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Leaving No One Behind In An Ageing World

World Social Report 2023

DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS

WORLD SOCIAL REPORT 2023: LEAVING NO ONE BEHIND IN AN AGEING WORLD

United Nations

DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS

The Department of Economic and Social Affairs of the United Nations Secretariat is a vital interface between global policies in the economic, social and environmental spheres and national action. The Department works in three main interlinked areas: (i) it compiles, generates and analyses a wide range of economic, social and environmental data and information on which States Members of the United Nations draw to review common problems and to take stock of policy options; (ii) it facilitates the negotiations of Member States in many intergovernmental bodies on joint courses of action to address ongoing or emerging global challenges; and (iii) it advises interested Governments on the ways and means of translating policy frameworks developed in United Nations conferences and summits into programmes at the country level and, through technical assistance, helps build national capacities.

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FOREWORD

Our world is changing in fundamental ways. One key trend is the gradual and largely irreversible shift towards an older population, already underway in most countries.

The number of persons aged 65 years or older worldwide is expected to double over the next three decades, reaching 1.6 billion in 2050, when older people will account for more than 16 per cent of the global population.

People are living longer, healthier lives. The rise in human longevity is a success story caused by improved sanitation and medical therapies, greater access to education and family planning, and strides towards gender equality and women's empowerment.

This shift in the population age structure brings into question current arrangements of old-age support in countries both young and old. As the health and wealth of societies continue to improve, traditional notions of dependency at older ages are becoming less and less valid. Yet, effective systems of old-age support will continue to be needed, as will the intergenerational solidarity required to sustain them.

Not everyone has benefitted to the same extent from the social and economic improvements that drive longevity.

High and rising levels of inequality threaten to become a defining feature of present and future generations. Due to a combination of acute crises and unfavourable long-term trends in employment and wages, successive generations are increasingly unequal and economically insecure in both developed and developing countries despite ongoing improvements in health and education. Without swift and bold policy action to counter this trend, future cohorts of older persons may be even more economically unequal than those alive today. But rising inequality is not inevitable, and policy makers can influence the future direction of inequality as populations continue to live longer.

The *World Social Report 2023* explores the social and economic opportunities and challenges that population ageing presents. As Governments come together to mark the twentieth anniversary of the Madrid International Plan of Action on Ageing, the *Report* builds on the Plan's framework of support to national policies to create equitable, fair and inclusive societies for people of all ages.

Policies to promote healthy ageing, prevent poverty and foster employment and opportunities for decent work before people reach older ages are vital to enhance economic security and reduce inequality among older persons. Taking advantage of the skills, expertise and knowledge of older persons, women, and other groups that have traditionally been excluded from or disadvantaged in the labour market can go a long way towards promoting equity and ensuring that old-age support systems are fiscally sustainable.

A key message of the *World Social Report 2023* is that population ageing and policies implemented in response to this historic global trend can be harnessed to uphold the pledge contained in the 2030 Agenda for Sustainable Development that no one will be left behind. Together, we can address today's inequalities for the benefit of tomorrow's generations, managing the challenges and capitalizing on the opportunities that population ageing brings.

Questions of intergenerational equity in an ageing world need to take centre stage as the world prepares for the Sustainable Development Goals Summit in 2023 and the Summit of the Future in 2024. Now is the time to plan for the long term, to prepare for the challenges ahead and take advantage of the new opportunities these demographic shifts bring. It is the time to strengthen solidarity between younger and older people today and between present and future generations.

LI Junhua

Under-Secretary-General for Economic and Social Affairs
United Nations

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The following symbols have been used in tables throughout the report:

A hyphen (-) between years, for example, 1990-1991, signifies the full period involved, including the beginning and end years.
A full stop (.) is used to indicate decimals.

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Details and percentages in tables do not necessarily add to totals, because of rounding.

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United Nations Official Document System. United Nations documentation obtained from other United Nations and non-United Nations sources are for informational purposes only. The Organization does not make any warranties or representations as to the accuracy or completeness of such materials.

The following abbreviations have been used:

Economic Commission for Latin America and the Caribbean (ECLAC)

Gross Domestic Product (GDP)

International Labour Organization (ILO)

International Organization for Migration (IOM)

International Monetary Fund (IMF)

Luxembourg Income Survey (LIS)

Organisation for Economic Co-operation and Development (OECD)

Purchasing power parity (PPP)

Sustainable Development Goals (SDGs)

United Nations Conference on Trade and Development (UNCTAD)

United Nations Children's Fund (UNESCO)

World Health Organization (WHO)

NOTES ON REGIONS, DEVELOPMENT GROUPS, COUNTRIES AND AREAS

The designations employed in this publication and the material presented in it do not imply the expression of any opinions whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The term "country" as used in this report also refers, as appropriate, to territories or areas.

In this publication, data for countries and areas are often aggregated in six continental regions: Africa, Asia, Europe, Latin America and the Caribbean, Northern America, and Oceania. Further information on continental regions is available from https://unstats.un.org/unsd/methodology/m49/. Countries and areas have also been grouped into geographic regions based on the classification being used to track progress towards the Sustainable Development Goals of the United Nations (see https://unstats.un.org/sdgs/indicators/regional-groups/).

The designation of "developing" and "developed", is intended for statistical purposes and does not express a judgment about the stage in the development process reached by a particular country or area. Developed regions comprise all countries and areas of Europe and Northern America, plus Australia, New Zealand and Japan.

Developing regions comprise all countries and areas of Africa, Asia (excluding Japan), Latin America and the Caribbean, and Oceania (excluding Australia and New Zealand). Further information is available at https://www.un.org/ohrlls/content/about-us.

The classification of countries and areas by income level is based on gross national income (GNI) per capita as reported by the World Bank. These income groups are not available for all countries and areas. Further information is available at https://datahelpdesk.worldbank.org/knowledgebase/topics/19280-country-classification.

EXECUTIVE SUMMARY

Population ageing is a defining global trend of our time. People are living longer, and more are older than ever before. Spectacular improvements in health and survival and reductions in fertility have driven this momentous shift, which has begun or is expected to begin soon in all countries and areas. This change brings both challenges and opportunities as countries strive to achieve the Sustainable Development Goals (SDGs).

In 2022, the world marked the twentieth anniversary of the adoption of the Madrid International Plan of Action on Ageing. To commemorate this landmark, the *World Social Report 2023* explores the economic and social implications of the ageing of the human population. It builds on the Plan of Action's framework for national policies to create equitable, inclusive societies for people of all ages, providing recommendations to put the rights and well-being of older persons at the centre, across the life course.

Population ageing is an inevitable result of the demographic transition towards longer lives and smaller families. While the shift towards older populations is largely irreversible, collective actions and policy decisions shape its path and consequences. Postponing critical measures that allow societies to benefit from and adapt to population ageing would impose high social, economic, fiscal and health-related costs, for both current and future generations. By contrast, with appropriate foresight and planning, Governments can manage the challenges from population ageing while enhancing opportunities for all people to thrive and ensuring that no one is left behind.

As elaborated in this report, population ageing needs to be widely understood as more than just a set of discrete concerns mainly for one group of people who have advanced beyond a given age. Ageing touches all parts of economies and societies, from health care and education to employment and taxation. Each stage of life can contribute to or detract from well-being at older ages.

AN AGEING WORLD IS A SUCCESS STORY

Population ageing signals our extraordinary collective success in improving living conditions for billions of people around the world. Better sanitation and medical therapies, greater access to education and family planning, and strides towards gender equality and women's empowerment have all contributed to, and in some cases benefitted from, the steady move from high to low levels of fertility and mortality. These advances have ushered in an era where rapid population growth is slowly coming to an end, accompanied by a gradual but permanent shift towards older ages. Over several decades, both the number and population share of older persons have risen globally, while the number and share of children and youth have begun to shrink. By 2050, the number of persons aged 65 years or older is expected to double, surpassing 1.6 billion.

Currently, population ageing is furthest along in Europe and Northern America, Australia and New Zealand, and most of Eastern and South-Eastern Asia. In most countries of those regions, the proportion of older persons – by convention, those aged 65 years or older – exceeds 10 per cent and in some cases 20 per cent of the total population. Most parts of sub-Saharan Africa and Oceania (excluding Australia and New Zealand) are still in an early stage of this transition, while most countries in Central and Southern Asia, Western Asia and Northern Africa, and Latin America and the Caribbean are at an intermediate stage.

Declining mortality throughout the life course has driven the increase of life expectancy at birth in most countries and globally. Greater longevity has accompanied a narrowing of the age range in which most deaths occur. In the past, death was common at all ages. Many children died from infectious diseases, for example, and women frequently perished in childbirth. In most countries today, "premature death" before age 60 or 70 is relatively rare.

Greater global life expectancy reflects underlying improvements in health. In countries with available data, the number of years lived in good health has climbed, accounting for most of the increase in years lived overall. Statistical averages hide broad disparities in life expectancy, however, including by sex and socioeconomic status. In almost all societies, women live longer than men on average, and the rich longer than the poor. These differences stem partly from poor nutrition and exposures to environmental and occupational hazards that are more common among men and people with limited income and education.

In 2020, the World Health Organization and the United Nations designated 2021-2030 as the Decade of Healthy Ageing. Its purpose is to promote strategies, grounded in solid evidence, that support well-being among older people. It advocates for developing and maintaining functional abilities, recognizing that these depend on each individual's intrinsic capacity, the surrounding environment and interactions between the two. The Decade builds on the Madrid International Plan of Action on Ageing and aligns with the timing of the Sustainable Development Goals.

POPULATION AGEING BRINGS ECONOMIC REWARDS AND CHALLENGES

Levels of economic production and consumption vary over the life course. Typically, people in the middle phases of life produce more than they consume, generating a surplus to provide for their dependent children and others who rely on them for support and contributing towards economic security for themselves at older ages. The demographic transition includes first an increase and then a decrease in the share of working-age people in the total population. The initial increase occurs following a sustained reduction in fertility, which lowers the portion of children and youth in the population. The subsequent decrease in the relative size of the working-age population is driven by rapid growth in the proportion of older persons.

When the share of working-age people is growing, countries have a window of opportunity to jumpstart more rapid economic gains. Reaping this "demographic dividend", however, depends on maintaining or expanding investments in education and health, and on generating opportunities for productive employment and decent work as rapidly growing numbers of young people enter the workforce.

While consumption and production patterns change as people age, older people make important economic and social contributions at all stages of the demographic transition. Many continue paid employment. Within families, older people often provide financial support to other family members or assistance with childcare. Standard demographic indicators – such as the old-age dependency ratio – do not account for these factors, however (box 1). Further, many older people still encounter obstacles that limit their contributions. Age-based discrimination in the labour market, for instance, undercuts their full participation in the economy.

Older persons should have the option of continuing to work for as long as they desire and are able to do so. Nevertheless, the ability to work and generate income wanes sooner or later at advanced ages. As populations grow older, questions arise around how to support rising numbers of older people in the face of escalating pension, health-care and long-term care costs, particularly if equitable and sustainable systems are not in place to distribute resources among age groups.

The means of financing goods and services for older persons differ across countries. In more developed regions, public transfer systems, including pensions and health care, provide over two thirds of the consumption by older persons. In less developed regions, older persons tend to work longer and rely more on accumulated assets or family assistance. Countries at all stages of population ageing should take proactive and forward-looking measures to adapt and innovate in their labour markets and pension and health-care systems to ensure that support for older persons is both adequate and fiscally sustainable.

Lower fertility opens doors for families and societies to invest more in the education of children. Higher levels of personal savings in anticipation of a longer life can spur capital accumulation, increased productivity and faster economic growth. This period can continue as long as the savings are invested productively.

BOX 1

FINDING BETTER WAYS TO MEASURE POPULATION AGEING AND AGE-RELATED DEPENDENCY

There are different approaches to measuring population ageing and levels of age-related dependency. Two commonly used measures are: first, the size of the population aged 65 years or older as a proportion of the total population, and second, the old-age dependency ratio. The latter compares the size of the older population to that of the working-age population. By defining age groups in a chronological and static manner, however, the old-age dependency ratio does not consider changes over time in the health and activity levels of older persons or their diverse capabilities. In addition, by including older persons but omitting children and young people in calculating the ratio, the measure provides an incomplete picture of age-related dependency over the life course.

Some alternative measures could remedy these shortcomings. The total dependency ratio, for instance, includes both younger and older age groups. Another measure, the economic old-age dependency ratio, reflects not only the age distribution of a population but also variations over the age range in levels of labour income and consumption. Another set of indicators shifts the focus from the time elapsed since birth to the time remaining until death.

Some studies have demonstrated that the need for health care and social support at older ages is often closely linked to a person's remaining years of life. Where life spans are increasing, analyses and forecasts of ageing-related social and economic costs that are based on the expected time until death can provide relevant and useful information about the likely fiscal impacts of ongoing demographic changes.

PATHS TO OLDER AGES ARE UNEQUAL

Although the improvements in health and survival that drive the growth of older populations have been broadly shared, not everyone benefits equally. Many of today's older persons are in excellent health. Others live with multiple ailments or severe disability. Some are economically active and enjoy income security, but many live in poverty. Population averages conceal the vast inequalities and diverse needs and abilities of older people.

Inequality starts early in life. Without policies to prevent it, disadvantages reinforce one another throughout peoples' lives, leading to gaping disparities at older ages. Education and employment consistently emerge as primary determinants of health and economic outcomes at every stage of life, including at older ages. Moreover, health and employment are closely intertwined. Poor health can negatively affect employment opportunities, while the type of work that people do, the conditions in which they work and whether they have a job in the first place impacts their physical and mental health.

This report highlights the importance of country-specific conditions and policies to reduce inequality throughout people's lives, guided by some broad parameters. In general, countries with comprehensive social protection systems and universally accessible essential services, including for education and health care, have been much more successful at mitigating income inequality and reducing poverty at older ages than those without such systems. In both developed and developing countries, older persons are more likely to live in poor households than working-age people. Nevertheless, the gap in levels of poverty between older and working-age populations is much larger in developing regions where social protection systems and services are less well established and often far from comprehensive.

Inequalities evolve over the life course and vary from one generation to the next. Today's youth are healthier and better educated than prior generations. Moving forward, they are expected to be healthier and to live longer on average. Education levels are likely to continue increasing despite disruptions caused by the COVID-19 pandemic. At the same time, young people today face great uncertainty and economic insecurity in the transition to adulthood. Profound changes in the world of work are affecting job stability and disrupting income security.

Growing disparities in the labour market will likely result in higher levels of inequality as people age. For most countries with available data, income inequality has risen from one 10-year birth cohort to the next at almost all ages in both developed and developing regions. This rise may spur widening disparities in health and life expectancy among future cohorts of older persons. Moreover, widespread informal employment and the increased prevalence of other precarious forms of work threaten access to adequate pensions and other social protection benefits, putting economic security at risk for large numbers of older persons. Without remedial action, there is a significant risk that standards of living at older ages will become increasingly unequal.

GENDER DISPARITIES DRIVE UNEQUAL AGEING

Poverty levels at older ages are typically higher among women. Lower levels of participation in formal labour markets, shorter working careers and lower wages compared to men leave many women struggling with greater economic insecurity later in life. Given women's longer life expectancies, older women are more likely than older men to be widowed, less likely to remarry and more likely to live alone – three features that can exacerbate economic insecurity.

Women also bear the brunt of deficiencies in caregiving. The unequal distribution of care and domestic work within families curtails women's working lives and constricts pension incomes. In the labour market, women make up most caregivers, working in both the informal and formal sectors of a poorly regulated care economy where workers typically earn low wages. At the end of their lives, older women are more likely to need long-term care because they live longer and are at greater risk of age-related disabilities than their male counterparts.

Gender equality requires rebalancing care duties within families and adopting family and labour policies that enable women and men to manage both domestic responsibilities and market employment. Such changes will foster women's labour force participation, strengthening the productive capacity of economies as populations grow older. Yet increased participation in the labour market will not be sufficient on its own. Substantial improvement in women's economic security throughout the life course, including at older ages, depends on eliminating gender disparities in education and ensuring access to decent work for both women and men. Bringing care work more consistently into the formal economy would create decent jobs and expand employment opportunities for women.

LONG-TERM CARE NEEDS ARE SOARING

Demand for long-term care is soaring in many countries as the population of older persons grows larger, especially at ages 80 and higher. Traditionally, co-habiting family members, usually unpaid women and girls, met the care needs of older persons. Intergenerational co-residence is declining in both developed and developing countries, however. Care models that rely exclusively or primarily on families are increasingly inadequate.

So far, public spending in most countries has not been sufficient to cover the growing demand for long-term care. The average expenditure by countries of the Organisation for Economic Co-operation and Development (OECD) was 1.5 per cent of GDP in 2019, down from 1.7 per cent in 2017. Insufficient funding means caregivers are undervalued, underpaid and inadequately trained and often work in difficult conditions. A shortage of well-trained caregivers leads to poor quality care. Many countries, even wealthy ones, continue to rely on informal services by paid or unpaid caregivers.

The COVID-19 pandemic exposed existing weaknesses in health care for older persons, especially long-term care, and demonstrated how such weaknesses can aggravate inequalities. Poor quality and underfunded systems of care, insufficient provisions for care at home, low wages and precarious conditions for paid care workers, and a lack of reliable protocols to prevent COVID-19 transmission within health facilities contributed to a heavy death toll among older persons. The crisis underlined the imperative for fundamental reforms of long-term care.

Those who deliver unpaid or poorly compensated care to older persons provide critical services. Yet their contributions are not adequately recognized. Governments can close this gap by developing integrated long-term care strategies that build on appropriate regulation, training and support for caregivers and mechanisms such as accreditation and monitoring to ensure quality. Instituting compulsory public insurance can free individuals from burdensome out-of-pocket costs for long-term care. Promoting formal employment for care workers and improving their working conditions can help meet the demand for quality care. Rethinking approaches to long-term care will benefit not only today's older persons and those who care for them but also future generations of older persons and their caregivers.

LEAVING NO ONE BEHIND IN AN AGEING WORLD REQUIRES POLICY ACTION NOW

This report highlights two sets of actions to build societies for all people at all ages. The first set can be taken throughout people's lifetimes to promote labour market participation and increased productivity, uphold good health and prevent poverty. The second set consists of policies to reduce inequality and promote economic security at older ages in a fiscally sustainable manner, taking into account both pensions and health care.

ADDRESSING THE ROOT CAUSES OF DISADVANTAGE AMONG OLDER PEOPLE STARTS AT BIRTH

Giving every person an equal chance to grow older in good health and with economic security begins with promoting equal access to opportunities from birth. All children should be able to develop and advance their capabilities, including through quality education and health care. Education should not stop after childhood or young adulthood, given rapidly evolving technologies and labour markets. Opportunities for continued learning and skills development throughout the life course help workers to adapt to shifts in labour demand, to use new technologies more effectively and to increase their productivity over time.

Improved education can raise labour productivity and reduce poverty and inequality but only when coupled with realistic prospects for decent work. Job creation matters but so does the quality of the work. Employment in the informal sector is often characterized by low worker productivity, limited access to social protection programmes and marginal contributions to public revenues. At the same time, decades of wage stagnation jeopardize the ability of low-wage workers to save for old age.

Increasing investment in the institutions of work – from regulations and employment contracts to collective agreements, labour inspection mechanisms and comprehensive social protection systems – will accelerate pathways to formalization, boost productivity and, above all, strengthen the social contract in an ageing world. Formalizing large informal sectors will take time, however. Throughout this transition, countries should progressively extend the coverage of social protection systems to all workers in the informal economy.

The world of work begins at home. Reducing the burdens of domestic care work, which fall disproportionately on women and impede their equal participation in the workforce, should be a central objective of employment and social policies. From parental leave to investment in public childcare services and dependent child tax credits, policies can foster the equitable sharing of unpaid care work and promote equal opportunities for women in the paid workplace.

Population ageing also reinforces the impetus for international investments so that countries with large working-age populations, including many in Africa, can attract much-needed capital. Such capital flows can boost labour productivity and wages and foster more rapid economic growth worldwide. Realizing the historic opportunity created by a rapidly growing pool of workers and a large market size also calls for transformative economic and structural reforms to encourage foreign direct investment and technological diffusion. In tandem, countries must invest in raising educational levels and ensuring that school curricula cultivate skills that people can use to gain a secure footing in the labour market.

IMPROVING THE LIVES OF OLDER PERSONS CALLS FOR ADEQUATE PENSIONS

Countries at advanced stages of population ageing may struggle with concerns about the sustainability of public expenditures, particularly for health care and pensions. Yet some proposed pension system reforms intended to ensure fiscal sustainability can, when applied across the board, negatively affect income security among low-income earners.

Most public pension systems have not kept up with changes in employment patterns, especially the growing insecurity of low-paying jobs. COVID-19 and earlier crises have exposed the risks of cutting public transfers across the board. This report proposes measures to improve sustainability while maintaining or increasing the role of pensions in reducing inequality. It also warns against shifting the financial risks associated with pension funds onto individuals or moving away from collective risk-sharing.

Countries without comprehensive social protection systems should focus on extending pension coverage, providing adequate benefits and financing public pension systems to reach target 1.3 of the SDGs.[1] Although there is no one-size-fits-all route to increased pension coverage, three actions can help to ensure the financial well-being of all older persons. The first is to encourage private savings and

1 The aim of target 1.3 is "to implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable".

improve financial literacy. The second is to introduce or expand tax-funded pension schemes so that all older persons maintain a basic level of income security. The third is to strengthen the institutions of work, as discussed in the previous section.

A critical factor in extending pension coverage and guaranteeing adequacy is funding. In most countries, it is possible to increase public revenues without intensifying the tax burden on low-income workers or the middle class. With an understanding of how population ageing may impact different categories of taxes, Governments can adopt forward-looking reforms to prepare for and address foreseeable fiscal pressures. For many developing countries, a top priority should be to improve their capacity for generating tax revenues, including by promoting transitions from informal to formal employment, combating tax evasion and strengthening tax administration. Such efforts need to be supported by effective and inclusive international cooperation on tax issues.

As populations age, all countries will face the challenge of providing adequate pensions and care for older persons while ensuring the long-term fiscal sustainability of current support systems. In this context, the fact that future generations of older people may be more unequal and economically insecure must be considered. Pension systems must be fiscally viable yet reforms weakening their redistributive power will jeopardize the well-being of growing numbers of older persons. If such reforms are seen as ineffective, they may also undermine the capacity of States to maintain pension systems.

It is also important to put inequalities across age groups and generations into perspective. Although these certainly require policy attention and action by Governments, discussions of sustainability and fairness to future generations should be cast in the broader context of the large and persistent divide separating rich and poor today, both within and among countries.

PUTTING AGEING AT THE CENTRE

As this report goes to press, the world continues to suffer from destabilizing shocks with profound impacts on health, economic prosperity and social welfare. After more than two years of the COVID-19 crisis, the war in Ukraine is upending a fragile social and economic recovery. Multiple humanitarian crises are erupting amid rising costs of living everywhere. Climate change looms large, inflicting severe and unprecedented droughts and floods, further stressing the global food supply and threatening the survival of many.

The *World Social Report 2023*, including its analysis and review of policy options to address population ageing, is intended to provide world leaders with information and policy guidance as they chart a path forward and renew commitments to achieving the SDGs. Rebuilding after multiple crises and advancing implementation of the 2030 Agenda for Sustainable Development hinge on wide-ranging and comprehensive policy responses at the national and multilateral levels. Leaders of all countries should recognize that these need to give a central emphasis to managing the challenges of population ageing while making the most of its opportunities.

WORLD SOCIAL REPORT 2023: LEAVING NO ONE BEHIND IN AN AGEING WORLD

INTRODUCTION

We live in a world of rapid social and economic change. People in the twenty-first century have and will continue to have, on average, a noticeably different life experience compared to earlier generations. Amid abundant change and diversity in the human condition, there are nevertheless common features of life in all human societies and similar changes affecting all populations, including a shift in population age structure towards older ages.

The long-term process of population ageing has begun, or is expected to begin soon, in all countries and areas of the world

Due to spectacular improvements in health and survival and to reductions in family size and fertility, the long-term process of population ageing has begun, or is expected to begin soon, in all countries and areas of the world. The share of older persons as a proportion of the global population is gradually increasing while the share of children and young people is slowly decreasing. These global trends bring both challenges and opportunities across the economic, social and environmental dimensions of sustainable development.

Much relates to variations in how people produce and consume over the course of life. Typically, people in the middle stages produce more than they consume, generating a surplus to provide for their dependent children or others who rely on them for support or to secure an income for themselves at older ages (figure 0.1). This

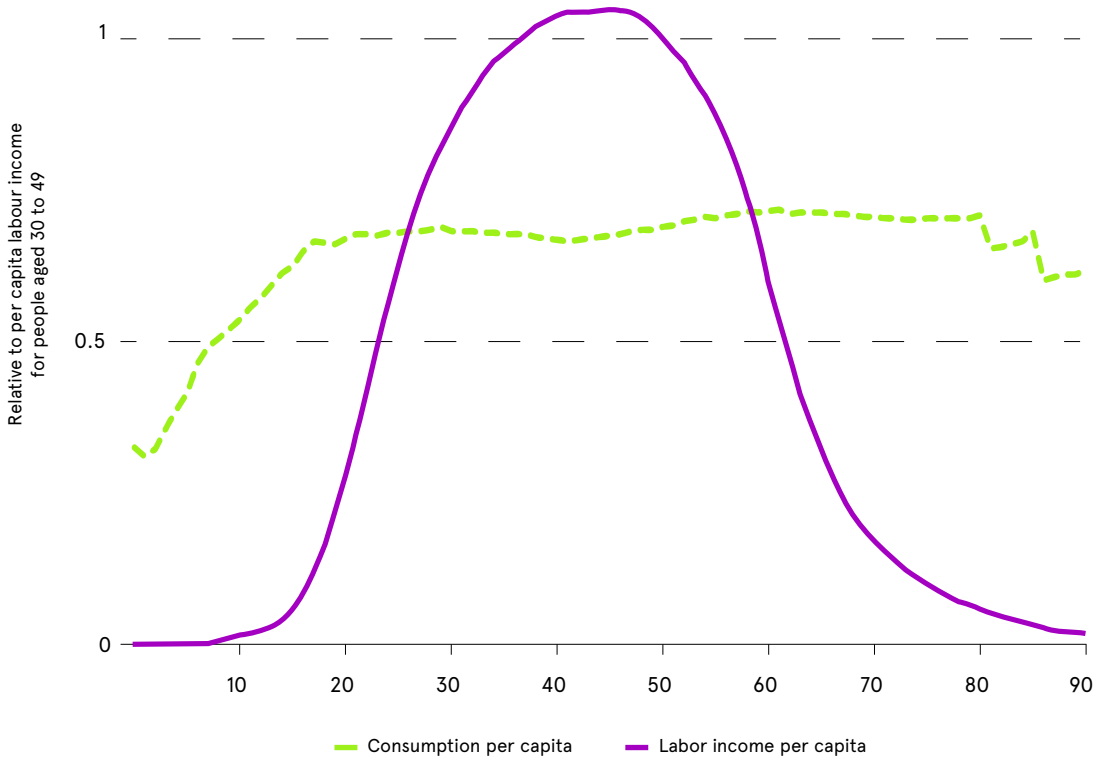
general pattern holds across populations at various levels of social and economic development.

Population averages, however, do not reveal the full diversity of individual experiences at any given age. Some working-age people do not generate sufficient labour income to finance what they need to live. Many older persons are in good health and continue to provide for themselves and contribute to their communities until advanced ages. Nevertheless, the ability to engage in productive work and carry out activities of daily living wanes sooner or later, given the progressive physiological deterioration that marks biological ageing.

As individuals grow older, questions arise around how they will sustain themselves financially when they no longer work or receive labour income, and how they will be cared for when they can no longer care for themselves. Societies provide support and care for older persons through various channels. Traditionally, families have played an essential part. Over time, however, States have taken on an increasing role in transferring resources and providing assistance to older persons as part of modern social contracts.

Figure 0.1

Age patterns of labour income and consumption, averaged across 41 countries, based on data between 1994 and 2016



Source: Computed using data from the National Transfer Accounts project. Available at https://ntaccounts.org (accessed on 23 August 2021).

Note: Age patterns of consumption and labour income are shown relative to the average labour income for people aged 30 to 49.

As populations globally undergo a demographic transition towards longer lives and smaller families, and the number and population share of older people grow, all Governments need to adapt and innovate in their policies and programmes to ensure that older persons remain productive and empowered members of society and to prepare to support more older people when needed. With appropriate foresight and planning, Governments can manage the challenges associated with population ageing while also taking full advantage of the opportunities it offers and ensuring that no one is left behind.

All Governments need to adapt their policies to enable older persons to remain productive and empowered members of society

In the initial stage of population ageing, countries have a window of opportunity to benefit from a demographic dividend – a boost in per capita economic growth arising from an increasing share of the working-age population. Expanding opportunities for decent work and investing in quality education and health-care services help maximize the potential benefits of the dividend and steer economic growth that is inclusive and diminishes poverty and inequality.

Governments in countries with rapidly ageing populations have responded in various ways. In most cases, concerns have emerged around the fiscal sustainability of programmes to respond to ageing. Unfortunately, some measures focused primarily on balancing the budget may also give short shrift to essential forms of social protection and, in doing so, intensify poverty and inequality among older people.

Some countries, for instance, have shifted financial risks onto pensioners through pension programmes that rely on workers contributing to an investment fund that will pay their pensions in retirement. The accumulated return on investment in large part determines the benefit received. This leaves individual beneficiaries bearing the uncertainties of investment performance, which may result in insufficient income later in life.

Despite such concerns, there are reasons to be optimistic about population ageing. Based on current global trends, future cohorts of working-age and older persons are likely to be healthier and better educated, and therefore more productive, compared to earlier cohorts. These changes highlight potentially positive impacts on the economy and broader society. Whether these potentially positive effects materialize depends on countries maintaining or increasing public investments in health care and education for all, including lifelong learning. Eliminating age-related discrimination and barriers to formal employment are other critical measures for older persons to make continued contributions.

The implications of population ageing have been on the agenda of the international community for decades. At the First World Assembly on Ageing convened in Vienna, Austria, in 1982, population ageing was identified for the first time as a global issue with vital connections to development. The Second World Assembly on Ageing, held 20 years later in Madrid, concluded with

the adoption of a Political Declaration and the Madrid International Plan of Action on Ageing, a landmark agreement in which Governments committed to "building a society for all ages". The Plan of Action provides guidance on a broad range of issues under three priorities: older persons and development, advancing health and well-being into old age, and ensuring enabling and supportive environments. The plan acknowledges the contributions and concerns of older persons as vital to the international development agenda.

In 1994, the Programme of Action adopted at the International Conference on Population and Development in Cairo recognized population ageing as an irreversible trend and called on Governments and other stakeholders to take advantage of the associated opportunities by helping older people to maintain their economic and social independence, and by providing health care and support through family and other formal and informal safety nets. The Programme of Action calls specifically for the support and protection of older women, recognizing that they constitute the majority of older persons globally.

While the Millennium Development Goals, adopted in 2000, only marginally included consideration of older persons and their needs and contributions to society, the 2030 Agenda for Sustainable Development sets out a universal plan of action to achieve sustainable development in a balanced manner. It calls for leaving no one behind and meeting the Sustainable Development Goals (SDGs) for all segments of society and at all ages, with a particular focus on the most vulnerable people, including those at older ages.

Recognizing the importance of healthy ageing[2] to achieving all 17 SDGs, in December 2020, the United Nations General Assembly proclaimed 2021-2030 as the United Nations Decade of Healthy Ageing.[3] The Assembly expressed concern that, despite the predictability of population ageing and its accelerating pace, the world is not sufficiently prepared to protect the rights and address the needs of older people.[4] United Nations Member States acknowledged that population ageing has major impacts on health systems and many other aspects of societies, including labour and financial markets and services for education, housing, long-term care and social protection.

To commemorate the twentieth anniversary of the Madrid International Plan of Action on Ageing, and at the onset of the Decade of Healthy Ageing, the *World Social Report 2023* examines the social and economic implications of population ageing for sustainable development. The report presents concrete policy options to harness opportunities and address challenges, including those related to sustainability, equity and inclusion.

2 Healthy ageing, defined by the World Health Organization (WHO) as "the process of developing and maintaining the functional ability that enables wellbeing in older age", replaces WHO's previous focus on active ageing, a policy framework developed in 2002. Healthy ageing, like active ageing, emphasizes the need for action across multiple sectors and enabling older persons to remain a resource to their families, communities and economies (WHO, 2020a).

3 General Assembly resolution 75/131.

4 In 2010, the General Assembly established an Open-ended Working Group on Ageing, mandated to identify possible gaps in the existing international framework and how best to address them. In 2012, the Assembly requested the Working Group to present a proposal containing the main elements to include in an international legal instrument to promote and protect the rights and dignity of older persons, which are not sufficiently addressed through existing mechanisms.

Chapter 1 examines changes in population age distribution over the demographic transition, particularly the rapid growth in the number and share of the older population. Although levels and trends differ by country and region, the world is gradually transitioning towards longer lives and smaller families.

Chapter 2 describes the global trend towards lower mortality and increased longevity. It shows that in countries with available data, the number of years lived in good health appears to be increasing.

Chapter 3 discusses the implications of population ageing for the economy. It affirms that different stages of the demographic transition have varying economic impacts. Other influential factors are economic structure and levels of human and social development. Understanding these dynamics can open opportunities to better prepare for a future with a greater share of older persons.

Chapter 4 examines inequality over the life course and illustrates how it contributes to poverty in old age. The analysis suggests that, although future cohorts of older persons will likely be healthier and more educated than those alive today, they may also be more unequal and economically insecure. Proactive changes are needed to reduce inequalities among people right now with the expectation that this will prevent worsening inequalities as people age.

Chapter 5 examines weaknesses in long-term care and support systems given changing living arrangements among older persons. It describes how reforming such systems could benefit today's older persons and those who care for them as well as future cohorts of older persons. The chapter draws attention to the importance of the care economy and to the imperative for policymakers to address the disproportionate role of women and immigrants in a sector that is often poorly compensated and remains largely invisible in economic accounting.

All countries must make choices about how to maximize the opportunities that population ageing brings while ensuring people's well-being at all stages along the life course. This report highlights policies that countries can adopt to minimize poverty and to support people in remaining productive and healthy as they age. A key message is that countries can address concerns about fiscal sustainability without sacrificing equity or economic security at older ages.

CHAPTER 1

AN AGEING WORLD

KEY MESSAGES

- The number of people aged 65 years or older worldwide is projected to more than double, rising from 761 million in 2021 to 1.6 billion in 2050. The number of people aged 80 years or older is growing even faster.
- Population ageing is an irreversible global trend. It is the inevitable result of the demographic transition – the trend towards longer lives and smaller families – that is taking place even in countries with relatively youthful populations. In 2021, 1 in 10 people worldwide were aged 65 or above. In 2050, this age group is projected to account for 1 in 6 people globally.
- As fertility levels fall, the share of younger people declines, while the shares of working-age adults and, eventually, older people go up. Further population ageing is driven by more people living longer, healthier lives.
- Among regions, Northern Africa and Western Asia and sub-Saharan Africa are expected to experience the fastest growth in the number of older people over the next three decades. Today, Europe and Northern America combined have the highest share of older persons.
- Women tend to live longer than men and thus comprise the majority of older persons, especially at advanced ages. Since the average survival of males is projected to gradually move closer to that of females, small but noticeable reductions in the sex gap in life expectancy and in the female share of the population at older ages are likely in coming decades.
- Conventional measures of population ageing, such as the old-age dependency ratio, are often used as proxy indicators of economic dependency. Other measures can provide a more nuanced picture by taking account of increased life expectancy or the economic production and consumption of various age groups.

We live in an ageing world, marked by a shift in the distribution of populations towards older ages. This pattern began on a global scale around the middle of the twentieth century and is expected to intensify in the decades ahead. Between 2021 and 2050, the global share of the older population, defined as people aged 65 years or over, is projected to increase from less than 10 to around 17 per cent. The number of older people is expected to more than double from 761 million to 1.6 billion during the same period (United Nations, 2022a). Most of the more developed countries have experienced population ageing over several decades and are already in advanced stages of this process. By contrast, many developing countries face rapid transitions towards ageing societies.

This chapter presents an overview of levels and trends in population ageing around the world. It also discusses how common demographic measures of population ageing can be modified to integrate health and economic considerations and thus provide clearer guidance as countries seek to implement policies and services to meet changing needs.

A.

OLDER POPULATIONS ARE RAPIDLY GROWING EVERYWHERE

The number of older people is growing fast, having tripled from around 260 million in 1980 to 761 million in 2021 (figure 1.1). By 2030, the number is projected to top 1 billion and eventually to reach over 1.6 billion in 2050. By the end of the twenty-first century, the world could have nearly 2.5 billion older people (United Nations, 2022a).

The number of older people increased rapidly in all regions of the world from 1980 to 2021, a trend that is likely to continue over the next three decades

The number of older people increased rapidly in all regions of the world from 1980 to 2021, a trend that is likely to continue over the next three decades. From 2021 to 2050, the population aged 65 or over in Eastern and South-Eastern Asia and in Central and Southern Asia is projected to grow by more than 540 million, accounting for more than 60 per cent of the global increase. Over the next three decades, Northern Africa and Western Asia and sub-Saharan Africa are projected to have the fastest growth – or highest growth rate – of the population aged 65 or above.

Globally, the number of people aged 80 years or over is rising even faster than the number aged 65 or above. By 2050, the world will have an estimated 459 million persons aged 80 or more, almost triple the number in 2021 at around 155 million. Between 2021 and 2050, this age group is projected to increase by more than 200 per cent in all regions except Europe and Northern America and Australia and New Zealand, where it is expected to grow by 10 per cent and 60 per cent, respectively.

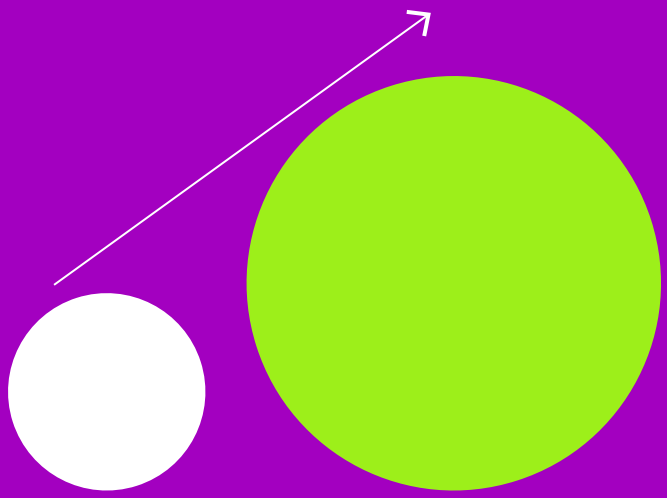
FACTS AND FIGURES FROM CHAPTER 1

MORE THAN DOUBLE

the number of people aged 65+ will MORE THAN DOUBLE from

761
MILLION in 2021 to

1.6
BILLION in 2050



THE 80+ POPULATION IS GROWING FAST

increase expected from

155 → **459**
MILLION in 2021 to MILLION in 2050

SOCIETIES WILL BE OLDER

from 1 in 10 people 65+

in 2021

to 1 in 6 people 65+

in 2050

THE GEOGRAPHY OF THE WORLD'S OLDEST COUNTRIES AND TERRITORIES IS SHIFTING

from Europe towards Eastern and South-Eastern Asia by 2050

World's oldest country or territory (with the largest share of people 65+)

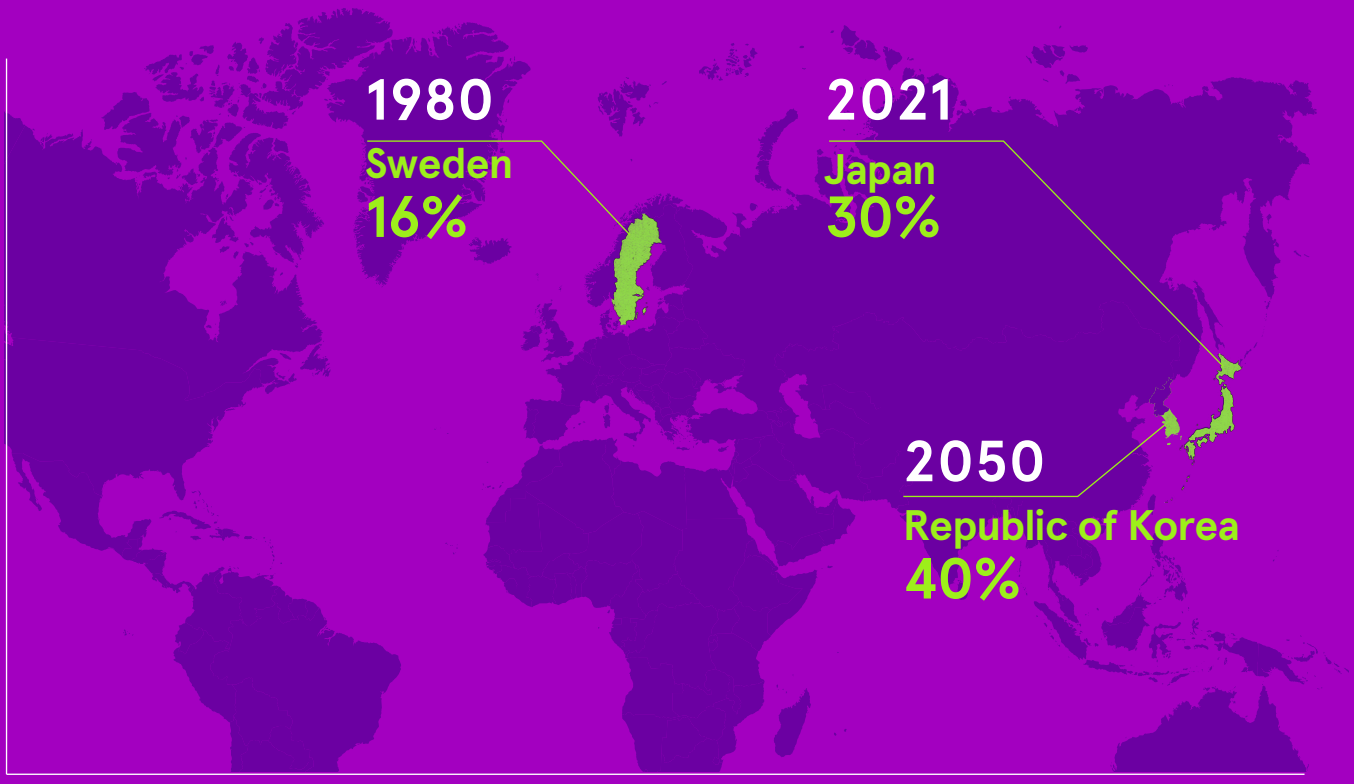
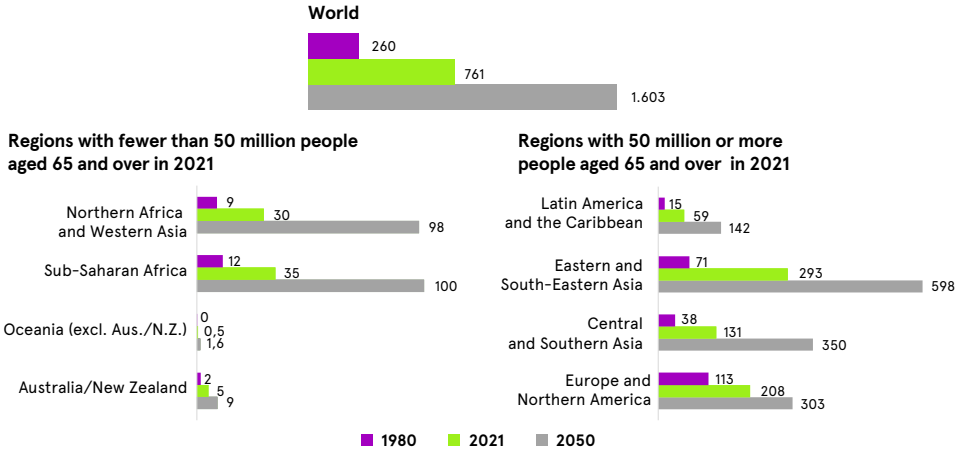


Figure 1.1 **Number of people aged 65 years or above in millions, world and regions, 1980, 2021 and 2050**



Source: United Nations (2022a).

