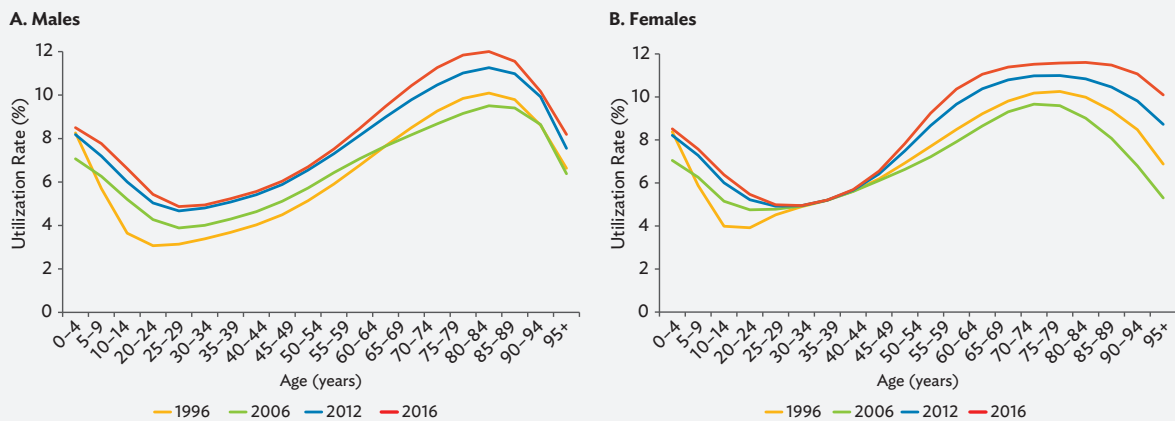
An organized family practitioner service is not present in Sri Lanka, although private sector general practitioners operate in most urban and semi-urban areas. Primary care and curative care are mainly provided in public hospitals. General outpatient departments (OPDs) which are staffed with medical officers with basic medical training provide outpatient care in hospitals. Specialists run specialist OPDs, which account for a substantial part of public sector care for chronic NCDs in older adults, such as diabetes and hypertension.

A network of public sector local level units provides preventive health-care services whose main focus is to provide maternal and child health and family planning services, but are not designed or well-suited to provide ongoing, routine care to NCD and older adult patients. Primary health-care institutions such as central dispensaries, maternity homes, rural hospitals, and small district hospitals, etc. are supposed to be the first point of contact, but with growing awareness, patients are increasingly seeking care at health-care providers of their

choice. With growing patient awareness and demand for specialist care, the trend is for patients to shift demand increasingly to higher-level and more specialist facilities. The public sector in response has gradually expanded and upgraded existing facilities to meet this demand. Private sector provision of inpatient and specialist services has also steadily increased. Private sector provision is located mostly in urban areas, so provision in rural areas is mostly by public sector physicians.

The pattern of outpatient utilization rate by age follows a horizontal S-shape where utilization is higher in children and at older ages (Figure 45). The utilization rate peaks during ages 75–90 years for males and 65–90 for females. For females and males, utilization rates have increased from 1996 to 2016 as shown by an upward shift in the curve. The elders tend to rely more on public services for outpatient care compared with the younger population, which could be due to a lower cost of accessing public services for the elderly who have limited resources (Figure 46).

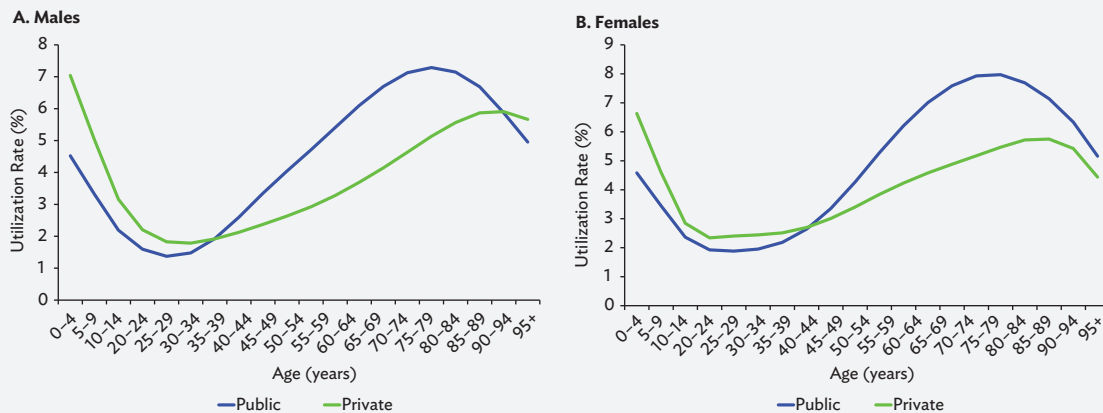
Figure 44: Outpatient Utilization Rate among Males and Females, 1996–2016



HIES = Household Income and Expenditure Survey.

Sources: Authors' estimates with smoothing of utilization rates using microdata from Consumer Finance Survey 1997 and 2004; and HIES 1997, 2010, 2012, and 2016.

Figure 45: Change in Outpatient Utilization Rate of Males and Females by Sector, 2016



HIES = Household Income and Expenditure Survey.

