WDA FORUM World Demographic & Ageing Forum

WDA Global Longevity Council

Positions for Policy Makers and Strategy Planners

April 2022

Living Longer Around the World:

Opportunities and Challenges

Living Longer Around the World: Opportunities and Challenges

Positions for Policy Makers and Strategy Planners Until 2035 From the Global Longevity Council[1] of the World Demographic & Ageing Forum (WDA Forum)

Executive Summary

The world's population is ageing. The proportion of people aged 65 and older is growing in virtually every country around the world. Nonetheless, the level and speed of change differ considerably across continents and countries – as we show in this paper, which covers 31 countries distributed across all continents except Antarctica. The countries were selected for economic and demographic diversity. In 2020 they represented 70% of the global population and 76% of global GDP.

This breadth allows us to project global population dynamics in the coming decade and beyond with reasonable precision. We purposely outline the expected changes only until 2035, a more practical timeframe for both strategy planners and decision makers in business and public policy, rather than several decades into the future or even to the end of this century.

The multiple societal and economic effects of population ageing are illuminated by means of the old-age dependency ratio (OADR), which approximates the number of people of retirement age in relation to people of working age. We further differentiate between the dynamics of the young-old (65–79) and oldest-old (80+).

[1] The WDA Global Longevity Council is an expert discussion platform centered around the megatrend of "Demographic Change" with demographers from all continents except Antarctica. Its goal is to guide business, society, and policy makers successfully through population dynamics in the 21st century. Faculty members are **Heather Booth** (Professor of Demography, Australian National University, Canberra, Australia), **Nicholas Eberstadt** (Henry Wendt Chair for Political Economy, American Enterprise Institute (AEI), Washington, DC, USA), **Wang Feng** (Professor of Demography, University of California, Irvine, CA, USA and Fudan University, Shanghai, China), **Hans Groth** (President of the WDA Forum, St. Gallen, Switzerland), **Bernardo Lanza Queiroz** (Professor of Demography, University Federal de Minas Gerais, Belo Horizonte, Brazil), **John May (**Research Professor, Schar School of Policy and Government, George Mason University, Fairfax, VA, USA), **Cheikh Seydil Moctar Mbacké** (Senior Fellow, Center for Research on Applied Economics and Finance of Thiès (CREFAT), University of Thiès, Senegal), **S. Irudaya Rajan** (Chairman, The International Institute of Migration and Development (IIMAD), Kerala, India), **Roland Rau** (Professor of Demography, University of Rostock and Max Planck Institute for Demographic Research, Rostock, Germany), **Noriko O. Tsuya** (Distinguished Professor, Keio University, Tokyo, Japan), **Pol Vandenbroucke** (Member of the Board of Directors, WDA Forum, St. Gallen, Switzerland and Chief Medical Officer, Pfizer Inc, New York, USA), with coordination and support by **Regina Regenass**, **Lucas Binggeli**, and **Patrick Friedli**.

Website: www.wdaforum.org | Contact email address: hgroth@wdaforum.org

Despite already having a relatively large proportion of older people, Europe's and Japan's populations will continue to age. The pace, however, will be rather moderate in contrast to most Asian countries, most notably China, which will experience unprecedentedly fast population ageing. African countries demonstrate a different momentum: The growth of older age groups will not be seen before 2035. Instead, due to the current high fertility rates and less ageing, the OADR on this continent will *stagnate or* even *decrease*, unlike on the other continents, which are more advanced in their demographic transitions. African countries' short- and midterm challenges stem from their rapidly growing young workforce and whether this can be translated into economic growth.

How should decision makers respond? We argue that, with the notable exception of policies and strategies to improve humankind's **physical and mental health** across increasingly longer lifespans, **mitigating** the demographic causes of population ageing (fertility rates, migration, and longevity) is difficult to accomplish. An illustrative example is the sub-replacement fertility rate in Western countries: Even if policies to increase fertility were successful, they could not have any impact on the relative size of the working-age population until after 2035.