Women live longer than men on average and thus comprise a majority of older persons, especially at the highest ages. In 2021, women outlived men by an average of 5.4 years and accounted for 56 per cent of the global population aged 65 or over. Among those aged 80 or over, the proportion of women reached 62 per cent. Since survival rates for men are projected to gradually move closer to those of women, the sex distribution at older ages is expected to become more balanced. Still, in 2050, women will likely comprise a majority of the population aged 65 or above and 80 or above (54 per cent and 59 per cent, respectively).

B.

THE POPULATION AGE DISTRIBUTION IS SHIFTING STEADILY UPWARD

The older population is growing globally both in absolute numbers and as a share of the total population. Population ageing unfolds over many decades through a gradual upward shift in the age distribution. While the share of population at older ages goes up, the share at younger ages goes down. The median and average ages of the population both rise in the process.

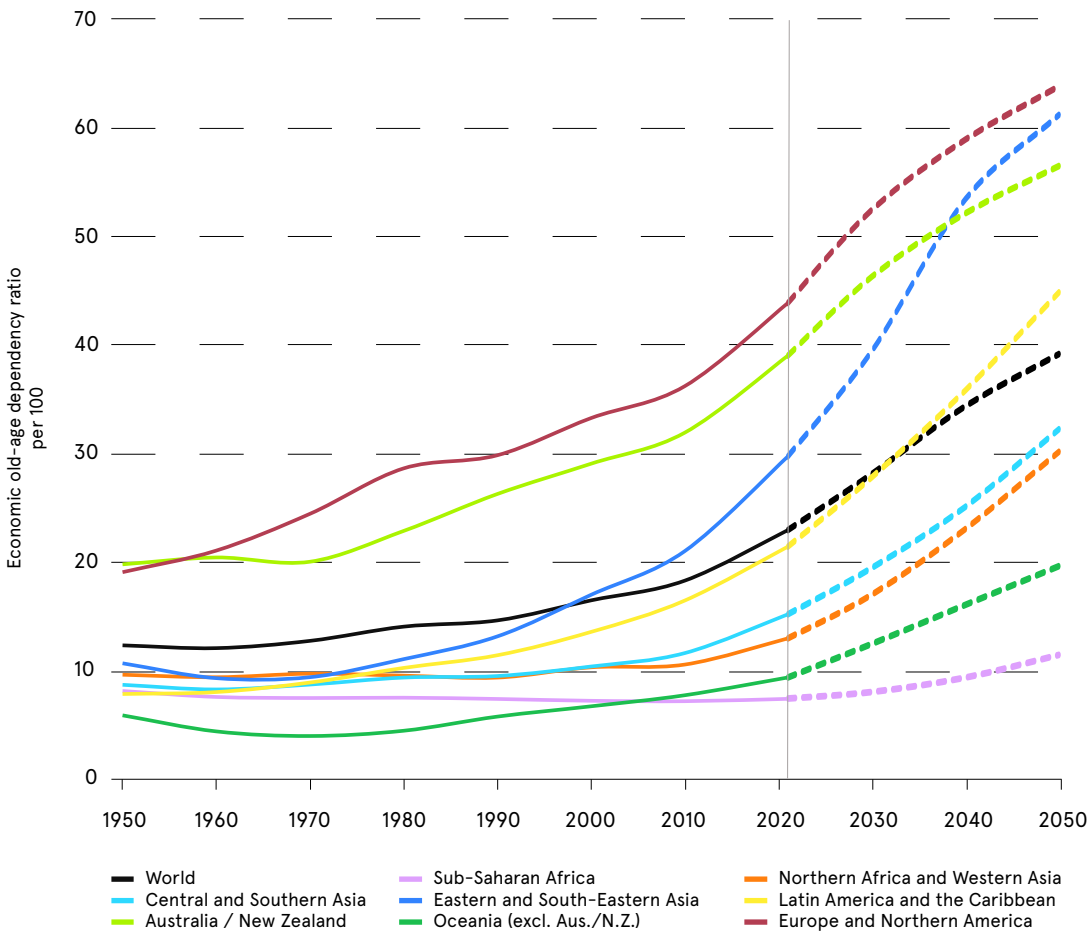
In 2021, 1 in 10 people worldwide was aged 65 or over compared to 1 in 20 in 1950. In 2050, this age group may account for 1 in 6 people worldwide (figure 1.2). Over the next three decades, the proportion of older people is projected to double in five regions while increasing more slowly in the other three. In sub-Saharan Africa, high birth rates are expected to keep the share of children and youth relatively large and therefore the share of older persons relatively small. In Europe and Northern America and in Australia and New Zealand, where population ageing is already well advanced, further ageing will take place more slowly.

In 1980, the world's 10 oldest populations were in Europe, each with around 15 per cent of the population at ages 65 or above (table 1.1). By 2021, the share

The geography of the world's oldest countries will shift from Europe towards Eastern and South-Eastern Asia between now and 2050

above age 65 had pushed past 20 per cent in all 10 countries, on its way to an expected 30 per cent by 2050. Although Japan had the world's oldest population in 2021, China, Hong Kong, Special Administrative Region (SAR) of China, and the Republic of Korea will likely surpass it before 2050. The geography of the world's oldest countries will shift from Europe towards Eastern and South-Eastern Asia between now and 2050, when the latter is expected to include 5 of the 10 oldest populations.

Figure 1.2 **Percentage of people aged 65 years or over, world and regions, estimates for 1950–2021 and projections for 2022–2050**



Source: United Nations (2022a).

Table 1.1 **Countries and areas with the largest shares of people aged 65 years or over, 1980, 2021 and 2050**

	1980		2021		2050	
RANK	COUNTRY OR AREA	PERCENTAGE AGED 65 YEARS OR OVER	COUNTRY OR AREA	PERCENTAGE AGED 65 YEARS OR OVER	COUNTRY OR AREA	PERCENTAGE AGED 65 YEARS OR OVER
1	Sweden	16.3	Japan	29.8	China, Hong Kong, SAR of China	40.6
2	Germany	15.7	Italy	23.7	Republic of Korea	39.4
3	Austria	15.4	Finland	22.9	Japan	37.5
4	United Kingdom	14.9	Portugal	22.6	Italy	37.1
5	Norway	14.8	Greece	22.5	Spain	36.6
6	Belgium	14.4	Bulgaria	22.4	China, Taiwan, Province of China	35.3
7	Denmark	14.4	Puerto Rico	22.4	Greece	34.8
8	France	14.0	Germany	22.2	Portugal	34.5
9	Switzerland	13.8	Martinique	22.1	Singapore	34.2
10	Luxembourg	13.6	Croatia	22.0	Kuwait	33.6

Source: United Nations (2022a).

Note: For countries and areas with a population of 90,000 or more by mid-2021.

Population ageing is progressing more rapidly in developing countries than it did historically in more developed countries

Population ageing is progressing more rapidly in developing countries than it did historically in more developed countries. With few exceptions, such as Japan, in most countries of the more developed regions, the proportion of the population aged 65 or above rose from 7 to 14 per cent in anywhere from 40 to 120 years. It took (or will take) between 20 and 50 years to increase the share further from 14 to 21 per cent. By contrast, most developing countries will likely see a doubling in the share of older persons from 7 to 14 per cent in 15 to 35 years and a further increase from 14 to 21 per cent in just 10 to 30 years.

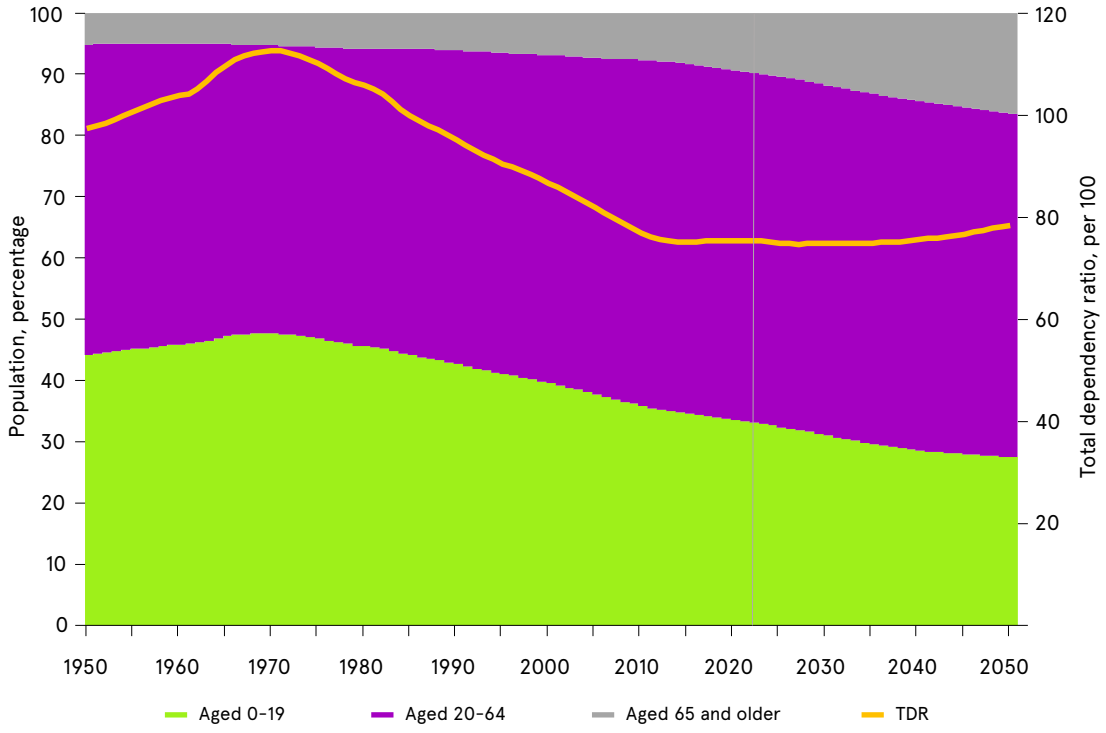
Between 2021 and 2050, all regions are expected to experience a rise in the median age, which divides the younger and older halves of the population. Globally, the median age is expected to climb from 30 years in 2021 to 36 years in 2050. The region of Latin America and the Caribbean is projected to experience a rapid rise in the median age from 30 years in 2021 to 40 years in 2050. Over the same period, the median age in Europe and Northern America is projected to increase from 40 to 46 years. Between now and 2050, 16 countries are expected to reach a median age of 50 years or higher.

Historically, older persons made up a much smaller share of the population compared to younger age groups. As fertility rates drop during demographic transition, the shift in the age structure manifests initially as a swelling share of adults in the working and reproductive ages and falling proportions of children and youth. If fertility remains at lower levels, the population begins to age and eventually the share of older people starts to rise. Successive cohorts tend to live longer, increasing the demands on younger generations as potential sources of assistance in old age.

Children and older people tend to rely on economically active adults for financial support and care. A total dependency ratio provides an approximate indication of how many dependents are likely to need support from each person of working age, on average. The ratio reflects the number of children and young people under age 20 plus the number of older persons compared to the number of working-age people, often defined as those between ages 20 and 64. The actual ages of dependency, however, vary considerably from country to country and from person to person. Factors such as the pursuit of higher education or youth unemployment often prolong the dependent period beyond age 20. Health and financial considerations as well as personal preferences influence the age at which people retire from the workforce and eventually become dependent.

Figure 1.3

Distribution of the global population in broad age groups and total dependency ratios, estimates for 1950–2021 and projections for 2022–2050



Source: United Nations (2022a). TDR indicates total dependency ratio.

In 2002, at the time of the Second World Assembly on Ageing, more than half of the global population was between 20 and 64 years old (54 per cent), meaning 8 or 9 individuals potentially depended on every 10 workers (figure 1.3). Most "dependents" were children and youth below age 20; only 15 per cent were older people. By 2021, with the progression of population ageing, older people made up a larger share of the dependent group, although still less than that of children and youth, and the proportion of working-age persons in the total population had increased to 57 per cent. This share will remain relatively stable through 2050, keeping the dependency ratio below 1. Part of the increased portion of people at ages 65 or over stems from the greater share over age 80. The latter is expected to increase from 2 to around 5 per cent of the global population between 2021 and 2050.

A regional review of the evolution of the working-age population shows that it peaked in Europe and Northern America in 2013. It is projected to peak in 2027 in Eastern and South-Eastern Asia, followed by Latin America and the Caribbean in 2043 and Central and Southern Asia in 2058. All other regions are expected to experience continued growth in the working-age population through the end of the century.

Although population ageing is progressing everywhere, younger populations will continue to constitute the largest share of dependents globally even while declining from 33 per cent of the global population in 2021 to around 28 per cent in 2050. Three regions will complete the transition from a high share of youth dependents to a high share of older dependents before 2050: Australia and New Zealand, Europe and Northern America, and Eastern and South-Eastern Asia. Latin America and the Caribbean will complete this transition by 2060 and Central and Southern Asia by 2080. Populations in sub-Saharan Africa, Oceania (excluding Australia and New Zealand), and Northern Africa and Western Asia will continue to have dominant shares of young dependents through the end of this century.

C.

BETTER MEASUREMENT IMPROVES UNDERSTANDING OF AGEING SOCIETIES

The total dependency ratio allows an overall understanding of the demand for public services and the necessary financial resources. Yet to better comprehend the socioeconomic implications of population ageing, several additional measures help account for the diversity of capacities and dependencies across ages.

The old-age dependency ratio, based on chronological age, compares the size of the older population to that of the working-age population. It assumes implicitly that all older persons are net recipients of economic transfers, including for health care, and that these transfers are financed by the labour income of younger age groups. Defining age groups in a purely chronological and static manner, however, may limit understanding of possible changes over time in the health status and activity levels of older persons (see chapter 2). Other concepts and measures that shift the focus from the number of years lived since birth to the expected

time until death, or remaining life expectancy, offer an alternative perspective on how population ageing impacts social and economic development.

Given the diversity among older persons in terms of economic activity, health and well-being, and levels of non-market activity, and considering that not all working-age people are economically active, researchers have proposed alternative measures of population ageing that incorporate information about age patterns of production and consumption. Such measures have been developed in the context of the National Transfer Accounts (United Nations, 2013, 2019a; Lee and Mason, 2011; Mason and others, 2017).[5]

1. COMPARING CHRONOLOGICAL AND PROSPECTIVE MEASURES OF OLD-AGE DEPENDENCY

The old-age dependency ratio is based on chronological age and is defined as the number of persons aged 65 years or over divided by the number of working-age people (20 to 64 years). This indicator allows an examination of national trends in population ageing and a comparison across countries at a given point in time. Age 65 is generally the threshold for defining older persons, who are often net recipients of economic transfers through publicly funded pensions and health care.

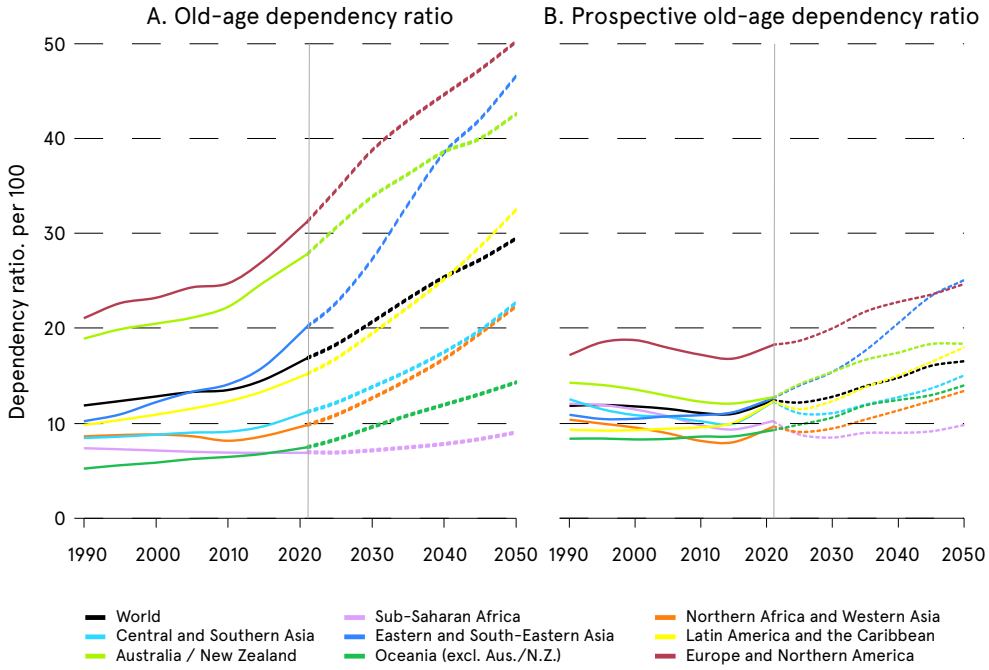
In all regions of the world, the old-age dependency ratio has increased continuously since 1990, albeit at varying speeds. Globally, in 2021, there were 17 persons aged 65 years or over per 100 persons aged 20 to 64. By 2050, this ratio is projected to increase to 29 per 100. In fact, the old-age dependency ratio is expected to rise in all regions between 2021 and 2050 (figure 1.4).

A complementary way to assess population ageing involves shifting the focus from the time since birth (chronological age) to the expected time until death (thanatological age). At an aggregate level, the expected time until death is determined by a set of age-specific mortality rates covering the remaining years of life. Since a person's health, welfare and social care demands at older ages are often more closely linked to thanatological than to chronological age, forecasts of the social and economic costs of ageing that are based only on chronological age are prone to bias (Riffe and others, 2016). During periods of declining mortality and increasing longevity, predictions of health and social care costs based on chronological age tend to overestimate total financial expenditure, as most acute medical care costs occur in the final months of life with little additional impact from a person's age at that time (Miller, 2001; Riffe and others, 2016; Sanderson and Scherbov, 2010; Stearns and Norton, 2004).

The prospective old-age dependency ratio (Sanderson and Scherbov, 2005, 2007) considers as "old" those ages at which people are expected to live, on average, a certain number of years (for this analysis, 15 years). Accordingly, this ratio is calculated as the number of persons above the age for which the remaining life expectancy is closest to 15 years, relative to the number of persons between age 20 and that age. In this way, the number of people with a remaining life

5 Ageing measures featured in this chapter focus on those with comprehensive data available at the global level or for large numbers of countries. Chapter 2 refers to other measures that are available only for a select number of countries for certain periods of time, including measures that incorporate information about health status or functional ability (WHO, 2015).

Figure 1.4 **Traditional and prospective old-age dependency ratios, world and regions, estimates for 1990–2021 and projections for 2022–2050**



Sources: United Nations (2022a), own calculations, based on Sanderson and Scherbov (2005, 2010, 2019). *Note*: The bump in the trajectories of prospective ratios around 2020–2022, as shown in panel B, are due to the impact of the COVID-19 pandemic, which interrupted trends in life expectancy for most regions.

expectancy of less than 15 years serves as a proxy for the number who are economically dependent on others due to advanced age.

Comparing the traditional and prospective old-age dependency ratios, the latter is lower in all regions except sub-Saharan Africa and Oceania (excluding Australia and New Zealand). This result suggests that the impact of population ageing may be less than what is implied by the traditional old-age dependency ratio in populations with high levels of life expectancy (figure 1.4).

2. MEASURING AGEING FROM AN ECONOMIC PERSPECTIVE

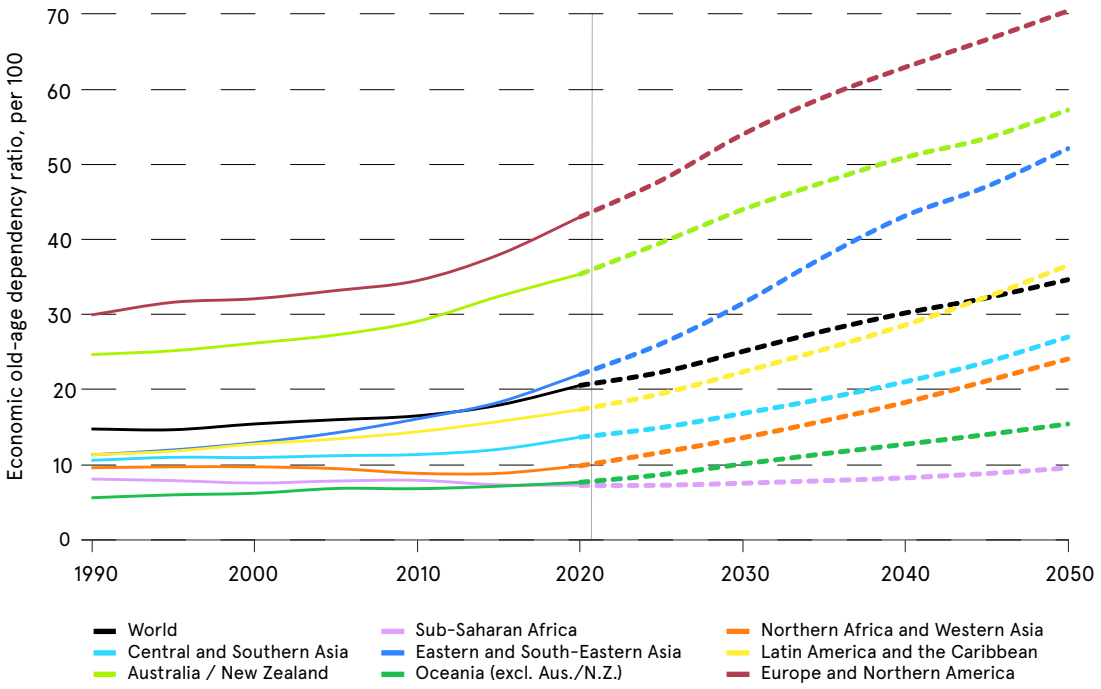
The old-age dependency ratio has economic analogues based on levels of consumption and production and other components of economic behaviour over the life course, as described in the literature on National Transfer Accounts (United Nations, 2013, 2019a; Lee and Mason, 2011; Mason and others, 2017). The analysis of such accounts focuses on the age distributions of consumption, labour earnings and other economic aggregates in a national economy. National Transfer Accounts can be used to measure and analyse the age and generational dimensions of an economy, providing evidence of the consequences of population ageing for economic policymaking.

In contrast to the measures discussed above, the economic old-age dependency ratio explicitly considers age-related patterns of economic activity to assess levels of dependency (net consumers) associ-

ated with old age. The ratio is defined as the effective number of consumers aged 65 years or over divided by the effective number of workers at all ages.[6] The key advantage of this measure is that it explicitly incorporates age-specific variations in labour income and consumption. In doing so, it gives a more direct, focused and realistic measure of economic dependency over the life cycle than either the old-age dependency ratio or the prospective old-age dependency ratio.

The economic old-age dependency ratio indicates that globally in 2020, there were 21 effective consumers aged 65 years or over per 100 effective producers. By 2050, this ratio is projected to rise to 35 per 100, with increases in all regions (figure 1.5). The economic old-age dependency ratio is slightly higher than the old-age dependency ratio in all regions, with a greater difference in Europe and Northern America and in Australia and New Zealand compared to other regions due to their relatively higher consumption at older ages (United Nations, 2019a).

Figure 1.5 **Economic old-age dependency ratios, world and regions, estimates for 1990–2021 and projections for 2022–2050**



Source: Based on the method outlined in Mason and others (2017).

6 The effective number of workers or consumers at a given age is calculated as the population at that age weighted by the labour income or consumption profile. People aged 30–49 are counted, on average, as one effective worker and one effective consumer. People at other ages are counted as more or less than one effective worker or consumer depending on how much they produce through their labour or consume relative to the average for those aged 30 to 49 (Mason and others, 2017).

Considering total demand for public support by younger and older populations worldwide, the share of dependents is expected to remain rather stable. The composition is changing, however. Most regions are already experiencing or will experience a shift in dependency from younger to older ages. Because populations are ageing at different speeds, national ratios vary significantly. In half of all countries or areas, the total dependency ratio is expected to change either upwards or downwards by 25 per cent or more from today until 2050. In 40 per cent of countries or areas, it will change by 30 per cent or more.

Most countries in the early stages of population ageing will continue to benefit from stable and in some instances even growing workforces while striving to meet the demands of large shares of young people and mounting numbers of older persons. Regions at more advanced stages of population ageing may see declining demands from shrinking younger populations and shift their focus to promoting the health and well-being of working-age and older populations. In doing so, they may benefit from people working longer in better health, with reduced needs for health care.

Conventional measures of population ageing, such as the old-age dependency ratio, are often used as a proxy indicator of economic dependency. From this perspective, growing numbers and rising shares of older persons are frequently considered a looming threat to public services, particularly health care and pensions. Other measures that account for increased life expectancy and actual economic production and consumption in various age groups, however, provide a more nuanced picture.

D.

DEMOGRAPHIC TRANSITION STEMS FROM LONGER LIVES AND SMALLER FAMILIES

The demographic transition, a gradual shift towards longer lives and smaller families, began first in Europe and Northern America, where levels of fertility and mortality began to fall as early as 1800, leading to a larger population and, eventually, a much older one as well. The transition took off on a global scale around the middle of the twentieth century (Caldwell, 2006; Lee and Reher, 2011).[7] The process typically unfolds in stages (figure 1.6). Population growth first accelerates and then slows down, while the age distribution first becomes younger before shifting towards older ages.[8]

Three main mechanisms drive population ageing during the demographic transition. First, the share of older people increases as fertility levels decline and reduce the proportion of younger people (ageing "from the bottom"). Second, the continuing extension of the human lifespan raises the number of older people (ageing "from the top").

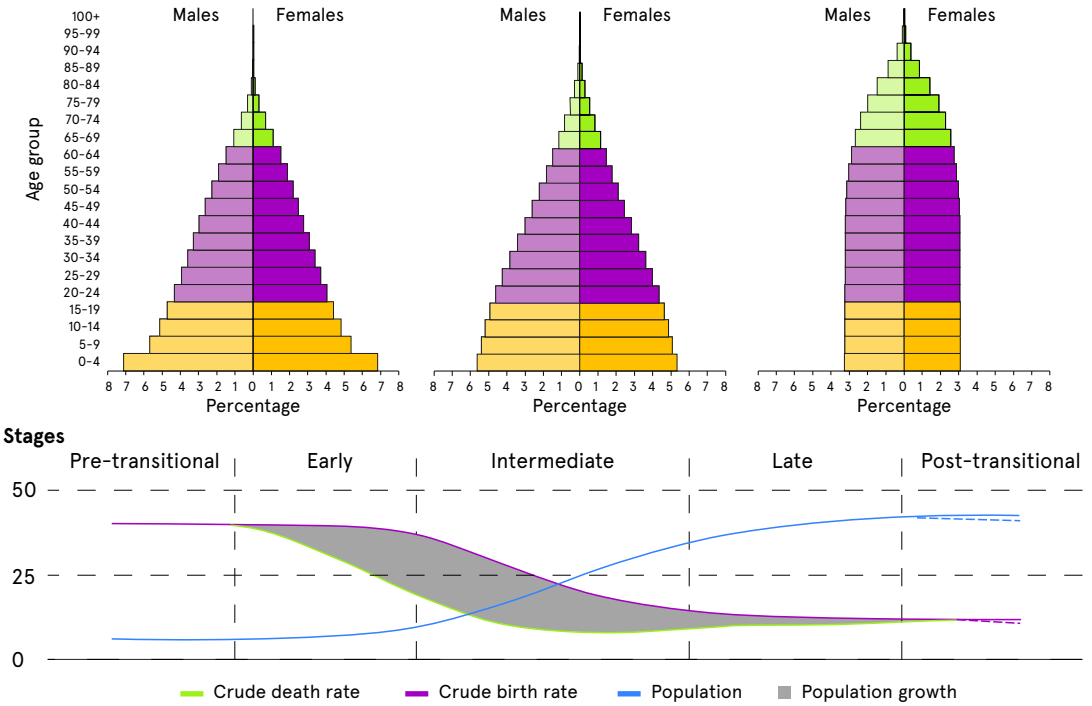
7 Today, no country or area is in the pre-transition stage. Among the 236 countries or areas that comprise the global population, one sixth, located almost exclusively in sub-Saharan Africa, are in an early stage; one third are in an intermediate stage; and the other half are in a late or post-transition stage (United Nations, 2022a).

8 This stylized description of the demographic transition refers to a population that is closed to migration, in which population trends are determined entirely by changes in levels of fertility and mortality. Box 1.2 examines the role of international migration in population ageing.

Third, when the cohort of people who are about to enter old age is large compared to its predecessors, their progression into older ages will enlarge the older population (a "cohort effect"). A large number of people ageing into their 60s and beyond stems from earlier declines in mortality at younger ages but can also result from high or fluctuating levels of fertility in the past, historical inflows of migrants or a combination of factors (Bloom, 2019; Sudharsanan and Bloom, 2018).[9] Because such a cohort effect is driven by past demographic changes, it can influence the age distribution of a population even if levels of fertility and mortality are not changing.

Before the demographic transition, the population distribution by age and sex resembles a pyramid, with a wide base and relatively few older people (figure 1.6, left population pyramid). At the onset of the transition, the opposite of population ageing – population rejuvenation – often occurs. Mortality levels typically fall first among infants and children due to improved nutrition and effective control of infectious diseases, including pneumonia, diarrhoea and malaria (Caselli, Meslé and Vallin, 2002), while fertility levels remain high. As the population grows due to declining mortality at younger ages, the share of children and youth expands, widening the base of the pyramid.

Figure 1.6 **Population distribution by age and sex, crude birth and death rates, and total population size at different stages of the demographic transition**



Source: United Nations calculations.

Note: The crude birth (or death) rate is the annual number of live births (or deaths) divided by the population size at the midpoint of the observation period. Both rates are expressed as the number of births or deaths per 1,000 people per year.

9 Change in the age distribution associated with large cohorts born from the late 1940s until the early 1960s in some countries, known as the "baby boom" generation (Van Bavel and Reher, 2013), is an example of population ageing led by a temporary rise in fertility. Today's ageing "boomers" comprise a significant part of the older population in some countries.

In an intermediate stage, fertility starts to fall while mortality continues to decline, including at adult ages. The base of the population pyramid shrinks as the share of children falls, while the share of people at working and childbearing ages expands, signalling the onset of population ageing (figure 1.6, middle population pyramid). Eventually, the share of older persons starts to increase as well. As the transition progresses, fertility may reach and level off at the so-called "replacement" level, at which successive generations become roughly equal in size (box 1.1). In this scenario, there will be less of a difference in population size across the age range, as the population "pyramid" becomes more like a bell tower or a rocket (figure 1.6, right population pyramid).

While population ageing is an inevitable consequence of demographic transition, population decline is not

Once the demographic transition is complete, populations may stop growing and reach a stable size or begin to decline (figure. 1.6, the post-transitional stage). However, while population ageing is an

BOX 1.1 DEFINING REPLACEMENT-LEVEL FERTILITY

Replacement-level fertility refers to a level of childbearing where each generation exactly replaces the previous one in terms of size. In other words, children of the current generation of parents grow up to become an equivalent number of potential parents in the next generation. To "replace" themselves, women need to have, on average, one daughter who survives through the reproductive age and so on for succeeding generations.

An average of 2 births per woman will exactly replace mothers and fathers, but only if two conditions hold true: first, the same numbers of boys and girls are born, and second, all female children survive to the end of the reproductive age range. In reality, replacement-level fertility is slightly higher than 2 births per woman to account for the unbalanced natural sex ratio at birth (slightly more boys than girls) and for the loss of reproductive potential due to premature mortality. In populations with relatively low levels of mortality, replacement-level fertility requires approximately 2.1 live births per woman over a lifetime. In countries with higher levels of mortality, a slightly higher level of fertility is required to compensate for the greater loss of reproductive potential and to ensure the replacement of generations (Espenshade, Guzman and Westoff, 2003).

inevitable consequence of demographic transition, population decline is not. The fall in fertility that typically occurs during the transition is a necessary but not sufficient condition to produce a deficit of births. Population decline occurs only if below-replacement levels of fertility continue for several decades without a counteracting effect due to international migration (box 1.2). Today, about half the countries or areas of the world have completed or are in a late state of the transition, with life expectancies at birth of 75 years or more and fertility below the replacement level (box 1.3).

BOX 1.2

INTERNATIONAL MIGRATION CAN BOTH SLOW AND ADD TO POPULATION AGEING

Beyond the interplay of mortality and fertility, international migration can influence the age distribution in countries with large inflows of migrants. Because immigrants typically include a disproportionate number of young adults, immigration often results in a younger population and workforce in destination countries, postponing the process of population ageing by a few years without fundamentally altering the trend towards an older population. The children of immigrants also contribute to a younger population, especially when migrants have more children than the resident population.

International migrants comprise a sizeable share of working-age people in some countries today. By lowering the old-age dependency ratio, they contribute to a more affordable balance between workers and retirees. If migrants remain and grow old in destination countries, they will eventually add to older cohorts, increasing the share of older people and gradually diluting the impact of immigration on the population age distribution. On the other hand, if migrants return to their countries of origin and do not become permanent residents of the host country, and if they are followed by younger cohorts of migrants, immigration can have an enduring impact through keeping the population somewhat younger than it would have been in the absence of migration.

In 2020, international migrants accounted for nearly 19 per cent of the working-age population of high-income countries and over 1 in 10 of those aged 65 or above (United Nations, 2020a).

BOX 1.3

FROM TAX CREDITS TO BABY BONUSES, COUNTRIES CONCERNED ABOUT LOW FERTILITY OFFER SUPPORT FOR BEARING AND REARING CHILDREN

In 2021, fertility hovered below the replacement level in 124 of 236 countries or areas. Among these, 47 had fertility below 1.5 births per woman (United Nations, 2022a). Government policies and institutional settings, as well as associated cultural, economic and sociopolitical structures and histories, can cause fertility to decline to low levels.

Influential factors include the incompatibility between professional careers and family life, which has been identified as a major driver of low fertility (Wilkins, 2019; Sobotka, Matysiak and Brzozowska, 2019; McDonald, 2006). Other factors encompass the flexibility of the labour market, the educational system, gender equity, the links between marriage and childbearing, governmental subsidies for the costs of childrearing, the housing market and international migration (United Nations, 2015a). Over the past three decades, amid concerns about population ageing and potential population decline, a growing number of governments have adopted policies to raise the fertility level. Based on survey data from 2019, Governments in half of the 82 low-fertility countries with available data had adopted policies to raise the fertility level (United Nations, 2021b).

A wide range of family policies can help parents balance their work and family life. Examples include employment-related support, such as parental leave for one or both parents and flexible working hours; monetary support, such as tax credits, child and family allowances, baby bonuses and childcare subsidies; and service provision, such as childcare and after school programmes. Some high-income countries (e.g., France, Hungary, Japan, the Republic of Korea, the Russian Federation and Singapore) have adopted explicit policies to influence the fertility level through economic or social incentives and tax credits. Others do not have such specific policies in place (Demeny, 2011; May, 2012).

In developed countries, family-oriented policies have evolved mostly through social welfare systems. For example, the "maternity capital" programme in the Russian Federation and the "speed premium" in Sweden provide cash benefits for having children. Norway makes high-quality childcare facilities available, and Estonia grants universal and generous parental leave (Sobotka, Matysiak and Brzozowska, 2019). Some developing countries, despite their less extensive welfare systems, have adopted measures that include maternity leave, family or child allowances and publicly subsidized childcare. Notably, all low-fertility countries except the United States of America provide national paid maternal leave. Fewer countries also provide paternal or parental leave (United Nations, 2021a).

A recent review of policy responses to concerns about low fertility indicates that di-

BOX 1.3

rect monetary support may have temporary effects, mainly on the timing and spacing of births, but little long-term impact (Sobotka, Matysiak and Brzozowska, 2019). Policies that lower the costs of childbearing in a predictable way over several years, not just around the time of birth, are more likely to be effective. Clashes between work and family life underline the need to advance gender equality, achieve work-family balance, subsidize costs for childbearing and housing, and ensure that the private sector allows flexible working arrangements and access to parental leave for both parents (Wilkins, 2019).

Improving work-family balance and guaranteeing income security could have positive impacts on dependency ratios and fiscal sustainability. Such policies can assist men and women in realizing their desired family size while contributing to financial independence at older ages, especially for women. They may also support the voluntary extension of people's working lives.

CHAPTER 2

TOWARDS LIVING LONGER, HEALTHIER LIVES

KEY MESSAGES

- There is no doubt that increasing human life expectancy is a long-term trend. Survival to older ages has become more common worldwide. Health among older people varies considerably, however, both among and within countries.
- Increased global life expectancy reflects better health overall. The number of years lived in good health, or at least without severe disability, has risen in many places.
- Men live, on average, fewer years than women. Yet older women experience a greater prevalence of morbidity and disability. Given the dominance of cardiovascular disease and cancer as causes of death, different personal behaviours and diverse exposures to environmental risks both contribute to group variations in morbidity and mortality, including by sex.
- Inequalities in income, education and living arrangements, including those due to race or ethnicity, help explain observed differences in the health of individuals and their risks of dying over the life course. Uneven access to affordable, quality health care can lead to unequal use of services and disparities in life expectancy.
- Rapid growth in the number of people reaching older ages highlights the importance of promoting health and preventing and treating illness throughout the life course, as conditions experienced earlier in life can have a substantial impact on a person's health and well-being at older ages. The concept of "healthy ageing" highlights the importance of maintaining functional ability as people grow older to enable their continued participation in society.
- Societies with ageing populations need to adapt to having increasing numbers of older persons with a wide range of functional abilities. The ability to perform critical functions and to participate in everyday activities depends not only on the intrinsic capacity of individuals but also on the social and physical environments in which they live. Supportive environments can help older persons to remain active and independent as they age.

Virtually all people aspire to live longer lives. Some may wonder whether the extra years of life will be spent in good health or consumed by disease and disability. For individuals, deteriorating health at older ages raises concerns about living independently and securing needed care and support. From a collective perspective, societies need to adapt to increasing longevity by adjusting labour markets, social security and health-care systems, and other institutions.

The United Nations has recognized that older persons have a right to supportive environments to enjoy healthy lives and fully participate in and contribute to their families, communities and broader societies. To advance action along these lines, Member States of WHO and the United Nations proclaimed 2021-2030 to be the United Nations Decade of Healthy Ageing. The Decade builds on previous international agreements, including the 2002 Madrid International Plan of Action on Ageing and programmes such as the 2016-2020 WHO Global Strategy and Action Plan on Ageing and Health.

A.

A LONGER LIFESPAN IS A SUCCESS STORY

Around the world, populations have shifted from high to low mortality rates as part of a larger process known as the demographic transition. Despite differences in the timing and pace of this shift, the average length of life, or life expectancy at birth, has increased progressively in nearly all countries and globally. Declining mortality accompanies a change in the distribution of deaths from younger to older ages.

Figure 2.1 illustrates this pattern with historical data from Denmark from 1835 to the present. In the nineteenth century, a large share of deaths occurred among children and young adults, with a secondary concentration among people ranging in age from 60 to 80 years, approximately. Over time, infant and child mortality declined due to preventive health measures, better treatment of infectious diseases, and improvements in maternal and child health care.