Sources: Authors' estimates with smoothing of utilization rates using microdata from Consumer Finance Survey 1997 and 2004; and HIES 1997, 2010, 2016 (Department of Census and Statistics, various years).

Public sector health-care provision does not rely on the system of general practitioners. As aforementioned discussion shows, elders use both public and private health-care providers but tend to rely more on public sector health-care than younger adults. Recent estimates from the 2019 SLHAS indicate little change in the utilization profile since the 2006 Sri Lanka Aging Survey, which reported that 70% of visits by older adults were to government facilities compared with the 44% of visits reported for the overall population in 2004 (World Bank 2008). Older adults, who are poorer, are also more likely to use public facilities. This pattern has not changed substantially during the past 4 decades, and is distinctive in that utilization of public services in Sri Lanka is more pro-poor than any low and lower-middle income country in Asia (World Bank 2008, O'Donnell et al. 2007, Amarasinghe et al. 2013).

Unlike mothers and children, there is no system to allow older adults to obtain care on a continuous basis from the same dedicated physicians or health workers, or to coordinate their medical care in an integrated and continuous fashion. This reflects the lack of general practitioners in the public sector. This is borne out by the 2006 Sri Lanka Aging Survey which showed that the likelihood of elders with diabetes or ischemic heart disease having access to a regular doctor is not higher than for any other elder person (World Bank 2008). Further the data showed that only 22% of those diagnosed with arthritis, 30% (diabetes), 24% (a previous heart problem), and 29% (hypertension) have a doctor they could visit regularly. However, to some extent public hospitals have mitigated this by increasing the registration of older adults with NCDs at specialist clinics, where they can obtain continuity of care and probably reasonable quality of care from the same physician teams. Access to specialist-managed chronic care is probably also pro-poor given the overall pattern of public sector use. The 2006 Sri Lanka Aging Survey also showed an interesting pattern; a very high proportion of those with diabetes (93%), hypertension (94%), or other heart disease periodically underwent physical tests (Table 7) which is reflective of a high level of motivation and health awareness among the elders in Sri Lanka.

Table 7: Proportion of the Elderly Who Have Been Diagnosed with Chronic Disease and Who Have Had Relevant Tests Done in the Preceding 12 Months, 2006

Demographic Factor		Diabetes	IHD	Hypertension
Sex	Male	90	77	93
	Female	97	95	94
Residence	Colombo	94	89	93
	Other districts	96	83	96
Income tercile	Poorest	96	82	89
	Middle	93	90	94
	Richest	97	92	98
All		95	88	93

IHD = ischemic heart disease.

Note: Relevant tests were blood sugar measurements in case of diabetes, blood pressure measurement in case of hypertension, and either in case of IHD.

Source: Authors' estimates based on the 2006 Sri Lanka Aging Survey (World Bank 2008).

A third aspect, after access and adequacy of health-care, is the quality of care. Studies show that quality of health-care services in the public sector is better than the average quality of care in regional and lower-middle-income countries.¹³ Most private sector provision is by physicians from the public sector, where the quality of private sector

¹³ Sri Lanka attained upper-middle-income country status in 2018. Given the limited time that has lapsed, the appropriate comparator group is lower-middle-income countries.

clinical care is likely to be equally good, if not better. Some studies argue that quality of care provided by private sector professionals is likely comparable to those in developed economies (Jayawardhana, Rannan-Eliya, and Karunaratne 2002; Rannan-Eliya, Jayawardhane, and Karunaratne 2003; Rannan-Eliya et al. 2015a, 2015b).

Health-care expenditure in Sri Lanka is split equally between public and private sources. In 2015, current expenditure on health was SLRs326 billion and capital expenditure was SLRs43 billion (Amarasinghe, Dalpatadu, and Rannan-Eliya 2018). Current expenditure on health was equivalent to 3% of GDP and per capita expenditure was SLRs15,595 (Table 8). Financing of health expenditure comes from tax revenues for public expenditure and out-of-pocket expenditures (approximately 46% each). Sri Lanka does not use social insurance as a means of financing, and private insurance accounted for 5% of total private financing in 2015. In 2015, 1.4% of GDP was spent on health by MOH and by provincial health departments (Amarasinghe, Dalpatadu, and Rannan-Eliya 2018). Cost of availing public health services, for inpatient or preventive care, as mentioned above, is borne by the government. Private expenditure is incurred on outpatient services and purchase of medicines and medical supplies.¹⁴ Thus, whether it is public or private facilities, patients may have to bear some costs, with private sector provision more expensive than public provision. According to one study (World Bank 2008), public dispensaries are the least expensive with a mean out-of-pocket payment of SLRs220 per visit, followed by public hospitals (SLRs278); private clinics (SLRs467); and private hospitals (SLRs1,351) with private specialists being the most expensive at SLRs1,808 per visit (Table 9).

Table 8: Life Expectancy and Current Health Expenditure in Selected Countries, 2015

Country	Life Expectancy at Birth (years)	Population Aged 60+ years (%)	Current Health Expenditure per Capita (current \$)	Current Health Expenditure (% of GDP)
Bangladesh	72	7	32	2.6
India	68	9	63	3.9
Malaysia	75	9	386	4.0
Sri Lanka	75	12	115	3.0
China, People's Rep. of	76	15	426	5.3
Korea, Rep. of	82	18	2,013	7.4
United States	79	21	9,536	16.8

GDP = gross domestic product.