Therefore, we recommend **adapting** to the current situation and impending changes, including those beyond demography. The key element of such an adaptation strategy is a "new life design", i.e., changing the way we live and work. In this new world, future-oriented policies should provide the framework to reshape education systems, employment conditions, social security systems, intergenerational relationships, family dynamics, and gender roles, and to critically appraise cultural values, all with the goal of forming structures and strategies that are effective and resilient through 2035 and beyond. This also implies that the currently accepted concept of the life course should undergo a profound examination, with corresponding changes in the purpose and meaning of the different stages of life.

Since countries around the world are at different stages of their demographic transitions, the actions required vary significantly. To stimulate fruitful discussions on how to adapt to ageing societies, policy and strategy options for the 31 selected countries are provided in Appendix 1.

What Is Our Objective?

The objective of the Global Longevity Council of the World Demographic & Ageing Forum (WDA Forum) is to create awareness ***of the level and speed*** of population ageing in different regions and countries around the world. There are two key megatrends, namely older population age structures (a macro-level perspective) and people living longer (a micro-level, individual perspective). To illustrate their urgency and impact, the Council has analyzed the differing stages of demographic transition in 31 countries from six continents. In 2020 the selected countries represented 70% of the global population and 76% of global GDP (see Figure 1).

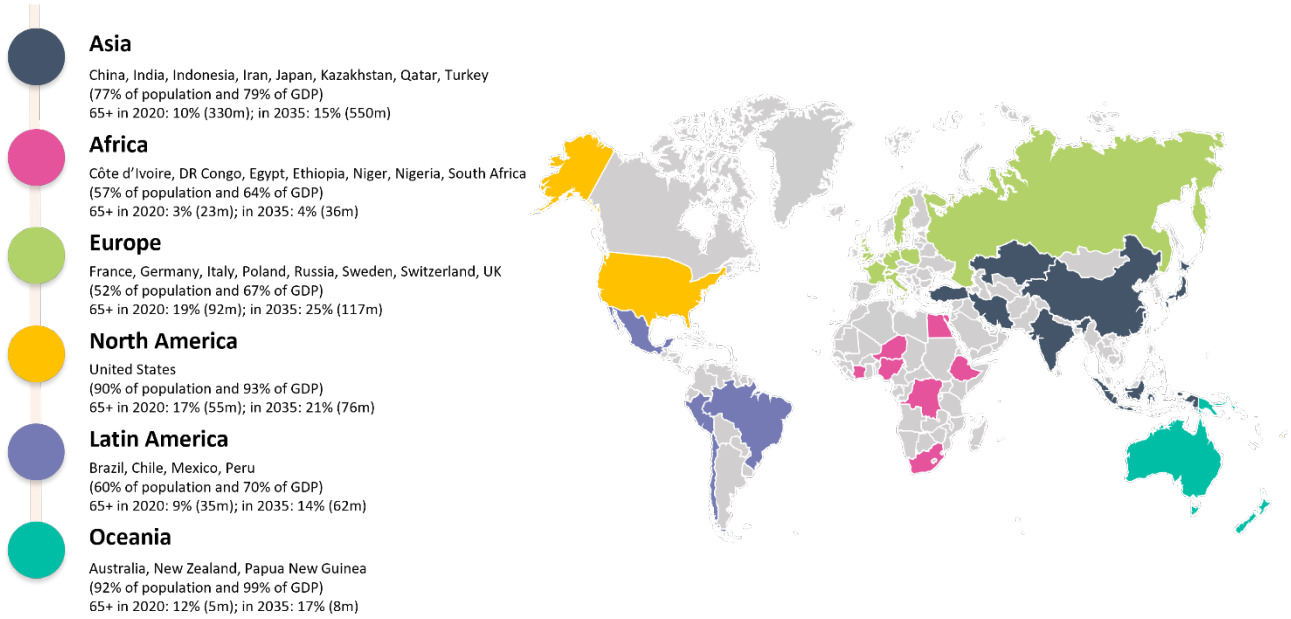


Figure 1: Population aged 65+ years in 31 countries – selected for economic and demographic diversity – in percentage and absolute numbers in 2020 and 2035. In 2020 these countries represented 70% of the global population and 76% of global GDP.