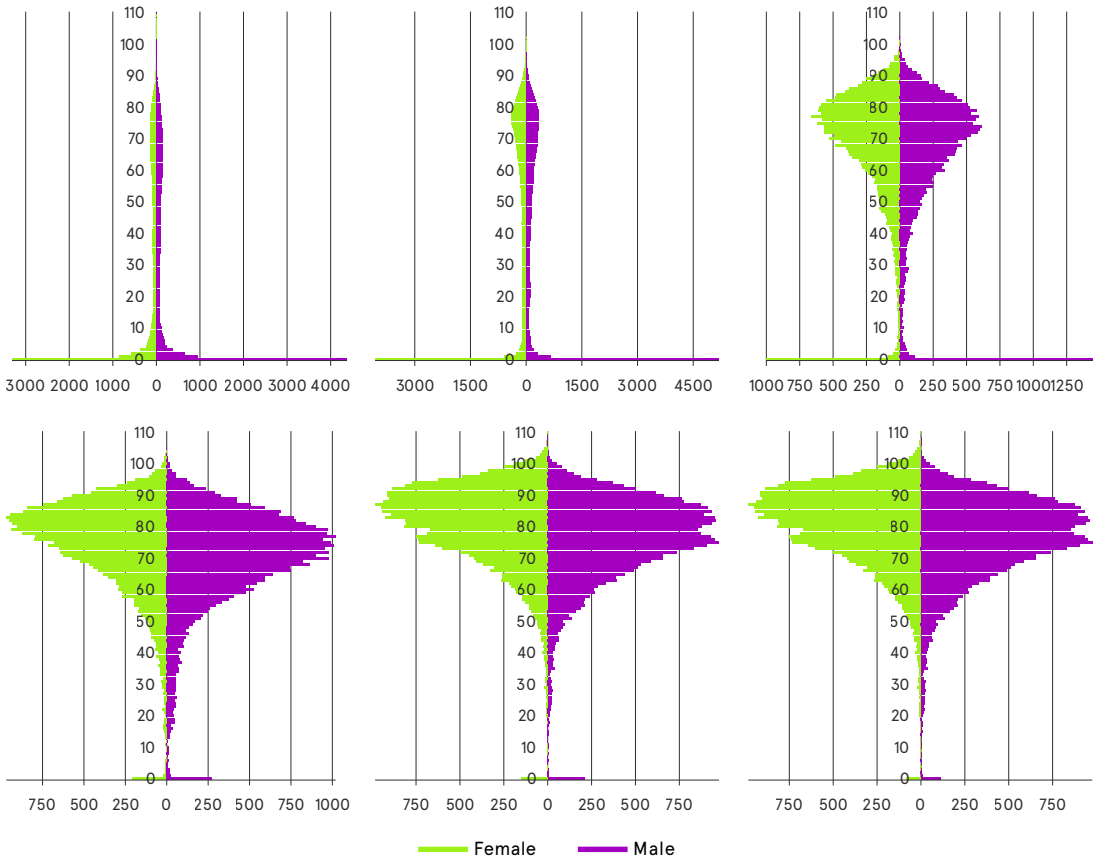
Deaths in Denmark started to tilt towards adult ages in the early twentieth century, reflecting a decline in the number of premature deaths among both men and women. This shift intensified by the middle of the century, at which point there were very few deaths below age 30 and a large and increasing concentration among older adults, especially octogenarians, nonagenarians and centenarians.

Such trends have unfolded now in countries in all world regions. A summary expression for the growing proportion of deaths within a short age interval is the "compression" of mortality (Wilmoth and Horiuchi, 1999; Kannisto, 2000; Robine, 2021). This term describes the clustering of deaths around the most frequent or modal age at death. A higher modal age indicates a shift towards more advanced ages at death (or mortality delay) and an increase in average lifespan. Recent rises

in external causes of death,[10] however, have halted this compression, slowed the rise in life expectancy and increased the variability of ages at death for several countries in Europe and Northern America (Beltrán-Sánchez, Finch and Crimmins, 2015).

In the early twentieth century, increasing life expectancy in the more developed regions arose mostly from decreased mortality among infants and young children (Thatcher and others, 2010). More recently, mortality decline at older adult ages has become a major driver of rising life expectancy in countries with already low levels of mortality. Indeed, since the early 1990s, more than two thirds of the average gain in life expectancy in low-mortality countries has come from extended years of life among those aged 60 or older. In countries with higher levels of mortality, recent increases in life expectancy have mostly resulted from reduced mortality at younger ages.[11]

Figure 2.1 **Number of deaths by sex and age in Denmark, 1835-2020**



Source: Robine (2021), based on data from the Human Mortality Database. Available at www.mortality.org/.

10 External causes of death include intentional and unintentional injury, poisoning (including drug overdose), and complications from medical or surgical care (WHO, 2022b).

11 High-mortality countries refer to those where life expectancy at birth was below age 60 from 1990 to 1995; low-mortality countries had a life expectancy at birth of age 75 or higher in the same period.

Globally, a baby born in 2021 could expect to live on average almost 25 years more than a newborn from 1950 (for a discussion of the impact of the COVID-19 pandemic, see box 2.1).[12]

Globally, a baby born in 2021 could expect to live on average almost 25 years more than a newborn from 1950

While all regions have experienced rising life expectancy, the greatest gains have been in Eastern and South-Eastern Asia, where improvements in survival have added nearly 34 years to the average length of life. In 2021, people in that region could expect to live 76.5 years compared to just 43 years in 1950. Unsurprisingly, high-income countries and areas in Asia and the Pacific and in Europe feature at the top of life expectancies globally. Middle-income countries follow suit with multiple countries in Latin America and the Caribbean having also attained a life expectancy of 80 or more years. Most low-income countries, although subject to higher mortality rates, are also seeing significant gains in life expectancy (United Nations, 2022a).

12 These values reflect "period" life expectancy, which shows the average age to which a newborn would live if current death rates continued during their entire life. The estimates do not predict actual lifespans.

BOX 2.1

COVID-19 HAS DISRUPTED STEADY GAINS IN GLOBAL LIFE EXPECTANCY

Global life expectancy at birth fell to an estimated 71 years in 2021, down from 72.8 in 2019, due mostly to the COVID-19 pandemic. Some countries saw greater declines than others. In Central and Southern Asia and Latin America and the Caribbean, life expectancy fell by almost three years on average between 2019 and 2021. As with many causes of death, COVID-19 took many more lives among older people than younger ones. Older people have a greater risk of serious illness and higher case fatality rates.[13]

Environmental and social factors account for substantial variation across countries in old-age COVID-19 mortality. Such factors include the prevalence of comorbidities, the presence of robust old-age social protection systems and the capacity of health systems to protect those at increased risk.

The living arrangements of older persons in congregate settings emerged as a factor increasing the risk of contracting and dying from COVID-19 by heightening the efficiency of transmission (Comas-Herrera and others, 2020).

Based on the latest available estimates of the effect of the pandemic on mortality, global life expectancy at age 65 fell by 1.2 years between 2019 and 2021, representing more than 71 per cent of the total decline in life expectancy at birth. Outside Australia and New Zealand, all regions of the world experienced a drop-off in the average number of years a 65-year-old person could expect to live. This was sharpest in Central and Southern Asia (–2.3 years) and Latin America and the Caribbean (–1.5 years) (United Nations, 2022a, 2022b).

13 The case fatality rate refers to the share of people who died from COVID-19 among all persons infected with the virus during a certain period.

B.

WOMEN HAVE A SURVIVAL ADVANTAGE – BUT IT MAY NOT LAST

Women live longer, on average, than men. A female survival advantage exists in nearly all populations with available data, both past and present (table 2.1) (United Nations, 2020b). Historical data suggest that the sex gap may have been no more than two or three years in pre-industrial populations (Beltrán-Sánchez, Finch and Crimmins, 2015). In more recent times, however, the gap has widened, especially where mortality levels are relatively low. In 1950, women could expect to live almost four years more than men globally. In 2021, although both men and women could anticipate living longer than in 1950, the difference between the two had increased to more than five years. Global life expectancy at birth is projected to increase further for both women and men, reaching 80 years for women and 75 years for men by 2050.

Table 2.1 **Life expectancy at birth by sex, world, regions and income groups, 1950, 2021 and 2050**

	1950		2021		2050	
REGION	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
World	48.4	44.6	73.8	68.4	79.8	74.8
Sub-Saharan Africa	38.7	36.2	61.6	57.8	69.1	64.3
Northern Africa and Western Asia	43.4	39.8	74.8	69.7	80.8	76.0
Central and Southern Asia	40.2	41.5	69.6	65.9	79.4	74.9
Eastern and South-Eastern Asia	45.6	40.3	79.6	73.6	84.1	79.4
Latin America and the Caribbean	50.8	46.5	75.8	68.8	83.1	78.1
Australia/New Zealand	71.6	66.7	85.6	82.7	88.6	85.4
Oceania (excluding Australia and New Zealand)	43.9	40.3	70.1	64.6	74.9	68.4
Europe and Northern America	66.6	61.2	80.4	73.9	86.1	81.6
World Bank income groups						
High-income countries	65.0	58.2	83.1	77.5	87.6	83.4
Middle-income countries	44.9	42.2	72.7	67.6	79.6	74.8
Low-income countries	35.1	28.6	65.0	60.0	71.6	66.0

Source: United Nations (2022a).

Changes in the sex gap in life expectancy closely relate to shifting disease patterns. From the late nineteenth century until the early twenty-first century, an increasing share of deaths came from chronic and degenerative diseases and conditions. For several decades, cardiovascular disease has been the leading cause of death in most low-mortality countries. While the sex difference for some causes of death is small (for example, most infectious diseases and cancers), the male disadvantage is relatively large for cardiovascular ailments. Over the next few decades, continuing reductions in morbidity and mortality from cardiovascular disease may bring a gradual reduction in the life expectancy gap between men and women, at least for low-mortality countries (Crimmins and others, 2019).

Although girls and women tend to experience lower mortality rates across the age range, the female advantage in survival is most noticeable at older ages. Older women have lower cumulative exposures than men to lifestyle risk factors such as tobacco and alcohol use, along with differences in diets, occupational hazards, environmental exposures and use of health care. Men are more likely to die from cancer, cardiovascular disease and other ailments associated with exposure to lifestyle risks, particularly after age 65. Women often experience higher rates of chronic conditions, such as arthritis, osteoporosis and depression, which may be debilitating and diminish the quality of life but are less likely to result in death (Carmel, 2019; OECD, 2021a; United Nations, 2020c).

With men and women experiencing somewhat different health problems, one sex cannot be characterized as enjoying better health. Much depends on historical time, geographic location and individual behaviours (Crimmins and others, 2019).

C.

MANY FACTORS DETERMINE HEALTHY AGEING

As with mortality risks, the health status of older people diverges considerably. Different experiences of illness and disability reflect diversity among individuals in genetics, life histories, environmental exposures, personal behaviours and access to health care, as well as random variation.

Ongoing examination has probed the relationship between the "quantity" and "quality" of life. The WHO defines healthy ageing as "the process of developing and maintaining the functional ability that enables wellbeing in older age" (WHO, 2020a, p. 8). Functional ability depends on having the capabilities "that enable people to meet their basic needs, learn, grow and make decisions, be mobile, build and maintain relationships, and contribute to society" (ibid., p. 11). Several factors influence functional ability, such as the presence and severity of disease or injury (morbidity) and age-related physiological changes (biological ageing or senescence), which affect a person's intrinsic capacity. In addition, the physical, social and eco-

nomic environments in which people live can promote or hinder healthy ageing.[14]

Although healthy ageing centres on the health status and needs of older people, the term refers to a process that spans the life course. Changes conducive to increased longevity and greater well-being at older ages may occur early in life. Better nutrition in childhood, improved access to health care throughout life, reduced exposure to hazardous working conditions and favourable behavioural changes in terms of smoking, diets or physical activity can all contribute to healthier older lives (Crimmins and others, 2019). Risks of specific morbidities and mortality vary widely across individuals of the same age. This dynamic process across the life course produces great heterogeneity in the patterns and trajectories of both intrinsic capacities and functional abilities among older people (WHO, 2015, 2020).

Many indicators can assess the average number of years that a person can expect to live in good health, including disability-free life expectancy, health-adjusted life expectancy, chronic disease-free life expectancy, life expectancy in good perceived health and cognitive-impairment-free life expectancy. An assessment of health status and an estimation of expected years lived in good or poor health can vary by indicator.

Changes conducive to increased longevity and greater well-being at older ages may occur early in life

D.

LONGER LIVES ARE NOT ALWAYS HEALTHY, ESPECIALLY FOR WOMEN

Healthy life expectancy is analogous to life expectancy but adds a quality dimension to the quantity of life. It offers a summary measure of how many remaining years are expected to be lived in good health, free of disease or disability. A specific measure of healthy life expectancy is disability-free life expectancy. Whether disability-free life expectancy increases in proportion to total life expectancy is a question of debate.

A recent analysis of selected countries in Asia, Western Europe and Northern America found that increased life expectancy in recent decades was accompanied by a proportional increase in disability-free life expectancy, with the number of years lived without disability as a share of total life expectancy remaining fairly constant. The study concluded that all life spans are increasing, meaning that life expectancy without disability as well as life expectancy with disability are increasing in roughly the same proportion. The implication is that "while on the one hand, an increase in life expectancy in good functional health should be welcome, there should also be concerns about the increase in the number of years lived with disabilities" (Robine, 2021, p. 12).

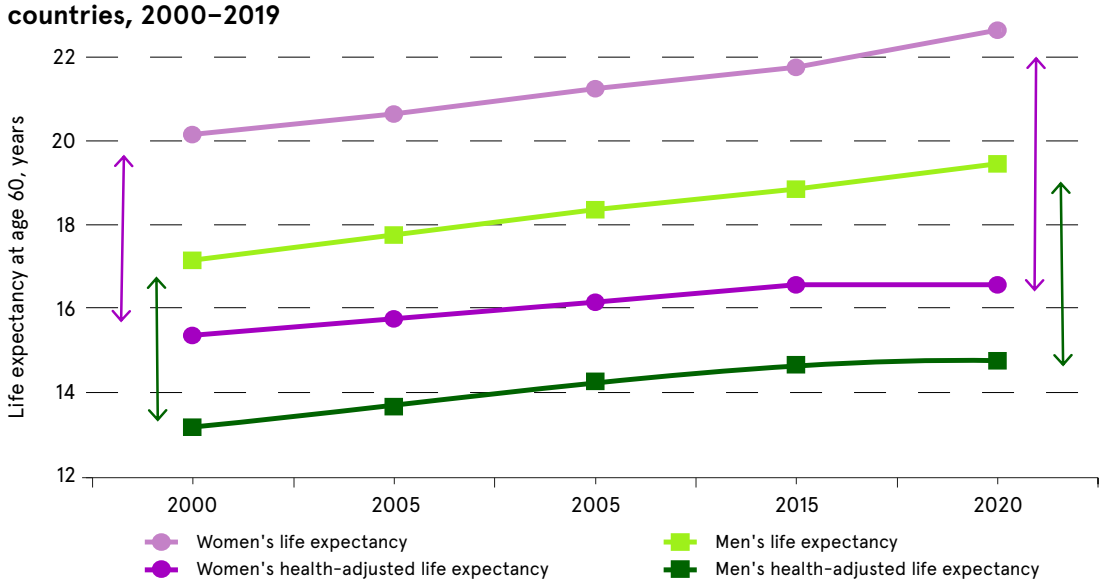
14 Environments include the home, community and broader society, and all the factors within them, such as the built environment, people and their relationships, attitudes and values, health and social policies, the systems that support them and the services that they implement (WHO, 2020b, p. 10).

There is less evidence about levels and trends of healthy life expectancy for other parts of the world, including sub-Saharan Africa, Eastern Europe, Latin America, Northern Africa and the Middle East, and Southern Asia. In India, older people (aged 60 or over) experienced both an increase in life expectancy and in life expectancy without mobility limitations between 1995 and 2004 (Sreerupa and others, 2018). A relative compression of disability (i.e., the reduced proportion of remaining life with mobility limitations) took place among older men in rural areas compared to a relative expansion of disability (increased proportion) among older women in urban areas. In South Africa, healthy life expectancy based on self-rated health at ages 50 and above increased more than life expectancy from 2005 to 2012 (Chirinda and others, 2018). In São Paulo, Brazil, disability-free life expectancy at age 60 fell sharply between 2000 and 2010 while life expectancy kept increasing (Campolina and others, 2014). Life expectancy free of cognitive impairment at age 60, both the observed value in years and as a proportion of total life expectancy, increased from 2003 to 2016 in Chile (Moreno and others, 2019).

More systematic and comparable data to assess a population's health status come from measures of health-adjusted life expectancy commonly used by WHO since the early 1990s. Health-adjusted life expectancy is the number of years that a person is expected to live in good health plus fractions of years lived with some form of disease, injury or disability (WHO, 2020c). According to the latest estimates, between 2000 and 2019, global life expectancy at birth increased by six years, from 67 to 74 years.[15] Healthy life expectancy also increased by six years, from 58 to 64 years.

Figure 2.2

Life expectancy and health-adjusted life expectancy at age 60, by sex, selected countries, 2000–2019



Source: WHO (2020c).

Note: Estimates for 183 countries with available data.

15 Slight differences exist between estimates from WHO and the 2022 revision of the *World Population Prospects*.

Figure 2.2 presents life expectancy and health-adjusted life expectancy at age 60 between 2000 and 2019. The difference between the two indicates the number of years lived with a given disease burden or disability. On average, life expectancy at age 60 increased faster than health-adjusted life expectancy for both men and women. In 2000, the gap for men was 4.1 years; for women, it was 5.3 years. By 2019, the gap had increased to 4.7 years for men and 6.0 years for women. Globally, the proportion of time spent in ill-health has slightly increased at birth and at age 60. These averages, however, mask significant variation within and across countries (WHO, 2020b).

Surveys based on self-reported disabilities often find that older women are more likely than older men to indicate that they are disabled. Disability in this context refers to an inability to perform certain activities of daily living, such as walking across a room, feeding oneself or using toilet facilities without assistance. This gap may indicate women's greater propensity to report health problems. Yet researchers have confirmed the higher prevalence of disability among older women through direct physical measurements. Overall, the available evidence supports the conclusion that the sex gap in disability at older ages is real, with women having a noticeable disadvantage (Crimmins and others, 2019).

E.

DISPARITIES IN HEALTH AND LIFE EXPECTANCY INTERSECT WITH MULTIPLE INEQUALITIES

While all regions of the world have seen substantial improvements in life expectancy, the risk of death differs from one person to another, depending on access to health care and socioeconomic status, among many factors. Increased inequality may emerge due to declining life expectancy among lower socioeconomic groups even as it continues to rise in higher socioeconomic groups.

Cost and other barriers can lead to disparities in access to and use of health care, adoption of technological innovations in medicine and preventive health behaviours. Those with higher socioeconomic standing have greater access to resources, including better and earlier medical care to avoid disease or minimize its impact. Wider societal, economic, environmental and cultural conditions influence some risk factors associated with many diseases affecting older persons. These dynamics can result in social stratification and lead to inequalities in health and ultimately life expectancy.

Recent increases in the inequality of life expectancy within a number of developed countries has coincided with widening gaps between the wealthiest and the poorest members of the population. For example, in the United States and Denmark, life expectancy has been stagnant or

even declined among low-income groups while the wealthiest continue to show gains (Kinge and others, 2019; Dahl and others, 2021). Inequalities in life expectancy associated with income levels are not uniform among men and women, however. In Sweden, the gap in life expectancy at age 65 for men from the highest and lowest income quartiles increased from 3.4 to 4.5 years between 2005 and 2016. For women the gap grew from 2.3 to 3.4 years (Fors, Wastesson and Morin, 2021).

Recent increases in inequality in life expectancy in some developed countries have coincided with widening gaps between the rich and the poor

A study of 15 European countries using level of education as a measure of socioeconomic status found the most educated consistently living longer than those with lower education (Mackenbach and others, 2019). The results varied among countries, with a 2.1-year difference between men in Spain with the highest and lowest levels of education and a more than 8-year difference between these two groups in Lithuania. The gaps were smaller for women but still persistent. Women in Spain had a 0.6-year difference in life expectancy between low- and high-income groups, while women in Lithuania saw a gap of more than 4 years.

Significant racial inequalities in life expectancy persist in the United States, partly attributable to racial differences in education and income. In some cases, these gaps have narrowed. For example, between 1980 and 2018, college-educated adults lived three more years, on average, between ages 25 and 75 than those without a degree (Case and Deaton, 2021). This educational divide was present for college-educated Black and White people alike. Over this period, the racial divide in expected years of life narrowed by 70 per cent for those with or without a college degree, while the educational divide in average longevity doubled for both White and Black people.

Risk factors explain much of the inequality in life expectancy by income and education. Behavioural risks (smoking, alcohol consumption, being overweight, physical inactivity) are key channels for socioeconomic status to impact lifespan (Al Snih and others, 2007; Tian and others, 2011). For instance, smoking prevalence and obesity have fallen much faster among well-educated and higher-income Americans than among those with lower socioeconomic status (Bor, Cohen and Galea, 2017).

Socioeconomic status has largely determined the unequal impacts of COVID-19 infection and disparities in mortality rates (box 2.1). Lower-status groups were less likely to work from home and more likely to face infection (Mena and others, 2021), even as they had more limited access to health care. Further, risk factors or comorbidities that increased COVID-19 mortality and morbidity (cardiovascular disease, diabetes, heart diseases and obesity, among others) are higher among lower socioeconomic groups.

In the United States, during the pandemic, ethnic and racial disparities in hospital

outcomes for Medicare beneficiaries aged 65 years and older included higher death rates (Song and others, 2021). People in counties with low socioeconomic status had higher rates of both COVID-19 cases and fatalities than those in counties with higher socioeconomic status (Hawkins, Charles and Mehaffey, 2020).

F.

PREMATURE DEATHS HAVE DECLINED BUT THE FUTURE IS UNCERTAIN

The COVID-19 pandemic reversed many recent gains in health and well-being. Global life expectancy at birth was lower in 2021 by 1.7 years compared to 2019. Eight years from now, however, when the 2030 Agenda for Sustainable Development and the Decade of Healthy Ageing come to an end, it is expected that life expectancy at birth will have recovered worldwide.[16] At that point, average longevity is projected to be 82 years in the more developed regions and 73 years in the less developed ones. By then, life expectancy at age 65 is predicted to reach 21 and 17 years in the more and less developed regions, respectively, and the share of people aged 65 years or more will have risen globally from 10 to 12 per cent.

More and more people are surviving at younger ages and therefore dying at older ages. While few studies examine developing countries with high and intermediate levels of mortality, those countries may follow paths of mortality decline similar to those in the more developed countries. Many developing nations, however, are still struggling to prevent premature deaths from communicable and non-communicable diseases, including neonatal conditions, lower respiratory infections and diseases of the circulatory system (Gouda and others, 2019). Given this situation, and considering the global impacts of the COVID-19 pandemic on trends and patterns of morbidity and mortality, future trends are uncertain at least in the short term.

While all regions have seen substantial increases in life expectancy, striking inequalities persist both among and within countries. These are tied to income, education, race and other factors and to differences in living arrangements. They in part determine the health of individuals across the life course as well as their risk of dying. Disparities in life expectancy also arise from unequal access to affordable, quality health care.

While there is little doubt about the long-term trend towards longer lives, the relationship between longevity and health at older ages has varied over time and across countries. Although the length of a healthy life, or at least the number of years lived without severe disability, has increased in many places, it remains unclear if longer

16 In 2021, life expectancies globally were affected by the impact of the COVID-19 pandemic on death rates, particularly among older persons. For the projection period, all countries are assumed to catch up with their pre-COVID-19 pandemic levels and trends in life expectancy at birth between 2022 and 2025, depending on their mortality experience in 2020 and 2021 and their adult COVID-19 vaccination coverage in early 2022. Such recovery can be considered a reasonable assumption in a context of uncertainty about the implications of the pandemic over the short and medium term in different regions (United Nations, 2022b, 2022c).

lives go hand-in-hand with healthier ones in all situations. The answer depends on a population's health profile, the time period considered and the specific measure used to evaluate health status. A central goal of the Decade of Healthy Ageing is to ensure that growing populations of older persons enjoy additional years of good health. Disease prevention, access to health care over the life course, and supportive and enabling environments all play key roles in achieving this objective.

CHAPTER 3

WHAT POPULATION AGEING MEANS FOR ECONOMIES AND INTERGENERATIONAL EQUITY

KEY MESSAGES

- Changes in population age structure unfold at different times and speeds. The impact of ageing on the economy depends on where countries are in their demographic transition as well as their economic structure and level of social development, including education and human capital formation.
- The young and the old consume, on average, more than they produce through formal labour. Families, markets and governments mediate the reallocation of economic resources from one age group to another to smooth consumption over the life course. An ageing population calls for the continuous adaptation of channels for redistribution.
- Ageing societies may face fiscal challenges due to rising health-care, long-term care, retirement and other old-age support costs, combined with a potential reduction in government revenue from fewer working-age taxpayers. Addressing these issues starts with making ageing integral to economic development and ensuring that older people can use their expertise and skills in ways that benefit them and the broader economy.
- Women's labour force participation rate remains below that of men in every age group, reflecting gender gaps in education and the predominant share of women in unpaid work, among other concerns. Such patterns mean that women generally receive lower pension benefits in most countries. Pension systems need to be transformed to help reduce gender gaps and protect women's income security in old age.
- In all societies, policymakers must support the reconciliation of conflicting work and family demands through effective and equitable social and economic policies.

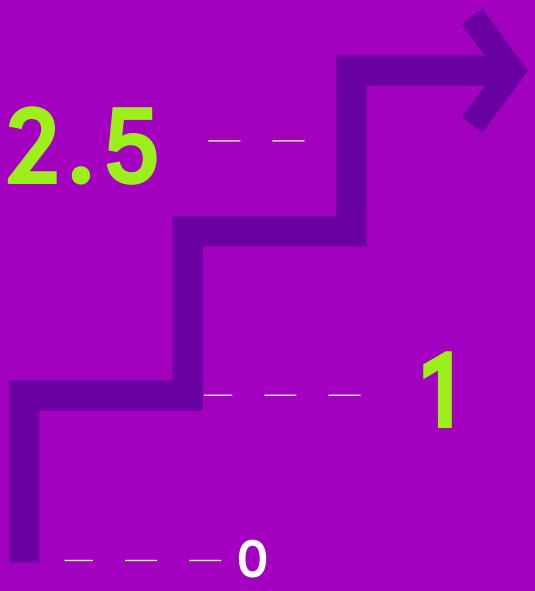
FACTS FROM CHAPTER 3

THE SHIFT IN THE AGE STRUCTURE OF A POPULATION CAN RESULT IN DEMOGRAPHIC DIVIDENDS THAT CAN CONTRIBUTE BETWEEN

1 AND 2.5

PER CENT

OF ANNUAL GROWTH IN GDP PER CAPITA



2015

the life cycle deficit, or unmet resource needs of all older persons worldwide

was estimated at

11.5

PER CENT

of the total labour income

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Population ageing has profound impacts on the economy depending on where countries are in their demographic transition. It poses challenges but also opens opportunities

As more countries move from high to low fertility and mortality levels, the global population is undergoing major changes in age distribution. This shift is unfolding at different times and speeds across countries and regions, producing ageing at intermediate and advanced stages.

The young (aged 0 to 19) and, in most societies, the old (aged 65 or older) consume, on average, more than they produce through their labour. Most working-age people (aged 20 to 64), by contrast, consume less than they produce through their own labour. Families, markets and governments support this pattern of income and consumption over the life course by mediating the reallocation of economic resources from one age group to another. For older people, intergenerational reallocations can arise from their individual accumulation of wealth, including savings or other financial capital and property or physical capital. Other reallocations come from private transfers, such as between family members, and public transfers, including through government programmes.

Public systems for intergenerational transfers are based on the prevailing social contract. Children, young people and older persons receive education, health care, pensions and other support from the working-age population, which benefitted from such support from earlier generations when it was young and can expect the same from future generations when it grows old. Older people often continue to contribute to the economy and society through various forms of formal and informal work, including childcare, volunteerism and part-time employment as well as productive investment. Within families, older persons may make net transfers to their children.

In 2015, the life cycle deficit, or unmet resource needs of all older persons worldwide, was estimated at 11.5 per cent of the total labour income of all those who work, irrespective of their age, on average, based on a sample of 119 countries (Mason and Lee, 2018). This deficit, which is larger in high-income than low-income countries, needs to be financed through either public or private transfers.

Countries significantly diverge in how they finance the deficit. Most rely on some combination of public transfers, asset-based reallocations (net asset income or spending down of savings) and private or family transfers. This combination and overall available resources determine the financial impact of ageing on a society and the potential policy responses. In many low- and middle-income countries, older persons depend heavily on asset-based reallocations and to a smaller extent on public transfers. Family transfers play a significant

but comparatively smaller role in many countries. Net private/family transfers to the older population tend to be negative; older persons generally transfer more to their children and grandchildren than what they receive from them.

Rapid population ageing may escalate needs for health care, long-term care and pension expenditures at a time when a growing share of older people may constrict the productive capacity of the economy (IMF, 2019). This can translate into impacts on public finances, requiring mitigation through effective and equitable strategies. Significant population ageing may require reforming economic and social protection structures, public finances, and public and private pension schemes, bearing in mind that the effects of ageing on the economy and public finances are not inevitable. Much depends on policy choices.

The effects of ageing on the economy and public finances are not inevitable. Much depends on policy choices

How countries measure population ageing is continuously evolving as people live longer and healthier lives. Chronological ageing or the share of people aged 65 years and older has traditionally informed fiscal and social planning as a summary statistic indicating the scale of economic, social security and health needs among older persons. Older people are not a homogenous group, however. While chronological age is a valuable measure of ageing, it is also important to examine how different age groups compare in terms of economic productivity, health, functional abilities and/or biological age, as these attributes may more directly capture socioeconomic and health requirements. Current measures of labour force participation similarly do not adequately reflect the significant role that older people play in the informal economy, underlining the need to develop more accurate measures of the economic contribution of older people.

This chapter examines how countries can navigate the economic challenges and opportunities of ageing. This includes assessing key labour market variables, such as the size and composition of the working-age population and the labour force participation rate, given their impact on overall productive capacity. The chapter also considers core strategies to harness the opportunities of ageing and ensure its positive contribution to the economy and society more broadly.

A.

AGEING OPENS DOORS AND POSES CHALLENGES

The multiple economic impacts from population ageing require careful navigation through appropriate policy responses tailored to different stages of demographic transition. Dimensions to consider include demographic dividends, the productive capacity of the economy, consumption patterns, financing consumption and achieving sustainable economic growth.

1. TWO DEMOGRAPHIC DIVIDENDS CAN DRIVE GREATER GROWTH

The shift in the age structure of a population can result in two demographic dividends that at their height can contribute between 1 and 2.5 per cent of annual growth in GDP per capita (Mason and others, 2017). A first demographic dividend can take place when declines in both fertility and mortality rates result in an increasing share of the working-age population. Having fewer dependents and more workers frees resources for consumption or investment in accelerated economic and social development. During the first dividend period, the ratio of effective producers to effective consumers in the economy is rising. This period can be quite long, often lasting five decades or more (figure 3.1). But eventually, lower fertility reduces the growth of the labour force even as longer life spans accelerate the growth of the older population. As a result, increases in per capita income start to slow.

The first demographic dividend can have a lasting impact on economic growth if gains in per capita income are used to increase human capital through investment in health and education, to accumulate physical capital, to support technological innovation and to strengthen growth-inducing institutions. Realizing the first demographic dividend also depends on the ability of labour markets to absorb and provide decent jobs for the rapidly growing working-age population.

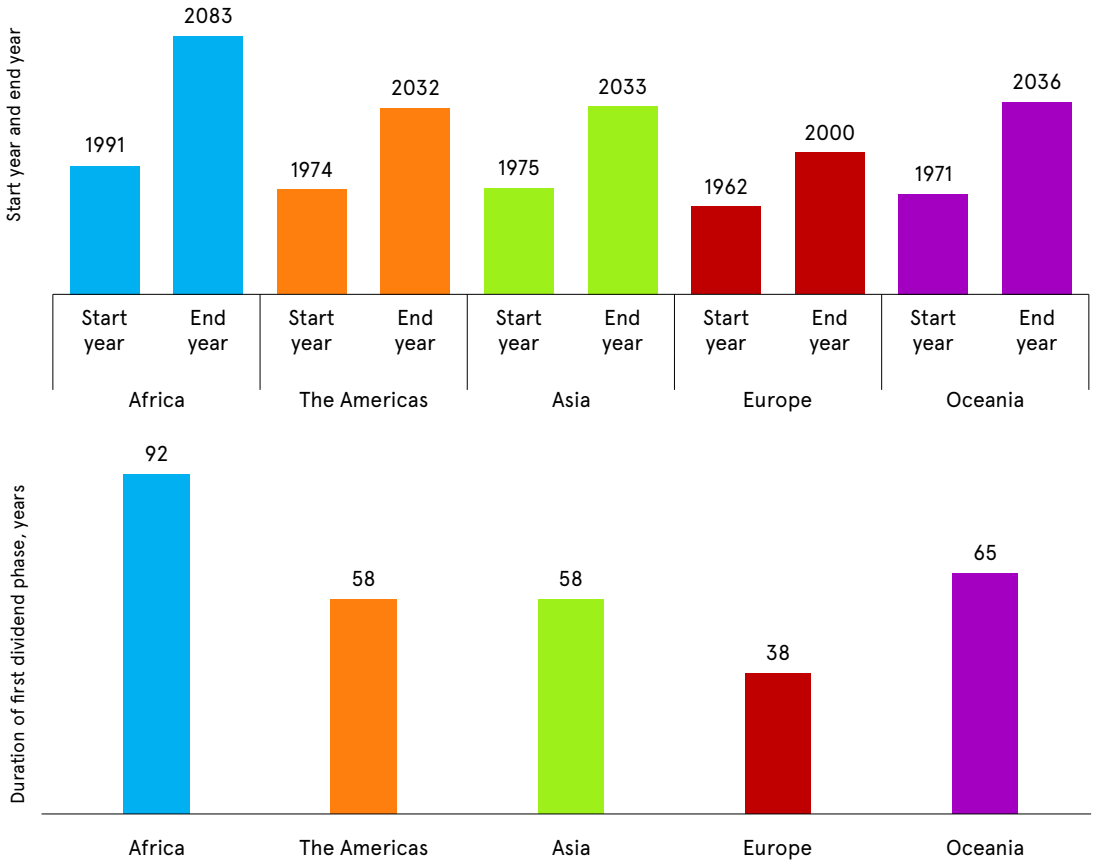
A second dividend may occur later in the demographic transition, driven by the increased capital intensity of the economy and the savings of working-age individuals for retirement. A population concentrated at older working ages and facing an extended period of retirement has a powerful incentive to accumulate assets, unless people are confident that families or governments will provide for their needs. The rise in savings among people at older working ages can support greater human and physical capital accumulation, increased productivity and higher national income, and stimulate further economic growth. Raising the ratio of capital to labour makes labour more productive, a "capital deepening" that drives the second dividend. This period remains as long as savings generated in the economy are invested productively in human, physical and environmental capital.

The timing and duration of the first demographic dividend has varied considerably across regions (figure 3.1). In the Americas, Asia and Oceania, it likely started in the 1970s, with an end predicted in the 2030s. Ageing in Europe started earlier with the first demographic dividend phase estimated to have concluded around 2000. In Africa, the demographic dividend phase likely started in the early 1990s but may last much longer than in other regions, ending only in the early 2080s (Mason and others, 2017).[17]

17 The United Nations Department of Economic and Social Affairs has published the *National Transfer Accounts Manual: Measuring and Analysing the Generational Economy*. This methodology provides a link between population trends and economics. Its foundation is a life course analysis of income and consumption for 60 countries and territories that make up a large part of both the global population and GDP. Participants in the National Transfer Accounts project have extended the estimates and analyses to another 106 countries, bringing the total to 166.

Figure 3.1

Years marking the beginning and end of the demographic dividend (upper panel) and average duration of the first demographic dividend (lower panel), both by region



Source: Mason and others (2017).

2. AGEING HAS AN IMPACT ON PRODUCTIVE CAPACITY

The changing size and composition of the working-age population and labour force are key factors in the impact of population ageing on productive capacity. In any economy, productive capacity drives growth and structural economic transformation. Such capacity encompasses the diverse competencies, resources, skills, infrastructure, technological capabilities, institutions and knowledge systems that a country needs to produce and deliver progressively more sophisticated goods and services in an efficient and competitive manner (UNCTAD, 2021).

Economic activity varies by the age structure of a population. As it shifts to older ages, the proportion of workers (net producers) first increases and then declines while the share of older persons (net consumers) rises. This compositional change can reduce aggregate economic output unless sufficient increased productivity, brought about by investment in human and physical capital, offsets the effects of a shrinking labour force.

A. *SIZE AND COMPOSITION OF THE WORKING-AGE POPULATION*

An expanding working-age population provides opportunities for faster economic growth. It also poses challenges for job creation due to the increasing number of people entering the labour market. By contrast, a shrinking working-age population can slow economic growth, reduce competitiveness and increase the old-age dependency ratio. If a society is to maintain or raise its standard of living, the working-age population must produce enough to provide for its own material needs while funding public and private transfers to children and older persons and saving for retirement.

In numbers, the global working-age population is expected to grow from 4.5 billion people in 2021 to 5.4 billion in 2050. As a share of the global population, however, it is projected to decline from 57 to 56 per cent. This relatively modest aggregate change averages out greater shifts in some regions, particularly Africa, with a projected doubling in the number of working-age people from 639 million in 2021 to 1.3 billion in 2050.

The working-age population is also growing older, which may further reduce productive capacity, especially in countries relying heavily on manual labour. The number of older working-age people (55 to 64 years) is projected to increase from 723 million in 2021 to 1,075 million in 2050 and to 1,218 million by 2100. Africa is expected to account for two thirds of the projected global increase in older workers from now until the end of the century. The number of older workers in Africa is projected to rise from 63 million in 2021 (9 per cent of the world population aged 55 to 64) to 160 million in 2050 (15 per cent) and 432 million in 2100 (35 per cent).

B. *SIZE OF THE LABOUR FORCE*

A decline in the working-age population can affect aggregate output and income in an economy unless it is countered by higher labour force participation rates. The labour force participation rate, as defined by the International Labour Organization (ILO), is the percentage of the working-age population 16 years or older that is employed or actively looking for work.[18] It does not include those employed in the informal sector, however. The global labour force participation rate in 2019 was 60.7 per cent: 74 per cent for men and 47 per cent for women (ILO, 2020).

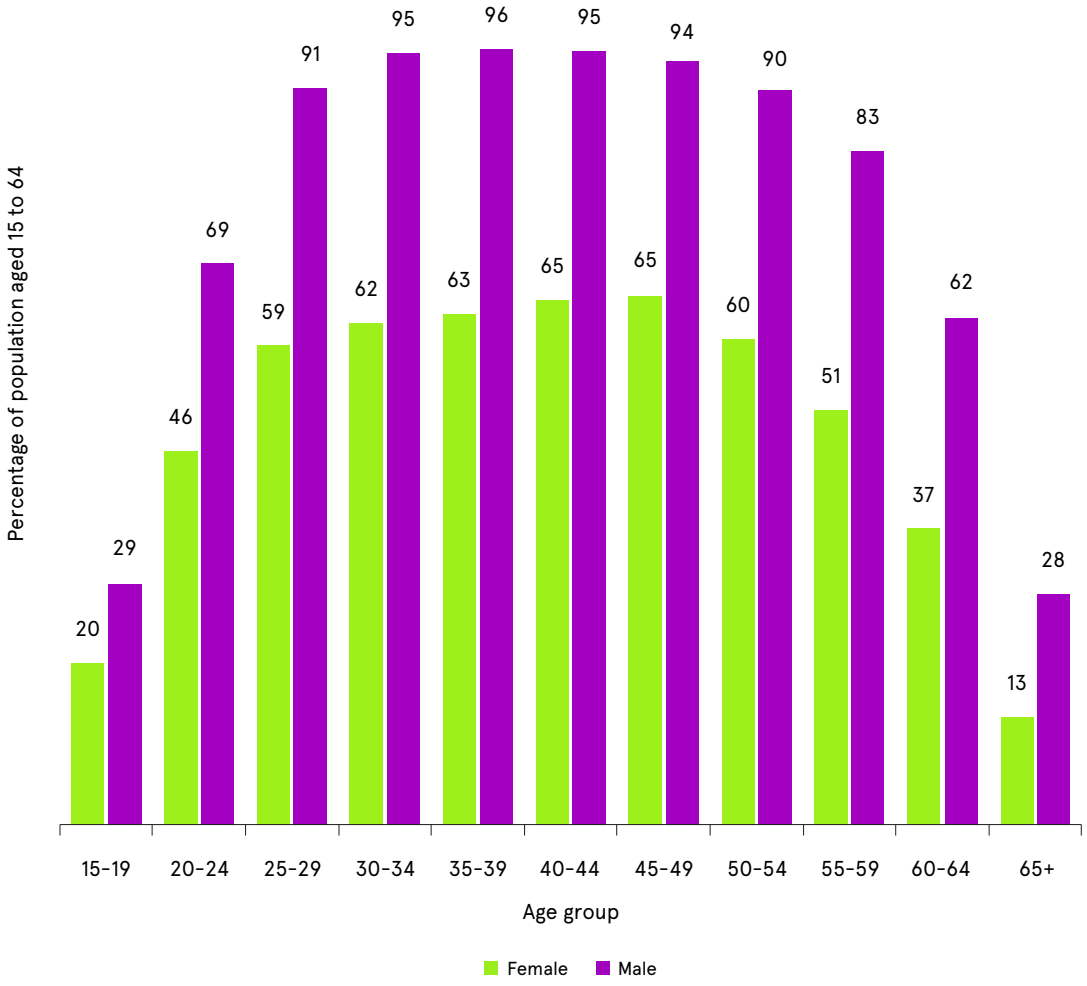
The labour force participation rate generally declines with age, which reduces per capita and even aggregate output and income. Since 1990, the global labour force participation rate has trended downward partly due to the ageing of the working-age population, a direction projected to continue until at least 2030 (ILO, 2018a). This should be of concern especially in regions where the working-age population is shrinking, for reasons that include the higher price of labour expected with a declining labour force. Further, in developing countries, where most older persons work informally in agriculture, a structural economic transformation resulting in a shift

18 The United Nations Population Division defines the working-age population as individuals aged 20 to 64 years. The ILO defines the labour force participation rate, however, as the percentage of the working-age population that is 16 years or older that is employed or actively looking for work. This means that the two indicators are not fully comparable.

of employment away from this sector has caused many to lose their jobs. Changes in Asia, which accounts for over half the world's population, have driven the declining global labour force participation rate.

The global labour force participation rates of men and women diverge by some 30 percentage points, on average, for persons aged 20 to 64 (figure 3.2). While the global labour force participation rate of women aged 30 to 54 is 60 per cent or higher, it is 51 per cent for those aged 55 to 59. This may reflect an earlier retirement age for women in some countries and other factors such as greater expectations that women will care for older family members. Many gender-based patterns and norms constrain the ability of women to participate in the formal labour force. A large proportion of the work that women do is informal and/or unremunerated care work that goes unrecognized by current labour measures.

Figure 3.2 **Global labour force participation rate by age and sex, 2019**



Source: Calculations based on ILO (2020).