Sources: Amarasinghe, Dalpatadu, and Rannan-Eliya (2018); and World Bank. World Development Indicators (accessed 30 October 2018).

Health expenditure per capita in Sri Lanka is much less than other countries with the same level of life expectancy and population aging (Table 8). Although Sri Lanka has a larger share of elders in the population and better health outcomes, the country spends a smaller share of GDP for health (Table 8). Also, Sri Lanka does better than most developing economies, despite its limited resources, in minimizing health-care access inequalities. This is most apparent with respect to maternal and child health, where access to key services, such as antenatal care, skilled birth attendance or family planning services is either equal or pro-poor, in contrast to the pro-rich inequalities

¹⁴ It is not uncommon for government health-care facilities to ask patients to purchase medicines and supplies from private suppliers when public facilities have run out of stock. This is in line with government policy.

observed in many developing economies (Rannan-Eliya et al. 2010). Overall use of doctors and inpatient services is also equal or slightly pro-poor in Sri Lanka, but the evidence is less clear with respect to elders due to lack of data.

Table 9: Average Out-of-Pocket Costs, Travel, and Waiting Times for Outpatient Care by Facility Type, 2006

Outpatient Care Provider	Average Out-of-Pocket Costs (SLRs)	Average Travel Time (minutes)	Waiting Time (minutes)
Public hospitals	274	48	69
Public dispensaries	220	38	24
Private hospitals	1,351	68	52
Private clinics	467	23	29
Private specialists	1,808	49	32
Ayurveda hospitals	265	47	27
Ayurveda doctor	823	58	50

Source: World Bank (2008).

Sri Lanka's health system also does well in terms of protecting its population against catastrophic health expenditure (van Doorslaer et al. 2006, van Doorslaer et al. 2007), and the poor benefit from government expenditure on health services (O'Donnell et al. 2007). This is unlike the experience of many developing economies. Among the critical factors that have contributed to equity in health services is a nationwide extensive network of health facilities that allows the poor physical access to medical services, a clear policy of free-of-charge services at point of delivery, and the richer patients voluntarily shifting from public sector to private services (Rannan-Eliya 2001).

Long-Term Care for the Elderly

The following discussion draws on a report (ADB forthcoming) prepared under the ADB regional technical assistance project, Strengthening Developing Member Countries' Capacity in Elderly Care. Population aging has created an increasing need to provide care for the elderly in Sri Lanka. The intrinsic capacity of an older adult declines to some degree with age. Age and the health condition of the person together could severely affect the ability of the person to live independently. Activities of daily living (ADLs), such as eating and dressing, are physically less demanding, and comparatively few elders require assistance to perform them (Table 10). However, a greater share of the elders needs assistance for activities like going to the toilet and bathing, which are physically more demanding. Moreover, higher numbers of the elderly need assistance to do instrumental activities of daily living (IADLs) like cooking and shopping, which are physically more demanding (Table 10). Figure 46 compares ADL deficiency in Sri Lanka with ADL deficiency in the PRC, India, Russian Federation, and South Africa, where Sri Lanka appears to be on the lower range of one and more than two ADL deficiencies.

Table 10: Inability to Perform Activities of Daily Living and Instrumental Activities of Daily Living by Age Group and Sex, 2006 (%)

Activity	60-69		70-79		80+	
	Male	Female	Male	Female	Male	Female
ADLs						
Unable to eat without assistance	2.1	0.8	4.2	5.3	16.8	18.1
Unable to dress yourself without help	2.2	1.3	5.0	8.0	18.6	23.3
Unable to go to the toilet without help	3.8	2.7	6.2	11.2	26.5	30.6
Unable to bathe without help	5.8	6.5	10.6	22.0	44.2	52.8
Unable to stand up from sitting on a chair without help	6.2	10.5	13.4	24.5	38.1	49.2
IADLs						
Unable to prepare your meals	10.6	7.0	22.4	28.2	60.2	60.1
Unable to take your medication	4.1	5.3	10.1	18.0	37.2	43.5
Unable to shop for food or obtain food from usual source	6.0	9.1	13.7	29.0	50.4	66.3
Unable to manage your money or finances	4.8	5.4	7.8	20.6	31.0	48.2
Unable to sweep the floor or yard	6.9	7.8	17.1	24.3	53.1	55.4

ADL = activities of daily living, IADL = instrumental activities of daily living.