Data Source: Own illustration based on UN Population Division, *World Population Prospects, 2019 Revision*; World Bank national accounts data; and OECD national accounts data (2021).

What do ageing and the demographic transition mean for strategy planners and decision makers in business and public policy? Nations today are already facing unprecedented challenges in the realms of social security, education, labor markets, future market projections, product and service design, social cohesion, health care, and the financial sustainability of ever-longer lifespans.

We have intentionally chosen 2035 as our time horizon. This is a timeframe both strategy planners and decision makers in business and public policy are focused on and are

incentivized to take action for. In addition, this timeframe highlights the urgency of the topic: The demographic analysis shows how some regions of the world will already be greatly affected by population ageing in the coming decade.

The longer societal decisions are postponed, the fewer effective policy options there are available. This is particularly true for countries that are already advanced in the ageing transition. Policy makers and strategy planners need to set the right priorities to enable their societies to turn ageing and longevity into a positive achievement.

What Do We Know?[2]

The world's population will continue to grow for the next 15 years and beyond, but will do so at a slower pace than we saw in the second half of the twentieth century. By contrast, the number of older people is growing more rapidly than before, both in absolute and relative terms, resulting in the global megatrend of population ageing.

The global population is expected to grow by about 14% over the next 15 years, reaching almost 8.9 billion people by 2035. With a 26% increase, the African continent will drive this trend. Africa is followed by Oceania with an 18% increase, albeit with a much smaller population. Except for Europe, the other continents are expected to grow by about 10%. By contrast, Europe's population is expected to decline by 2% by 2035.

This variability *across* continents is also reflected by variabilities *within* continents: One of the fastest growing countries in Africa is Niger with a projected population growth of 71% between 2020 and 2035, while, with a 16% growth, South Africa's population growth is on par with Australia's. Among Asian countries, Qatar's population is expected to grow by 21% while Japan's will likely shrink by 7%. China's population may grow by 2%, but it will no longer be the most populous country in the world by 2035. It will be succeeded by India before the end of this decade, whose population will grow by 13% to reach nearly 1.6 billion by 2035. The United States and North America as a whole will grow by a proportion comparable to Asia (8% vs 9%). Latin American countries will grow more slowly than the global average, with 4% population growth in Chile, 7% in Brazil, and 13% in Mexico and Peru. Europe's decline of about 2% is driven by countries such as Italy (−4%), Germany

[2] Unless otherwise indicated, all estimates refer to the *World Population Prospects, 2019 Revision*, by the United Nations.

(−1%), Russia (−3%), and Poland (−4%), but also by the Balkan states, the Baltic states, and all Eastern European countries. This trend is not shared by all European countries, however: The United Nations projects positive population growth for France (3%), the UK (5%), Sweden (7%), and Switzerland (8%).

By 2035 there will be more than 1.1 billion people aged 65+ on our planet. As the figure was 727 million in 2020, that means an increase of almost 60% in 15 years. No country's 65+ population will shrink, except for Bulgaria's (-0.3%).

But population ageing has differing dynamics in different parts of the globe: The number of older adults (i.e., people aged 65 and over) will grow by about 70% or more in Asia, Africa, and Latin America whereas the number of older adults in Oceania and North America will grow less quickly (+48% and +39%, respectively). It might be surprising that the continent with the smallest growth in the number of older adults will be Europe, whose older adult population will grow by a quarter. The reason is simple: Older adults already make up a significantly higher proportion of the population in European countries such as Italy, Germany, Sweden, and France, than elsewhere in the world. In Italy, for instance, almost a quarter of the total population was 65 years or older in 2020.