Several factors underlie declining labour force participation among older workers over time: poor working conditions, ill health, low job satisfaction, labour market rigidities and the overall ageing of the working-age population. In addition, the institutional arrangements of pensions systems may reduce incentives for older workers to remain on the job. In many developed countries, for example, some workers choose to retire early, prior to the official or statutory retirement age (usually at age 65, although increasingly at older ages). For them, generous early pension benefits make the choice of work over leisure unattractive. Cultural norms and discrimination against older workers, including when it comes to recruitment, retention and retraining, may also help explain early retirement in some countries.

While encouraging older persons to work longer is important, there should always be an option to retire and live with basic income security above a certain age

Worldwide, an estimated three out of four older people work in the informal sector, which is not reflected in the global labour force participation rate. In 2019, Asia's labour force participation rate was the lowest of all regions (figure 3.3), partly reflecting sizeable informal sector employment. The labour force participation rate noticeably declines with increasing age in all regions after people reach age 55, although less so in Africa. Africa also stands out in terms of the proportion of people older than 65 remaining in the labour force, at 40 per cent. The same ratio in Europe and Latin America and the Caribbean is 8 per cent and 9 per cent, respectively. Africa's high ratio is likely due to the lack of adequate retirement benefits, which gives older persons no choice but to continue working. While it is important from an economic perspective to incentivize older people to work longer in ageing societies, there should always be an option to retire and live with basic income security above a certain age.

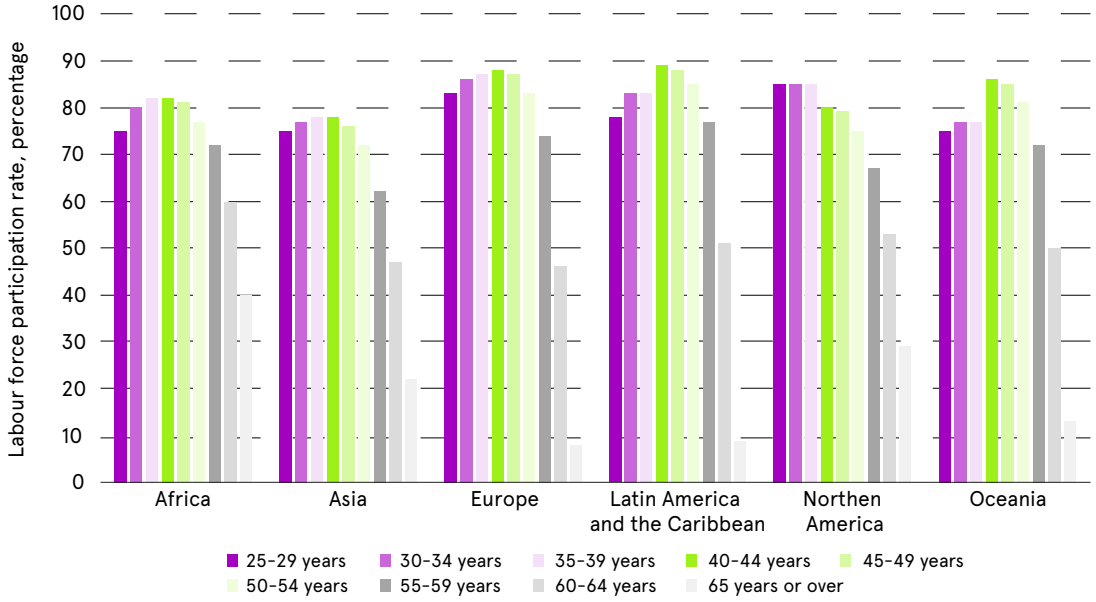
3. AS PEOPLE GROW OLDER, CONSUMPTION PATTERNS CHANGE

As income, needs and preferences change over the course of life, so do consumption behaviour and the marginal propensity to consume. This has implications for the composition and level of consumption in society.

Consumption patterns at older ages display some distinctive differences across countries (figure 3.4). One is the tendency in developed economies for consumption to increase sharply after people reach age 80. In some high-income countries, consumption at older ages exceeds that of younger adults by 30 per cent or more. This is due mainly to a large jump in the use of health care. Countries with more generous public transfer and welfare systems, such as Sweden, generally have higher consumption levels later in life compared to other developed countries such as Australia and Canada, where such systems are less extensive. In low- and middle-income countries, consumption remains relatively constant across all adult ages.

Figure 3.3

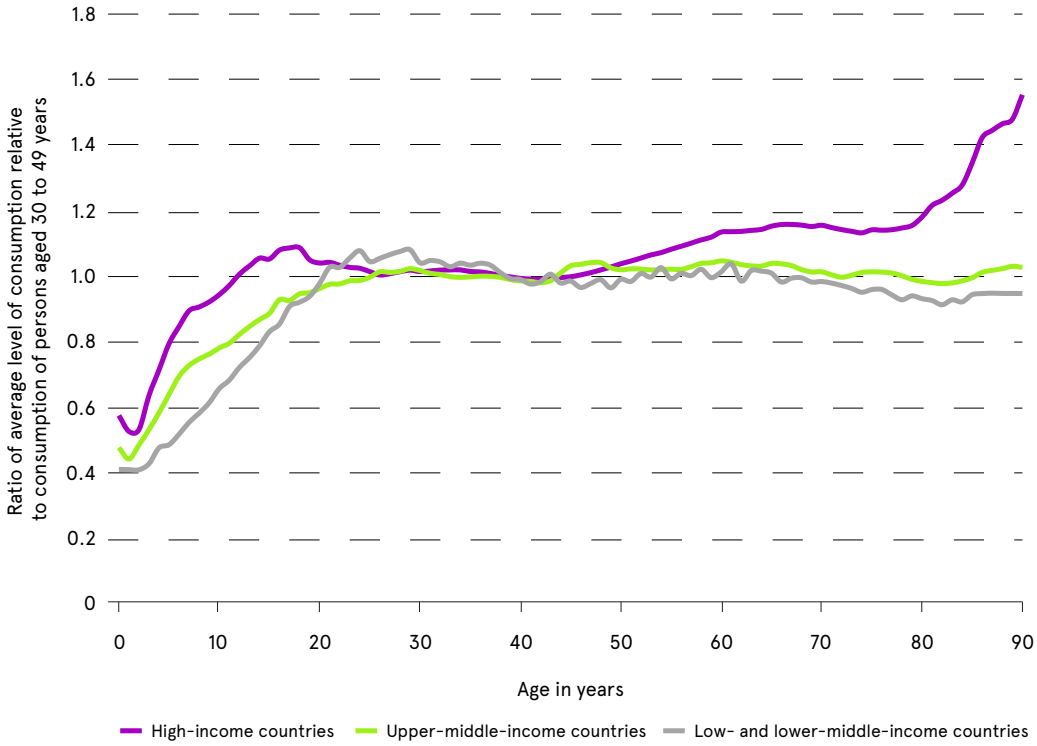
Labour force participation rate by region and age group (in years), 2019



Source: Calculations based on ILO (2020).

Figure 3.4

Per capita consumption by age relative to the consumption level among those aged 30 to 49, latest year available, 2005–2016



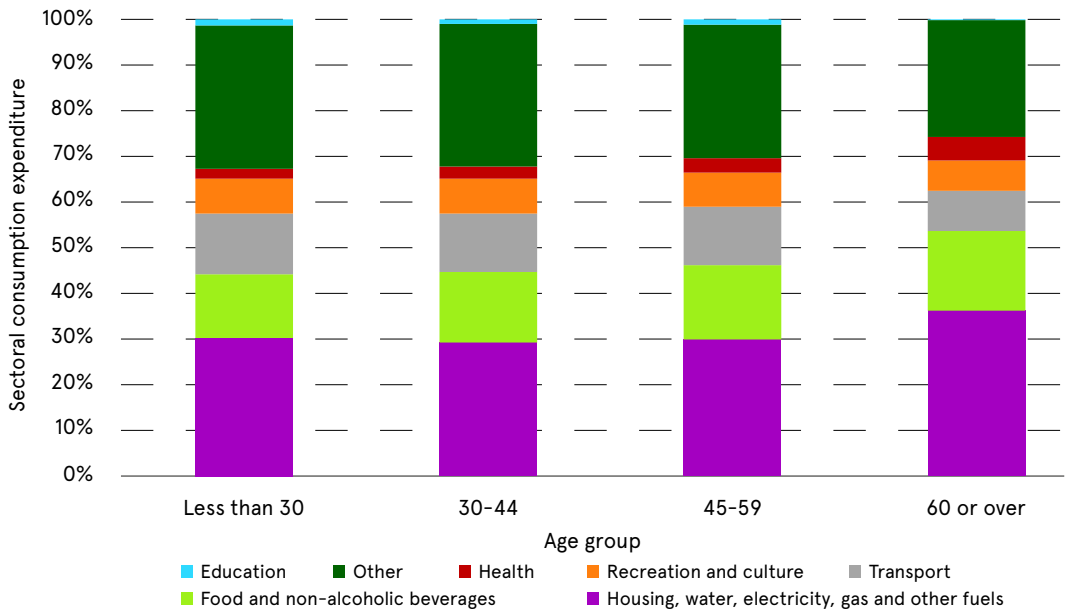
Source: National Transfer Accounts database. Available at https://ntaccounts.org (accessed on 4 April 2022).

Among the many drivers of consumption patterns, ageing is probably less important than factors such as income or education. At the same time, different age groups vary in how they consume. Evidence from the European Union suggests that older persons spend more on services, housing and health care than younger cohorts, and less on transport (figure 3.5).

In the United States, older households, where the household reference person is above age 65, spend a larger share of income on housing, utilities and fuel, household operations, housekeeping supplies and health care compared to working-age people. They spend significantly less on alcoholic beverages, apparel and services, tobacco and smoking supplies, and insurance and pensions. A study from Germany found that age influences the amount that individuals spend for different purposes, implying that "during the lifecycle, a private household adapts its consumption behaviour to the actual habits and needs as well as the income situation" (Stoever, 2012, p. 3). Data on consumption patterns in China show two consistently high-value expenditure categories in older households compared to younger ones: health care and housing. For older households in the lowest income quintile, food consumption is significantly lower than in younger households (Khan, 2022).

Age structure and consumption patterns have implications for inflation in coming decades (Juselius and Takats, 2016) but the burden of rising prices may not be equitably shared across age groups. For example, between 2014 and 2017, inflation for online goods was at least 1 full percentage point lower every year than inflation for equivalent goods in the overall consumer price index (Goolsbee and Klenow, 2018). Should this tendency continue to hold, older per-

Figure 3.5 **Structure of consumption expenditure by age, European Union countries, 2015**



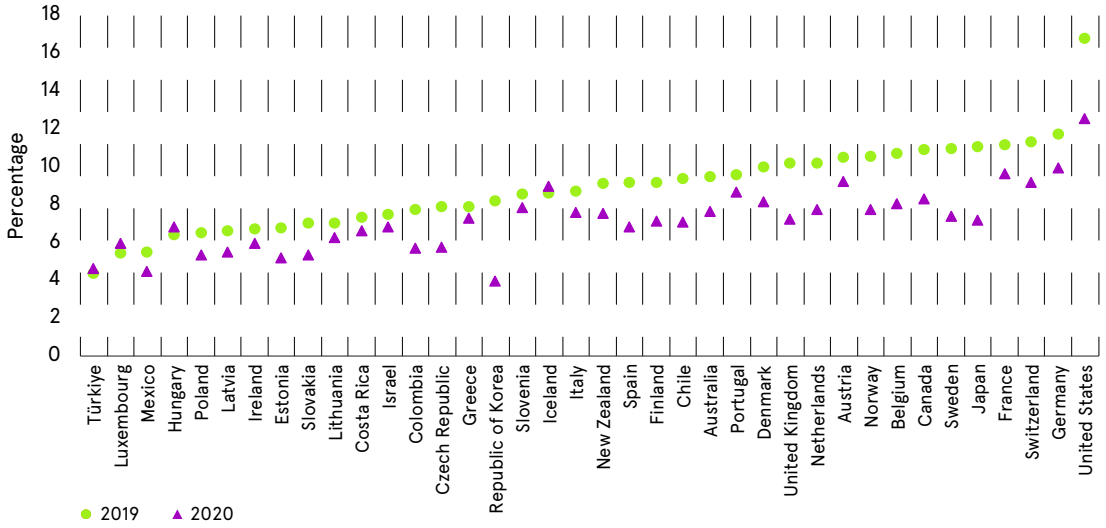
Source: Eurostat. Available at https://ec.europa.eu/eurostat/data/database.

sons, who are more likely to shop in stores than online, may face higher prices than other age cohorts (although such an effect would decline as people accustomed to shopping online age). Online shopping is also more common among high-income groups, and as this interacts with age, it can make some less affluent older persons particularly vulnerable to higher inflation.

The United States Bureau of Labor Statistics calculated an experimental consumer price index for households with a reference person or spouse aged 62 or older, finding that older persons face a higher inflation risk. In past decades, older Americans, according to this index, have on average seen slightly higher inflation than people in general (Stewart, 2008). This finding is particularly important because many countries link pension benefits to the consumer price index. If that index does not properly reflect cost-of-living increases for older persons, applying it may further accentuate income inequality.

Without policy reforms, population ageing tends to put upward pressure on age-related public spending. Global health-care expenditure, as a share of GDP, has consistently risen over the years, increasing in comparable terms (PPP, or purchasing power parity) from about $8.3 trillion in 2011 to $13.4 trillion in 2019. Data from Organisation for Economic Co-operation and Development (OECD) countries show that most have seen increases in public health expenditure since 2000 (figure 3.6). This is not just explained by population ageing. It also relates to the increasing prevalence of unhealthy and sedentary lifestyles. This trend is likely to continue, with the European Union expecting public spending on health care and long-term care to rise by 0.7 and 1.3 percentage points of GDP between 2013 and 2060, respectively (Nerlich and Schroth, 2018). Studies on emerging economies predict that population ageing will have a significant impact on public and private health-care expenses (Zhou and others, 2020).

Figure 3.6 **Total annual expenditure on health as a share of GDP in OECD countries**



Source: OECD.Stat. Available at https://stats.oecd.org/.

As the share of people aged 65 or older grows, both public and private health-care expenditures are expected to increase. The old-age dependency ratio has a significant impact on per capita health-care expenditure, after controlling for other factors (Khan, 2022). Yet the effect is not straightforward, depending on a host of variables. Both the number of older persons and their health status determine the relationship between ageing and health-care spending. Education level also directly links to better health and lower health-care expenditure among older persons. Long-term investment in education can thus have significant positive spillover effects on the health-care budget (Borrescio-Higa and Valenzuela, 2021).

Without equitable and sustainable systems in place, however, rising pension, health-care and long-term care costs can pose challenges to both individuals and the macroeconomy, raising risks of poverty and inequality among older people

The impacts of ageing also differ by modes for financing health care. In past decades in the United States, for instance, average medical costs have been strongly associated with time until death but only weakly associated with age (Miller, 2001). This is due in part to a health-care industry that uses costly new treatments and offers limited options for end-of-life care. In high-income countries, nearly 10 per cent of the aggregate annual health budget goes to the less than 1 per cent of people who die each year (Normand and others, 2021).

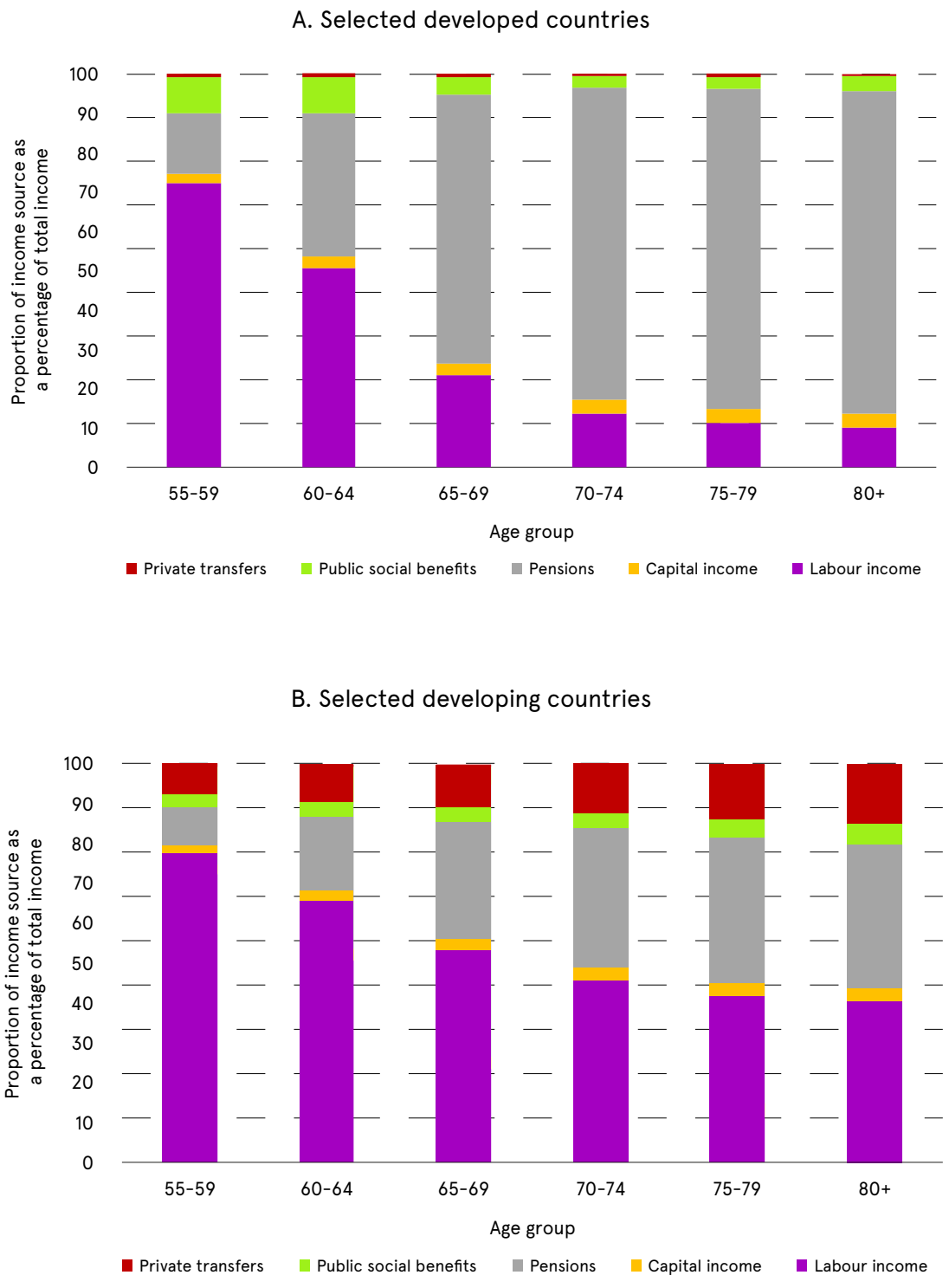
4. FINANCING OLD-AGE CONSUMPTION DEPENDS ON REALLOCATING RESOURCES

Patterns of income and consumption across the life course, including deficits for certain age groups, are not necessarily a macroeconomic problem if systems to reallocate resources are balanced and sustainable. At the individual level, adequate private savings and pensions can ensure the welfare of older people. Without equitable and sustainable systems in place, however, rising pension, health-care and long-term care costs can pose challenges to both individuals and the macroeconomy, raising risks of poverty and inequality among older people (Pandey and others, 2018).

A. SOURCES OF FINANCING

How older people finance their consumption differs across countries. The main sources of finance are people's own work, savings and other assets, and private and public transfers. In developed countries, public transfer systems, including for pensions and health care, meet at least two thirds of consumption needs among older persons. In developing countries with limited public transfer systems, older persons tend to work longer, rely on assets accumulated when younger or turn to their families for support (figure 3.7). In low-income countries, where public transfer systems are poorly developed, older persons rely more on assets than on private or family transfers. Asset-based reallocations fund about 95 per cent of the old-age deficit in India. In East Asia, family support remains important in many countries even if its role has been declining over time.

Figure 3.7 **Sources of income by age group**



Source: Calculation based on the Luxembourg Income Survey (LIS) Database, latest year available. Available at www.lisdatacenter.org.

Significant differences in financing the consumption of older persons operate among countries at similar levels of economic development and stages of demographic transition. For example, older people in Brazil receive much larger public transfers than their counterparts in Mexico, primarily through pension benefits. Brazilians become net beneficiaries of public transfers at age 52 while Mexicans pay more in taxes than they receive in public benefits until age 58. While Brazilians receive generous pension benefits throughout old age, people in Mexico work longer and tend to support themselves more through asset income than public transfers (Lee and Mason, 2011).

Without mitigating reforms, total expenditure on pensions will increase with population ageing. In advanced and emerging economies, pension spending as a percentage of GDP rose from around 7 per cent in the 1970s to 8 per cent in 2010. By 2050, public pension spending in these countries is projected to increase by 1 to 2.5 percentage points of GDP, to an average of 9.6 per cent of GDP (Amaglobeli and others, 2019). In the European Union, demographic changes alone are expected to raise pension spending by 7.6 per cent of GDP from 2013 to 2060 (Nerlich and Schroth, 2018).

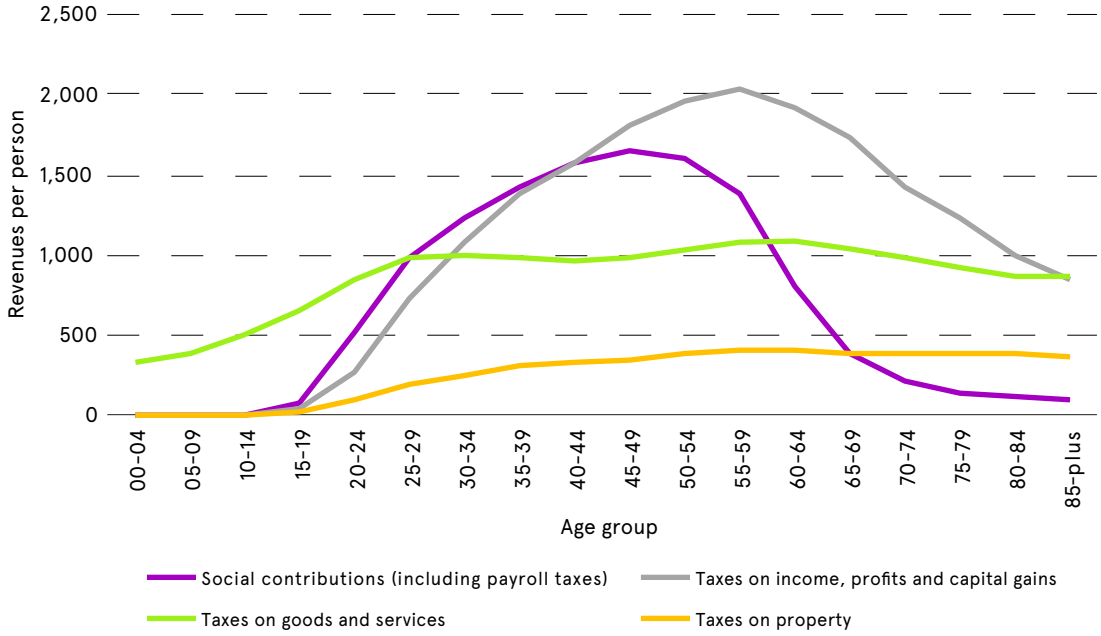
B. IMPLICATIONS FOR GOVERNMENT REVENUE

Population ageing may have implications for government revenues, amid concerns about potential declines in the labour force and uncertain effects on labour productivity. Government revenue tends to change with the number of taxpayers and their income, so it is more directly related to the working-age or employed population than to the total population. Since taxes and social contributions vary over the life course, population ageing may imperil or dampen the growth of fiscal revenues.

Countries in the early stages of ageing may see their tax revenue increase as all income sources have the potential to grow. Countries that are more advanced in ageing may see declines in fiscal revenue from social contributions linked to the labour market as well as taxes on income, profits and capital gains. Offsetting this effect would require older persons to remain gainfully employed or otherwise generate income (Cylus and others, 2019).

Figure 3.8 outlines the age profile of different types of tax revenues and potential changes in revenue sources as populations grow older. These trends would shift if older persons were healthier, better educated and work longer. The overall impact of ageing on government revenue thus depends on the combined effect of these factors.

Figure 3.8 **Per capita taxes and social contributions across the life course, selected countries in Europe, Asia and the Americas**



Source: Cylus and others (2019).

Note: Revenue types were averaged across six countries with available data: Italy, Japan, Sweden, Thailand, Uruguay and the United States.

A smaller labour force can have a substantial impact on government revenue. In Slovenia, for example, the projected decrease in the working-age population, from 66 per cent of the total population in 2016 to 58 per cent by 2040, together with a rising share of older persons could cause government revenues to contract by a projected 1.6 per cent as a share of GDP (Colin and Brys, 2020). Simulations for Germany indicate that annual income tax revenue could decrease by around 7 per cent by 2035 compared to 2016 despite greater labour market participation by older people (Beznoska and Hentze, 2017). This outcome, however, could be offset by changes to the tax system, such as by increasing marginal tax rates on the highest wage earners.

Population ageing may diminish revenue from value added taxes due to reduced taxable private consumption and a shift in demand towards specific services, such as health care, that are often subject to tax exemptions. Since the consumption tax burden of the oldest households is generally lowest, fiscal revenue will fall as the size of that age group increases. Revenue from taxes on capital, property and corporate income are likely less influenced by population ageing. In some countries, such revenue may even increase due to asset accumulation by older persons

An OECD simulation found that without policies to increase tax revenues to offset age-related increases in expenditures, public debt levels in advanced and emerging

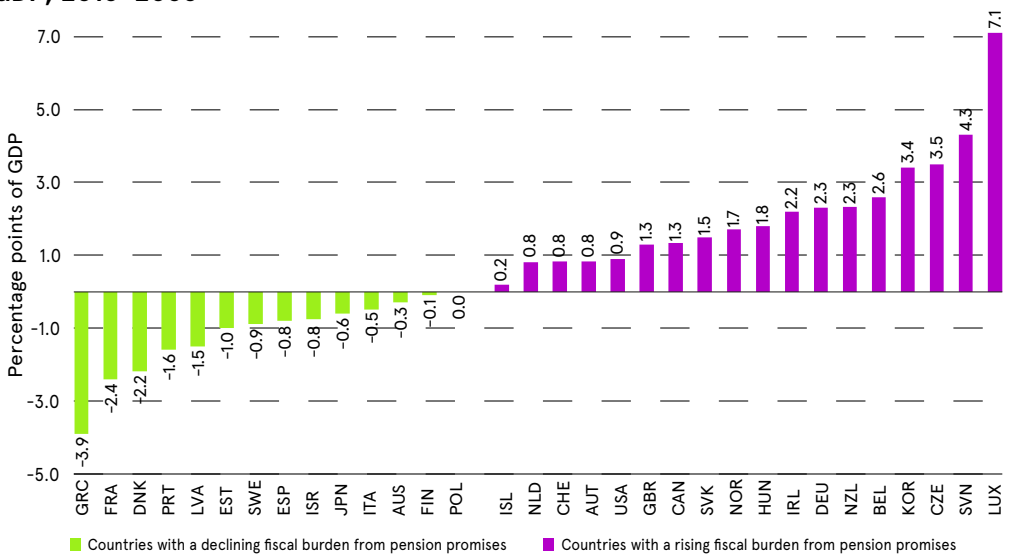
economies may increase dramatically and unsustainably over the next 40 years (Guillemette and Turner, 2018; Rouzet and others, 2019). The simulation incorporates demographic changes and the future impacts of already legislated increases in retirement age, built-in pension system stabilizers, the phasing out of early retirement provisions and changes to benefit formulas. Significant variations arise due to differences in pension commitments, however (figure 3.9).

5. ADAPTING TO SUSTAIN ECONOMIC GROWTH OVER TIME

Economic growth may slow during the demographic transition as population growth levels off and societies move towards ageing. Ageing tends to increase capital accumulation and investment in the economy through many channels, as discussed earlier. While greater capital intensity raises productivity, the magnitude of this effect varies across countries and depends on different factors. In general, the retirement savings of working-age individuals takes on added importance as it can contribute to capital accumulation and investment in both domestic and international assets, resulting in higher national income.

Total investment in the economy may decline if expected growth in aggregate demand slows as an ageing population moves towards a different consumption profile (Aksoy and others, 2019). A shift in demand towards less capital-intensive services such as health care may reduce needs for capital investments (Lee, 2016). Ageing thus amplifies the need for countries to adopt policies that foster structural economic transformation, including through digitalization, investment in physical and human capital and the greening of the economy.

Figure 3.9 **Changes in the fiscal burden due to pension promises in 32 OECD countries, percentage of GDP, 2018–2060**



Source: Guillemette and Turner (2018).

Note: The change reflects the primary fiscal revenue needed between 2018 and 2060 to offset additional pension costs and stabilize public debt to GDP at the 2018 value.

Ageing can also alter the trajectory of productivity, especially in sectors requiring particular abilities. It is usually assumed that as work becomes increasingly dependent on digital tools and technology, an older workforce with fewer relevant skills will be less productive. This assumption is increasingly challenged, however, by successive cohorts of technologically sophisticated older persons. Moreover, older people have accumulated knowledge that may compensate for lower rates of technology adoption. The overall impact of ageing on labour productivity thus depends on the combined effect of these factors.

One promising approach to population ageing is to invest in technology and more capital-intensive economic activity. Already, the rapid advance of automation and artificial intelligence is reducing reliance on labour. Some evidence suggests that additional capital investment in automation in some advanced ageing economies is helping to accelerate economic growth (Acemoglu and Restrepo, 2020).

Other research indicates that ageing and shrinking populations may have a positive influence on the collective demand for resources, food production, energy use and pollution (Clements and others, 2015). The clearest influence is perhaps on changes in demand for environmental resources, with positive effects on natural capital (SDG target 12.2). This results from shifts in production towards more capital-intensive industries and methods and in consumption from material-intensive goods towards health and leisure activities. Countries with higher old-age dependency ratios have smaller ecological footprints.[19,20]

The influence of ageing on other sustainability measures is less clear but does offer opportunities to make progress in halving per capita global food waste and reducing food losses along production and supply chains (SDG target 12.3), and in improving prevention, reduction, recycling and reuse systems to reduce waste generation (SDG target 12.5). Population ageing also raises important questions around how to recognize unpaid care work in economic growth accounting, an issue briefly discussed in box 3.1.

19 The ecological footprint is a measure of how much area (in global hectares) of biologically productive land and water an individual, population or activity requires to produce all the resources it consumes and to absorb the waste it generates, using prevailing technology and resource management practices.

20 Population ageing may also increase the consumption of energy from heating and cooling. It is important to consider sources of energy generation in assessing the overall impact on the environment.

BOX 3.1

ACCOUNTING FOR UNPAID CARE INFORMS POLICIES EQUIPPED TO MANAGE AN AGEING SOCIETY

The ILO (2018a) has estimated that unpaid care work for household production accounts for 16.4 billion hours of work time annually, equivalent to around 2 billion jobs. Data from the UN SDG Global Database, based on a sample of 32 developing and 24 developed countries (56 in total), suggest a significant gender difference in the proportion of time spent on unpaid care and domestic work in countries at different stages of population ageing.

In developing countries, which tend to be at earlier stages of the demographic transition, women on average spend 17.3 per cent of their time on unpaid care and domestic work, compared to 17.1 per cent in mostly older developed countries. In contrast, men in ageing societies tend to spend a greater portion of their time on unpaid care work, at 8.7 per cent on average, than men in developing countries, at 5.8 per cent. Men's share in both cases remains much lower than women's share. Globally, women currently perform three quarters of unpaid care work hours, reflecting entrenched gender inequality (ILO, 2018a).

The neglect of unpaid care work in economic accounting results in inaccurate assessments of changes in individuals' well-being and the value of time (OECD, 2014; Lequiller and Blades, 2014). A more complete calculation would capture both the aggregate amount of unpaid care work and its distribution. It is also essential to assess the quality of care work, based on the experiences of those receiving care services. This emphasis is consistent with the "beyond GDP" movement's call for a shift from measuring economic production to measuring people's well-being (Stiglitz, Sen and Fitoussi, 2009). Quality is particularly pertinent for ageing countries as it is already low and could further deteriorate without sufficient investment to match rising demand.

From a policymaking perspective, insufficient measurement of unpaid care work limits its analysis of gender gaps in labour market outcomes, such as labour force participation, wages and job quality – as well as effective measures to rectify these disparities. The lack of measurement also obscures the true scale of caregiving in an ageing society and limits proactive actions enabling unpaid caregivers (often women) to become full participants in the labour force.

With population ageing, a better understanding of unpaid care work could inform more accurate assessment of measures to mitigate adverse economic effects. For example, since unpaid care work is not included in GDP and unpaid care workers are not considered part of the labour market, national accounts miss a full reflection of the productivity of the women and men who carry out unpaid care work.

BOX 3.1

Further, calculations to estimate the economic benefit from narrowing the gender gap in labour force participation, with the implicit assumption that women who are not "participating" in the labour market are unproductive, would likely overstate the impact of potential policy measures to bring more women into paid work. It would be more appropriate to interpret the potential boost to growth as a ceiling, indicating its limits. A more accurate estimate would require better understanding and measurement of the economic contribution of unpaid, predominantly female, care workers.

B.

KEEPING UP WITH AGEING CALLS FOR SHIFTING CONSUMPTION AND PRODUCTION STRATEGIES

In both developed and developing countries, opportunities and challenges from population ageing warrant adopting effective, equitable strategies for both the production and consumption sides of the economy. Ageing should be central to economic development agendas, including to ensure that the broader economy benefits from the expertise and skills of older persons.

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1. WOMEN AND OLDER WORKERS ADD VALUE IN LABOUR MARKETS

As societies age, labour force participation rates need to rise accordingly, particularly for women, older workers and other groups traditionally excluded from the formal labour market. This applies especially to countries with advanced ageing.

Women's greater role in the labour force has been integral to positively transforming the structures of economies in many countries in recent decades. Yet they still participate at rates well below those of men in every age group, reflecting distinct gender roles and social status, among other issues. Women's increased participation would slow the projected decline in the size of the labour force.

Towards that end, a key challenge for policymakers is to reconcile conflicting work and family demands. Employment and social policies need to make it possible for women to have children while remaining in the labour market and continuing to develop their careers. Policies can include the provision of subsidized childcare, maternal and paternal leave, and tax credits, among others.

Employment and social policies need to make it possible for women to have children while remaining in the labour market and continuing to develop their careers

The greater participation of women and older workers in the labour force will require workplaces to make changes in occupational safety and health, working hours and organization, such as more flexible working hours and arrangements and taxation systems, as well as enhanced support to families with children. For older workers, it may be important to eliminate distortions in pension and social transfer programmes that discourage them from remaining in the labour force. Older persons should be able to work as long as they wish and can do so productively. This will require systematically countering age-based discrimination, the main challenge to realizing older people's right to work at all levels of the labour market (United Nations, 2021b).

The economic benefits of closing the gender gap in labour force participation are significant according to a recent examination of historical factors contributing to economic growth in 178 countries.[21] The analysis reaffirmed the essential importance of improving labour productivity and women's participation in the labour force. In 2018, roughly one third of working-age people globally remained outside the labour force, with significant variation by gender. Globally, a 20-percentage-point gap exists between male and female rates of labour force participation (figure 3.2). The gap is as high as 31.2 percentage points in Asia and as low as 8.7 percentage points in Northern America.

Expanding female labour force participation provides a major opportunity to boost GDP per capita and expand the economic base in countries with ageing populations. Closing the gender gap would add another 30 per cent to global GDP per capita. In effect, this amount represents the global opportunity cost of women's lower labour force participation.

In Europe, legislated pension reforms, particularly a higher retirement age, track an expected rise in employment rates among women and older persons. These are projected to raise the labour force participation rate of workers aged 55 to 64 from 62 per cent in 2019 to 72 per cent by 2070. An even larger increase is predicted for women, leading to a convergence with men (European Commission, 2021a). These forecasts also envisage long-term improvements in the employment ratio and a lowering of the unemployment rate from 6.8 per cent in 2019 to 5.8 per cent by 2070.

21 Based on an unpublished internal research note by the Development Research Branch of the United Nations Department of Economic and Social Affairs in April 2022.

In OECD countries, the relaxation of rules stipulating mandatory retirement and the promotion of more flexible working arrangements are projected to raise GDP growth by an additional 2.5 percentage points, on average. The OECD projects that giving older workers greater opportunities to work would enhance GDP per capita by as much as 19 per cent over the next three decades (United Nations, 2021c).

Every society needs to focus on investing in the education and skills of people of all ages, including during the demographic transition towards older societies

2. GREATER LABOUR PRODUCTIVITY DEPENDS ON INVESTING IN SKILLS

Lifelong learning improves the labour productivity of all workers, especially amid rapidly changing technologies. In ageing societies, labour productivity may fall because of declining average physical and cognitive abilities among older workers without commensurate efforts to enhance their skills and knowledge. An ageing labour force thus provides an additional incentive for firms to invest in new technologies that enhance labour productivity. The combined impact of these measures will ultimately determine the overall effect of population ageing on labour productivity.

Every society needs to focus on investing in the education and skills of people of all ages, including during the demographic transition towards older societies (box 3.2). This enhances labour productivity while also transforming economic structures and incentives, leading to accelerated application of digital and green technologies as instruments of sustainable development.

BOX 3.2

HOW TO AMPLIFY ECONOMIC GROWTH DURING THE DEMOGRAPHIC TRANSITION

Increasing labour productivity is imperative for countries seeking to mitigate ageing's adverse effects on income growth. Based on a recent analysis, the needed rate of improvement depends on achieving gender parity in labour force participation, increasing the statutory retirement age from age 65 to age 70, and maintaining or increasing the level of international migration.

The analysis estimated labour productivity growth required to reach a given target for income growth, considering demographic changes projected in the *World Population Prospects* (United Nations, 2019b). The annual income growth targets were a 2 per cent per year increase between 2020 and 2050 for OECD countries and others with higher income than the group's average, and, for other countries, halving the income gap with the OECD average by 2050. The exercise applied alternative scenarios for the three factors and quantified the extent to which they can help to achieve the target income growth.

On average and across countries, achieving gender parity in labour force participation, an increase in the retirement age and maintaining existing migration flows could lower the annual labour productivity growth required during 2020-2050 to achieve the above income growth target by 9.5 per cent, 6.7 per cent and 1.0 per cent, respectively, or 17.2 per cent combined. Significant regional variation reflects different development conditions (figure 3.10). The 10 countries that could benefit most from the three factors would see the required labour productivity growth reduced by 44 per cent on average.

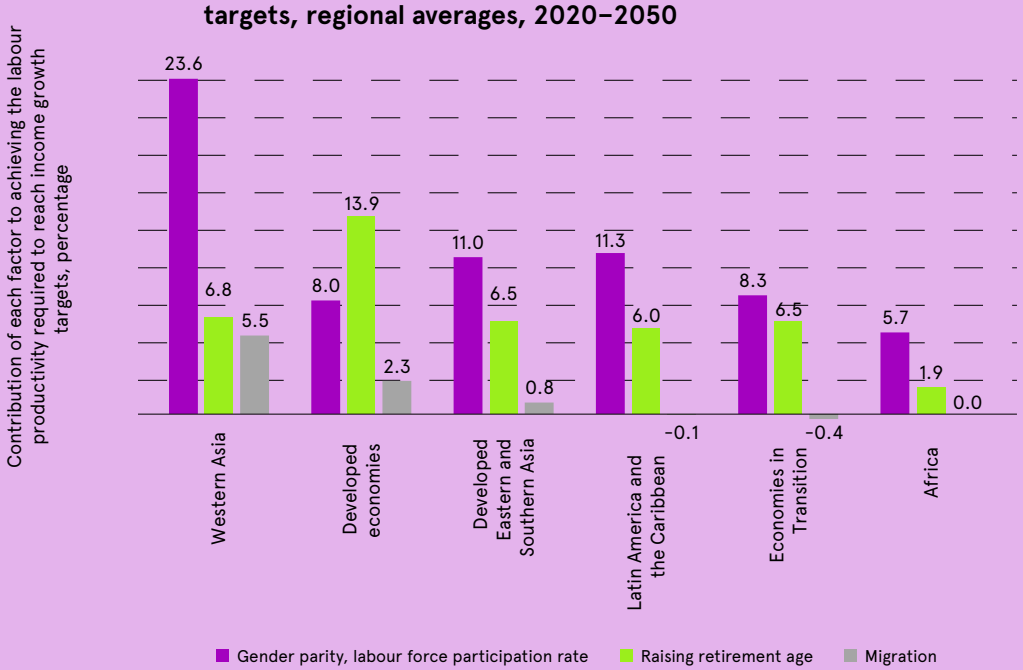
Among the three factors, attaining gender parity in labour force participation makes the biggest difference for 99 countries out of 167 sampled, comprising 113 developing and 54 developed countries. It is followed by raising the retirement age, which would be the most impactful in 67 countries, half of which are developed countries. Among all countries with available data, only one will gain more from continued migration (compared to no migration) than from the other two factors.

A push for higher fertility would have a limited impact in increasing per capita income between 2020 and 2050. Increased fertility would slow population ageing and over time result in a larger working-age population. But it would also immediately raise the share of dependent children, limiting favourable impacts on growth from a larger workforce.

Even accounting for the three factors conducive to economic growth, most countries would still need to accelerate labour productivity growth from levels before the pandemic to achieve the targeted income growth. This includes those with a growing working-age population, suggesting that nations cannot rely on favourable demographic trends alone to narrow the income gap. On average, the required increase in annual labour productivity growth is 3.2 percentage points.

BOX 3.2

Figure 3.10 **Projected contributions of three factors to achieving the annual average labour productivity growth required for income growth targets, regional averages, 2020–2050**



Note: Regions are ordered in terms of the sum of the average of each of the three factors, starting from Western Asia, which has the greatest sum. The income growth target is 2 per cent annual growth during 2020-2050 for OECD countries and countries with incomes higher than the OECD average. For other countries, the income target is to halve the income gap with the OECD average by 2050.