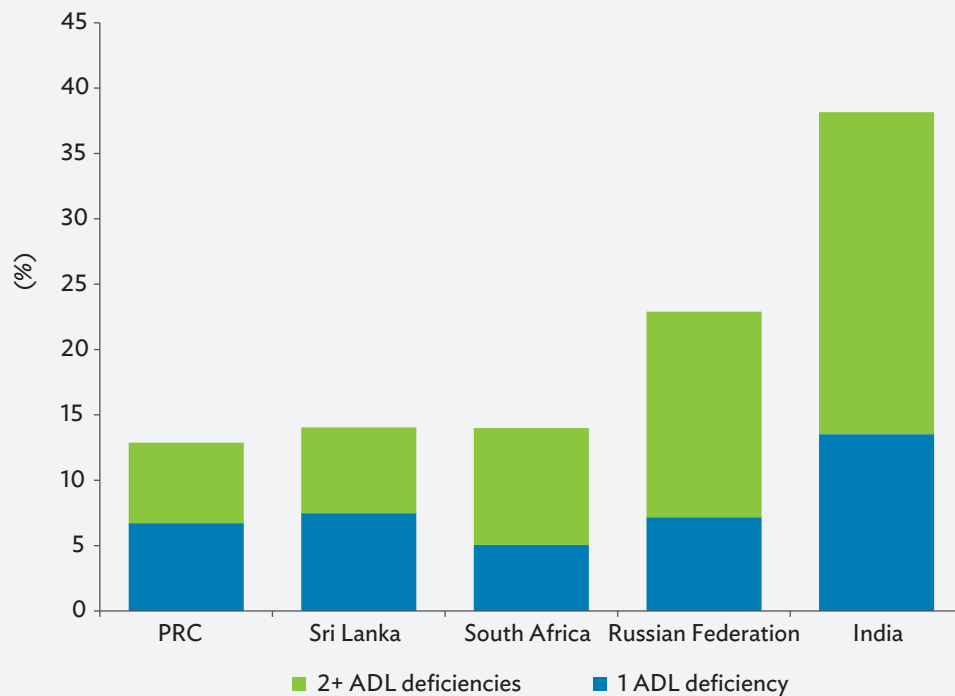
Note: Those who responded with “have trouble performing” and “unable to perform” were taken as having an inability to perform the task alone.

Source: Authors’ estimates based on the 2006 Sri Lanka Aging Survey (World Bank 2008).

Sri Lanka has several laws, policies, and plans relevant to population aging. Among the laws that focus on the rights and welfare of elders in Sri Lanka are the Protection of the Rights of Elders act, No. 9 of 2000 and the Protection of the Rights of Elders (Amendment) Act, No. 5 of 2011. The 2000 Act established the National Council for Elders (NCE) and National Secretariat for Elders (NSE) to assist the NCE in discharging its activities. The act states that children must provide the care their parents require and not neglect them, and that in the absence of such care, the state will provide appropriate residential facilities. The act calls on the NCE and NSE to recommend programs to support families, and establish welfare centers, recreation centers, and day care centers. In addition, the Constitution of Sri Lanka stipulates the right to access to health care for all citizens. The Protection of the Rights of Persons with Disabilities Act was enacted in 1996 to address issues faced by disabled people in Sri Lanka regarding their rights, which also covers disabled elders in the country. In 2006, the National Charter for Senior Citizens was adopted by the cabinet which defines the rights and responsibilities of older persons in Sri Lanka. Also, in 2006, the National Policy for Senior Citizens of Sri Lanka was adopted by the cabinet.

Among various objectives of the National Elderly Health Policy 2017 are to provide comprehensive health care for elders; make available well-trained personnel to effectively manage the health care of elders; and empower elder care societies, volunteers and the community in all aspects relating to the care of older people. The National Elderly Health Policy of Sri Lanka 2017 recognizes the need for LTC and proposes to convert some underutilized health-care facilities to government-operated LTC institutions. The MOH delivery plan of the National Elderly Health Policy launched in February 2017 similarly proposed to develop LTC institutions for older people in identified hospitals across the country and to develop human resources in order to fulfil the cadre requirements of the proposed LTC institutions for older people.

Figure 46: Age-Standardized Prevalence of Activities of Daily Living Deficiency among Adults Over 50 Years in Sri Lanka and Selected Comparators



ADL = activities of daily living, PRC = People's Republic of China.

Notes: Analysis used data from Study on Global AGEing and Adult Health (SAGE) country reports. SAGE collects data from six countries: the PRC, Ghana, India, Mexico, the Russian Federation, and South Africa. SAGE Wave 1 was conducted during 2007–2010.

Sources: Authors' analysis of data from the 2006 Sri Lanka Aging Survey (World Bank 2008), International Institute for Population Sciences and National AIDS Research Institute (2013), Shanghai Municipal Center For Disease Control & Prevention (2012), National Research Institute of Public Health and Russian Academy of Medical Sciences (2013), and Human Sciences Research Council (2012).

In Sri Lanka, as in most other economies in the region, family members (usually women) who do not engage in paid work, or domestic worker(s) who are already employed, provide care for elders in the family without much training and work is largely informal. In some cases, families with means to do so may hire care providers. The OECD defines LTC as a range of services required by persons with a reduced degree of functional capacity, physical or cognitive, and who are consequently dependent for an extended period of time on help with basic activities of daily living (Colombo et al. 2011). There is an urgent need to improve awareness, understanding, and recognition of LTC in Sri Lanka. The average family size in Sri Lanka has declined from 5.1 in 1985 to 3.8 in 2016 (Department of Census and Statistics and Ministry of Health, Nutrition, and Indigenous Medicine 2017) with a change in family structure from extended family setup to nuclear setup, where parents and their children live separately from grandparents (Kaluthantiri 2014). With shrinking households, there is also a decline in the capacity of the family to provide the required care to their elderly family members.