The ongoing global increase in the mean age is caused by declining fertility rates in the past, as well as ever-improving chances of survival at older ages. In general, longer lifespans are a worldwide phenomenon today, with very few exceptions. Since the turn of the millennium, only Mexico, Venezuela, Grenada, and Syria have experienced life expectancy reductions according to the United Nations. Those declines are usually due to specific peaks of violence due to social or political turmoil, such as the spike in homicides in Mexico. In the rest of the world, life expectancy grew steadily between 2000 and 2020, with the highest gains in Africa – nearly 10 years. Further increases in the coming decades are projected everywhere (see Figure 2).

In the Western world, life expectancy started to increase about 200 years ago. The chance of surviving to age 65 in Switzerland, for example, rose from less than 50% in 1800 to more than 90% in 2020. Over the time, all nations started to undergo this unprecedented demographic transition.

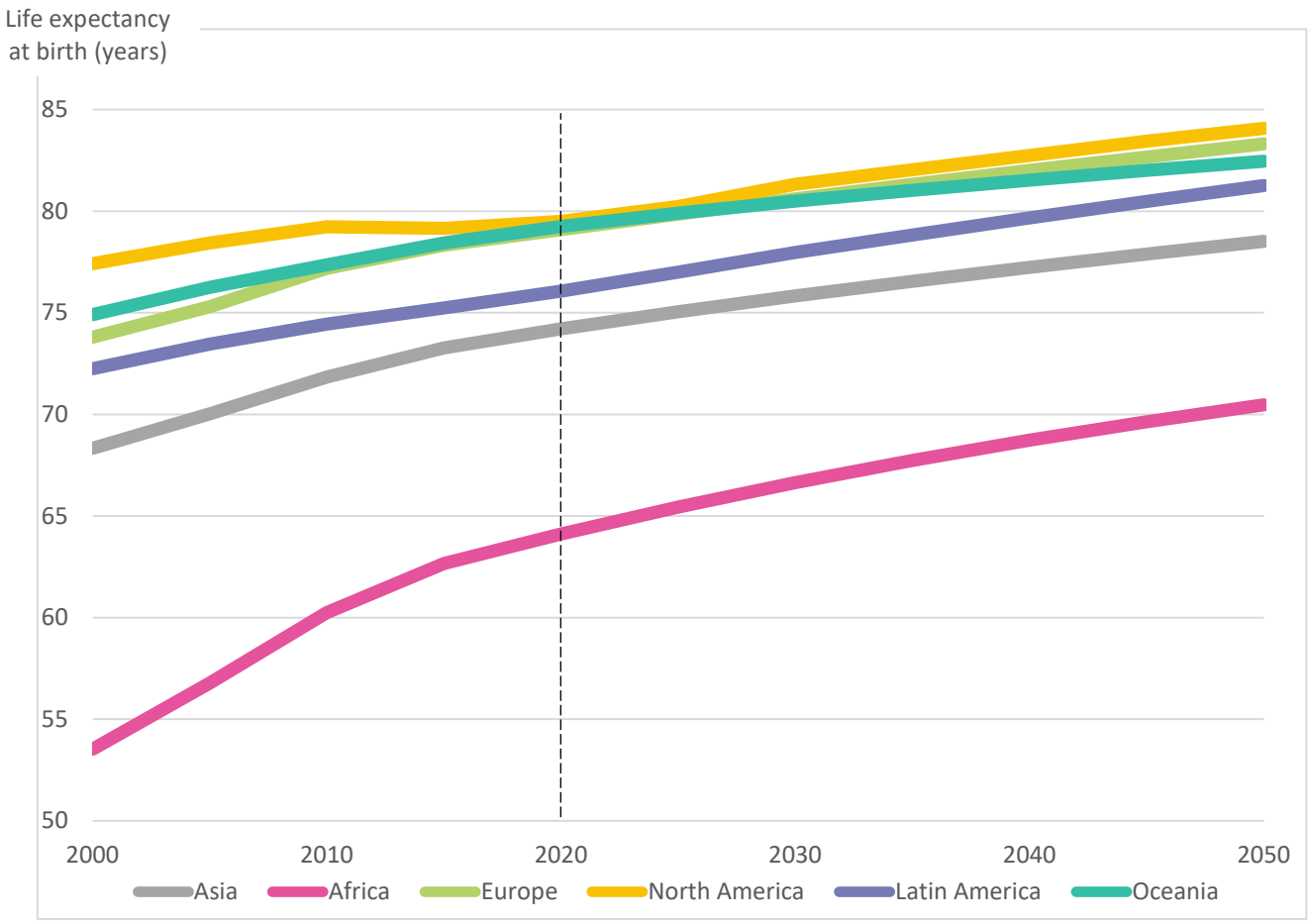


Figure 2: Life expectancy at birth has increased on all six continents since the turn of the millennium. There have been huge gains in Africa – almost 10 years from 2000 to 2020 – and steady increases on all other continents. The well-publicized opioid epidemic in the United States is one of the major contributing factors to the slowing of life expectancy improvements in North America since 2010.

Data Source: Own illustration based on UN Population Division, *World Population Prospects, 2019 Revision*.

Given the ongoing improvements in human living conditions and our growing ability to prevent and treat diseases, it is a reasonable assumption – as expressed in the United Nations' projections – that the proportion of humans aged 65+ will increase to more than 25% of the global population by 2035, with countries such as Japan, the Republic of Korea, Greece, Portugal, Spain, and Switzerland among the leaders. Longer term, it is expected that by the end of this century global remaining life expectancy at age 65 will be 22 years, and 11 years at age 80. While there will always be uncertainty about the exact numbers, longer lives and older populations are the destiny of all countries in the world.

People aged 65 and above are heterogeneous with respect to health and disability. It is therefore helpful to consider two age brackets for policy making (see Figure 3). People aged 65–79, the "young-old", can play a more active role and could potentially remain in the labor force during at least some of those years. However, they would have to be healthy,

motivated, and have up-to-date training. At the same time, the labor market needs to change to adapt to an older labor force. The “oldest-old”, people aged 80 and above, by contrast, are less likely to be able to actively participate in the labor force; they are the ones who are more likely to require social services, frequent and extensive medical care, round-the-clock assistance and the like.