Japan is among the countries facing considerable economic impacts due to rapid population ageing. Based on a 2007 estimate, labour productivity would need to grow by 2.6 per cent per year to sustain annual per capita income growth of 2 per cent over a 30-year period (United Nations, 2007). A similar pattern holds, to a lesser degree, in other countries with ageing populations, such as Germany, Italy and the United States. Required productivity growth in all these cases seems within reach by historical standards; an annual per capita income growth of 2 per cent is lower than the average achieved in the past. Yet maintaining an annual 2 to 2.5 per cent productivity growth rate for about five decades will not be easy, requiring sustained policy support to stimulate technological progress and innovation.

3. HARNESSING THE POTENTIAL OF THE TECHNOLOGICAL REVOLUTION

The world today is riding a new wave of technological change. The Fourth Industrial Revolution promises to alter people's work and lives in fundamental ways. New technologies such as artificial intelligence and robots are creating new occupations and taking over thousands of routine tasks. In many areas, new technologies are substituting for labour rather than complementing it.

Population ageing has become a key factor driving changes in work, technology and the globalization of markets. Some highly advanced ageing countries like Japan are systematically introducing new technologies to replace human labour in manufacturing and services (box 3.3). Many other countries are examining opportunities to mitigate negative fallout from ageing on their economies. While new technologies can improve economic productivity and the delivery of services, digitalized business models also pose risks in terms of labour rights and income inequality. Such issues will likely move to the forefront of global policymaking in coming decades.

In some industries, like automotive manufacturing, robots have already largely replaced people on the assembly line (Bloom, McKenna and Prettner, 2018). Mine operators use self-driving trucks that refuel only once a day. 3D printers increasingly produce goods that previously required extensive labour inputs, including tailor-made medical products like hearing aids. 3D printing, in fact, may become a lynchpin for boutique manufacturing in rural areas. Other technologies, like machine learning, have begun to diagnose diseases, among many other uses. These trends in technology accompany shifts in working patterns, such as the rapid rise of the "gig economy" over the last decade. As the size of the working-age population declines and salaries increase in many countries in coming years, private and public institutions will likely continue to replace labour through the automation and digitalization of work.

In the United States, an estimated 9 to 47 per cent of jobs may be automated over the next two decades (Frey and Osborne, 2017; Arntz, Gregory and Zierahn, 2017). The International Federation of Robotics has estimated that 3 million robots operated in 2017 worldwide. They are increasing annually at a rate of 14 per cent and could reach 11 million by 2030 (Bloom, McKenna and Prettner, 2018).

The fast pace of innovation and technological development poses a particularly significant challenge for many developing countries. They will need to manage and make the most of such changes or risk being left behind in the economy of the future. One common and urgent priority is to increase investment in education, including early child development, as well as health and social protection, as a strategy to seize the potential of new technologies to accelerate sustainable economic development. It is also important to invest in the skills and knowledge of older persons and ensure that technology platforms are accessible to them.

Many developed countries have already lost a significant number of manufacturing jobs to automation. Technologies are also displacing people in low-skilled occupations. For example, robots play increasing roles in caring for older people, assisting with daily tasks such as bathing, dressing, eating, communications and transport (Pruchno, 2019). While new technologies

carry enormous potential to improve standards of living, many people remain rightly concerned about negative impacts on employment and inequality.

4. PRONATALIST POLICIES SHOW MIXED RESULTS

A longstanding concern is that population ageing will drag down public finances and standards of living. An analysis of data from 40 countries shows that fertility well above the replacement level would generally be most beneficial for government budgets. Fertility near the replacement level, however, would be most beneficial for the macroeconomy and the average standard of living. Considering the effects of age structures on families as well as governments, the total fertility rate that would maximize the economic support ratio is estimated at 1.8 births per woman in low-income countries, 2.0 in upper-middle-income countries and 2.3 in high-income countries (Lee and Mason, 2014).[22]

Many European societies view boosting birth rates as an important strategy to slow population ageing and reduce fiscal pressures. Most governments in countries that are past the demographic dividend, in Europe and elsewhere, have introduced pronatalist policies to respond to declining fertility and rapid population ageing. Examples include providing incentives to have more children through baby bonuses, family allowances, tax breaks, parental leave, subsidized childcare and flexible working schedules.

Different examinations of the impact of pronatalist policies on fertility show mixed results. A United Nations expert meeting in 2015 concluded that maternity, paternity and parental leave, paid at a high level of wage replacement and for moderate durations, appeared to positively influence fertility (United Nations, 2015a). Similar results came from affordable, accessible, high-quality childcare and education services for children of all ages. Evidence on the response to cash benefits is mixed. Quebec, Canada's cash grant, France's birth grant, Australia's baby bonus, Germany's maternity leave and the Israeli child subsidy programme have demonstrated positive fertility responses according to some research (Lee, 2022). Other studies have found no significant fertility response to such benefits. The effect largely depends on the country, type of programme and research method. In general, small benefits may not counteract other, stronger factors in fertility decisions.

5. BEYOND BORDERS: IMPETUS FOR NEW INVESTMENT FLOWS

The accelerated outsourcing of production and enhanced global value chains will likely be key strategies that rapidly ageing countries deploy to address the economic implications of declining working-age populations. Ageing countries may need to diversify their investments beyond what is possible domestically and potentially obtain higher average rates of return as well. Ageing thus accelerates the impetus for international investment flows from upper-middle income and high-income countries to lower-middle and low-income countries, such as some in Asia and Africa with abundant labour. Such capital flows can increase labour productivity and wages and propel higher economic growth.

22 The economic support ratio measures the share of the working-age population in the total population.

BOX 3.3

IN JAPAN, AGEING IS REORGANIZING INDUSTRY AND ADVANCING THE DIGITAL ECONOMY

Japan's population is predicted to decline from 126 million to 100 million people between 2020 and 2050. This could shrink the workforce by 20 per cent between 2020 and 2040 as it sheds from 65 million to 52 million people. By 2040, an estimated 36 per cent of the population will be older than 65, up from 29 per cent in 2020. The near certainty of labour shortages has already catalysed economic transformation.

Changing demographics have forced Japanese companies to accelerate digitalization, for example, and brought about a major reorganization of industrial architecture and policy. Japan, along with Germany, is now at the forefront of digital manufacturing. Japan's global market share in industrial robotics and machine vision technologies exceeded 50 per cent in 2019, up from 30 per cent in 2016. By 2020, plants and offices outside Japan generated more than half of manufacturing sales.

Managing global value chains is now central to how Japanese companies do business. As a result, the GDP share of manufacturing exports rose from 8.8 per cent in 1995 to 18 per cent in 2020. Vertical farming and new agricultural technologies have transformed agriculture and resulted in more efficient use of natural resources. The rising average age of farmers, which topped 68 years in 2020, has in part driven the reinvention of agriculture.

Japan's digital transformation has offered a solution to the "succession problem" facing many companies, where hiring cannot keep up with retirement. Sharp increases in job mobility, the number of independent contractors and the use of dual employment systems have together brought about a significant rethinking of existing pension systems, including to improve coverage of workers in non-standard and informal forms of employment and to open opportunities to defer pension benefits until age 75. A low unemployment rate, less than 3 per cent in 2020, minimizes apprehensions around technological change. Further, educational reforms and major government and private investments in reskilling the workforce are helping workers adapt to momentous changes.

Source: Schaede and Shimizu (2022).

Africa has potential to become a major driver of global economic growth in the latter half of the twenty-first century – if countries adopt the right policies to realize a historic demographic opportunity. Policies need to nurture a rapidly growing pool of well-trained workers and advance economic and structural reforms that make the continent a magnet for foreign direct investment and technological diffusion. The digital revolution offers Africa an extraordinary chance to make the public and private sectors more cost-effective, efficient and transparent, a major catalyst for economic growth. It can also bypass traditional structural transformation anchored in the rapid expansion of a highly polluting manufacturing sector, choosing instead a lighter environmental footprint with greater emphasis on growth in services such as business process outsourcing, e-commerce and fintech.

Africa has potential to become a major driver of global economic growth in the latter half of the twenty-first century – if countries adopt the right policies to realize a historic demographic opportunity

As digital technologies spread and ease the flow of both manufacturing and service jobs to offshore locations, global production networks will expand in developing economies with surplus labour. Continued improvement in education and skills and a readiness to transition to green and digital economies could make labour-surplus economies such as those in Africa into a hub for production and global value chains, especially given their competitive wages. Increased investment in human capital and physical infrastructure will be key to making the most of this opportunity.

C.

CAREFULLY TIMED POLICIES CAN STEER A SUCCESSFUL TRANSITION

Success in extending human lives and reducing fertility rates have presented opportunities and challenges in managing economies. Harnessing the opportunities and mastering the challenges depends in part on government policies at different stages of the demographic transition. These need to recognize how changes in the size and composition of the working-age population and labour force heavily influence the impact of ageing on productive capacity. Furthermore, as income, needs and preferences change over the course of life, so does consumption behaviour, with implications for both government spending and revenue.

Governments need to adopt comprehensive strategies aimed at enhancing investments in health and education; fostering labour force participation, particularly among women and older workers; improving labour productivity; and raising fiscal revenue. Ageing needs to move to the centre of economic development agendas, towards ensuring that economies both thrive and benefit from the expertise and skills of older persons.

CHAPTER 4

AGEING, POVERTY AND INEQUALITY, NOW AND IN THE FUTURE

KEY MESSAGES

- Old-age pensions and access to health care are critical in reducing poverty and inequality among older persons. But they are not sufficient on their own. Ensuring economic security and health for all in old age calls for promoting equal opportunity from birth, including through universal access to health care and education as well as opportunities for decent work.
- Investments in decent work are paramount. Decades of wage stagnation are jeopardizing people's ability to save enough to support themselves in older ages. Informal employment and various non-standard forms of employment limit workers' social protection coverage and their contributions to public revenues.
- Without swift policy action to prevent it, future cohorts of older persons are likely to be economically more unequal than those today. With growing numbers of older persons in all regions, inequality and economic insecurity at older ages should be rising causes of concern.
- While worries over fiscal sustainability have dominated pension reforms, pension benefits are still too low in many countries and beyond the reach of some groups. Inadequate investment in economic security at older ages risks jeopardizing progress in reducing poverty among older persons. It may diminish the well-being of future cohorts of older persons and further undermine already shaky trust in Governments.
- Not everyone has benefitted equally from the advances in health and living conditions that drive population ageing. Many of today's older persons are in good health. Others live with multiple ailments or severe disability. Some are economically active and enjoy income security but many live in poverty. Some have strong social ties. Others lead isolated lives. Population averages conceal these inequalities and the diverse needs and abilities of older people.

Inequalities do not emerge suddenly at older ages. They follow and feed on people's different experiences throughout their lives. A person's country of birth, family, education, employment path and social networks affect well-being in later life, as do gender, ethnicity and other characteristics. Advantages or disadvantages in access to opportunities and resources can reinforce each other at any point. Prolonged unemployment, for instance, has negative impacts on health and social networks. Poor health and limited social networks, in turn, constrain employment opportunities. From a policy perspective, it is important to understand the influences across the life course that underlie inequalities in later life, and how different national and local contexts shape this process.

Inequalities evolve over a single generation and from one generation to the next. On average, today's youth are healthier and more educated than prior generations. Progress in education is likely to continue among future generations, despite the disruptions of the COVID-19 crisis. Younger people today are expected to live longer and make important contributions to society, including at older ages. Yet growing uncertainty and economic insecurity mar their transition to adulthood. Examining the labour market characteristics of successive cohorts of youth, working-age adults and older persons across countries as well as inequality trends across cohorts sheds light on ongoing changes with implications for the future of ageing.

This chapter illustrates how diverse ageing paths drive disparities in old age within and between countries, with a focus on poverty and income inequality. It uses cross-country evidence to explore how public policies can influence economic well-being at older ages.[23] Even countries that have made progress in improving the opportunities and quality of life of women and men as they grow older,[24] however, are far from ensuring that no one is left behind.

A.

POVERTY, INEQUALITY AND EXCLUSION IN OLD AGE: A SNAPSHOT

1. POVERTY RISKS CAN RISE WITH AGE

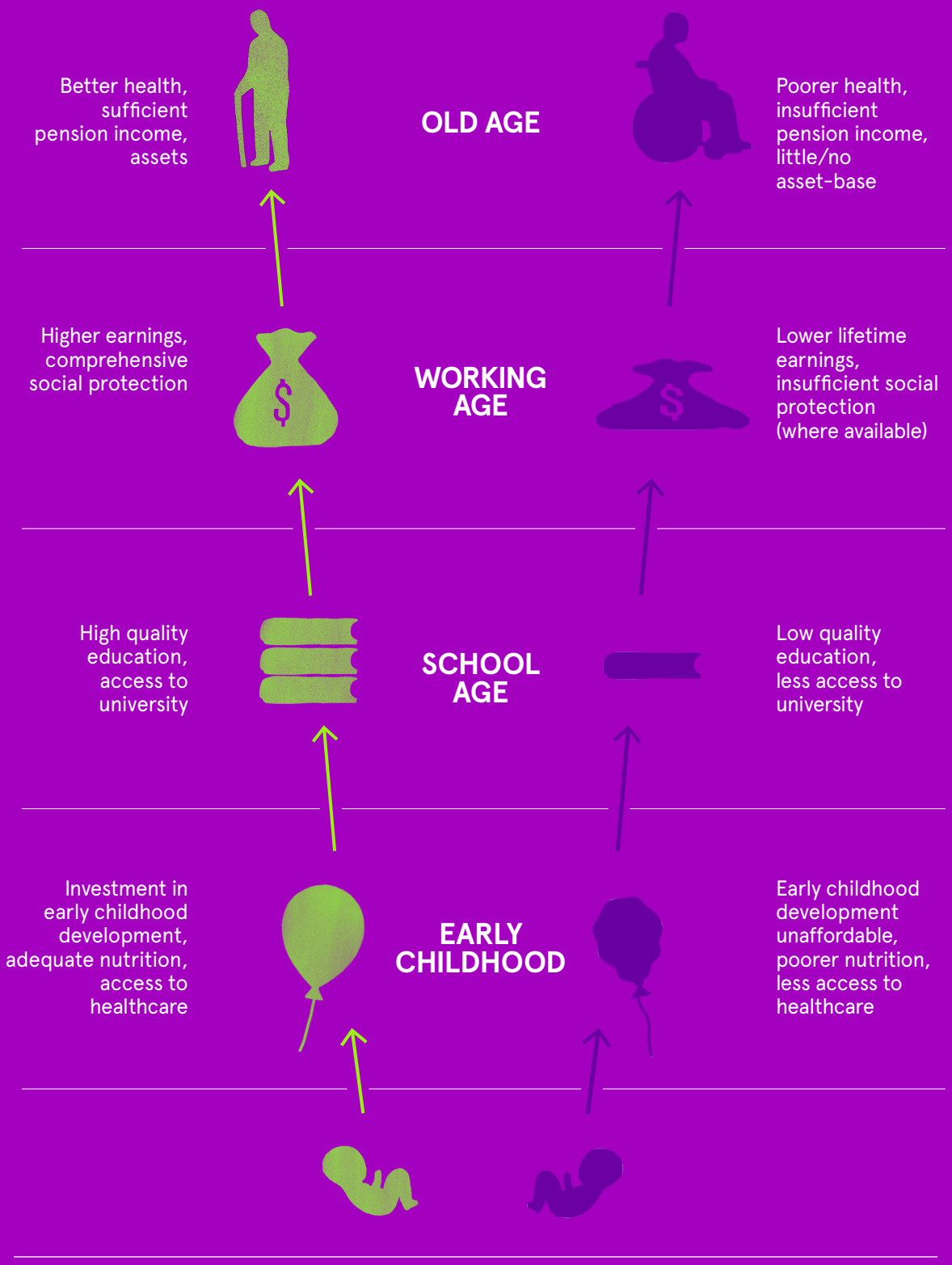
Reducing poverty among older persons is a core objective of the Madrid International Plan of Action on Ageing. Older people face particular risks of falling into poverty. At some point, most begin to work less or stop working altogether due to health reasons or family responsibilities, or because they are obligated or wish to retire at a statutory retirement age. Discrimination may undermine further employment. While many older persons remain productive, their economic well-being depends on the availability of public income support, affordable health care, family support and personal savings to a greater extent than for the working-age population.

Despite the policy relevance of detailed, disaggregated poverty information, including for SDG monitoring, there are few

23 The chapter's findings are based on microdata analyses using the LIS Database, which covers numerous developed and developing countries, and the Gateway to Global Aging data platform.

24 The Madrid International Plan of Action on Ageing refers to this as "building a society for all ages".

UNEQUAL AGEING ACROSS THE LIFECOURSE



cross-country, comparable estimates of the prevalence of poverty among different population groups, including older persons. Box 4.1 describes the methodological challenges affecting the reliability and comparability of poverty data by age.

BOX 4.1

CHALLENGES IN MEASURING OLD-AGE INCOME POVERTY

Measuring poverty and inequality remains a difficult task. Most estimates rely on household survey data that are not regularly available in many developing countries and that are not fully comparable across countries or over time. In terms of poverty data disaggregated by age, one major constraint of household surveys is that they do not provide information on the actual distribution of income or consumption within households. Without detailed individual data, it is often assumed that income and other resources are shared equitably among household members. All older persons living in households where pooled income or consumption are above the poverty line are therefore considered to live above the poverty line and vice versa.

Evidence suggests that the intrahousehold distribution of resources is not always equitable, however. In some settings, older persons (especially older women) and children have lower levels of economic well-being than other household members, particularly when resources are limited (Brown, Calvi and Penglase 2021; de Vreyer and Lambert, 2020). Further, the needs of individual household members vary. While older persons may have lower energy requirements than working-age adults, they more often live with disabilities and therefore incur higher costs to achieve the same standard of living (WHO and World Bank, 2011).

Assuming intrahousehold equity in the distribution of resources, income (or consumption) is often divided by the number of household members to adjust for household size in poverty calculations. This per capita equivalence scale does not consider that some costs are fixed regardless of household size. Namely, the costs of energy or housing do not increase proportionally with each additional household member. Other equivalence scales, such as the square root scale used in this report, take economies of scale into account. A wide range of equivalence scales, including those used by the OECD, adjust for assumed lower resource needs among children.

Intrahousehold inequalities, the equivalence scales used and other methodological choices (including the use of income versus consumption data to measure poverty) affect the reliability of estimates of old-age poverty. Whether child poverty estimates are higher than old-age poverty and by how much depends on the equivalence scale used, for instance (Gelders, 2021). While there are no easy ways to address these challenges, the underlying assumptions must be made explicit and their impact systematically assessed. Additional research is needed to account for intrahousehold inequities in the distribution of resources and the ways in which these affect older people.

Taken at face value, scarce cross-country estimates suggest that levels of extreme income poverty are lower among older persons than among children and even the working-age population. In one of the most comprehensive efforts to provide a global demographic profile of people living in extreme income poverty using harmonized survey data, Castañeda and others (2018) estimated that the percentage of persons aged 65 or above living on less than $1.90 a day around 2013 (7 per cent) was below that of the working-age population (from 10 per cent for those aged 25 to 34 to 7 per cent for those aged 55 to 64) and much lower than for children (20 per cent).[25]

Whereas extreme poverty is increasingly concentrated in some developing regions, particularly sub-Saharan Africa and Southern Asia, other measures of poverty are relevant for countries at all income levels. In most developed countries, for example, poverty is not measured in absolute terms. Instead, the poverty line is set as a proportion of each country's mean or median income.[26] The proportion of people living below 50 per cent of each country's median income, disaggregated by age, sex and disability status, is part of the SDG global indicator framework.[27]

Findings based on a new series of estimates of relative poverty by age, covering 49 countries, including 20 developing countries, differ somewhat from those based on absolute extreme poverty measures (figure 4.1). They suggest that older persons live in relatively poor households more often than working-age people (aged 25 to 64 in this case), as do children (aged 0 to 14) and youth (aged 15 to 24).28 Relatively lower incomes, combined with fewer opportunities to participate in the labour market, can make older persons more economically insecure and vulnerable.

Differences in relative poverty between the working-age population, older persons and children tend to be larger in developing than developed countries. In the latter, comprehensive social protection systems, including more generous public pensions and broader coverage and access to health care than in developing countries, have been successful in addressing economic insecurity at older ages. In developing countries, age-related differences in relative poverty are larger even though more older people live in intergenerational households, which should help to protect older and younger members from falling into poverty in times of crisis.

25 Based on the World Bank's Global Micro Database, which contains harmonized household survey data for 89 low- and middle-income countries. The estimates are based on the international poverty line of $1.90 per day using 2011 PPP conversion rates and a per capita equivalence scale.

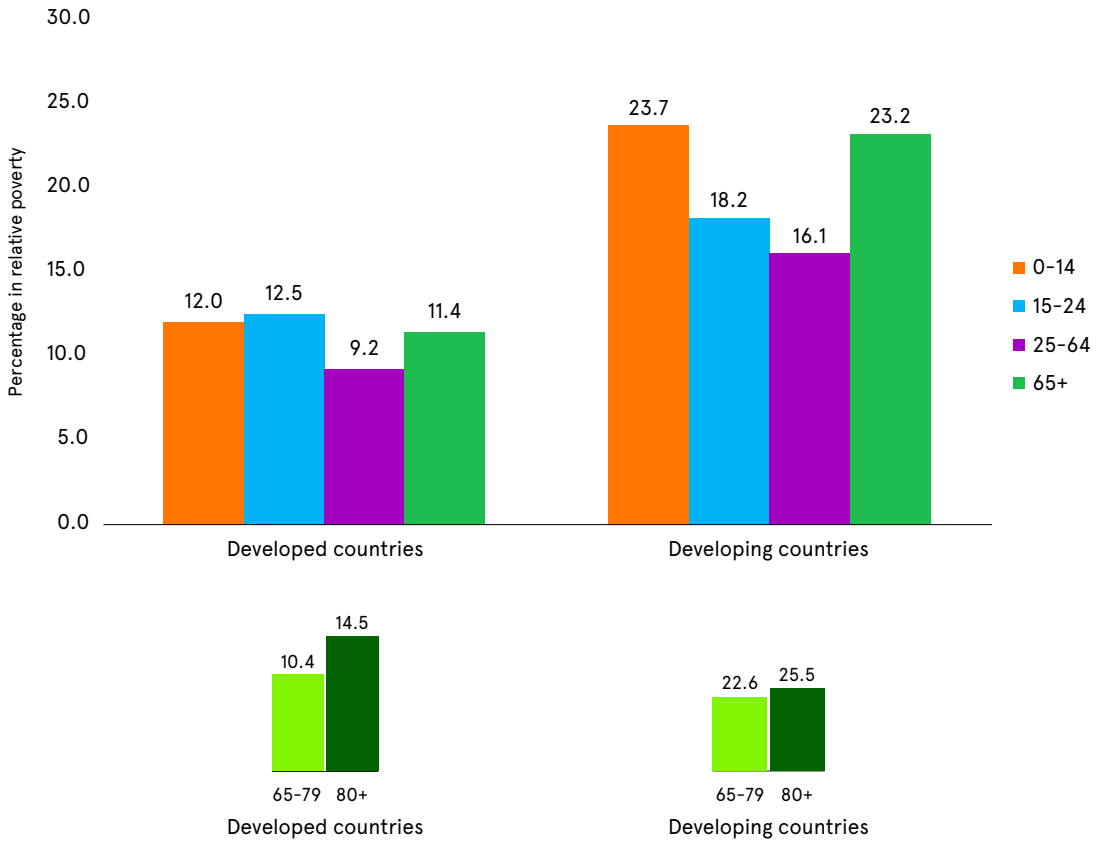
26 The use of relative poverty measures is increasingly common, including in regional and international organizations. The World Bank, for instance, has introduced a relative (or "societal") poverty line to its set of estimates (Jolliffe and Prydz, 2019). These relative measures, including the one used in this chapter, are tailored to country circumstances. They reflect the fact that different countries have different standards for basic needs, namely, higher expenditure may be deemed necessary to cover such needs in a rich country than in a poor one. The main limitation of relative measures is that they rely on a different yardstick to assess poverty in each country, effectively treating individuals differently depending on their country of residence. Half of the median income is close to or even below absolute (extreme) poverty in some low-income countries and way above extreme poverty in high- and even middle-income countries. Considering this limitation, relative poverty measures are used here to compare poverty levels by age and across different groups within countries but not to compare well-being across countries.

27 See indicator 10.2.1, the only indicator for SDG target 10.2 (by 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status). The SDG indicator database does not currently contain information on indicator 10.2.1 disaggregated by age, sex or disability status. See https://unstats.un.org/sdgs/dataportal (accessed on 27 July 2022).

28 The estimates are based on a relative poverty line of half of the median income of the total population. This threshold is also used by the OECD, which calculates estimates using similar assumptions (see https://data.oecd.org/inequality/poverty-rate.htm). The series in figure 4.1, which is based on harmonized income survey data, covers a larger number of countries (49, including 20 developing countries) than the OECD.

In all regions, people aged 80 years or older, the majority of whom are women, face the highest risk of relative poverty among all age groups. They are more likely than people in younger groups to be widowed and to live alone, two features that affect their economic vulnerability. They also participate less in the labour market and are not as well covered by public pensions as those aged 65 to 79. In Latin America and the Caribbean, for instance, the percentage of persons who neither worked nor received a pension was higher among people aged 70 or over (37 per cent) than among those aged 60 to 64 (25 per cent) or aged 65 to 69 (29 per cent) around 2016 (ECLAC and ILO, 2018). Moreover, the share of those aged 70 and older who did not work or receive a pension was much higher among women (48 per cent) than among men (13 per cent) (ibid.).

Figure 4.1 **Share of the population living in relatively poor households by broad age group, late 2010s (or latest year with data)**



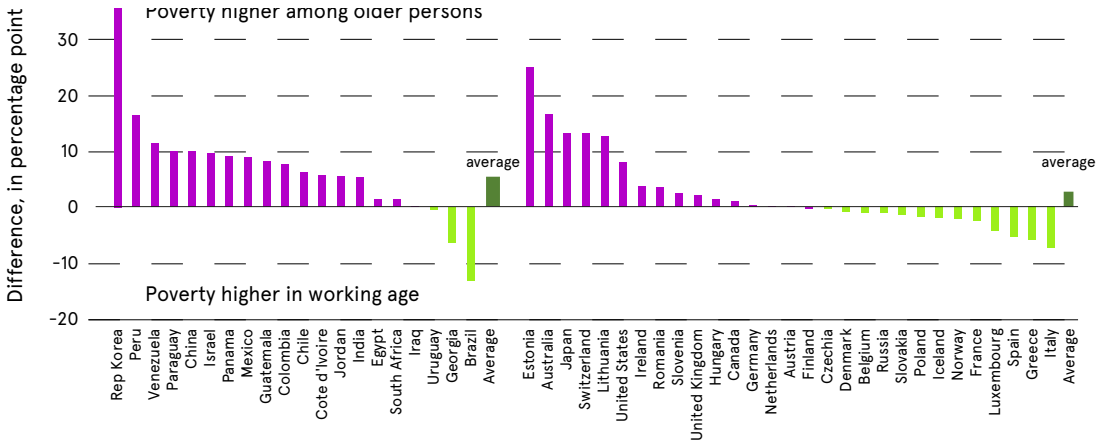
Source: Calculations based on data from the LIS Database (multiple countries; surveys conducted between 2010 and 2020). Available at www.lisdatacenter.org.

Note: Estimates are based on a relative poverty line of 50 per cent of the median income of the total population. They are calculated using harmonized survey data on disposable household income, reported at the individual level, for 20 developing countries (3 in Africa, 7 in Asia, and 10 in Latin America and the Caribbean) and 29 developed countries. The calculation of individual-level income is based on a squared root scale. Disposable income includes labour income, capital income, pensions, public social benefits and private transfers minus income taxes and social security contributions.

Differences in the prevalence of relative poverty by age vary substantially across countries (figure 4.2). The Republic of Korea stands out for having much higher levels of relative poverty among older persons than among the working-age population. Declines in family support, linked to changes in living arrangements and a rapid increase in the number of older persons living independently, have not been countered with adequate public pensions and other social protection measures (Ku and Kim, 2020; OECD, 2016). At the same time, younger cohorts have benefited from the country's fast economic transformation and rising levels of education much more than older persons in this rapidly ageing country. By contrast, Brazil's social protection system plays a major role in keeping older persons out of poverty and reducing inequality at older ages, including through the Beneficio de Prestaçao Continuada, a social assistance transfer for older people and people with disabilities living in poor households, and Previdência Rural, which includes informal workers (Barrientos, 2021; Tramujas Vasconcellos Neumann and Albert, 2018).

Across developed countries, there is some correspondence between public spending on pensions and the old-age poverty gap. Pension spending is below the OECD average in most countries that, according to figure 4.2, suffer from relatively high old-age poverty.[29] Australia's spending on pensions (3.9 per cent of GDP in 2019) is just over half the OECD average (7.7 per cent of GDP). Estonia's pension system has one of the lowest net replacement rates in the European Union.[30] By contrast, pension spending is above 10 per cent of GDP in France, Greece, Italy and Spain.

Figure 4.2 **Differences in relative poverty rates between older and working ages, selected countries, 2018 (or latest year with data)**



Source: Calculations based on data from the LIS Database (multiple countries; surveys conducted between 2010 and 2020). Available at www.lisdatacenter.org.

Note: See note on figure 4.1.

29 See the OECD pension spending indicator at https://data.oecd.org/socialexp/pension-spending.htm (accessed on 11 April 2022).

30 Net replacement rates are defined as an individual's net pension entitlement over her or his net (disposable) income before retirement.

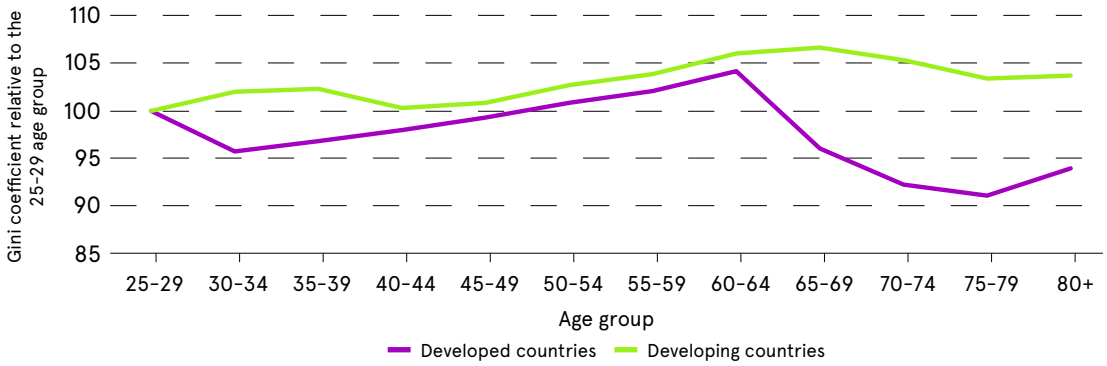
With growing numbers of older persons in both developed and developing countries, high levels of economic insecurity should be a rising concern. Longer life expectancies and policy reforms that reduce future retirement income could exacerbate these trends. They may even jeopardize the general health and economic improvements observed among older persons in developed regions in recent decades.

With growing numbers of older persons in both developed and developing countries, high levels of economic insecurity should be a rising concern

2. INEQUALITY NEED NOT INCREASE IN OLD AGE

Poverty snapshots by age conceal large and persistent inequalities within each age group. Overall, the shape of the age-specific disposable income inequality curve, which is used to compute the Gini coefficient, differs substantially between developing and developed countries (figure 4.3). Inequality is higher among older persons than among working-age people in developing countries but lower in developed countries. In the 18 developing countries included in this analysis, inequality is higher among people aged 65 to 69, on average, than in any other age group. This occurs despite the fact that people at the bottom of the income distribution tend to die earlier, on average, a selection effect that should push inequality down as people grow older.[31] In developed countries, by contrast, a precipitous drop in inequality starts around age 65.

Figure 4.3 **Gini coefficient by age, selected developed and developing countries, 2018 (or latest year with data)**



Source: Calculations based on data from the LIS Database (multiple countries; surveys conducted between 2010 and 2020). Available at www.lisdatacenter.org.

Note: The figure shows the Gini coefficient of equivalized disposable household income. Income values are top and bottom coded. Estimates by age relative to the Gini coefficient at ages 25 to 29 are based on information for 29 developed countries and 18 developing countries (3 in Africa, 5 in Asia and 10 in Latin America and the Caribbean).

31 Cohort effects may influence age-specific Gini coefficients. That is, inequality may have been systematically higher among people in older cohorts throughout their lives. Levels of inequality have increased across successive cohorts in most countries, however, as discussed below. Cohort effects alone probably do not explain the rise in inequality over people's work lives or the sudden decline in developed countries after ages 60 to 64. Longitudinal studies support the finding that inequality tends to increase with age within cohorts, especially during people's working lives (Hungerford, 2020; Crystal, Shea and Reyes, 2017; Deaton and Paxson, 1994).

The sudden drop in inequality starting at around age 65 in countries that, overall, have comprehensive social protection systems, including public pensions and other public old-age transfers, suggests that these play an important role in curbing income inequality in old age.32 In general, pension entitlements are less unequal than wages in countries with broad coverage (OECD, 2013, 2015, 2017; Bosch, Melguizo and Pagès, 2013). Replacement rates are higher for people with lower wages; tax-based pensions provide an income floor for the lowest earners. In countries without comprehensive social protection systems, the redistributive role of public pensions is absent, and inequalities over the life course persist at older ages.

The sudden drop in inequality starting at age 65 in countries with comprehensive social protection systems suggests that these play an important role in curbing inequality in old age

3. SAVING FOR OLD AGE STUMBLES OVER MULTIPLE OBSTACLES

Wealth assumes an increasingly important function for economic security throughout old age. Individuals and households use wealth accrued throughout their lives, including physical assets such as homes or land and financial assets, to finance consumption and withstand shocks once they stop working. The distribution of household wealth is typically more unequal than the distribution of income within and across countries (United Nations, 2020d).

About 46 per cent of adults save for old age in high-income countries, compared to 16 per cent in middle- and low-income countries.[33] These disparities reflect people's varying capacities to accrue wealth based on their incomes and their unequal access to asset markets. In 75 countries, women's property rights are still restricted, for instance (World Bank, 2019). Even without legal obstacles, there are substantial inequalities in access to and use of financial services, including in old age. A lack of financial literacy, limited digital capabilities, illiteracy (especially in developing countries), discrimination, and the absence of financial services, products and digital infrastructure affect some groups of people more than others.

Given the challenges in measuring household and individual wealth, even more so if the focus is on differences by age, estimates are not widely available. Figure 4.4 shows wealth levels by age among people living in relative income poverty and those living above the poverty line in eight developed countries with available data (Australia, Canada, Finland, Germany, Italy, Norway, the United Kingdom and the United States).

Average household wealth typically rises with the age of the household head up to the official retirement age, when older persons start to spend their savings or

32 Differences in living arrangements between more and less developed countries may also play a role. In settings where the co-residence of older persons and working-age adults is still common, mostly in countries in developing regions, the disposable income of households of older persons reflects inequalities during working ages to a greater extent than in settings where intergenerational co-residence is less common.

33 World Bank, Global Findex database. Available at https://www.worldbank.org/en/publication/globalfindex.

else stop accruing assets and the burden of liabilities declines. There are large gaps in wealth between people living in relative income poverty and those with incomes above the relative poverty line, however. These differences increase up to ages 70 to 74. Gaps in wealth widen among survivors despite the fact that the poorest people tend to die earlier than people with higher incomes and more wealth.

The composition of wealth matters as well. Non-financial assets constitute a large share of wealth owned by older persons with low incomes in the eight developed countries with data (see annex figure 4.1.1). Their main residence, vehicles and other non-liquid durables and valuables make up 90 per cent of these non-financial assets. Spending down these assets to finance consumption is challenging, particularly for older persons in poverty, who for the most part can hardly downsize their homes.

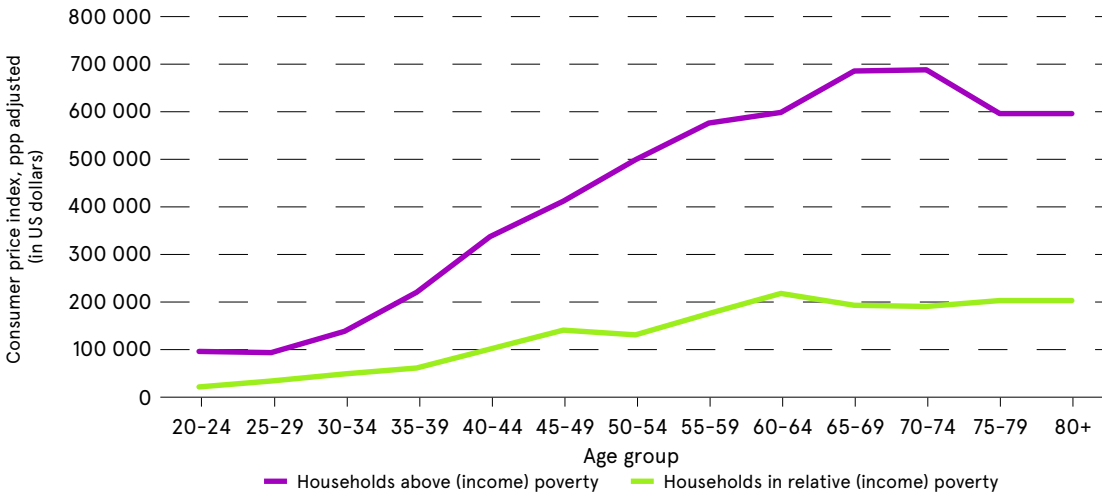
4. GENDER DISPARITIES MAKE OLDER WOMEN POORER

Inequalities between men and women persist into old age. Economically, women's lower levels of formal labour market participation, shorter working lives and lower wages during working years lead to more economic insecurity in later life. As a result of longer life expectancies, older women are also more likely than older men to be widowed, less likely to remarry following widowhood and more likely to live alone, three features that contribute to their economic insecurity, especially by age 80 or beyond.

In developed countries with data, higher levels of relative poverty among older persons compared to people of working age are due to greater poverty among older women (see figure 4.5.A). In developing countries with data, relative poverty is higher among women than men at all ages (figure 4.5.B).

Figure 4.4

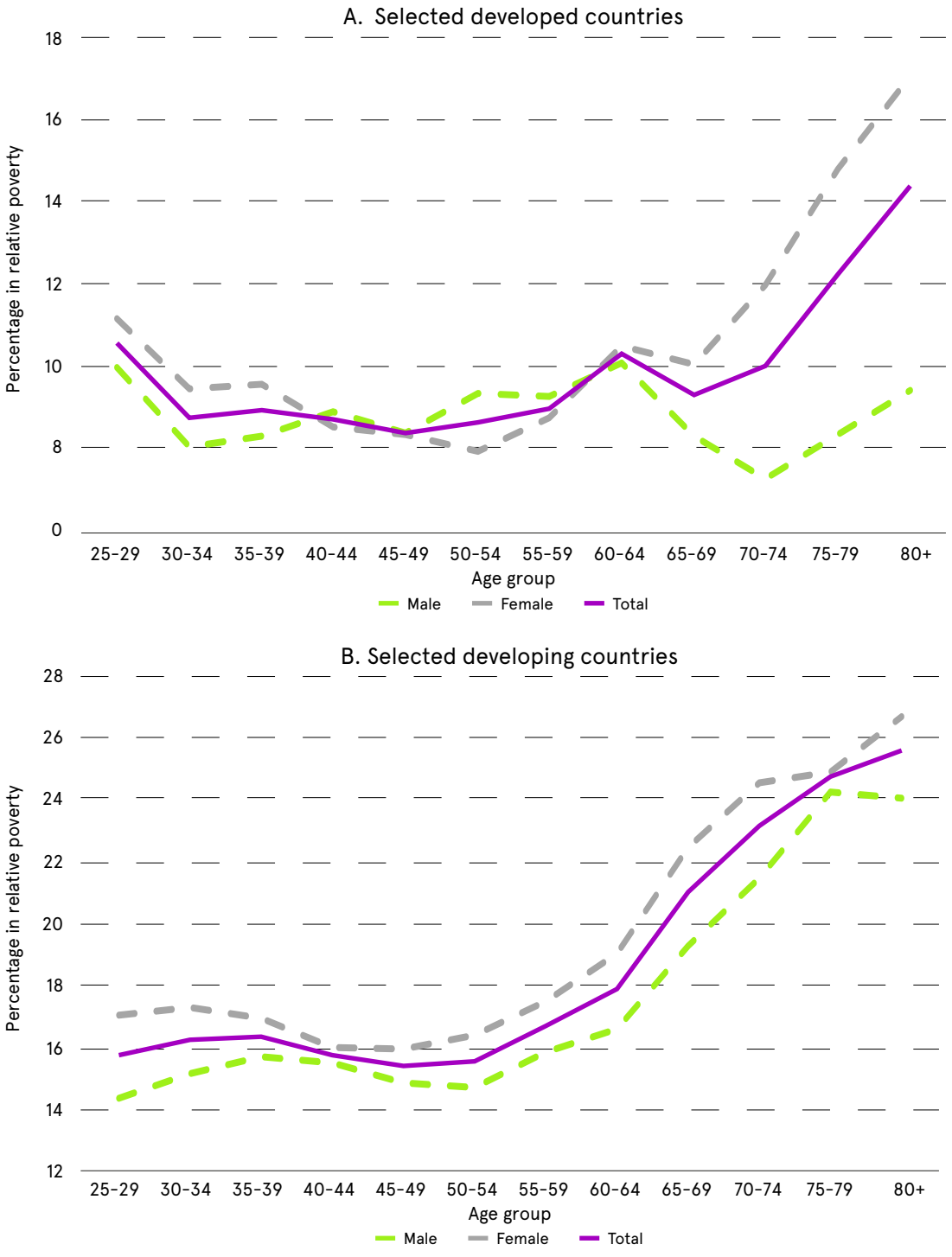
Household wealth by age, selected developed countries, 2019 (or latest year with data)



Source: Calculations based on data from the LIS Database (multiple countries; surveys conducted between 2010 and 2020). Available at www.lisdatacenter.org.

Note: Estimates are calculated using harmonized survey data on wealth reported at the household level for eight developed countries (Australia, Canada, Finland, Germany, Italy, Norway, the United Kingdom and the United States). Households in relative poverty are those living under 50 per cent of the median income of the total population. Estimates of household wealth include financial assets except pension assets and non-financial assets minus liabilities.