Community care is also an important modality of care provided to elders who require LTC. There are Elders' Committees around the country either set up by the NSE, community organizations, or NGOs. These committees provide social interaction to elders, which help minimize loneliness during old age. Some NGOs operate elder day care centers, such as the HelpAge Sri Lanka day center in Ratmalana. But services provided by these elder committees are for able elders who can walk into the place where they gather. Services provided at these care facilities fall short of providing ADL/IADL assistance, personal care, or nursing care.

Only a few community programs are available to cater to elders with mobility difficulties. One example is the Home-Care Volunteers program by HelpAge Sri Lanka. Elders aged 60–70 years who are identified by the elders' committees are given training and encouraged to visit and monitor other elders who live in their area. They are trained to identify vulnerable elders as well as mental illnesses and to advocate families and elders in their area. They are linked with the medical officer of the MOH to whom they can provide information about any needy elders. It has been operating since the 1990s and trains about 200 volunteers every year. Presently about 2,000 volunteers are actively engaged in the community providing this service (ADB forthcoming).

There are about 25 private home nursing care service providers that provide trained nurses or attendants. These services are usually expensive and are not considered affordable for low-income families. The types of services they provide vary and range from simply preparing meals to 24-hour nursing care. For a recent study on the LTC for elders in Sri Lanka, it was estimated that home nursing care services provide 24-hour nursing care services to 900 older clients.¹⁵ Expenses for a caregiver ranged from SLRs30,000–SLRs72,000 per month in 2016.

There are elder care homes with the primary purpose of providing accommodation to elders. There are around 255 elder care homes of which 2 are run by the central government, 3 by provincial councils, and about 30 as for-profit businesses. The remainder are not-for-profit and run by NGOs or faith-based organizations (Table 11).

Table 11: Estimated Number of Elder Care Homes and Residents by Type of Elder Care Home, 2017

Type	Number of Homes	Total Number of Residents	Number of Residents per Home	Residents Needing Assistance With ADLs (%)
Public	5	500	100	26
Private (for profit)	30	500	15	24
Private (not-for-profit)	220	6,100	30	12
Total	255	7,100	30	14

ADL = activities of daily living.

Note: Estimates from IHP survey of elder care provider institutions in 2017 conducted for a country diagnostic study on long-term care in Sri Lanka under the ADB technical assistance project, Strengthening Developing Member Countries' Capacity in Elderly Care. Source: Adapted from the Survey of Elder Care Provider Institutions (IHP 2017).

Elder care homes accommodated around 7,100 elders, which accounts for 0.2% of the population aged more than 60 years in 2017. Private (not for-profit) elder care homes accommodated 85% of all residents. Most of the elder care homes are located around Colombo and 50% of elder care home residents were from homes in the Western Province. Most of these elder care homes are not designed or intended to provide LTC, as they lack the necessary staff or financial resources to take care of elders who need 24-hour nursing care and assistance with ADLs. In practice, most of the elder care homes that provide residence to elders who need assistance with ADLs

¹⁵ Estimates from an IHP survey of elder care provider institutions in 2017.

do so because they continue to accommodate elders who were once physically able but have changed to a state of needing assistance with ADLs during their stay. Of the elders living in elder care homes, 14% needed assistance in ADLs (Table 11).

The average monthly expenditure per resident is SLRs4,300 in a public elder care home and SLRs7,000 in a private (not-for-profit) elder care home, while an elder at a private (for-profit) elder care home pays on average SLRs24,000 per month. Financing of public elder care homes is predominantly from public funds and only 2% of expenditures are funded by private donations. Expenditure at private (not-for-profit) elder care homes is financed mainly by donations made by individuals and not-for-profit organizations.

Despite families facing difficulties in taking care of their elderly members, there is still a lack of recognition of more complex care needs of elders. It is known that some of the admissions to public hospitals are social admissions where elders are admitted to hospitals when family members cannot manage their care within the home. However, those cases are not meant to be managed in a hospital but are to be managed in an LTC setup or by a trained caregiver or a family member. This indicates a significant gap in the provision of LTC services whether home-based, community based, or institutional.

The need for LTC services will increase in the future with an aging population and diminishing capacity of families to provide care. Therefore, steps must be taken to raise awareness among policy makers and the general public about the need for LTC in old age and the need to establish a formal LTC system for the elderly in the country (ADB forthcoming).

Government health and social services both have a clear mandate to provide services that would fall under and contribute to an LTC system. However, these services are not yet being provided under an integrated and coordinated LTC system, and resource availability can limit delivery. As the need for care increases, there is an urgent need to increase the number of LTC service providers and services throughout the country at all levels through government, the private sector, or nonprofit providers (or through a combination of the three). A formal mechanism needs to be set up to coordinate and integrate the provision of health, social, and LTC services for the elders under an overarching LTC strategy. This is a key gap for Sri Lanka to address and is important in order to provide person-centered care. Assistive device affordability and availability is not sufficient in Sri Lanka, particularly for mobility aids and hearing aids but also for spectacles.

The LTC system should have institutional, home-based, and community-based care components. Further support for family-based informal care and self-care needs to be strengthened. This would necessarily involve a multisector approach to the provision of LTC for elders with the participation of the government, the private sector, and NGOs. Alongside strengthening family care, home- and community-based care services and residential nursing care will need to be developed to ensure the provision of care needs for those without sufficient informal care support and/or with complex care needs, which family caregivers cannot safely and sufficiently support (ADB forthcoming). The National Health Policy on Elders 2017 provides a basis for improving LTC health services. Efficient implementation of this policy with necessary human and financial resources will support the development and improvement of other aspects of a formal LTC system.