Figure 4.5 **Share of the population living in relative poverty by age and sex, late 2010s (or latest year with data)**



Source: Calculations based on data from the LIS Database (multiple countries; surveys conducted between 2010 and 2020). Available at www.lisdatacenter.org.

Note: See note on figure 4.1.

While retirement benefits and old-age transfers should reduce old-age poverty in countries with strong social protection systems, the gap in pensions between men and women is substantially higher than the gender pay gap, at least in the OECD countries (OECD, 2019). Older women are more likely to have worked in lower-paying jobs than men. Because of the unequal distribution of care and domestic work, as well as their reproductive roles, women also have shorter working careers and lower pension incomes even as they spend longer periods in retirement. Some countries have recognized these differences in pension entitlements. A growing number of countries in Europe offer caregiver credits for public, tax-funded pensions, for instance (Gerlinger, 2018). Expanding access to tax-funded old-age pensions and reducing requirements for access to contributory schemes have also helped women.

However, pension systems are not a silver bullet to close gaps in old-age poverty that result from the wider inequalities that women and other disadvantaged groups confront throughout their lives. Addressing these disparities requires more comprehensive life course approaches, including social, employment and family policies.

5. OTHER DIMENSIONS OF OLD-AGE EXCLUSION

While older persons do not always fare worse than younger people economically, they face spatial and social barriers that exacerbate the risk of social exclusion.[34] The fact that disability grows with age but supportive infrastructure is often insufficient limits autonomy, mobility and access to spaces, markets and services. Surveys have found that older persons report lower life satisfaction, fewer social interactions and less social support than working-age adults (OECD, 2020a). Against a backdrop of age discrimination, they also express a lack of agency or control over their lives and feel that they are not treated with dignity or respect (WHO, 2021a). Across Europe, more than one in three people aged 65 years or older reported being a target of ageism (Abrams and others, 2011). A meta-analysis of 52 studies across 28 countries suggested that one in six older persons has suffered from some form of elder abuse, a problem exacerbated by the pandemic (Yon and others, 2017).

Older persons report lower life satisfaction, fewer social interactions and less social support than working-age adults

For employed older workers who can afford to retire or are forced to do so, leaving the labour market often leads to shrinking social networks (Kauppi and others, 2021; Patacchini and Engelhardt, 2016). It also means losing a source of social identity and social acceptance. Older people who remain in the labour market, however, often report high levels of job insecurity and discrimination (Ayalon and Tesch-Römer,

34 Defined as a state in which individuals are unable to participate fully in economic, social, political and cultural life (United Nations, 2016).

2018; Phoenix and Parravani, 2019; OECD, 2020a). Cross-country evidence shows that employers are less likely to hire older than younger applicants for the same position and that, once employed, older workers have less access to training (Chang and others, 2020; Lahey, 2006).

Social connections are important for people's well-being and health. Compared to younger people, older persons report fewer social interactions and a lack of social support in times of crisis. In OECD countries, older people are almost three times more likely than young people to say they have no friends or family members to turn to for help in an emergency (OECD, 2020a). The COVID-19 crisis exacerbated social isolation among older persons, particularly at its onset (see box 4.2). Digital technologies and new media platforms allowing connections with family and friends may reduce social isolation to some extent. Yet a persistent digital divide in accessibility and usability may exclude older people from yet another sphere of social life.

A persistent digital divide in accessibility and usability may exclude older people from yet another sphere of social life

BOX 4.2 COVID-19, ISOLATION AND DISCRIMINATION AGAINST OLDER PERSONS

The COVID-19 pandemic has disproportionately affected older people. After many countries enacted limits on interpersonal contact to control the virus, warnings emerged about the possible unintended impacts on vulnerable groups, including older people.

Early evidence suggests, for instance, that lockdowns prevented health and social care systems from effectively responding to older peoples' pre-existing needs (HelpAge International, 2020). This has been a particular problem for older women as they are overrepresented among older persons and require more long-term care than older men. Even before the pandemic, care arrangements for older persons were fragile and unequal.

The restrictions disrupted social connections for many older persons, contributing to loneliness, stress and deteriorating mental health. Isolation has been particularly acute for those living in dedicated care facilities or alone. For older persons with cognitive decline or dementia, the interruption of regular and familiar social interactions and group activities has likely been particularly damaging. Some restrictions, including the closure of long-term care facilities to visitors, persisted far longer than others due to the specific threats the virus poses to older persons.

BOX 4.2

The physical isolation of older persons from traditional social networks may have put some at greater risk of elder abuse and neglect. Social isolation is a known risk factor for elder abuse as it limits opportunities for detection (Burnes and others, 2015). While data are still limited, a study suggests that, in the United States, one in five older persons was abused during the pandemic, an over 80 per cent increase compared to pre-pandemic estimates (Chang and Levy, 2021).

Measures meant to protect older persons may have contributed to narratives, in news and media coverage, of COVID-19 as mainly an "older person's illness" and of older people as a homogenous and extremely vulnerable group, despite large variations in risks within age groups. The World Health Organization (2021a) has noted that this framing may have undermined public health efforts against COVID-19 by pitting the needs of younger and older adults against each other and eroding intergenerational solidarity.

Health care, social care and social protection, and transportation and mobility are lifelines for older persons to participate in society. Even in countries that offer these public services, older persons are often excluded or their needs are not adequately met (United Nations, 2016). Insufficient access to services and supporting infrastructure is a particular problem for older persons in rural and remote areas. As an increasing number of public services are offered online, age-related gaps in access and skills compound these challenges.

Physical isolation and immobility also limit access to public services and spaces, forming a vicious cycle of exclusion for some older persons. A lack of accessible public transport and unwalkable public spaces such as marketplaces, hospitals and parks create barriers to their participation. They also threaten the ability of older persons to "age in the right place", as discussed in chapter 5.

B.

INEQUALITIES OVER THE COURSE OF LIFE ADD UP

Snapshots of older persons at one point in time provide little information on how advantages or disadvantages over the life course affect health and other markers of well-being in later life (Carr, 2019). A life course approach helps identify the roles that early life conditions and people's paths during adulthood play in driving divergent outcomes in old age. It can also shed light on some of the structural social and political factors that explain unequal ageing.

Education has consistently emerged as a primary determinant of health and well-being throughout the life course

This section examines how education and employment paths affect economic prospects and health in old age – specifically, the risk of living in poverty or with a disability. Despite the importance of understanding the determinants of healthy ageing, necessary data are not widely available, particularly in developing countries. Comparisons across countries are even more challenging due to the lack of harmonized cross-country surveys containing retrospective information as well as the dearth of longitudinal studies. These are crucial to understanding how context affects the ways that family, education and work influence ageing outcomes. Better ageing outcomes in some countries than in others provide some evidence to assess which social and economic policies matter most.

1. HEALTH DISPARITIES AMONG OLDER PEOPLE OFTEN START EARLY: EDUCATION IS KEY

Adversity early in life can leave lasting imprints on health and well-being in later ages. Extensive research illustrates how disadvantages in infancy and childhood increase the likelihood of developing chronic diseases, engaging in unhealthy behaviours and suffering from functional limitations in adulthood.[35]

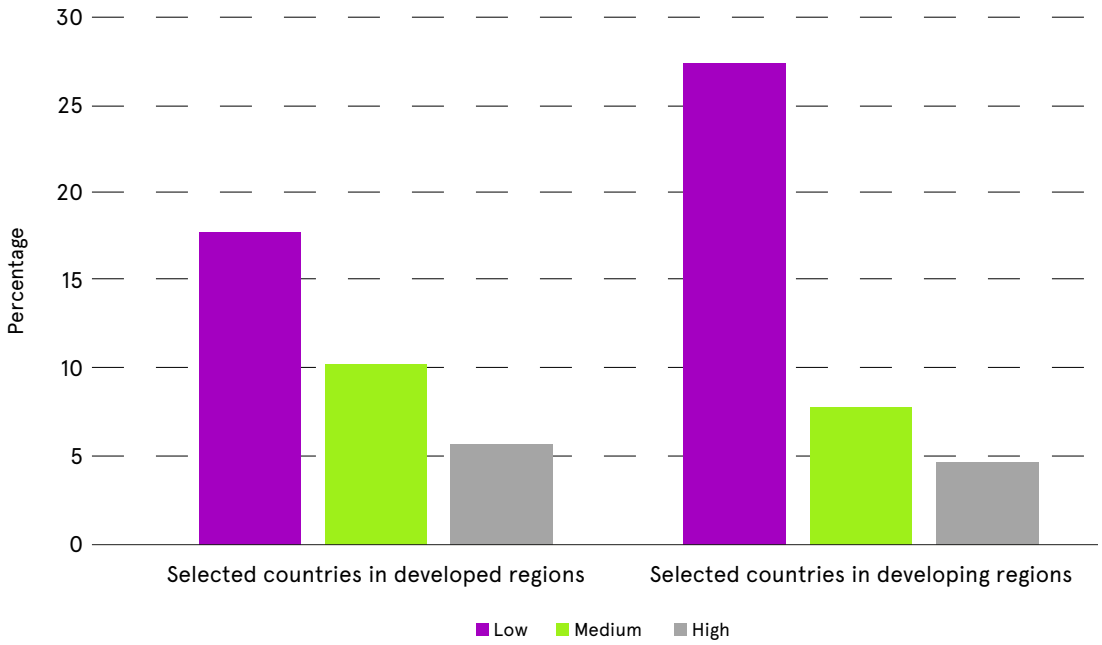
Education has consistently emerged as a primary determinant of health and well-being throughout the life course. A person's education, and even that of their parents, affects their income, access to health care, lifestyles and social networks – all the way to old age.

Disparities in the prevalence of relative old-age poverty by education, for instance, are very large (figure 4.6). Gaps are greater in developing countries but substantial in developed countries as well, suggesting that social protection in old age does not fully correct disadvantages that accumulate along the lifespan even in these countries. Older persons with low levels of education experience three to four times as much poverty as those with high levels of education in developed countries with data.

35 See, for instance, Carr, 2019; Kobayashi and others, 2017; McEniry, 2013; and van der Linden and others, 2020.

Figure 4.6

Share of older persons living in relative poverty by level of education, 2019 (or latest year with data)



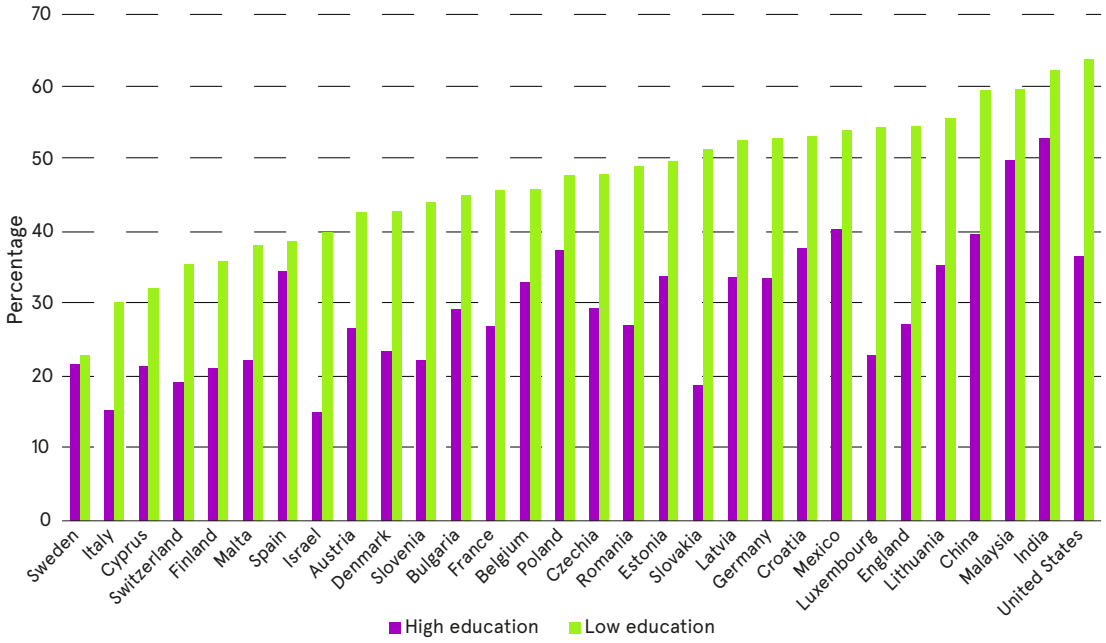
Source: Calculations based on data from the LIS Database (multiple countries; surveys conducted between 2010 and 2020). Available at www.lisdatacenter.org.

Note: Based on information for 18 developing countries and 29 developed countries. The educational level is classified into three categories: low (primary and lower secondary levels), medium (upper secondary) and high (tertiary).

People with less education are also more likely to suffer from poor health and die earlier. Even with this selection effect, health disparities by education persist into old age.

As shown in figure 4.7, there is a significant difference in functional disability prevalence – defined as limitations in completing daily tasks, as in the note for the figure – between the least and most educated older adults, across countries. On average, the prevalence of disability is twice as large among older adults with low levels of education. In some developed countries, levels of disability among the less educated are as high as in the developing countries in figure 4.7. The disability gap differs by country in part due to differences in social protection coverage, levels of spending on public education and support to workers or families with children.

Figure 4.7 **Share of adults 50 and older with a functional disability by education level, selected countries, around 2018**



Sources: Harmonized Health and Retirement Studies accessible from the Gateway to Global Aging Data platform. Available at https://g2aging.org/. Studies include the China Health and Retirement Longitudinal Study, the English Longitudinal Study of Ageing, the Irish Longitudinal Study on Ageing, the Longitudinal Aging Study in India, the Malaysia Ageing and Retirement Study, the Mexican Health and Aging Study, the Survey of Health, Ageing and Retirement in Europe and the United States Health and Retirement Survey.

Notes: Functional disability is measured by whether the respondent had some difficulty in any of the following activities: (a) walking 100 metres, (b) getting up from a chair, (c) stooping, kneeling or crouching, or (d) lifting or carrying 10 lbs (5 kilos). Educational attainment in China, India, Malaysia and Mexico was classified as none (low) or more than primary education (high). In all other countries, education was divided into low (less than upper secondary education) and high (tertiary education). Estimates are age-adjusted and weighted to correct for sample design. The age range of the studies is 50 to 118 years.

BOX 4.3

DISPARITIES IN DISABILITY SIGNAL UNEQUAL AGEING

The onset and severity of disability, affecting either physical or mental health, profoundly impacts people and their families. It incurs large economic and societal costs in terms of health care and caregiving needs. The estimated global cost of dementia alone reached nearly $1 trillion in 2016 (Xu and others, 2017). Physical disability can include limitations in the ability to carry out daily activities needed for personal care and an independent life, such as eating, bathing and mobility.

The onset of disability prior to old age and a disproportionately high rate of disability are indicators of poor health that are unequally distributed. Disability rates vary significantly throughout the world and reflect differences in childhood circumstances, adverse exposures to disease and risk, and uneven access to resources and opportunities. In general, people in developing countries are more exposed to risk factors associated with disability, such as limited access to health care, unsafe water systems and malnutrition. Disability rates are also steeper in populations that have experienced catastrophic events such as natural disasters and civil conflict. While disability rates are higher in developing countries than in developed countries around the world, disability prevalence is greatest among the poorest in all countries (Hosseinpoor and others, 2013).

Examining functional limitations as a measure of disability (see note for figure 4.7) allows cross-national comparisons of inequalities in health in old age as it tracks the difficulties that people face in daily life. It does not depend on access to health care and medical professionals for diagnosis, as is the case for examining differences in the prevalence of diseases, such as diabetes or cardiovascular disease.

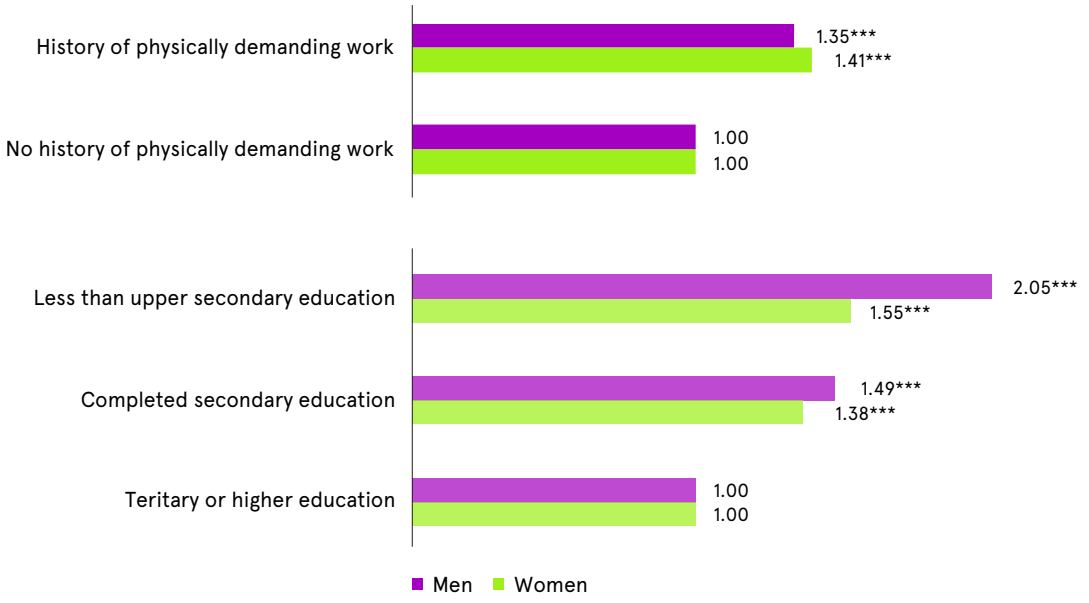
2. EMPLOYMENT CAN SUPPORT OR DAMAGE HEALTH

A person's occupation, whether they have a job and the conditions in which they work shape well-being in old age. While the effects of employment on health depend on the types of jobs people do and their access to social protection, the fallout from unemployment is unequivocally negative. Episodes of unemployment damage physical and mental health,[36] cause financial hardship and lead to isolation and psychological stress. Vulnerable employment, often in the informal sector, has similar impacts as it limits access to social protection and links with social and political organizations, including unions.

Physically demanding jobs can also damage health. In European countries, men and women holding such jobs since the start of their working lives had a 35 and 41 per cent greater risk of disability by the age of 50, respectively, than those who did not (see figure 4.8 and annex figure 4.1.2). The interplay between the type of work and disability later in life occurs independently of the level of education. For women, the effect of working or having worked in physically demanding jobs is as large as not having higher education.

The significant, independent effects of employment characteristics and educational attainment on functional disability at older ages suggest distinct pathways linking each to ageing.

Figure 4.8 **Odds ratios of the effect of working in physically demanding jobs on functional disability, adults aged 50 or older, selected European countries and Israel, around 2018**



Source: Survey of Health, Ageing and Retirement in Europe for ages 50 to 118. Available at http://www.share-project.org/home0.html.

Notes: The numbers represent the odds ratio of experiencing disability compared to workers with non-physically demanding jobs (employment history) and those with tertiary education (education). For employment history, respondents either agreed or disagreed with the following statement: My main job was physically demanding. Results are significant at the p <.001 level.

36 See, for example, Wanberg, 2012 for a review.

Job demands may increase the risk of injury or other health risks that can lead to disability and poor health in old age. Education likely affects health behaviours. Low educational attainment may be a good proxy of the characteristics of employment history with negative effects on health, other than physical labour, such as episodes of unemployment, job precarity and low wages.

C.

THE FUTURE OF AGEING: MORE UNEQUAL

The situation of older persons will continue to evolve as today's children and youth grow older. Assessing the social and economic characteristics of successive cohorts of youth, working-age adults and older persons provides important insights into the future of our ageing world.

Successive cohorts of youth and adults are increasingly unequal and economically insecure, in both developed and developing countries, despite improvements in health and education

Despite the impact of COVID-19 and other sources of uncertainty, future cohorts of older persons are likely to be healthier and more educated – and therefore more productive – than those today. They will benefit from continuing scientific and technological innovations, including medical and pharmaceutical advances, that will allow many to enjoy healthier and longer lives (Carr, 2019). Health has largely improved throughout the life course, both over time and across successive cohorts. Yet from an economic perspective, successive cohorts of youth and adults are increasingly unequal and economically insecure, in both developed and developing countries, despite improvements in health and education. Without swift and bold policy action to counter this trend, future cohorts of older persons may be even more economically unequal than those today.

1. THE EMPLOYMENT CRISIS WILL BE FELT ACROSS GENERATIONS

A. PRECARIOUS WORK AND LACK OF EMPLOYMENT

Recent decades have seen dramatic changes in how people work. Labour market participation has helped millions of people to escape poverty and empowered women and other disadvantaged groups. Yet deficits in decent work are large and persistent. Full-time jobs under standard employment contracts, which usually entail access to social protection and other employment rights, have ceased to be the norm even in developed countries. Involuntary temporary, part-time and casual work, including zero-hours contracts, subcontracted labour and self-employment, are on the rise. New forms of employment and work are emerging partly through digitalization and automation and in a growing "gig" economy. Workers in these new forms of employment have little

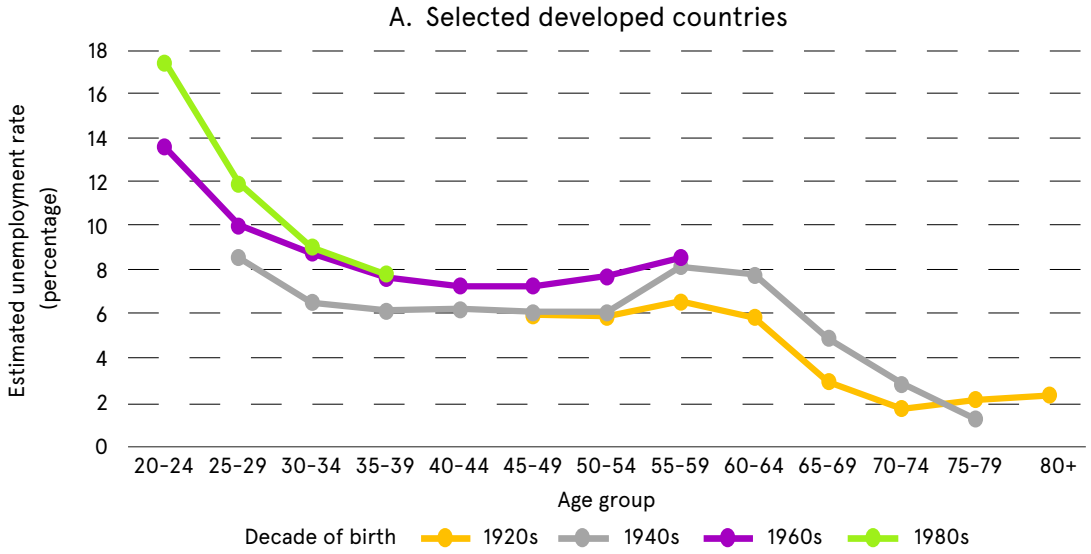
employment security, unsteady incomes and limited access to social protection, much like workers with more traditional forms of non-standard contracts as well as those in the informal economy.

This growing labour market flexibility has not brought about more employment opportunities for all workers. Globally, the number of jobless persons increased from 161 million in 2000 to 187 million in 2019 and is projected to touch 207 million in 2022, after reaching 221 million in 2021 due to the COVID-19 crisis.[37] The unemployment rate hovered between 5 and 6 per cent before the crisis.

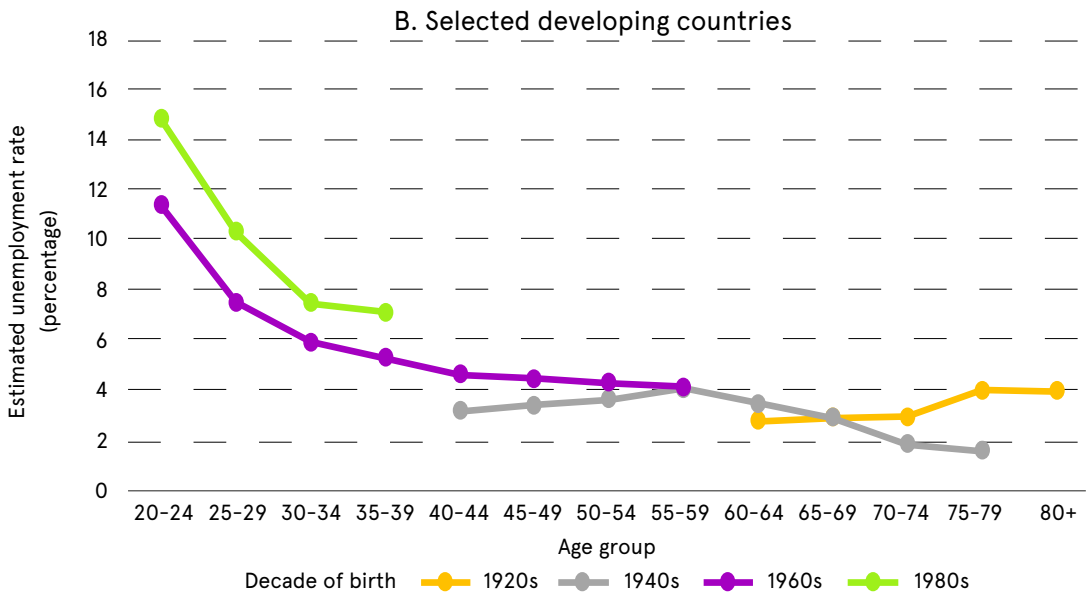
Growing unemployment levels across successive 10-year birth cohorts are evident in figures 4.9.A and 4.9.B. Unemployment has increased from one cohort to the next in practically all age groups in developed and developing countries with data. For workers aged 25 to 29, for instance, unemployment rose from 9 per cent for the cohort of people born in the 1940s, on average, to 12 per cent for those born in the 1980s in developed countries. For workers aged 55 to 59, it climbed from nearly 7 per cent for those born in the 1920s to 9 per cent for the 1960s cohort. In developing countries, the shorter cohort series also suggests rising unemployment from one cohort to the next, particularly among younger workers.

To some extent, temporary shocks affect trends across cohorts. For example, part of the 1980s cohort reached their 20s during the 2008 financial and economic recession, which resulted in a protracted unemployment crisis. This downturn and other disturbances have had scarring effects on workers, affecting their employment prospects in the long term. It is unlikely that temporary setbacks alone, however, explain the increase in unemployment across birth cohorts.

Figure 4.9 **Estimated unemployment rate by age and birth cohort**



37 ILO Statistics. Available from: https://ilostat.ilo.org/. See also ILO, 2022.



Source: Calculations based on data from the LIS Database (multiple countries; surveys conducted between 2010 and 2020). Available at www.lisdatacenter.org.

Notes: Based on information for 29 developed and 16 developing countries. Data come from successive waves of the LIS Database, from 1978 to 2019. Each line represents a 10-year birth cohort (that is, people born between 1 January 1920, 1940, 1960 or 1980 and 31 December 1929, 1949, 1969 or 1989, respectively). The trend for each cohort is estimated using age and country fixed effects to adjust for some missing observations, especially in earlier survey waves.

Unemployment trends are an incomplete measure of deficits in productive employment and decent work. In countries lacking comprehensive social protection systems, most workers cannot afford to stay unemployed. An estimated 60 per cent of workers worldwide, and over 70 per cent in developing countries, struggled to earn income through informal employment in 2019 (ILO, 2021a; World Bank, 2021). As a result of the pandemic and measures to contain it, informal workers were three times as likely as workers in formal employment to lose their jobs in countries with data (ILO, 2021a).

Persistent informality and the rise of non-standard forms of formal employment pose a challenge to income security in old age

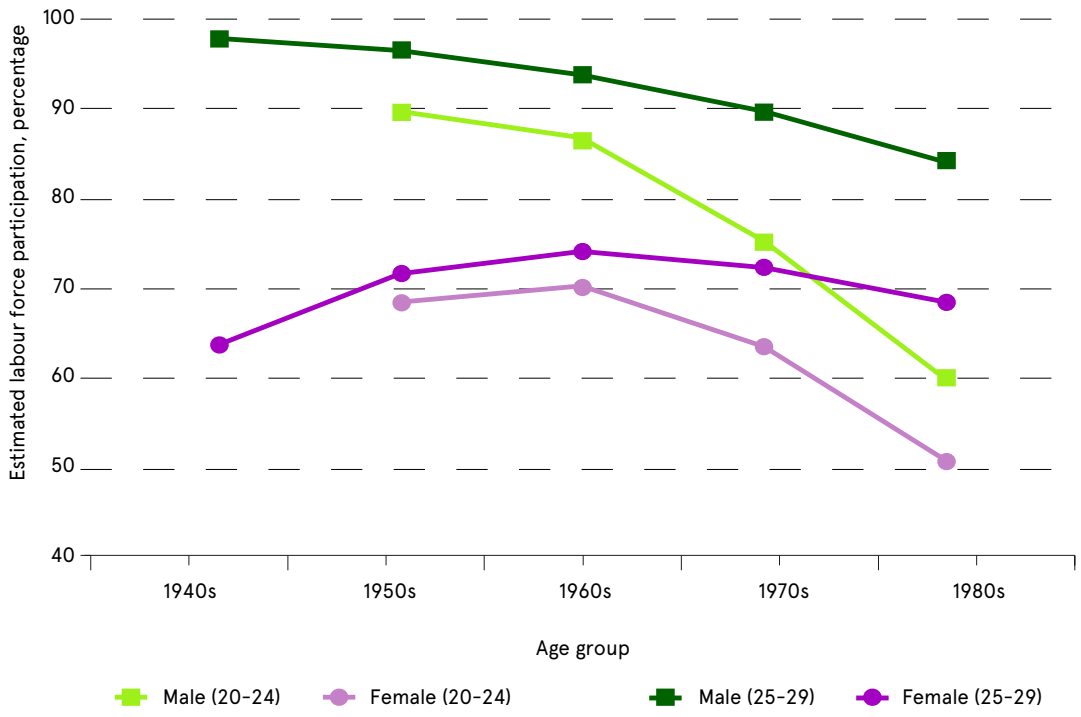
Persistent informality and the rise of non-standard forms of formal employment pose a challenge to income security in old age. Most workers in informal employment do not pay into contributory pensions or other social protection programmes. In fact, a lack of social protection coverage is often a criterion to identify informal employment (Gatti and others, 2014). Further, liquidity constraints limit the ability of these workers to save privately and regularly, since wages are lower and more unreliable in informal than in formal employment. Such workers also face many barriers to accessing formal and reliable financial services, from low financial literacy and high transaction costs to a lack of information. Many workers in the "gig" economy, own-account workers and those with temporary or part-time contracts face similar obstacles due to unsteady incomes and the lack of employment security.

B. *THE YOUTH EMPLOYMENT PREDICAMENT*

For young people, decent jobs are an important step in the transition to adulthood. Since early labour market experiences shape future employment opportunities, decent work deficits, both in the amount and quality of jobs available to youth, can have long-lasting consequences in terms of poverty, including in old age, and may even deter the well-being of future generations. They also challenge the ability of countries moving through a demographic transition to capitalize on a demographic dividend.

Young people are three times as likely to be unemployed as adults and bear the brunt of employment losses during recessions (ILO 2021a, 2021b). Many countries have witnessed a big surge in the number of discouraged young workers, who are available to work but have dropped out of the labour market. As shown in figure 4.10, labour force participation rates on average have declined steadily among young men aged 20 to 24 as well as young adults aged 25 to 29 from one birth cohort to the next in countries with data. Female labour force participation rates reached their highest point for young women of the 1960s cohort and have declined across more recent cohorts (1970s and 1980s).

Figure 4.10 **Estimated youth labour force participation rate by birth cohort**



Source: Calculations based on data from the LIS Database (multiple countries; surveys conducted between 2010 and 2020). Available at www.lisdatacenter.org.

Note: Based on information for 29 developed countries and 16 developing countries (see figure 4.1). The horizontal axis represents consecutive 10-year cohorts.

The growing number of years that young women and men spend in education explains part of the decline. Since the mid-2000s, however, the number of young people who are "not in employment, education or training" (known as NEET) has increased. This represents a severe waste of human potential with potentially drastic repercussions, both for young people in terms of lifelong marginalization and exclusion and diminished well-being in old age, and for societies at large, particularly those who could benefit from a demographic dividend.

Growing casualization, underemployment and persistent informality are long-standing features of an employment crisis that has endured even during periods of economic expansion and disproportionately affects youth. The economic insecurity generated by this deep crisis compounds inequality, undermines public trust and damages the social fabric.

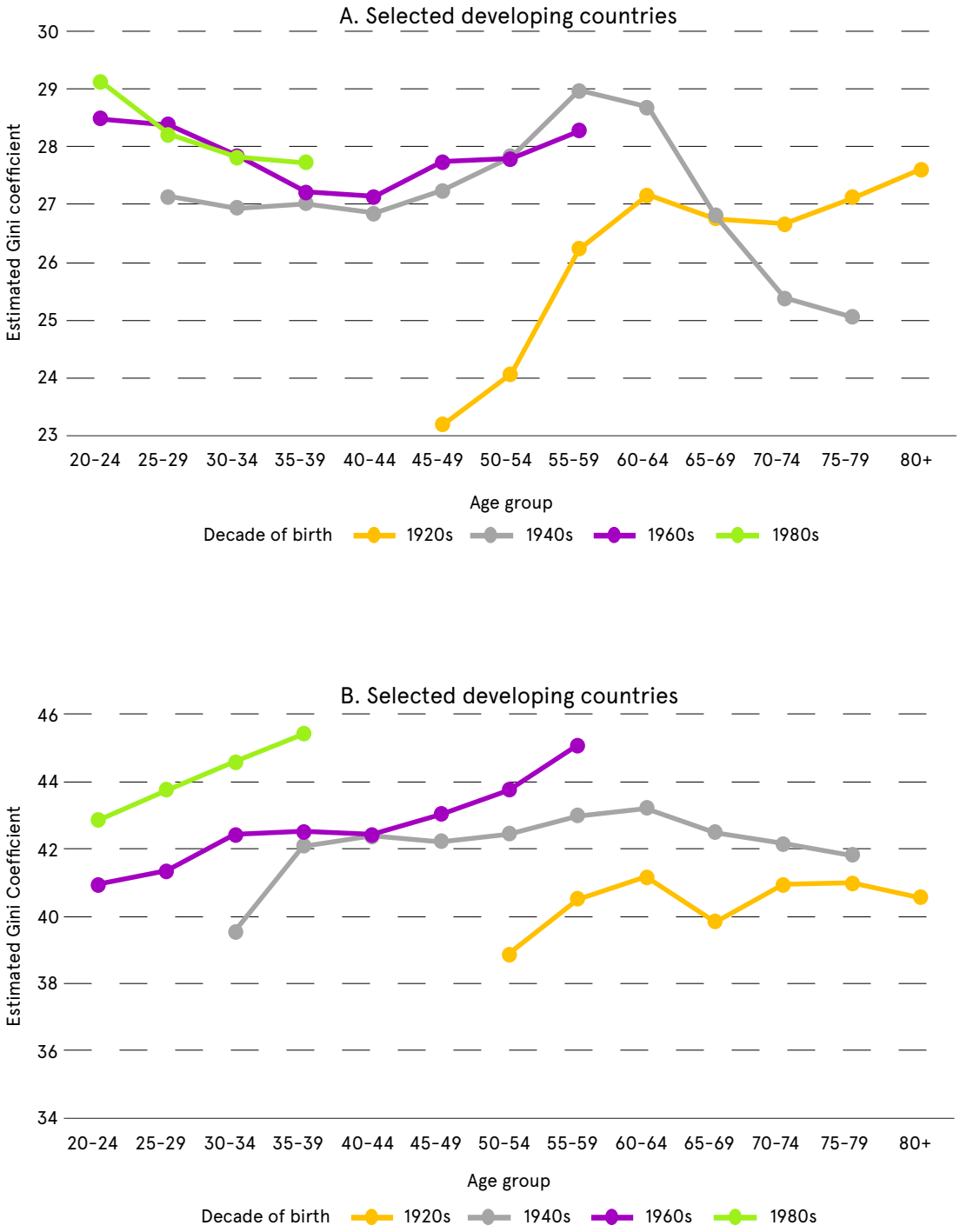
2. INEQUALITY IS RISING

Changes in the world of work have implications for inequality. Cohort analysis based on the Gini coefficient of income inequality shows widening disparities among successive cohorts of youth and working-age people (figures 4.11.A and 4.11.B). Future cohorts of older persons will likely face higher inequality in old age without action to prevent it.

In developing countries, according to figure 4.11.B, the Gini coefficient has increased steadily from one birth cohort to the next at all ages. Cohorts born in the 1960s or later are extremely unequal: Gini coefficients between 44 and 45 are well above the world average of 38 around 2015 (United Nations, 2020d). In developed countries, inequality is also deepening across cohorts at all ages but with exceptions. Increasingly comprehensive social protection systems and other forms of old-age support have helped curb inequality among older people, even during crises (part of the 1940s cohort reached retirement age amid the 2008 financial meltdown and its aftermath).

High and growing income inequality is concerning for ethical and instrumental reasons. Extremely unequal countries are less effective in reducing poverty and less successful in sustaining economic growth than those with low inequalities (United Nations, 2020d). Income inequality is linked to disparities in health and education that transmit disadvantages from one generation to the next. Without appropriate institutions to prevent them, inequalities often concentrate political influence among those who are already better off. Political inequalities tend to maintain or widen unequal opportunities and undercut trust in the ability of Governments to address the needs of the majority, with implications for political stability and the functioning of democracy.

Figure 4.11 **Gini coefficient by birth cohort**



Source: Calculations based on data from the LIS Database (multiple countries; surveys conducted between 2010 and 2020). Available at www.lisdatacenter.org.

Note: Based on information for 29 developed countries and 16 developing countries (see figure 4.1)

3. COVID-19 ALTERED PROSPECTS FOR EDUCATION AND LABOUR MARKETS

The COVID-19 pandemic and the ensuing economic crisis have had major implications for education and labour markets. The hardest hit are low-wage workers, including those in informal employment, and women and youth. As a result, poverty has increased and emerging evidence indicates that income inequality has risen within many countries as well, possibly reversing the declining inequality observed in a majority of developing countries since 2000 (World Bank, 2022; Narayan and others, 2022; United Nations, 2022d). Current trends point to increased inequality between men and women (Alon and others, 2021; Flor and others, 2022) and indicate that youth aged 18 to 25 suffered the largest drops in household income (Belot and others, 2020).

There is a high risk that rising inequality will continue to escalate and even intensify during the recovery from the pandemic and over the long term. In the labour market, the crisis is inducing structural changes that threaten to exacerbate existing divides. The rise in remote work, for instance, is likely to reduce decent work opportunities for low-income workers, in particular, since the tasks they perform are less amenable to working from home, and their housing conditions, including Internet connectivity, are less adequate. Disparities within countries in access to remote work are likely to appear across countries, considering that poor countries have more jobs with physical or manual tasks and lower ICT access and use. A growing reliance on self-employment, particularly in the "gig" economy, could accelerate the trend towards precarious work for a large share of the labour force.

For younger cohorts, disruptions in education brought about by the pandemic compound unequal employment opportunities. Among the various channels through which the pandemic will affect future cohorts, education is probably the most important and de-equalizing one.

Although learning away from school has been temporary for some, others may never return to the classroom due to economic hardship at home that forced them to work instead of going back to school or because they have become discouraged. Even for those who did not drop out, disruptions in education leave scars, affecting motivation, future employment opportunities, wages and social mobility, with implications for well-being in old age. The COVID-19 pandemic and its aftermath may result in a lost generation of children and youth without fast action to address their needs. Current cohorts of children and youth risk losing $17 trillion in lifetime earnings in present value because of school closures induced by COVID-19 (World Bank, UNESCO and UNICEF, 2021).

D.

REDUCING INEQUALITY AND PROVIDING SECURITY – WITHOUT BREAKING THE BUDGET

Many older persons have incomes that are low by national standards, placing them below the relative poverty threshold. Some enjoy a comfortable old age; a few are very wealthy. Without policies to prevent it, disadvantage accumulates through peoples' lives, leading to large disparities. This chapter highlights how countries with comprehensive social protection systems, including broad access to affordable health care, have been much more successful in curbing income inequality and reducing poverty at older ages than those without them.

Countries with comprehensive social protection systems, including broad access to affordable health care, have been much more successful in curbing income inequality and reducing poverty at older ages than those without them

Fiscal sustainability concerns have dominated policy discussions about the impacts of population ageing, including those related to pension reforms. In countries with broad pension coverage, benefits currently represent 2.5 to 5 per cent of GDP (Khan, 2022). Measures to sustain pension expenditures over the long run can affect progress towards more immediate goals of eradicating poverty and reducing inequality.

Nonetheless, action on two fronts can help address sustainability concerns without sacrificing equity or the right to economic security at older ages. First, ex ante actions can be taken over the life course to promote healthy ageing and reduce levels of poverty and inequality before people reach older ages. Second, specific policies to reduce inequality and promote economic security at older ages can be constructed in a fiscally sustainable manner, with a focus on old-age pensions.

1. CUTTING THE ROOTS OF OLD-AGE DISADVANTAGE AND ILL-HEALTH

Policies and programmes that promote the well-being of older persons are critical. Yet from a life course perspective, such efforts are insufficient (Carr, 2019). Poverty and exclusion at older ages result from disadvantages experienced by some groups, including women, throughout their lives. Actions to counter or mitigate such disadvantages along the life course can prevent poverty and exclusion from taking root.

While no single set of policies applies universally, all countries should adopt a coherent and integrated policy strategy to give every person an equal chance to grow older in good health and with economic security. Towards that end, national strategies should promote equal access to opportunities, back fiscal policies conducive to reducing inequality, and tackle prejudice and discrimination (United Nations, 2020d). Strategies centred on these

three building blocks should help reduce both age-based and broader inequalities.

While no single set of policies applies universally, all countries should adopt a coherent and integrated policy strategy to give every person an equal chance to grow older in good health and with economic security

While intergenerational equity deserves greater attention and requires urgent policy action in many countries, existing gaps between rich and poor within one age group or one generation are extremely large and consequential, as reflected in the 2030 Agenda's call for reducing economic inequality.[38] Yet States have generally been much more effective in redistributing resources across age groups, especially from the working-age population to children and older persons, than across socioeconomic groups.[39] Promoting equal opportunity requires that all children have an equal chance to advance their capabilities from birth, including through access to quality education and health care, and later in life to enjoy the rewards of their education through opportunities for decent work.

Ensuring healthy ageing should be a key priority. Maintaining good physical and mental health over the life course helps to prevent descents into poverty and promotes the income security of older persons. Health insurance is crucial, since without it, many people fall more seriously ill or end up in poverty due to an inability to afford the cost of health care. Globally, nearly 1 billion (996 million) people face catastrophic levels of health spending, defined as out-of-pocket expenditures above 10 per cent of household income (WHO, 2021b). Out-of-pocket health expenditures per capita doubled from 2000 to 2019 worldwide,40 spurred in part by privatization. The increased costs of health care and other basic services make them unaffordable for people in poverty or affect the quality of services they receive.41

Universal health coverage is a necessary step to ensure affordable and equal access to health-care services for all. Accelerating its achievement will reduce out-of-pocket spending on health, thereby protecting vulnerable groups from financial hardship while improving access to health care. Several developing countries, such as Ghana and Viet Nam, have shown that universal health coverage is feasible at various levels of development.

Addressing the social determinants of health is also important, with education being one of the most critical factors for health in old age. A person's education af-

38 SDG 10 calls for reducing inequality within and among countries. Specifically, target 10.1 calls for progressively achieving and sustaining income growth of the bottom 40 per cent of the population at a rate higher than the national average.

39 Even in Europe, as a Vanhuysse, Medgyesi and Gal (2021) note, States are "better characterized as inter-age redistribution machines, performing lifecycle consumption smoothing rather well" while social policies serve multiple goals in Europe, but "empirically they are neither primarily nor solely responsible for poverty relief and inequality reduction

40 Calculations based on the WHO Global Health Observatory data repository, out-of-pocket expenditure per capita in PPP international dollars. See https://apps.who.int/gho/data/node.main.GHEDOOPpcPPPSHA2011?lang=en, accessed on 15 June 2022.

41 See A/73/396, Note by the Secretary-General on Extreme Poverty and Human Rights on Privatization (26 September 2018).

fects health not only through its impact on income and access to health care but also through behavioural and psychological dimensions such as smoking, diet and access to social support, all of which influence physical and mental health in later life. The significant education gradient in health and well-being across the life course is an argument for improving education access and quality for all, not only as a goal in and of itself but also as a health policy.

Considering rapid changes in labour markets around the world, education should not stop after childhood. All workers, regardless of wages or skills, will experience an increasing number of job transitions. Providing opportunities for learning and skills development throughout people's working lives would allow them to adapt to shifts in labour demand. Education and training systems and techniques must be updated to better meet the needs of learners at all ages.

Improved education and potential increases in labour productivity will have little effect on poverty and inequality, much less on people's ability to save for old age, without successful school-to-work transitions and decent job prospects. In recent decades, real wage growth has not kept pace with improvements in productivity, particularly in developed countries (ILO, 2018b). In addition, wage inequality has grown (ibid). Wage adjustments that reflect changes in labour productivity over time and a statutory minimum wage are key for workers and their families to save. Higher wages would also have a positive impact on public budgets.

High levels of informal employment limit the ability of workers to attain economic security at older ages. Promoting formalization can expand decent work opportunities and reduce working poverty across the life course. Stronger labour market institutions, including regulations, employment contracts, collective agreements and labour inspection systems, along with comprehensive social protection systems based on solidarity and risk-sharing, are essential pathways to formalization. Governments can incentivize the transition from the informal to the formal economy for employers and employees alike by improving access to business services, financing and markets, coupled with continuing education and skills development programmes that reduce barriers to entry into formal work. Formalization is a complex and gradual process, but some countries, including Brazil, Thailand and Türkiye, have significantly reduced informality over the last decade.[42]

2. IMPROVING THE LIVES OF OLDER PERSONS THROUGH ADEQUATE PENSIONS

The struggle against poverty among older persons, aimed at its eradication, is a fundamental objective of the Madrid International Plan of Action on Ageing. Significant progress in extending pension coverage has helped protect many older persons from poverty, including during the COVID-19 crisis. In 2020, 77.5 per cent of older persons worldwide received a pension (ILO, 2021c). While the coverage rate was above 95 per cent in Europe, less than 20 per cent of people above retirement age received a pension in sub-Saharan Africa (ibid.).

42 ILO Statistics on the informal economy. See: https://ilostat.ilo.org/topics/informality/ (accessed on 15 June 2022).

Many countries have expanded pension coverage through tax-funded, non-contributory schemes. These reach groups that are usually undercovered, namely, women and workers in informal employment. But they often do not provide income security on their own. As regards contributory schemes, most countries have defined benefit plans in place. A small but growing number of countries complement these with mandatory or voluntary defined contribution systems (ILO, 2021c). Since most contributory schemes are pay-as-you-go, where the working-age population funds current pension benefits, increases in the share of older persons and the number of years in retirement have caused growing concerns about pension sustainability.

BOX 4.4

THE BUILDING BLOCKS OF OLD-AGE PENSION SYSTEMS

Old-age pensions are payments provided to people above a specific age. Broadly, there are three types of pensions:

1. Tax-financed pensions: Often called social or non-contributory pensions, they are financed from general government revenues and aim to provide a minimum income in old age. Tax-financed pensions can be universal (directed at all citizens above a specific age), pension-tested (available to older persons who do not receive a contributory pension or whose contributory pension benefits are below a certain threshold) or means-tested (for older people whose income is below a certain threshold).

2. Mandatory contributory pensions: These schemes are available to workers, generally in the formal sector, and are meant to partly or fully (in a few cases) replace labour earnings received prior to retirement. Contributory pensions are financed by deductions from employees' salaries and complemented by contributions from employers. Contributory schemes can either be financed on a "pay-as-you-go" basis (contributions from the working-age population financing pensions of current retirees) or funded by the individual through the investment of savings and deferred payment arrangements. Funded schemes can be paid for by investment returns set by the market or by returns set by the Government (in what are called notional defined-contribution plans). The basis of the pension calculation can be related to labour earnings and meant to ensure a specific level of benefits during retirement (in what are referred to as defined-benefit schemes) or linked only to contributions made (in so-called defined-contribution schemes).

3. Voluntary or private contributory pensions: Offered to the working-age population and elective by design, voluntary or private contributory pensions can take many forms. Some are funded exclusively through individual savings while others are funded by both employees and employers.

BOX 4.4

Countries usually adopt different combinations of the above to build their pension systems. In other words, pension systems usually have several tiers, as described above: tier 1 (tax-financed pensions), tier 2 (mandatory contributory pensions) and tier 3 (private or voluntary contributory pensions). Tax-financed pensions are provided through the State. Mandatory contributory pensions are usually offered fully or partly through the State. Voluntary or private contributory pensions are generally operated by the private sector; Governments play only a regulatory role.

To improve fiscal sustainability, many countries have raised the age at retirement, cut down early retirement provisions or indexed the retirement age to increases in life expectancy. Others have bumped up contribution rates or reduced benefits for future retirees, mostly through changes in benefit indexation. There is also a trend towards private defined contribution pension plans, in which benefits depend on the level of savings accumulated by the pensioner, either to complement or replace public defined benefit plans that provide minimum income guarantees.

Measures to ensure fiscal sustainability must be weighed against the need for public pensions to cover and provide income security to all older persons

The combination of these reforms, which will affect youth and future generations more than older people today, is expected to lower benefits. The ILO recorded 57 cases of reforms to reduce pension benefits that were introduced from 2018 to 2020 (ILO, 2021c). In countries of the European Union, the average gross replacement rate of public pensions is projected to decline from 42.5 per cent of the average wage in 2013 to 35.9 per cent in 2053 (European Commission, 2017). Expected changes in replacement rates vary significantly by country: They are projected to fall by more than 20 percentage points in Poland, Portugal and Spain but expected to increase slightly (by less than 2 per cent) in Czechia and Denmark (ibid.).

Measures to ensure fiscal sustainability must be weighed against the need for public pensions to cover and provide income security to all older persons. In countries with comprehensive social protection systems, the challenge is to maintain the poverty- and inequality-reducing effects of pensions. In countries without them, the focus must be on extending pension coverage, providing adequate benefits and creating fiscal space to finance public pension systems and meet target 1.3 of the SDGs.[43] Early action on these fronts would

43 The aim of target 1.3 is "to implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable".

allow a gradual phase-in that may spread costs across generations.

A. A FISCALLY SUSTAINABLE FOCUS ON EQUITY AND ECONOMIC SECURITY

In countries with broad pension coverage, replacement rates are higher for low-income than for high-income earners. In the European Union, replacement rates even increased for the bottom income quintile from 2007 to 2015 but declined from 2015 to 2018 (European Commission, 2021b).

Beyond concrete measures to safeguard the income security of low-income earners, supporting the diverse needs and preferences of workers regarding retirement age is also key

Reforms to ensure sustainability that are applied across the board can negatively affect the income security of low-income earners. Take increases in retirement age, for instance. As life expectancy grows and people's health improves, they can remain productive until later in life. Considering that low-income earners have a lower life expectancy than high-income earners, however, indexing the retirement age to average life expectancy has a regressive effect. Workers with an expectation of shorter lives lose a larger proportion of their projected lifetime income from pensions than those who are expected to live longer. If gains in longevity benefit higher-income earners the most, as they have in many countries in recent decades, this regressive effect will increase over time. Yet very few pension schemes take inequalities in life expectancy into account (OECD, 2017; Diakite and Devolder, 2021; Ayuso, Bravo and Holzmann, 2020). In addition, low-income workers also have fewer and more precarious employment prospects, particularly at older ages.

Maintaining or increasing the inequality-reducing role of pensions while raising the retirement age calls for granting low-income workers higher accrual rates, lowering minimum contribution thresholds, crediting periods of unemployment, improving the portability of pensions and, above all, strengthening efforts to guarantee decent work, including decent wages. More frequent or generous adjustments of retirement incomes to the cost of living (or indexation) for low-income workers would also help ensure that those in need do not face economic insecurity as they grow older.

Beyond concrete measures to safeguard the income security of low-income earners, supporting the diverse needs and preferences of workers regarding retirement age is also key. Most countries already allow workers to continue working beyond retirement age, with some earnings limits. Early retirement is strongly restricted in many countries, although several have expanded early retirement options since 2020 (OECD, 2021b). Very few countries allow partial retirement, where employees continue working on a reduced schedule while starting to draw a portion of their pension (OECD, 2017). Taking into consideration the concerns of workers with physically demanding jobs and those with health issues, countries could consider more phased retirement arrangements.

Regarding the move towards defined contribution pension schemes, many of these rely on private savings accounts and thus shift investment risks from the State to individuals. They are less redistributive than defined benefit programmes and therefore magnify labour market inequalities, particularly since individuals with lower levels of income and education have less financial knowledge and access to financial services than their more educated counterparts. Implementation depends on broadly available and accessible financial services and facilities, which many developing countries currently lack.

Very few countries rely exclusively on defined contribution schemes today (ILO, 2021c). As a complement to defined benefit programmes, they can improve the adequacy of pension benefits. But some do not meet the core principles set out in international social security standards.[44] Specifically, defined contribution schemes based on individual savings accounts have suffered severe losses during recent recessions, therefore failing to ensure predictable and adequate benefits until death, as legal entitlements.

The fact that future generations of older persons may be more unequal and economically insecure than today's, absent major policy correctives, must be factored into pension systems reforms. Very generous pensions may not be sustainable. At the same time, reforms that weaken the redistributive power of pensions will jeopardize the well-being of a growing number of older persons. Such reforms may further undermine State capacity to support pension systems, particularly if they are perceived to be ineffective and unfair.

The fact that future generations of older persons may be more unequal and economically insecure than today's, absent major policy correctives, must be factored into pension systems reforms

B. EXPANDING PENSION COVERAGE AND ADEQUACY

Despite efforts to extend pension coverage, access to contributory pensions is usually limited to waged workers in the formal sector. This presents a challenge to developing countries with large informal sectors. But gaps in coverage and insufficient benefits are not only a concern for developing countries. Workers under non-standard contracts in all countries face some of the same challenges. And around the world, women's persistent disadvantages in the labour market and their disproportionate burden of unpaid care limit their access to pensions and other social protection programmes.

There is no one-size-fits-all process to increase pension coverage. But action on three fronts can help. The first is to encourage pension savings. The second is to introduce and expand tax-funded pension schemes, recognizing that these first and second measures are not mutually exclusive. Third, the labour mar-

44 See the ILO Social Security (Minimum Standards) Convention (no. 102) or the ILO Convention on Invalidity, Old-age and Survivors' Benefits (no. 128). For further analysis, see also ILO 2011 and 2021c.

ket policies discussed earlier alongside efforts to include non-wage workers in contributory schemes and improve financial literacy will go a long way in helping workers and their families save and contribute to social protection systems.

Tax-funded schemes have helped expand effective coverage around the world and ensure that all older persons have at least a basic level of income security, particularly when they are universal. Chile legislated a large increase in both the basic (solidarity) pension and the publicly financed pension supplement in 2019. As a result, the future pension of full-career, low-wage earners will increase by one third (OECD, 2021b). In Latvia, both the minimum pension and non-contributory old-age benefits were raised by 25 per cent in 2020, albeit from a low level. Mexico introduced a tax-based basic pension in 2019, available to all citizens from age 65 since July 2021 (ibid.).

Many tax-funded schemes are means tested and thereby restricted to older people with low income, often those living in poverty and who do not pay into contributory systems. Means-tested tax-funded pensions leave older persons who are neither in poverty nor covered by contributory schemes (the so-called "missing middle") without a minimum income guarantee. In developing countries, this "missing middle" mainly comprises workers in informal employment.

Beyond coverage gaps, tax-financed pensions are often insufficient to provide income security to their beneficiaries. The ILO (2015) estimates, for instance, that from 2010 to 2014, beneficiaries received less than $1.25 a day from tax-financed pensions in more than one quarter of developing countries with available data. While these schemes are typically designed as basic-income transfers meant to complement, rather than replace, contributory pensions, they have some impact on poverty alleviation among older persons (United Nations, 2018a).

Reforms to the design and implementation of pension systems may be important. But improving the coverage and adequacy of pension benefits in the end rests on expanding decent work opportunities and strengthening the institutions of work. Policies to level the playing field for women in the labour market, promote transitions from informal to formal employment, provide adequate wages and other measures will go a long way towards achieving target 1.3 of the SDGs.

There is also space for opening decent work opportunities for older persons and eliminating barriers to their participation. Having the option to retire gradually would make staying in the labour market more attractive to many older persons. Tackling bias and discrimination against older workers would also expand job options and improve employment conditions. The UN Global Campaign to Combat Ageism recommends three strategies to combat ageism: policies and laws to reduce or eliminate it, educational interventions and increasing intergenerational contact (WHO, 2021a). Much more can also be done to adapt jobs and workplaces to people with disabilities, including older persons.

3. THE POTENTIAL OF PROGRESSIVE TAXATION

In countries without comprehensive social protection systems, a critical

factor for achieving SDG target 1.3 is sustainable funding. Increased public funding can come either from reallocating existing resources or generating additional revenue.

In most countries, there is scope for mobilizing public revenue without imposing a heavier tax burden on low-income workers or the middle class (UN IATF, 2022). For the most part, the effect of taxes and social protection systems on poverty and inequality depends on how progressive taxes are. Income and property taxes are usually progressive while indirect taxes, such as consumption taxes, are generally regressive; that is, they take a larger percentage of income from low-income households than from high-income ones.

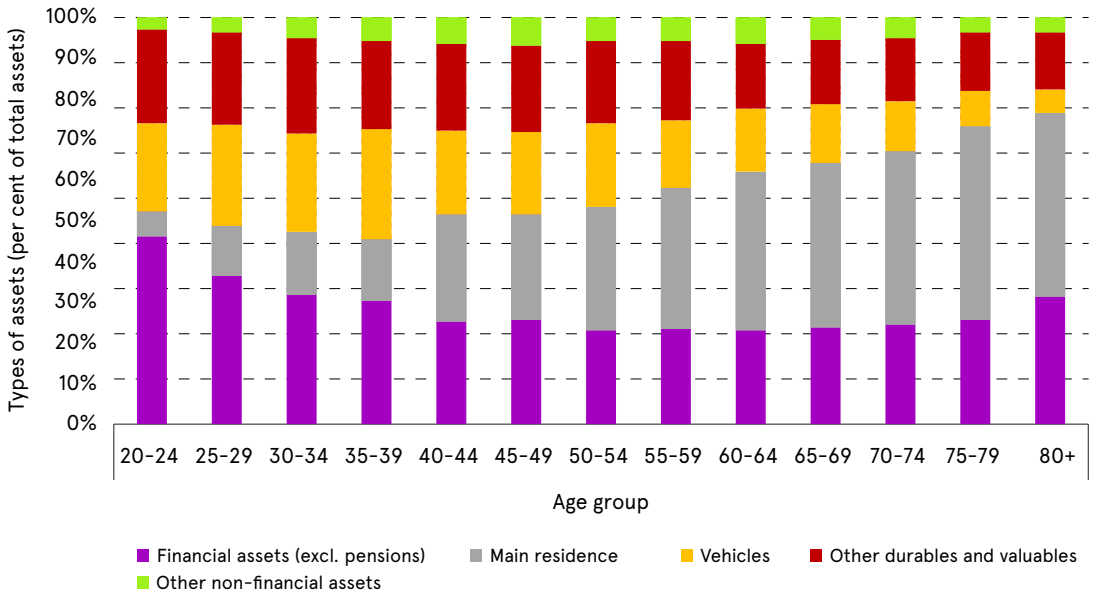
In developed countries, top income tax rates could be higher, as they were in the 1980s, with little impact on economic growth (IMF, 2017). Strengthening taxation on wealth and property could generate new revenue if countries devote sufficient resources to enforcement, given the opportunities for avoidance.

In developing countries, reducing levels of informality will go a long way in expanding tax bases, as will tackling capital flight and illicit financial flows and enacting reforms to strengthen tax administration, as advocated in the Addis Ababa Action Agenda. Improving compliance and preventing tax evasion can increase revenue without necessarily hurting people in poverty. Raising minimum income tax thresholds and reducing the burden of indirect taxation can make tax systems more progressive. Lower tax rates on basic goods, such as staple foods, may be warranted. That said, given the increasingly globalized nature of trade and business, there are limits to what countries can achieve on their own. Recent multilateral initiatives aimed at improving coherence and transparency in addressing tax avoidance are steps in the right direction.

Ultimately, progressive fiscal policies and a well-functioning tax system can encourage a virtuous cycle of social solidarity, where comprehensive social protection systems, including pension systems, strengthen public support for redistribution. In contrast, inadequate benefits and regressive reforms jeopardize progress towards reducing old-age poverty and the overall well-being of future cohorts of older people. Such reforms may undermine trust in Governments and the willingness of citizens to pay taxes and contribute to pension schemes during their working lives. They may further erode the capacity of social protection schemes to ensure income security.

ANNEX 1. ASSET OWNERSHIP AMONG PEOPLE LIVING IN RELATIVE POVERTY

Figure 4.1.1 Types of assets owned by people living in relative poverty by age in eight developed countries, 2019 (or latest year with data)



Source: Calculations based on data from the Luxembourg Wealth Study Database (multiple countries; surveys conducted between 2010 and 2020). Available at https://www.lisdatacenter.org/our-data/lws-database/.

Note: Estimates are calculated using harmonized survey data on wealth reported at the household level for eight developed countries (Australia, Canada, Finland, Germany, Italy, Norway, the United Kingdom and the United States). Households in relative poverty are those living under 50 per cent of the median income of the total population.

ANNEX 2. THE LIKELIHOOD OF FUNCTIONAL DISABILITY BASED ON WORK HISTORY

Figure 4.1.2 Logistic regression predicting functional disability based on work history, by sex, adults aged 50 and older in Europe, 2018

	Male		Female	
	ODDS RATIO	95% CONFIDENCE INTERVAL	ODDS RATIO	95% CONFIDENCE INTERVAL
Main job physically demanding (ref=no)				
Yes	1.35 ***	(1.19,1.54)	1.41 ***	(1.26,1.58)
Individual covariates				
Age	1.05 ***	(1.04,1.05)	1.06 ***	(1.06,1.07)
Rural	0.94	(0.84,1.05)	0.95	(0.85,1.06)
Education (ref=tertiary)				
1.Less than upper secondary	2.05 ***	(1.69,2.49)	1.55 ***	(1.31,1.84)
2.Upper secondary and vocational training	1.49 ***	(1.26,1.78)	1.38 ***	(1.17,1.62)
Country covariates (ref=Northern Europe)				
Central Europe	1.61 ***	(1.38,1.86)	1.52 ***	(1.32,1.76)
Southern Europe	0.91	(0.76,1.09)	1.20 *	(1.01,1.43)
Eastern Europe	1.86 ***	(1.60,2.15)	1.87 ***	(1.63,2.14)
N	19283		22535	
r2_p	0.049		0.071	

Source: SHARE, Gateway to Global Aging Data. Available at https://g2aging.org/.

Notes: Estimates are age adjusted and weighted to correct for sample design. * p < .05, ** p < .01, *** p < .001.

CHAPTER 5

A CRISIS OF CARE

KEY MESSAGES

- **Demand for long-term care is rising due to population ageing and changes in the living arrangements of older persons. The COVID-19 crisis exposed weaknesses in long-term care, yet care and support systems continue to receive insufficient policy attention.**
- **The absence of accessible and equitable long-term care services takes a heavy toll on older persons, their families and whole societies. Women bear the brunt of deficiencies as they comprise the majority of both care recipients and paid and unpaid caregivers.**
- **Rethinking how to provide long-term care will benefit today's older persons and those who care for them as well as future cohorts of older persons. Countries should pursue a more equitable, person-centred approach involving governments, businesses, civil society, communities and households, and addressing needs in paid, formal forms of care as well as unpaid, informal ones.**

A CARE CRISIS IN NUMBERS

1 in 3

the number of women 65 and over that need long-term care in the EU.

and **1 in 5 men**

13.6

MILLION

the estimated deficit of long-term care workers.

80%

of all long-term care in Europe is provided by informal caregivers.

9 in 10

the number of formal long-term care workers that are women in OECD countries.

1.5%

the average percentage of GDP in OECD countries spent on long-term care in 2019; down from 1.7 per cent in 2017 despite growing demand.

Rapidly ageing populations have increasingly complex health care as well as care and support needs. Traditionally, for better or worse, co-habiting extended families have met the care needs of older persons. Living arrangements for families and older individuals, across developed and developing countries, have changed in recent decades, however. These shifts, combined with ageing in general, have heightened demand for different forms of care. For societies and individuals, the implications of increased demand depend significantly on what type of care is being provided and by whom. Women are the main stakeholders in long-term care, comprising the majority of both care recipients and paid and unpaid caregivers.

The mechanisms of care and support for older populations are increasingly important policy concerns. Yet across developing and developed countries, long-term care has suffered a lack of concerted policy attention. Government spending on quality long-term care has rarely been sufficient to cover mounting demand. Paid care work is notable for its low wages and difficult working conditions, leading to poor outcomes for recipients and an insufficient supply of well-trained caregivers.

A lack of regulation of service provision has also undermined quality.

This chapter describes how rising needs for long-term care, combined with changes in living arrangements, impact families and societies, particularly women. It shows how disparities in both who provides care and the primary sources of care available to older adults affect well-being. Without accessible and equitable formal care services, older adults confront unmet health and care needs that prevent them from realizing dignity and inclusion in their community. Families, particularly women, and health-care systems struggle to keep up. During the COVID-19 crisis, existing weaknesses in both paid and unpaid and formal and informal long-term care systems surged to the surface, with devastating impacts. To solve the crisis of care, the chapter proposes different strategies for meeting the long-term care needs of older adults more fairly and sustainably.

A.

AS POPULATIONS AGE, CARE HAS NOT KEPT UP

1. CARE NEEDS ARE GROWING

People in almost all countries are living longer. Globally, babies born in 2022 are expected to reach 72.3 years on average, 25 years longer than those born in 1950.[45] Living more years does not necessarily mean enjoying a better quality of life, however, especially at older ages. In fact, living longer is associated with increased non-communicable disease and disability. Older persons often experience hearing loss, cataracts and refractive errors, back and neck pain and osteoarthritis, chronic obstructive pulmonary disease and diabetes, and they are at greater

45 United Nations, *World Population Prospects 2019*. Available at https://population.un.org/wpp/ (accessed on 3 March 2022).

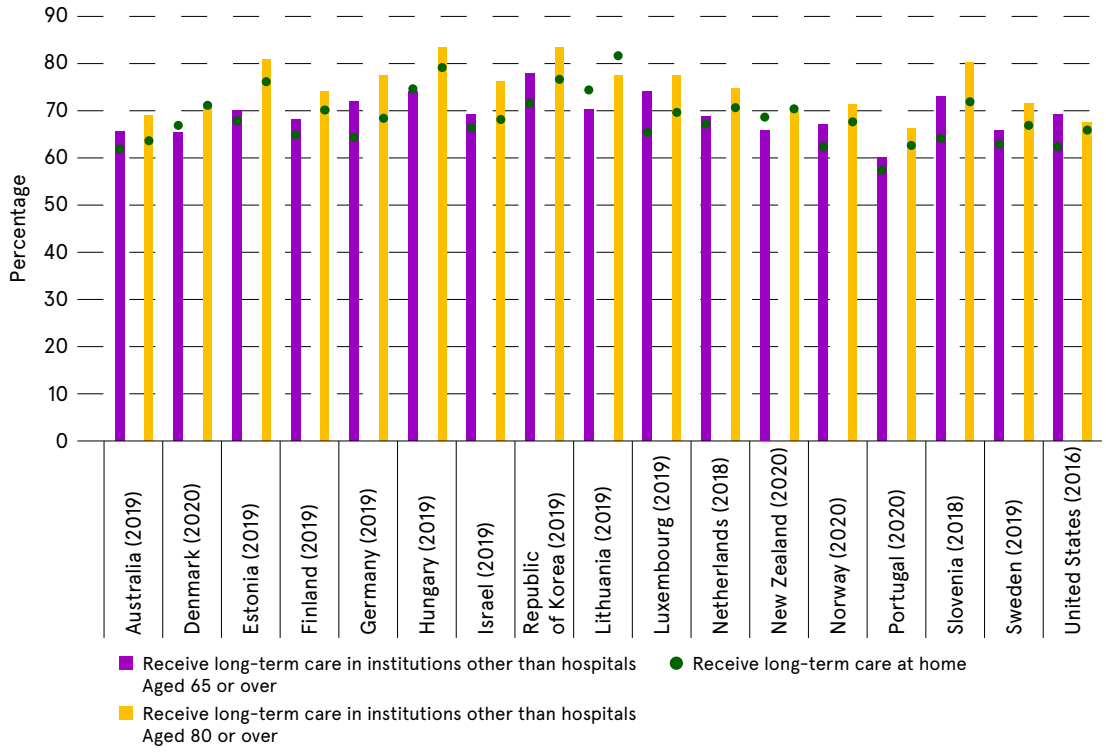
Because they live longer and spend a relatively longer period of their lives in poor health, older women are more likely to need long-term care services compared with older men

risk of depression and dementia. As people age, they are also more likely to experience several conditions at the same time.

Biological changes and increasing needs for support as people age have different implications for individuals and societies. At the individual level, people do not follow the same path to older ages. While many older persons enjoy relatively good health into their later years, others may experience chronic diseases and other health risks.

For societies, an upward shift in the population age distribution means that shares of older persons are expected to grow in coming decades. In Europe and Northern America, population ageing is already well advanced. In Eastern and South-Eastern Asia, populations are ageing rapidly. Although individual older people may not require additional care or support, societies as a whole still face rapidly increasing demand for care services for older persons. In Japan, for instance, the number of older persons in need of care is

Figure 5.1 **Share of women among long-term care recipients in institutions other than hospitals and at home, aged 65 or above and aged 80 or above, selected OECD countries**



Source: OECD Health Statistics 2021. Available at https://stats.oecd.org/ (accessed on 9 March 2022).

Note: Countries are selected based on data availability.

projected to rise from 8.3 per cent of the total population in 2020 to 14.4 per cent in 2065 (Marukawa, 2022).

Because they live longer and spend a relatively longer period of their lives in poor health, older women are more likely to need long-term care services compared with older men. Women are also usually frailer and have worse health at the end of life than men (Hägg and Jylhävä, 2021). As a result, they tend to account for a higher proportion of care recipients at home and in institutions (figure 5.1). For instance, in the European Union, at ages 65 or over, 33 per cent of women needed long-term care compared with 19 per cent of men (European Commission, 2021c). Moreover, greater female longevity means that a larger proportion of older women are widows and lack potential support from a spouse.

2. CARE NEEDS ARE CHANGING

High-quality care and support systems mean that older people can live more independently, with dignity and choice, personal safety and the ability to participate in their communities and society. In return, societies realize the rights and full potential of their ageing populations. As older people with different health conditions may have different needs, care and support systems should cover a wide spectrum of activities, including primary, acute and end-of-life care, and assistance with meals, housekeeping, bathing and other activities of daily living.

As populations age, needs evolve. Older persons may have specific care or healthcare requirements, including those that stem from having two or more long-term conditions. Some individuals may start to have limitations that prevent them from carrying out daily routines, such as getting out of bed, taking baths or showers, using the toilet, dressing and preparing meals. Functional limitations may not immediately require care services for extended periods but may call for assistance with some activities of daily living. In the United States, for instance, about one third of people aged 65 or older report functional limitations of some kind, a share that rises to two thirds among people aged 85 or older (United States, Congressional Budget Office, 2013).

Functional limitations can also increase demand for more extended services over time. For example, decreased mobility and falls among older persons can result in needs for hip and knee replacements and extended recovery, increasing demand for palliative, rehabilitation and ongoing care services (Pacific Prime, 2013).

Ageing amplifies the risks of cognitive impairments; 50 million people worldwide now live with dementia (Casafont and others, 2020). Still with no cure, dementia is linked to ageing and most commonly manifests as Alzheimer's disease. As dementia progresses, it results in increasing cognitive, psychosocial and eventually physical disabilities requiring enhanced support.

For people who grow older with chronic or disabling conditions, the focus may shift from finding a cure to providing quality of life and relief for disease-related symptoms as well as ensuring dignity and comfort during an individual's final days. End-of-life care, which includes palliative and hospice care, is expected to see a surge in demand yet countries remain largely unprepared for it (box 5.1).

BOX 5.1

ACUTE END-OF-LIFE VULNERABILITIES REQUIRE SPECIALIZED CARE

Countries are particularly unprepared for an expected jump in demand for end-of-life care as populations age and the burden of non-communicable diseases rises. Only an estimated 1 in 10 people needing palliative care worldwide is receiving it, even as demand is expected to double by 2060 (WHO, 2022). This type of care requires specialized skills, services and infrastructure, at a time in human life when vulnerabilities are acute. Even in countries with universal health coverage, however, the quality of end-of-life care varies dramatically. Shortfalls add to the burdens of those who are already experiencing severe pain and discomfort (Sallnow and others, 2022).

Because end-of-life care needs are complex, common care-related issues, such as insufficient training, high staff turnover, inadequate support for carers, a lack of access to medical or specialist support and high staff workloads, become especially concerning. Research on undergraduate nursing students, for instance, suggested they feel largely unprepared by their formal training to provide end-of-life care to dying patients and their families (Gillan, van der Riet and Jeong, 2014). With people dying further into old age, when dementia, multimorbidity and frailty are more common, and spousal, social and other forms of support are less available, end-of-life care provision requires urgent policy attention.

Countries could pursue several directions to improve and expand access to end-of-life care. Critical factors encompass adequate funding for formal end-of-life care infrastructure, training and education for care providers, and the availability and appropriate use of essential medicines, including controlled medicines for pain and symptom management. Families, community volunteers and other individuals acting as end-of-life caregivers need much more financial and logistical support, especially under the supervision of trained professionals. This would help to expand the opportunity to die at home, as many people wish. The rapid spread of COVID-19 in long-term and end-of-life care facilities highlighted the risks of concentrating those who are most vulnerable in one place while also robbing many older persons of the chance to die among loved ones.

B.

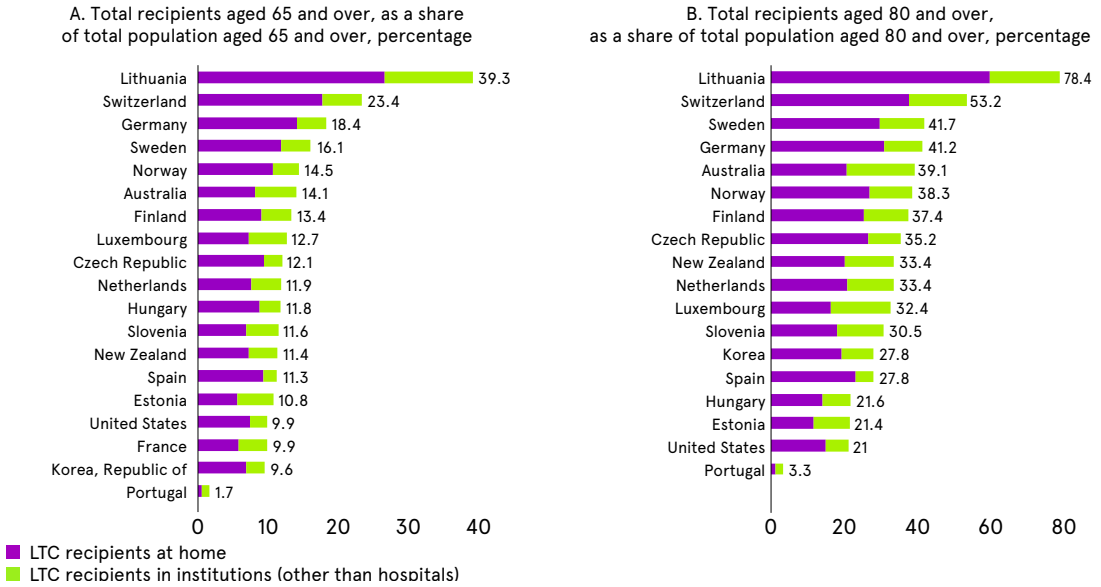
PROVIDING BETTER CARE: DETERMINANTS, STATUS AND CHALLENGES

1. AGEING IN THE RIGHT PLACE

Rising care needs for older persons calls for providing quality care services. Growing old at home or "ageing in place" is a central desire for most older women and men, all over the world. A recent survey in the United States showed that nearly 80 per cent of adults aged 50 and over want to remain in their homes over the longer term, a proportion that has been consistent for more than a decade (Davis, 2021). "Ageing in place" refers to the ability to live in one's own home and community safely, independently and comfortably, regardless of age, income or capacity. "Ageing in the right place" extends the concept to the ability to live in the place most suited to a person's needs and preferences, which may or may not be one's own home. It highlights that the "right place" must satisfy the social, economic, health and infrastructure needs of older women and men, and offer adequate services, safety and affordability (Golant, 2015). Figure 5.2 shows that the share of people receiving long-term care at home is much greater than in institutions, for those aged 65 or above and aged 80 or above.

Multiple factors influence older persons' choices about where to receive care services. First, care options for older people and their families vary significantly by country and personal circumstances. Service availability and accessibility, cultural beliefs (such as the notion that the family is best placed to take care of its older members) and the financial situation of older persons and their families all affect care choices. Where older persons receive long-term care may also depend on their disease profile. Institutionalized care is typically reserved for frailer individuals who have difficulty managing on their own or need specialized medical services. Care services also have inextricable links with the living arrangements of older persons, as discussed below.

Figure 5.2 **Long-term care recipients at home and in institutions other than hospitals, selected countries, latest available year**



Source: OECD Health Statistics 2021. Available at https://stats.oecd.org/ (accessed on 9 March 2022).

Note: The numbers next to each bar indicate the share of older persons receiving long-term care in each age group. The share is the sum of those receiving long-term care at home and in institutions other than hospitals. Countries were selected based on data availability.

2. LIVING ARRANGEMENTS DEFINE CARE PROVISION

Living arrangements strongly determine the care services that older people receive. In many societies, co-residence with adult children is a common support mechanism. Adult children may be expected to remain with and support their ageing parents as part of "lifetime reciprocity" or "filial piety". Co-residence is also a way for parents to support adult children who have never left the parental home or have returned to cope with economic hardship or adverse life events. An older person may also move into the household of an adult child to help care for grandchildren or following the death of a spouse. Such living arrangements vary. According to the most recent global estimates, older persons live in households that range in size from 2 to 12 persons, on average (United Nations, 2019c).

In more developed countries, such as in Western Europe and the United States, intergenerational co-residence has declined dramatically. Most older persons live either in single-person households or in households consisting of a couple only or a couple and their unmarried children. In 2019, the average size of such households was 1.9 persons in France, Switzerland and the United Kingdom and 2.1 in the United States. In countries with more older persons living in small households, especially many developed countries, people tend to marry later, have fewer children and have them later in life. While older people may choose to live close to their children or relatives to receive care and support when needed, as in some European countries, social pro-

grammes typically offer financial assistance or health-care benefits to retired adults. This can make it more affordable and convenient for older people to stay in their own homes and to live by themselves or only with a spouse (United Nations, 2019c, 2020e).

Intergenerational co-residence has declined dramatically in developed countries

In most developing countries, older persons are most likely to live with a child or extended family and to receive care and support within the family. Higher fertility in the recent past provides more opportunity for older persons to co-reside with their children and grandchildren, potentially including one or more children in the same household. Countries with the highest prevalence of this type of co-residence are in Africa, Asia and Latin America. In Africa, for instance, all countries (except Burundi, Egypt and São Tomé and Príncipe) have at least half of older persons living in households with extended family members (United Nations, 2019c, 2020e).

Urbanization can affect the living arrangements of older persons and the care services they receive. Cities usually offer a wide range of choices for housing and living configurations tailored to individual health, social and infrastructure needs and the economic means of older persons. Available options range from ageing in one's own place to retirement homes, senior homes, residential care homes, continuing care homes, and assisted living communities and nursing homes that provide 24/7 care and support.[46] Additional options are residential communities for older persons that typically cater to the wealthy with amenities such as club houses and golf courses, fitness centres and tennis courts. Fewer options exist in rapidly growing cities, especially in developing countries, where poor and disadvantaged older persons often live with extended family in overcrowded homes with minimal financial resources.

While some rural areas can be places of great natural beauty and offer a wide range of recreational activities for active ageing, finding health-care services can be a challenge for older persons, more so in remote areas. Outpatient and hospital-provided specialty care may not be available. Attracting and retaining formal and informal caregivers may be an ongoing struggle. Well-lit and safe walkways away from traffic; accessible, reliable and affordable public transportation; adequate housing; public and commercial services and opportunities for social participation are often lacking.

3. DEMAND FOR CARE OUTSTRIPS THE SUPPLY OF CAREGIVERS

Long-term care is a major component of care services for older persons. It refers to a broad range of personal, social and medical services over an extended period to "ensure that people with or at risk of a significant ongoing loss of intrinsic capacity can maintain a level of functional ability consistent with their basic rights,

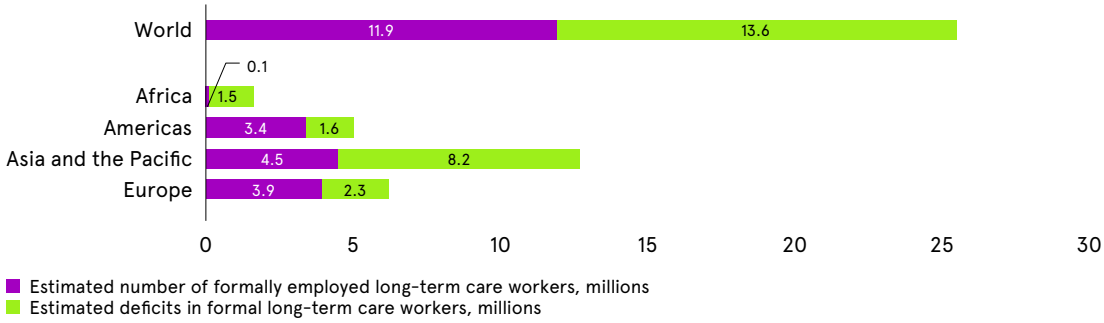
46 Residential care homes provide assistance with meals and the activities of daily living. Continuing care homes offer nursing services as needed, allow residents to transit into facilities on the same premises that provide more assistance if and as needed, and can accommodate couples with different care needs.

fundamental freedoms and human dignity" (WHO, 2017). This includes care provided at home, in the community or in institutions.

Long-term caregivers can be employed in the formal or informal economy, and their services may be paid or unpaid. A formal caregiver delivers professional and usually paid services to an individual or group of individuals. Informal caregivers provide care to those who need it, generally based on an existing relationship, such as with a family member, friend or neighbour (AIHW, 2021). They are typically unpaid but not all. In some cases, people without necessary travel documents, training or credentials move to other countries to provide care services, meaning they can only work in the informal sector and are usually poorly remunerated. That said, the distinctions between formal and informal, paid and unpaid care are blurring. Some European countries, for instance, provide cash payments directly to informal caregivers to incentivize and support them (Zigante, 2018).

Amid rising demand for long-term care, growth in the number of caregivers is not keeping pace. As of 2015, the world was experiencing a shortage of about 13.6 million formal care workers, according to a study of 46 countries with 80 per cent of the world's population.[47] The shortage was largest in Asia and the Pacific (8.2 million workers) and smallest in Africa and the Americas (1.5 million and 1.6 million workers, respectively).[48] In Europe, the shortage amounted to 2.3 million workers (figure 5.3). Such deficits mean that half the older population globally does not have access to quality formal long-term care.[49]

Figure 5.3 **Estimated numbers and deficits in formal long-term care workers, the world and by region, 2015**



Source: Adapted from Scheil-Adlung (2015).