In relation to managing the quality of service provision at LTC service providers, development of benchmarks to set quality standards for home nursing care services and elder care homes and strengthening of the registration process should be a key priority. At present, quality management in Sri Lanka includes legal registration of home nursing care services by the Private Health Sector Regulatory Council and of elder care homes by the NSE. The Private Health Sector Regulatory Council also provides guidelines for the operation of home nursing care services

and is tasked with monitoring them. Ensuring quality management will be paramount in designing an improved LTC system for Sri Lanka.

Informal LTC providers such as family members or domestic workers generally do not have any training. Formal or volunteer caregivers also often do not have any specialized training in LTC, although some may have received a minimal amount of training, ranging from about 3 days to 3 weeks. Nurses and doctors provide medical care to all citizens, including elders, at public and private health-care facilities. The Post Graduate Institute of Medicine established a Specialty Board in Elderly Medicine in 2009, which offers diploma courses in geriatric medicine and gerontology, while higher-level training in geriatrics is planned. Physiotherapists, occupational therapists, and speech therapists also play a role in LTC although the supply and coverage of these is limited. Additionally, 1,500 caregivers of various sorts provide care in older people's homes. Elder care homes have a caregiver-client ratio of about 1:5 and also have nurses, doctors, and physiotherapists providing services. Elder rights promotion officers employed by the NSE provide social services to elders.

In 2006, the NSE commenced a 3-week training program for home care assistants on how to provide care for older patients. In 2015, the program was developed into a National Vocational Qualification (NVQ) level 2 qualification, which was conducted and appraised by the National Apprentice and Industrial Training Authority (NAITA). This NVQ level 2 qualification was conducted jointly with the NSE and the Directorate for Youth, Elderly, and Disabled Persons of the MOH where certification is provided free of charge. After completion, trainees are added to the NSE's database of trained home care assistants. Currently, the NSE has about 100 trained home care assistants listed in its database. Those interested can contact the NSE and request for a care assistant, and NSE will facilitate contacting a care assistant listed in their database. These care assistants provide services on 8-hour shift basis and the person who hires the care assistant has to pay for their services.

Families typically bear the costs of providing care services for older family members. A small proportion of elders live in private (for profit) elder care homes or receive services from caregivers hired from home nursing care providers, which are also financed by out-of-pocket expenditure.

An unknown level of LTC provision is currently financed by the MOH in the case of elderly patients in its hospitals who are retained in beds at government acute care hospitals, when hospital staff are unable to safely discharge them. No reliable data exist on how prevalent this practice is, since technically patients cannot be kept in acute hospitals for more than 30 days. However, in some cases, after closing the patient's file, patients are readmitted for a new episode of care every 30 days. This is a cost to the health system due to overutilization of health facilities, but lack of data prevents the estimation of the cost of providing care to patients in health facilities, which could be provided in an LTC system at a lower cost. The majority of elder care homes are financed by private donations or through the private sector.

In summary, current financing mechanisms for LTC in the country are out-of-pocket expenditure, private financing, charitable financing, and public financing. There is a need to estimate the costs of a wide range of care services, and current and projected levels of need, in order to enable financial planning by the government for the LTC system.

Country experience and global experience clearly indicates that any expansion of formal LTC for elders in Sri Lanka may have to be predominantly financed by public financing, funded either wholly or in part by taxation. Education, health care, and social services in Sri Lanka are already predominantly financed by government tax revenue complemented by private funding on a voluntary basis. The same financing approach may need to be considered for an LTC system to maintain equity of services. Provision of publicly financed LTC will likely place an additional fiscal burden.

Impact of Aging on Health-Care Costs

Although aging will exert an upward pressure on resource requirements and costs in the health sector, there is considerable uncertainty as to how large this will be. Historical analyses and projection models of future health-care costs in OECD economies confirm that aging has increased and will increase costs, but also that other factors can offset the upward pressure on spending (Fogel 2003; Zweifel, Felder, and Meiers 1999). Improvements in health of individuals of a given age can offset the rise in expenditure due to changes in the age structure of the population. However, increase in health expenditure for a given morbidity will lead to an increase in overall health expenditure (Dormont, Grignon, and Huber 2006).

Medical price inflation and productivity change are the two most critical drivers of health-care costs, both of which can be influenced by policy. Aging will increase demand for health care, but the net cost of delivering health-care services also depends on the price or unit cost of service delivery. Health care spending forecasts developed for Sri Lanka suggest that aging, the increase in the share of the elderly in the population, would add at most 1% of GDP to Sri Lanka's health spending by 2101 (Rannan-Eliya 2008). These forecasts projected that elderly-induced cost increases would be partly offset by savings from the reduction in numbers of young children. However, health-care costs in Sri Lanka in the 2005–2016 time period were substantially below model projections and even fell as a share of GDP. Preliminary analysis suggests that the main explanation is that cost-reducing productivity improvement was much faster in Sri Lanka than the model had anticipated, which confirms the central importance of productivity change in mitigating the impact of aging on future health-care costs.