47 An ILO study estimated the shortfall in the numbers of long-term care workers based on a relative threshold of 4.2 formal long-term care workers per 100 persons aged 65 or above in 2015. The threshold derives from the population-weighted median value of formal long-term care workers per 100 persons aged 65 or above in a group of 18 selected countries in the Americas, Asia and the Pacific and Europe. Given scarce data on long-term care workers, the study followed several assumptions. For countries where data were not available in Africa, the number of formal care workers was estimated at 0.4 workers per 100 persons aged 65 or above. The related values for the Americas, Asia and the Pacific, and Europe were 1.69, 2.34 and 2.9. They were estimated based on a population-weighted average number of formal long-term care workers in countries with available data in respective regions (Scheil-Adlung, 2015).

48 The Americas include both North America and Latin American and the Caribbean. The ILO's study does not provide disaggregated estimates within the Americas.

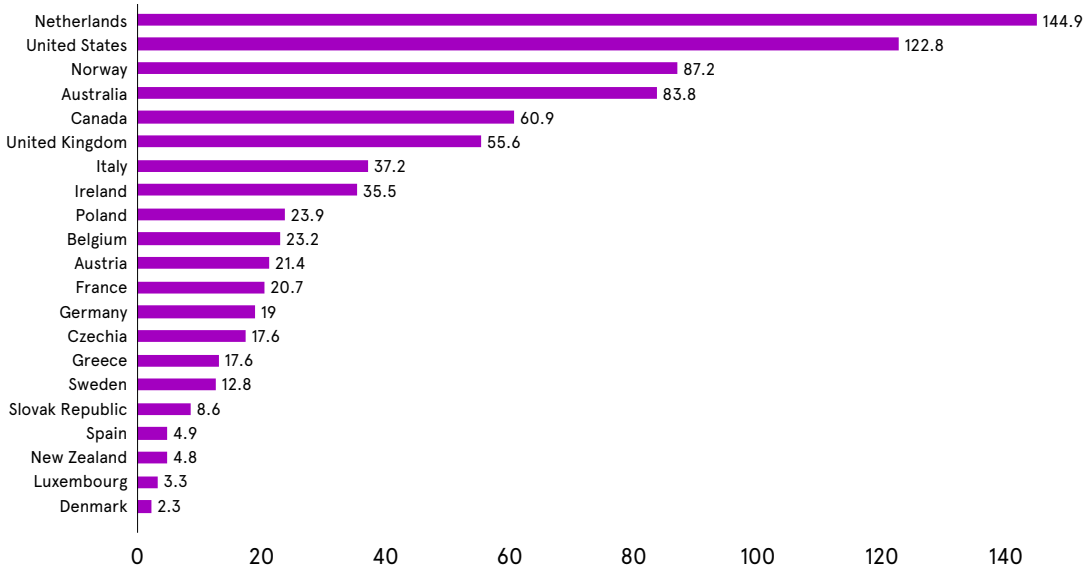
49 Scheil-Adlung (2015) set a threshold for the basic provision of care services at 4.2 workers per 100 persons aged 65 or above, which is the median population-weighted number of formal long-term care workers in 18 selected countries in the Americas, Asia and the Pacific and Europe. If a country does not meet 4.2 care workers per 100 persons aged 65 or above, its people do not have access to quality formal long-term care provision.

The paucity of formal long-term care provision is expected to continue in coming decades. In the United States, an estimated 3.5 million additional workers or more will be needed to provide long-term care to older people by 2030 (Spetz and others, 2015). The number of formal jobs for these workers is projected to increase by only 1 million over the same period, however. In Japan, the Government (2015) estimates that the demand-supply gap in 2025 will be about 380,000 care workers, especially in metropolitan areas. By 2030, Germany will need additional care workers equivalent to around 263,000 to 500,000 full-time workers (Gerlinger, 2018).

Foreign-born migrants have filled care gaps in many countries. While comprehensive data on the migrant status of care workers are very limited, piecemeal evidence suggests the proportion of foreign-born care workers in high-income countries is great, having grown sharply in recent years amid rising demands for care and the unwillingness of native-born populations to take up what they see as low-status and poorly paid work (Sowa-Kofta and others, 2019). In Italy, an estimated 73 per cent of the paid care workforce in 2017 was foreign born (Bonizzoni, 2019). Some migrant care workers are undocumented or arrive in a country with a visitor or tourist visa. This strands them in the informal economy with limited protection and below official minimum wages.

Without enough formal caregivers, many countries, even rich ones, will continue to rely on informal care provision in private homes. In Europe, for instance, informal carers provide up to 80 per cent of all long-term care. They comprise from 10 per cent to as much as 25 per cent of the total population (Zigante, 2018). While the number of informal care workers varies significantly across countries (figure 5.4), most are unpaid family members, often also aged 65 or more.

Figure 5.4 **Number of informal long-term care workers per 100 persons aged 65 or over, 2014**

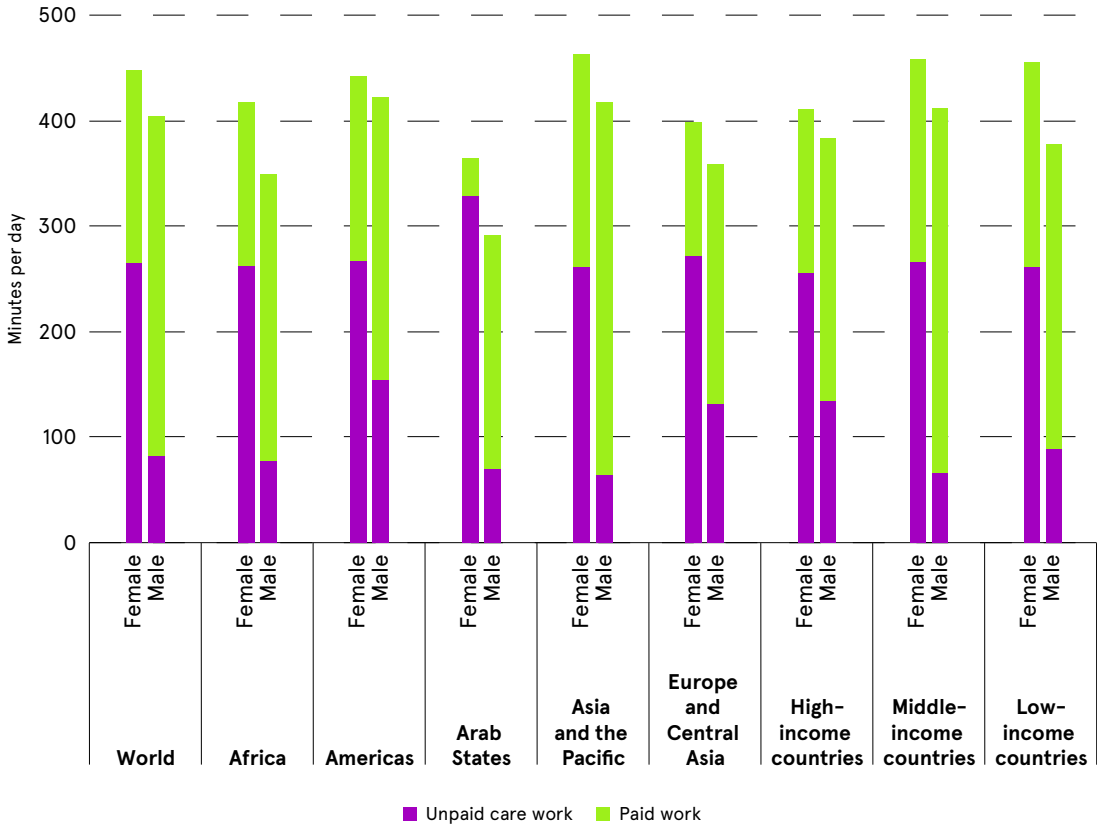


Source: Adapted from Scheil-Adlung (2015).

A. *LONG-TERM CARE STILL DEPENDS ON WOMEN AND GIRLS*

Most caregivers, paid and unpaid, in formal and informal sectors, are women. This phenomenon persists across regions and countries at different income levels. As figure 5.5 shows, women globally spend over 250 minutes per day on unpaid care work, on average, triple the time spent by men. In some cases, social and cultural expectations that women can and should care for older relatives and family members with disabilities may make women reluctant to seek support from formal or informal care services. Greater longevity also means that older women increasingly provide care to their parents and relatives in the oldest age categories.

Figure 5.5 **The time that women and men spend on unpaid care work for all household members**



Source: ILO, Models of care employment around the world. Available at https://www.ilo.org/global/about-the-ilo/multimedia/maps-and-charts/enhanced/WCMS_721442/lang--en/index.htm (accessed on 11 March 2022).

Among unpaid caregivers aged 50 years or more in OECD countries, 62 per cent are women. (OECD, 2020b).[50] Globally, women contribute 71 per cent of the estimated time devoted to unpaid care for people with dementia, a share that increases to 80 per cent in low-income countries (Alzheimer's Disease International, 2018).[51] Significant cross-country variation exists, however, even among high-income countries with similar markers of gender equality. For instance, the share of unpaid, informal carers aged 50 or more who were women ranged from 53 per cent in Austria to 76 per cent in Spain (OECD, 2021c). The amount of unpaid caregiving is also unevenly spread within and across households and families. Women in wealthier families are more likely than poorer women to pay a formal non-family caregiver to support the care needs of older relatives (Shah and others, 2012; Ozen, 2020). Inequalities also occur within families, with research from Mexico and Peru suggesting that unpaid care work is sometimes imposed on less powerful family members, such as daughters-in-law and younger granddaughters (Lloyd-Sherlock and others, 2017).

Women are also more likely to perform paid care work, in both the formal and informal economy. Nine in 10 long-term care workers in OECD countries are women. Even in countries considered some of the world's most gender equal, Denmark and Norway, women comprise 95 per cent and 92 per cent of paid care workers, respectively (OECD, 2021c). This is closely related to the low social status and poor pay of care work as well as cultural and social norms that women should carry out care-related activities, whether paid or unpaid (Addati and others, 2018). Paid care work is also unevenly distributed across the female workforce, often drawing women from ethnic minority backgrounds. In the United States, black and Hispanic women make up almost half of paid care workers despite being only 14 per cent of the total workforce (Gould, Sawo and Banerjee, 2021).

B. CARE WORK IS UNDERVALUED, UNDERPAID, UNDERTRAINED

One reason for the general undervaluing of care work is that so much of it takes place at home without pay, even when it entails complex medical and nursing tasks. The actual value of unpaid care work is massive, with 16.4 billion hours spent on it every day, equivalent to 2 billion people working eight hours per day with no remuneration (Scheil-Adlung, 2015). The Ministry of Economy in Argentina (2021) estimated that unpaid care and domestic work accounted for 15.9 per cent of GDP in 2020, making it arguably one of the largest sectors of the economy. In 2015, 15.9 million family members and friends provided 18.1 billion hours of unpaid care to people with Alzheimer's and other dementias, with an estimated economic value of $221.3 billion (Lord, 2016).

Paid care workers receive wages but often at marginal levels, coupled with little job

50 These estimates likely undercount the amount of total caregiving and perhaps the extent of the gender divide in care, due to data limitations. The only nationally representative surveys that ask these questions are retirement surveys of people 50 and older (HRS/SHARE) so younger women are not included.

51 This is consistent with global findings on unpaid care work more broadly – encompassing childcare and routine household work – where women dedicate, on average, over three times more hours than men to unpaid care work: 4 hours and 25 minutes per day for women against 1 hour and 23 minutes for men (Addati and others, 2018).

security, poor working conditions and few or no benefits. Across the 27 members of the European Union, non-residential long-term care workers make 80 per cent of the average national hourly wage (Gould, Sawo and Banerjee, 2021). Caregivers tend to be underpaid even compared to other occupations where workers have similar skills, education and experience; this is referred to as the care penalty (England, Budig and Folbre, 2002). Wage penalties in care work reflect the fact that most care workers are women (Addati and others, 2018).

People, especially women, from countries with few economic opportunities may migrate to higher-income countries and work in the care sector. Migrant caregivers are more likely to hold short-term temporary visas, however, limiting their rights in the host country and amplifying their vulnerability to exploitative practices (IOM, 2010). Shorter in-country work histories combined with lesser value given to education credentials obtained abroad also place migrant care workers at a disadvantage relative to native-born caregivers (Behtoui and others, 2020). Foreign-born care workers in China, Taiwan, Province of China, for instance, only receive 86 per cent of the minimum wage of their native-born peers.

Ethnic minorities and foreign-born migrant caregivers may experience discrimination at work from co-workers and recipients of care, often caused by cultural or language differences and reflected in the preferences of care-receivers for support from people who are "more like them" (IOM, 2010). At the same time, as caregivers migrate to higher-income countries, they leave behind a growing gap in care provision in their countries of origin.

Lack of adequate training commensurate with the needs of care recipients is a significant barrier to high-quality care services and higher wages. Long-term care services require a broad spectrum of professional skills, such as helping older persons with dressing, bathing and eating; assisting with mobility; providing physical and occupational therapeutics; and supporting them with nutrition and food preparation. Quality services also call for knowledge in geriatrics, aimed at the unique health needs of older people. Most caregivers, paid and unpaid, have insufficient training, however. In OECD countries, about 70 per cent of formal care workers are personal care workers with no mandatory standard or minimum qualifications; the remaining 30 per cent are nurses with a minimum number of years of training (OECD, 2020b). Family caregivers typically have little care literacy or understanding of the ageing process and how it evolves. They may not understand frailty or what caregiving entails, and not know where to turn for services and information or how to monitor and improve the quality of care (Lloyd-Sherlock, 2017).

Undervalued and unappreciated care work has spurred various physical and mental health issues among caregivers, negatively impacting the quality of care. In care facilities, paid workers with low levels of training often experience a high burden of stress as they care for older people with the most complex needs and challenging behaviours. Paid home care work often involves complicated, poorly defined roles and responsibilities within the family. Female care workers, in particular, may experience isolation, harassment and violence. All these factors feed the undesirability of long-term care jobs, high turnover and low morale

(United Nations, 2018b). Paid carer stress skyrocketed during the COVID-19 pandemic, especially early on when supplies of personal protective equipment, vaccinations and other protective measures were limited or non-existent (Smith and others, 2020).

Although providing care to a family member may have some positive aspects, including satisfaction in helping a loved one, unpaid family caregivers can experience mental stress and poor physical health, similar to paid workers. This may come, for example, from lifting and carrying older persons and a lack of rest and recuperation breaks (Qualls, 2021). Older caregivers may find tasks particularly challenging, such as those caring for a spouse. Family caregivers may experience multiple care-related burdens. For instance, when caring for older relatives, they may also tend to dependent children, manage household chores and finances, and engage in income-generating activities.

Paid leave entitlements as well as flexible working arrangements for family or other informal caregivers to provide care can protect the economic security and mental health of caregivers. Yet even among wealthier OECD countries, a third do not offer paid leave benefits to care for an ill family member (non-child). Among the two thirds that offer such benefits, there are varying amounts of pay and leave periods and qualifying "family members" are in most cases limited to partners/spouses, parents and sometimes siblings only (OECD, 2020b). Temporary respite care could provide relief for caregivers but is not available in all countries, especially in developing ones.

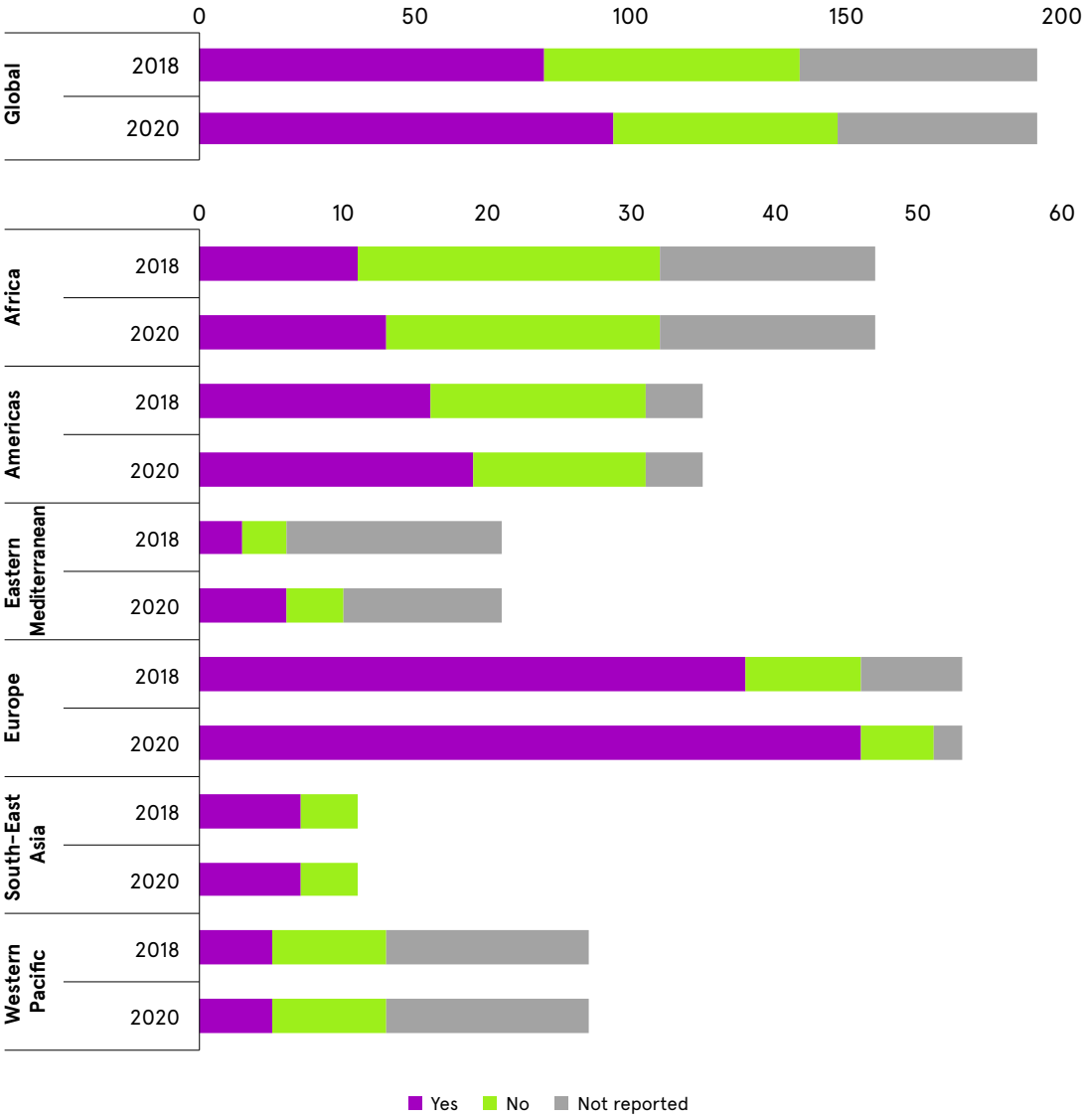
An individual's unpaid care responsibilities may limit their time for paid work. Many carers choose to remain in part-time jobs with lower salaries that are easier to combine with care responsibilities (Barslund and others, 2021). Family caregiving is also associated with additional expenditure, including purchasing medical supplies, assistive technologies and physical adaptations to homes, putting further financial pressure on family caregivers. Such strains can spark family tensions and caregiver-recipient confrontations, including elder abuse (Burnes and others, 2015; Fang, Yan and Lai, 2019).

Insufficient numbers of caregivers and low-quality services reflect a general lack of strategic policy planning much less meaningful consultations with older persons, the group most affected by such policies. Many countries across regions lack a specific policy, plan or strategic framework for long-term care (figure 5.6). The situation is particularly critical in South-Eastern Asia where population ageing is occurring rapidly. Missing or inadequate regulations on long-term care and their enforcement can impair quality, put prospects for decent work at risk for care workers, and increase the vulnerability of older persons to abuse. A lack of legislation on labour standards, for instance, has left care workers without guarantees of minimum daily and weekly hours and little employment protection or assistance in case of unemployment. This situation drives rising inequality in working conditions and therefore high turnover and low morale (Addati and others, 2018).

Even in countries that do have care provision policies, poor implementation has often left caregivers with benefit packages that do not meet minimum requirements. Older persons, especially the most vulnerable, are stranded amid fragmented, confusing and inadequate care options (Scheil-Adlung, 2015).

Figure 5.6

Number of countries with a long-term care policy, plan, strategy or framework, standalone or integrated within an ageing and health plan



Source: WHO, Maternal, Newborn, Child and Adolescent Health and Ageing data portal. Available at https://platform.who.int/data/maternal-newborn-child-adolescent-ageing/ageing-data/ageing---long-term-care-for-older-people (accessed on 1 March 2022).

Note: The "Americas" includes both Northern America and Latin America and the Caribbean.

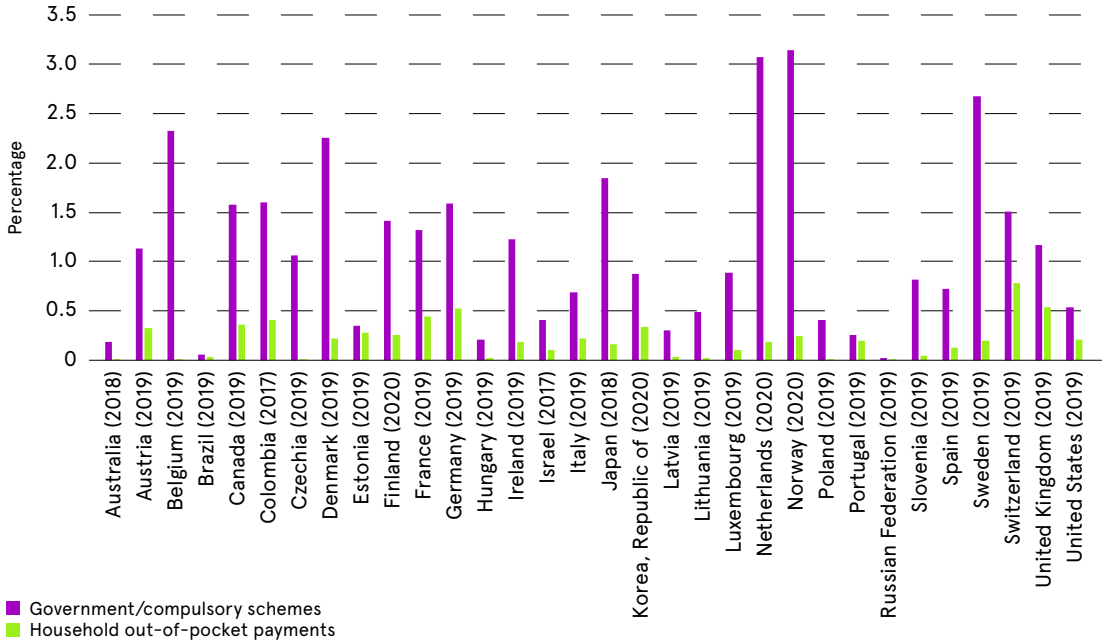
C. *NOT ENOUGH PUBLIC SPENDING, HIGH OUT-OF-POCKET COSTS*

As societies age, pressure grows to ensure the availability and affordability of long-term care services for all people in need. Spending must keep pace. Globally, however, average public expenditure on long-term care is low, remaining below 1 per cent of GDP from 2006 to 2010 (Scheil-Adlung, 2015). Little has changed over the past decade. Among OECD countries, average public expenditure for formal long-term care was just above 1 per cent of GDP in 2016 and 2020.52

Public spending on long-term care varies across countries, reflecting differences in population structure and the development of formal long-term care systems. In 2019-2020, the Netherlands and Scandinavian countries (Denmark, Norway and Sweden) spent the most by far on long-term care, at around 2.5 to 3 per cent of GDP. Elevated spending mirrors the more developed formal long-term care systems in these countries. A second group of high-income countries, including Finland, France, Germany, Japan, Switzerland and the United Kingdom, allocate between 1 and 2 per cent of GDP to long-term care. In some South-Eastern European and Latin American countries, which have relatively younger populations, formal provision of care is less comprehensive. People with long-term care needs rely to a greater extent on unpaid family members (figure 5.7).

Figure 5.7

Government spending and household out-of-pocket payments on long-term care, share of GDP, latest available year



Source: OECD Health Statistics. Available at https://stats.oecd.org/ (accessed on 9 March 2022).

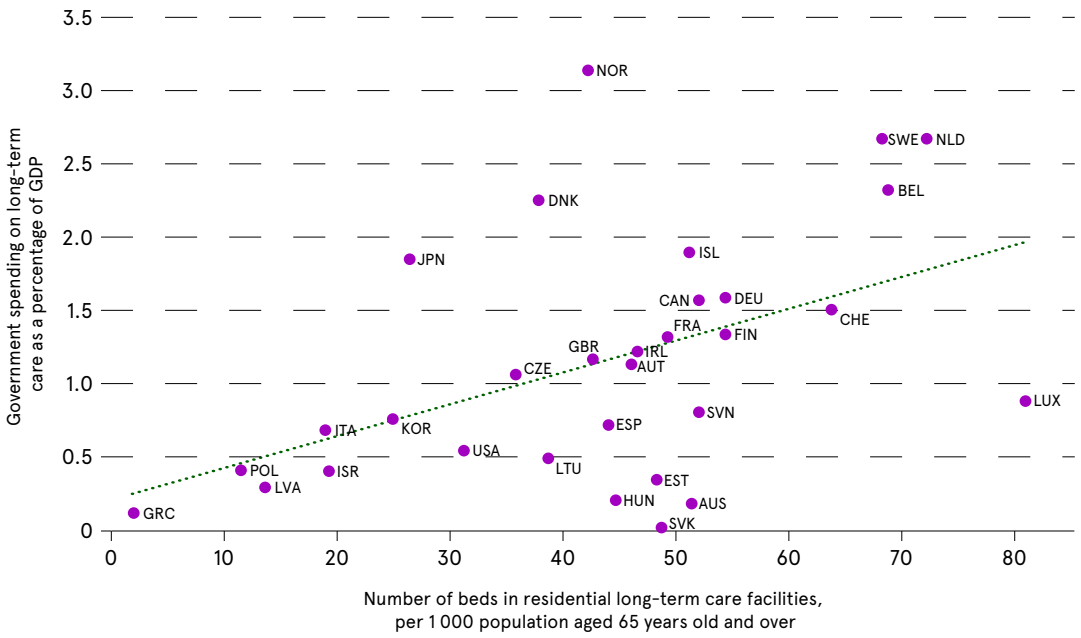
52 The calculation is based on OECD Health Statistics. Available at https://doi.org/10.1787/health-data-en (accessed on 1 March 2022).

Insufficient public expenditure leads to inadequate care infrastructure, indicated, for instance, by a low number of beds in residential long-term care facilities (figure 5.8). Long-term care infrastructure is limited in most countries in Africa, Asia and Latin America, and in some European countries (Lloyd-Sherlock and others, 2019). In Brazil, fewer than 1 per cent of older people have the option to live in a nursing home. Long-term care institutions are concentrated in urban areas and are relatively small, accommodating only 23 people on average. Long-term care capacities are even more limited in many African countries (Scheil-Adlung, 2015).

Overall, most countries provide investment falling far short of the real costs of long-term care services. Since participation in long-term care insurance could provide financial protection to older adults, some countries have instituted mandatory participation in it while people are still employed, such as Germany and the Republic of Korea (Scheil-Adlung, 2015). Yet insurance coverage has remained low. In the United States, private long-term care insurance covered only 11 per cent of adults aged 65 or above in community settings (not nursing homes) in 2014, often because of unaffordable premiums or the mistaken belief that standard health insurance would cover long-term care expenses (Johnson, 2016).

Older persons in many countries face high out-of-pocket payments for long-term care, including home and institutional care. Over half of the older persons in some countries, including Austria, Italy and Spain, had to spend their own

Figure 5.8 **Public spending on long-term care and long-term care beds in 2019 (or latest available year)**



Source: OECD Health Statistics 2021. Available at https://stats.oecd.org/ (accessed on 24 March 2022).

Note: The dotted line is a fitted one.

funds on long-term care with payments that can top 10 per cent of household income or more (Scheil-Adlung, 2015). Household out-of-pocket payments on long-term care are equivalent to over half of public spending in some countries, including Brazil, Estonia, Portugal and Switzerland (figure 5.7).

High out-of-pocket long-term care expenditures are likely to push older persons into poverty

High out-of-pocket long-term care expenditures are likely to push older persons into poverty. In the United States, nursing home stays have strong negative effects on total household wealth. One study found that after the first entry into a nursing home, a resident's total household wealth fell steadily over a six-year period, in contrast to those who stayed in their (owned) homes, the value of which may appreciate and increase household wealth (Banerjee, 2012).[53]

C.

COVID-19 CUT A DEVASTATING SWATHE THROUGH LONG-TERM CARE

1. CLUSTERED IN FACILITIES, OLDER PEOPLE WERE MORE VULNERABLE

Serious illness and deaths from COVID-19 infection have been highly concentrated among the oldest people. Those with some conditions that are more prevalent in older ages, such as diabetes, were more likely to die from the virus. In high-income countries, 89 per cent of both official deaths and excess deaths from the pandemic occurred among those over age 65 (Demombynes and others, 2021). In Italy, 35 per cent of older persons aged 80 or over who contracted COVID-19 died from the disease, compared to 1 per cent of people aged 40 to 49 (Signorelli and Odone, 2020).

In other countries, the picture has been slightly different. Roughly 40 per cent of official deaths and excess deaths were under age 65 in upper-middle-income countries with data, and 54 per cent in lower-middle-income countries. A similar pattern of much younger death profiles in middle-income countries holds when adjusting for differences in age distribution across countries (Demombynes and others, 2021). Age-disaggregated data on COVID-19-related deaths in low-income

53 In some cases, older persons in the United States transfer their assets to their children to qualify for Medicaid, which covers the costs of a long nursing home stay. Research finds that such Medicaid-induced asset transfers may be fairly small but not insignificant (Bassett, 2004).

countries are more limited but in 17 of these countries with data, an estimated 52 per cent of COVID-19 deaths were among people aged 65 or over.[54]

The types of care that older persons receive influence the risk of getting and dying from a COVID-19 infection. A large proportion of deaths have occurred in long-term care facilities. This reflects how the oldest people with comorbid conditions are more highly care dependent as well as the heightened risk of infection in communal settings (Graham and others, 2020).

Two recent studies using COVID-19 data disaggregated by age and care home residential status confirmed that the two main determinants of elevated risk of death in care homes were the underlying frailty of older persons and higher infection prevalence in care homes, in addition to old age (Hardy and others, 2021; Lai, 2022). The underlying frailty of older people in care homes accounted for 46 per cent of the difference in mortality rates between care home residents and non-residents in Belgium, while in England and Wales, it accounted for 66 per cent of the difference in the first wave and 88 per cent in the second wave (Lai, 2022). Higher infection prevalence accounted for 40 per cent of the difference in mortality between care home residents and non-residents in Belgium, while in England and Wales, it accounted for 26 per cent during the first wave and was negative during the second wave. Higher immunization rates among care home residents and better infection control procedures in care homes helped to curb infection in England and Wales (ibid.).

In countries where a greater proportion of older people live in institutions, such as Australia, Denmark and Switzerland, they are 60 times more likely to die from COVID-19 than people at younger ages. By contrast, in countries with a smaller proportion of older persons living in institutions, such as China, Mexico and Nigeria, older persons are eight times as likely to die from COVID-19 compared to those at younger ages (United Nations, 2020f).

Higher COVID-19 mortality rates in care facilities are associated with poorer quality ratings and overcrowding (Weech-Maldonado and others, 2021). Multiple room occupancy tends to be more common in developing countries, and facility staffs generally have more limited training, possibly impeding infection control (Roqué and others, 2016; Mapira, Kelly and Geffen, 2019). The practice of transferring COVID-19-positive older people from hospitals to care facilities without due precautions as well as failing to prioritize the provision of protective equipment to care facilities during the early phase of the pandemic contributed to higher death rates (Gibson and Greene, 2021).

Across all countries, fewer data track COVID-19 infections among older people outside facilities. Previous research suggests that those in multigenerational households often have extensive and frequent contacts with other household members, which heightens the risk of disease transmission. This was especially so for lower-income families, who were more likely to have a household member classified as an essential worker, reinforcing overlapping and compounding health and economic

54 Max Planck Institute for Demographic Research, COVerAGE-Database. Available at www.demogr.mpg.de/en/publications_databases_6118/online_databases_6676/ (accessed on 30 June 2022).

inequalities. Even when multigenerational families do not co-reside, older persons who live close to extended family members may have frequent contacts with them (Tomassini, Wolf and Rosina, 2003). Older persons living alone or with their spouse only would be expected to have the lowest infection rates due to their ability to limit social contacts (United Nations, 2020f).

Taken together, these findings suggest that if countries continue to incorporate large long-term care institutions into their care provision strategies, they must remain aware of how these concentrate vulnerabilities and require extra care and precautionary measures to stop the spread of new pathogens.

2. LONG-TERM CAREGIVERS PAID A HIGH PRICE, MANY TIMES OVER

The pandemic had profound impacts on caregivers. It increased caregiver stress and reduced the quality of care by limiting families' access to external support such as home visits, day centres and respite facilities (Kostyál and others, 2021; Onwumere and others, 2021). It also likely exacerbated pre-existing inequalities in informal care. The poorest families and caregivers of older persons with the most complex needs likely suffered most from compounding economic and other pressures and disruptions in health and care services (Lorenz-Dant and Comas-Herrera, 2021; United Nations, 2020f). Disadvantaged families without access to digital technology faced obstacles to alternative virtual services where these were introduced.

Most paid care workers have faced both the economic impact of the crisis and the medical and psychological toll of higher exposure to the virus. Throughout the pandemic, care workers remained in close contact with those most susceptible to infection, thus raising their own risks. Due to low wages, some carers took on multiple part-time jobs at different facilities while a lack of sick pay discouraged many from caring for themselves when ill. Travel between care facilities on crowded public transport may have heightened exposure and the chance of carers becoming vectors for viral entry into facilities (Chen, Chevalier and Long, 2020).

Such factors have contributed to high rates of burnout, illness and death among care workers, especially migrants (White and others, 2021). A survey of migrant health and care workers across 32 countries found that 40 per cent experienced increased job insecurity, 48 per cent had inadequate access to personal protective equipment and 27 per cent were only offered unpaid leave when infected with COVID-19 (Pillinger, Gencianos and Yeates, 2021). In the United States, for example, Filipinos make up 4 per cent of nurses but accounted for 32 per cent of COVID-19 deaths among nurses in 2020 (ibid.).

D.

MORE EQUITABLE CARE CENTRES ON WHAT PEOPLE NEED – AND DECIDE

Population ageing, combined with changes in older persons' living arrangements, is

increasing demand for different forms of care and has left many countries grappling with the implications. Reducing care dependency in later life requires a life course approach to promoting healthy ageing and preventing poverty. Adequate care and support systems for people in need of care – especially women and those from marginalized groups – could help reduce existing inequalities *among* older persons.

Reducing care dependency in later life requires a life course approach to promoting healthy ageing and preventing poverty

Across countries, the COVID-19 pandemic exposed existing weaknesses in approaches to long-term care and showed how these can aggravate inequalities. Poor quality and underfunded care facilities, insufficient provisions for care at home, and low wages and precarious conditions for paid care workers all increased the threat to older persons. The scale of the crisis has sounded a call for fundamental reform of care and support systems, including long-term care. Failure to do so will harm today's older persons and those who care for them, as well as future cohorts of older people.

A more equitable approach to providing care and support systems, especially for long-term care, would be person-centred, and tailored to the needs, values and preferences of care recipients and their caregivers. This goes beyond the medical aspects of care, encompassing an individual's culture, life history, social support network and identity, and giving recipients of care control over decisions that affect them. It would be holistic, involving governments, businesses, communities and households, and addressing needs for both paid, formal care and informal, unpaid care.

1. REGULATING IMPROVEMENTS IN CARE QUALITY AND CONDITIONS

Governments need to develop and implement long-term care strategies that include a sound regulatory framework, training and support for caregivers, coordination and integration across sectors, and mechanisms such as accreditation and monitoring to ensure quality. Older persons should be systematically involved in policymaking to ensure that policies meet their health and care needs. Population-based studies of older persons living at home, in communities and in institutions could inform policymaking by identifying the levels and distribution of care services, how they change over time, and the extent to which they meet the needs and expectations of older people.

For paid care workers, a range of measures can enhance the quality of their jobs and, therefore, the quality of long-term care services. Many countries need to pass legislation consistent with international labour standards to recognize and protect care workers and end inequalities in working conditions. Care jobs should provide at least the legal minimum wage. Higher wage levels should align with an expanded job scope, upgraded skills or career progression. Measures to improve working conditions may include guaranteeing

minimum hours for care workers, many of whom have no guaranteed hours and are paid per client visit. It could also mean ensuring that care workers making home visits are paid for the time and fuel used in travelling between homes. Providing weekly rest days and paid annual vacation, reducing the maximum duration of shifts and adopting flexible work arrangements can all improve job retention and morale.

National legislation should also guarantee care workers' rights to access social protection coverage. Care worker participation in collective action and consultations between employers and worker organizations should be encouraged. In addition, national training standards can articulate core skills and competencies for care work, which could then be developed through regulated training facilities that provide training and certification to promote proper recognition and career advancement.

Supportive migration policies through regular channels can improve the supply of skilled care workers from other countries when the domestic supply is insufficient. Such arrangements must not be extractive, however. Making migration partnerships mutually beneficial requires efforts to build skills and talent within countries of origin. Countries should also consider policies, including labour laws, to protect migrant caregivers' rights, such as to adequate housing and living conditions; health care; rest and recuperation periods, encompassing weekly time off and paid annual leave; recognition of existing qualifications and credentials; continued possession of travel and identity documents; and access to justice and effective redress mechanisms. Host and sending countries need to discuss responsibilities in providing and ensuring access to adequate social protection and health-care services for migrant caregivers.

2. INVESTING IN LONG-TERM CARE

Expanding and improving long-term care provision, care-related infrastructure,[55] social protection coverage for caregivers and care-related training all entail additional investments. The COVID-19 crisis underscored the critical importance of investing in emergency preparedness for long-term care. Many high-income countries are projected to boost public spending on long-term care over time. For countries of the European Union, public long-term spending is estimated to rise from 1.6 to 2.2 per cent of GDP between 2016 and 2040. In Australia, national government expenditure on care services for older persons accounted for 0.9 per cent of GDP in 2014-2015 and is projected to rise to at least 1.7 per cent of GDP by 2054-2055. These increases are attributable to population ageing, a decline in informal family caregivers and the greater availability and costs of formal long-term care as well as growing household wealth (WHO and OECD, 2021). Raising public spending is challenging, however, especially in the wake of the pandemic, which has devastated fiscal space and worsened debt situations in most countries, developing ones, in particular (see chapters 3 and 4 on financing policy responses).

55 This includes infrastructure related to obtaining water, improving sanitation and providing energy.

To complement public programmes, individuals could purchase private long-term care insurance. In some countries, such as France and the United States, individuals enrol in such insurance on a voluntary basis (WHO and OECD, 2021). Yet private long-term care insurance markets remain relatively small (Fang, 2016); they do not represent a major source of funds to finance long-term services. To bolster a larger private market, Governments can incentivize participation by regulating long-term care insurance pricing and maintaining market stability. In tandem, they can take measures to improve perceptions of risk by the working-age population and their ability to estimate long-term care dependency. Tax exemptions for long-term care facilities, equipment, medicine and other health-care auxiliaries could encourage private investment.

3. HELPING PEOPLE AGE IN PLACE

Countries should provide additional support to help people age in place, so that they can retain family and other social connections. An important element is to better support unpaid care providers. Governments can do much more to recognize the value of unpaid care and reduce its financial, physical and mental burdens. This includes establishing and expanding formal long-term care systems that provide a continuum of respite care, either at home, in day centres or in residential institutions. Accessible housing and transportation services can also help ease the burden on caregivers. National ministries, local governments, non-governmental service providers and other stakeholders could collaborate and explore innovative community-based service models, such as integrating social care services through co-location and collaboration with community service organizations, developing case management capacity, and promoting healthy and active ageing. Sharing lessons and good practices from community-based service models could foster their transfer and uptake across countries.

Governments can do much more to recognize the value of unpaid care and reduce its financial, physical and mental burdens

Extending paid leave entitlements as well as flexible working arrangements for family caregivers enables older people to remain at home and reduces the need for more expensive residential care. At the same time, financial support for family caregivers can help with the ongoing costs of providing care – for example, by replacing lost wages and tax deductions – while helping to avoid more costly interventions, such as hospitalization. Governments can also provide training for unpaid caregivers to improve the quality of services as well as encourage investment in new technology to support them, for instance, by easing physically challenging tasks, facilitating online learning and dissemination of information about worker rights and mobilization, and improving communication, including with family members. Use of digital long-term care services, such as remote telecare, rose during the pandemic. It may not be practical to deploy all new technologies in

the care sector, however. Countries should ensure that such innovations help to break down, rather than reinforce, the digital divide affecting older persons.

Government policies need to complement measures adopted by businesses. Private long-term care insurance could protect older persons from high out-of-pocket costs if they need assistance at home or in nursing or assisted-living facilities. Incentivized by government policies, employers could offer access to long-term care insurance through workplace retirement plans on an opt-out basis.

4. CREATING AN ENVIRONMENT THAT FOSTERS BETTER CARE

A combination of these measures can enhance the well-being of caregivers and improve care outcomes. They can challenge gender norms around caregiving by recognizing the inherent value of unpaid care work. Paid care work would become a more attractive employment proposition for both men and women. New business opportunities could open and boost the broader economy.

Such measures can also foster social cohesion through the sharing of risk across a community. Target 5.4 under the SDGs urges recognizing unpaid care and domestic work, providing public services, infrastructure and social protection policies, and promoting shared responsibility for care at the household level (United Nations, 2015b).

More data on gender norms in care are needed to inform governments and other stakeholders. Formalizing care work can create jobs and trigger new opportunities for women to participate in the economy. A sustainable and equitable system for long-term care needs to free women to pursue what they value, such as education or participation in the workforce, while encouraging men to assume their fair share of care duties, including those at home.

Formalizing care work can create jobs and trigger new opportunities for women to participate in the economy

Finally, better oversight and regulation of care facilities can help address inequalities in care provision. As shown during the COVID-19 crisis, many long-term care facilities are poor quality and leave residents highly exposed to disease and death. Governments and private providers should work together to ensure that care facilities meet agreed minimum standards and that workers have quality training sensitive to the needs of older persons. Governments should enhance pandemic preparedness, including around offering support for the mental well-being of caregivers.

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