With the increasing share of the private sector in providing health care, medical price inflation in the private sector may contribute to an increase in future health spending. There is historical evidence of a significant price inflation for some private medical services in Sri Lanka. Also, private services tend to be costlier than the public sector alternatives. The implication of this is that increasing public spending and service delivery can be strong levers to reduce total health-care costs by exploiting the lower costs of public sector service delivery.

Policy Recommendations for the Provision of Health and Long-Term Care to the Elderly

Sri Lanka's health system will need to be prepared to respond to changing demographics as the profile of patients change. In doing so, productivity improvements to offset medical price inflation and minimize the cost of providing health care to elders will be essential. As the analysis in previous chapters and sections have shown, only a small proportion of elders have pension incomes, thus the health system will need to be part of an overall social protection strategy that minimizes catastrophic health expenditures, which can push older people into poverty. Finally, enabling workers to lead healthy, active, and productive lives as they age will reduce the burden on the health system and the fiscal resources for pension and LTC needs.

To meet the challenges of NCDs as Sri Lanka's population ages, clinical treatment to prevent and manage NCDs will be essential. Evidence suggests that Sri Lanka's higher NCD mortality burden is driven by undertreatment, even by known cost-effective interventions. More investment at primary and secondary levels, as well as optimization of service organization and delivery, will be needed to provide low-cost NCD preventive and curative care services (World Bank 2008). This will be critical to mitigating the impact of a possible future

increase in older people with ill health and poor NCD outcomes, as these can be an additional burden on the public health-care system and on families.

Improving the ability of primary care services to deliver effective primary and secondary preventive care for older people is essential. The primary care system needs to take on new responsibilities such as geriatric care as well as more aspects of chronic disease care. However, this will require increased investment. This will also require teaching and training of health-care providers on geriatric issues, not as a "specialty," but as part of primary care provision and community care. The current primary care network, which caters to maternal and child health-care services, may need to be adapted to provide more general primary care services and specifically cater to elderly care services. Such a system may require greater reliance on use of trained family practitioners to better manage the health-care needs of an aging population. The integration of primary care with secondary prevention and associated clinical care is also needed as elders, especially those above 80 years of age or those with disability, will find it difficult to access or afford care far from their homes. Provision of such services through coordination with primary care providers will allow elders and their care providers to comply with treatment regime and thereby reduce complications.

Beyond health care, Sri Lanka faces a growing need for LTC services. As discussed in the previous sections, such care is largely being provided by informal caregivers, which will increasingly be insufficient both in numbers and in capacity to provide all the needed care support. LTC has different elements—health, social, and care—which are being provided by the MOH and the Ministry of Social Welfare along with some private and civil society groups. These existing LTC-related services need improvement, integration, and oversight. An identified focal agency with sufficient authority should be appointed to ensure coordinated implementation. Intersectoral and multi-stakeholder engagement will be needed. A communication campaign is also important to raise public awareness and engagement.

A single point of entry for the delivery of integrated care and clear responsibility for case management would help to avoid fragmentation in the LTC system. The system needs to draw together community, village authorities, and health and social systems. Better linkages between hospitals, nursing homes, home- and community-based formal care services, and older people and their families are required. Improved accessibility to appropriate assistive devices and equipment would also improve the quality of lives of many older people and their families. Piloting integrated home and community care-based models with adequate quality management should be a priority. Support, training, and information for older people, family caregivers and other informal care providers (such as domestic workers) are urgently needed. Workforce planning and training are needed to increase the numbers, quality, and capacity of the LTC workforce. This includes training about LTC for existing health and social welfare staff as well as developing a cadre to provide social care support in the home and community. Finally, as experience in other countries demonstrates, the development of an effective LTC system requires public investment; therefore, developing a public financing model for LTC is fundamental to stimulate expansion of needed LTC services throughout the country. The identified focal agency, which serves as the entry point, can take the lead in developing the legal, policy, and strategy frameworks for LTC as well as ensure financing, planning, and quality management of the overall LTC system.

6 Summary and Conclusion

Sri Lanka's progress on many indicators of education and health is well recognized, with the country being a leader in South Asia and performing well compared with other Asian economies. Gains made in health and education are over time reflected in the country's demographic transition—from high birth and death rates to low birth and death rates. This transition is manifested in the increase in the share of the working-age population, which, if fully exploited with complementary conditions, can boost growth. Sri Lanka is on the cusp of exhausting the opportunity to reap the economic benefits of this demographic dividend as the share of the population that is of working age has essentially stopped increasing. Mirroring this development is the increase in the share of older persons aged 60 years and above. Sri Lanka is not alone in experiencing this demographic transition. This phenomenon is being observed in East and Southeast Asia as well as in advanced economies. However, three features make Sri Lanka a unique case.

First is the speed of aging. Sri Lanka is aging rapidly with the share of those aged 65 years and above (using internationally accepted age bracket of 65 years and over for elderly people) set to increase from 7% to 21% in just under 4 decades between 2007 to 2045, much faster than many other economies. Second, Sri Lanka's working-age population will start declining by 2030. Last, Sri Lanka is experiencing these demographic changes at a much lower level of per capita income than some of the other economies, i.e., it is growing old before becoming rich.

Aging brings with it several challenges. A falling share of the working-age population and an aging population can adversely impact growth. Consumption and savings behavior vary over the life cycle of an individual and a changing age composition can affect savings. With an aging population, individuals may dip into their savings to meet expenditure but at the same time the youth may save more as they anticipate improved longevity after retirement. Aging has fiscal implications as pension costs go up, as does the cost of provision of health care for elders in those segments covered by public provision—or for all segments. Such is the case of Sri Lanka, where health services, as well as long-term care, are publicly provided. A multidimensional policy response is also needed—addressing constraints on growth, improving labor force participation, examining pension systems, providing elder care services, addressing fiscal imbalance, and creating fiscal space for additional expenditure. These have been discussed in the report and are summarized below.

- (i) Policies to improve overall productivity and labor force participation in the economy must be part of the response to aging.
- (ii) Improving female labor force participation, which remains low despite high educational attainment among women in Sri Lanka, will be essential to counter aging. Policies to improve female labor force participation such as maternity leave, raising awareness about sharing of household responsibilities, flexible hours, work from home, and provision of childcare facilities will be essential to attracting women into the labor force.
- (iii) Another area of focus that can help improve labor supply and productivity is upgrading the skills of all workers, specifically older workers. Policies to systematically upgrade the skills of elderly workers

are required. The broader challenge is to build education and training systems that allow for learning beyond the usual school and university life, i.e., continuing skill upgrading after entering the workforce, which will enable individuals to keep up with the needs of the time and acquire skills they may need for employment after retirement. The experience of developed economies such as Australia and some Asian economies that provide subsidized training to allow for lifelong learning activities to improve employability and productivity of the elderly workers may offer lessons for Sri Lanka.

- (iv) Technological solutions can be used to improve productivity, labor force participation, improve health and extend working lifespans as well as longevity, and to create a more flexible workplace to weather the headwinds coming from an aging population.
- (v) An aging population will add to government expenditure to meet the needs of elders for old-age income security, health, and LTC. The main challenge will be to mitigate future increases of pension costs to the budget by proactively introducing well-designed arrangements to provide coverage in a sustainable manner and avoid one-off policy responses. Policy responses include raising the retirement age, ensuring a systematic mechanism to revise benefits in relevant schemes with inflation, and developing a coherent pensions policy framework that covers all pension arrangements and addresses the issues of both coverage and benefit adequacy.
- (vi) Sri Lanka's health sector has performed well, which has not only improved life expectancy but also ensured that much of that increased longevity is spent in good health. Sri Lanka needs to safeguard these achievements as this would significantly enable efforts to extend working lives in response to aging. With its current approach to health financing, Sri Lanka is well placed to manage rising health-care costs. Its current system provides high levels of coverage at relatively low fiscal costs, and the system has not experienced significant cost escalation despite aging and a shift to noncommunicable diseases. If the past increases in efficiency gains in the health sector can be maintained, much of the increased health-care costs from aging can be dissipated, and overall fiscal costs will remain manageable. The system needs to continue to adapt to a changing ailment profile of an aging population and provide specialty treatment and care for noncommunicable diseases.
- (vii) Sri Lanka faces a growing need for LTC services. LTC has different elements—health, social, and care—which are being provided by the MOH and Ministry of Social Welfare along with some private and civil society groups. These existing LTC-related services need improvement, integration, and oversight. An identified focal agency with sufficient authority should be appointed to ensure coordinated implementation. Further, a single point of entry for the delivery of integrated care and clear responsibility for case management would help to avoid fragmentation in the LTC system. Workforce planning and training are needed to increase the numbers, quality, and capacity of the LTC workforce. This includes training about LTC for existing health and social welfare staff as well as developing a cadre to provide social care support in the home and community. A communication campaign is also important to raise public awareness and engagement.
- (viii) Long-term care will also likely impose fiscal costs based on the experience of other more advanced economies. Currently, spending is minimal as there is very little formal LTC provision. However, with aging and changes in living arrangements, there will eventually be pressure to fund LTC for a significant number of people. There is a need to develop a coherent approach to LTC, and in here, policy makers can learn from the different approaches in both developed and advanced Asian economies, so as to be in a better position to develop a strategy that will minimize future fiscal costs while meeting the needs that will inevitably develop.
- (ix) Aging will likely increase fiscal costs. Measures can be taken to mitigate the increase, but it is unlikely that it can be avoided altogether. Meeting these expenditures will require measures to improve fiscal space and revenue collection.

One aspect that the report has alluded to but not delved into is the need to improve the efficiency of capital markets to channel savings into long-term investments that will create income during old age, and also provide capital for investment as consumption-saving behavior changes with an aging population.

Demographic transitions can be identified early using population projections. Sri Lanka will face an aging population as the transition was set in motion decades ago. These are not easily reversed barring catastrophes or changes in policy. The advantage of being able to see the coming transition is that it allows all stakeholders time to plan in advance as the government, companies, and individuals adapt to an aging society.

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Growing Old Before Becoming Rich

Challenges of an Aging Population in Sri Lanka

By 2050, Sri Lanka will go through an unprecedented demographic transition into an aging population at a lower level of per capita income than other aging economies. This publication analyzes the situation of the over-60s in Sri Lanka. It discusses the implications of an aging population for growth and the labor market as well as the need for more fiscal resources to provide old-age income security, and health and long-term care for the elderly. To adapt to an aging society, a multifaceted response is required. Policy makers need to prepare early to meet these challenges.

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