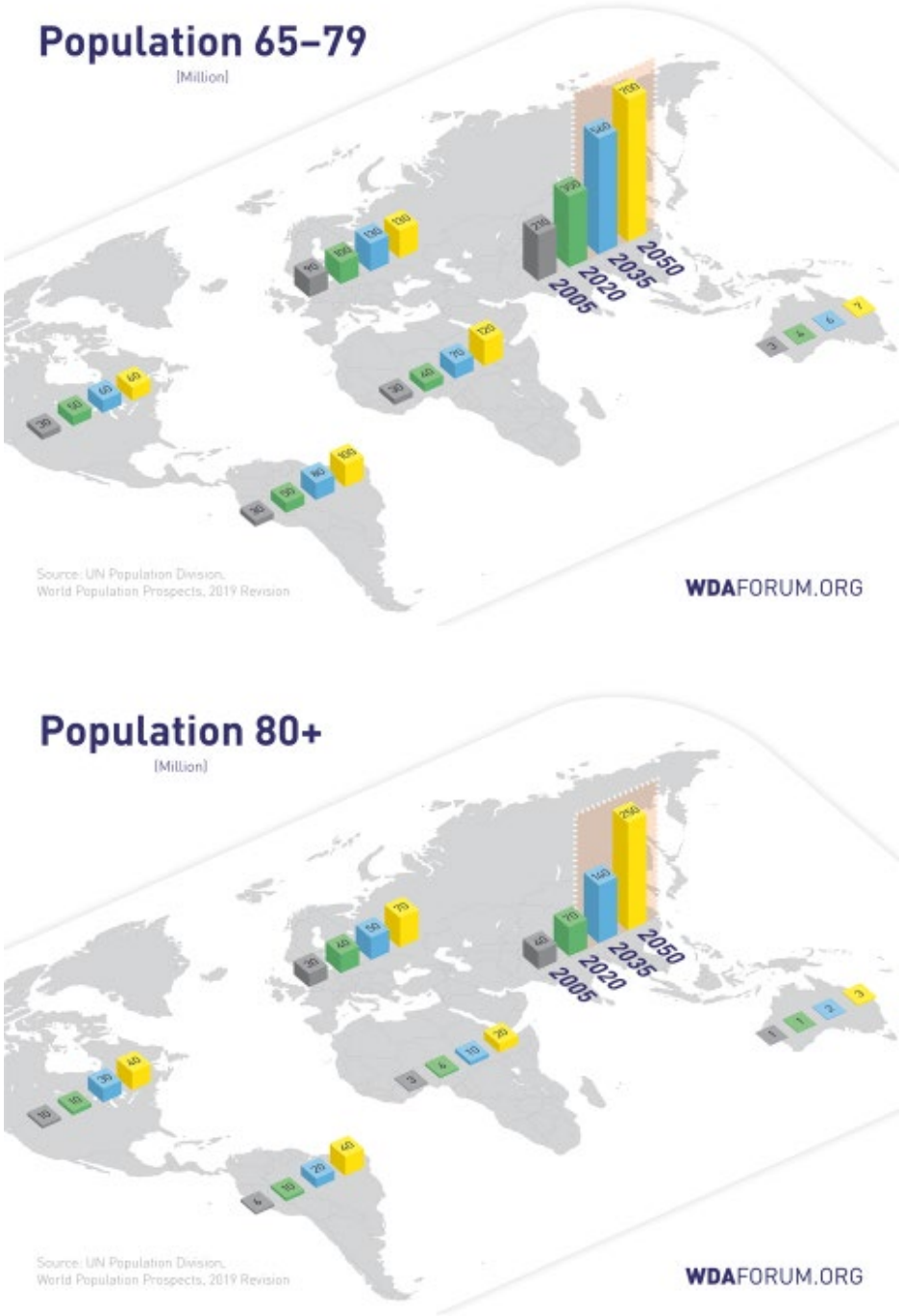


Figure 3: Different growth dynamics of 65–79 (“young-old”) and 80+ (“oldest-old”) populations all over the world. The absolute growth projected in Asia for 2035 and 2050 is striking!

Data Source: Own illustration based on UN Population Division, *World Population Prospects, 2019 Revision*.

Worldwide the number of people aged 65–79 (young-old) is expected to increase by 55% and the number aged 80+ (oldest-old) by about 75%.

The trend is most pronounced in Asia. In this most populous continent, the number of young-old adults is expected to grow by 222 million (+65%) and the oldest-old by 67 million (+93%). Asia is joined by Africa and Latin America where the number of young-old adults is expected to increase by 64%–71% and the oldest-old by at least 81% in each region. A similar magnitude of change for those aged 80 and above is expected in North America (+79%) and Oceania (+80%), while the number of young-old adults will grow by 26% and 38%, respectively. Europe is the only continent where the number of oldest-old adults will only grow by about a third (35%) and the young-old by 23%. Again, this is because their proportion of the total population size is already higher than on any other continent.

Once again, Japan can be considered an outlier or rather a vanguard country: What we can see in Japan today could be a demographic reality in many other countries a decade from now. Surprisingly, the number of people aged 65–79 in Japan will shrink by 11%, due to its earlier fertility decline. Japan is the only in-scope country with an expected decline in that age group; for most other countries reviewed in this paper the 65–79 age group will grow by at least 23% by 2035, with the exceptions of Sweden and Poland (both 10%), and France (18%).

The observed changes in age structure are an outcome of declining birth rates, a phenomenon that started 50 years ago in the Western world. Ongoing improvements in the rate of survival for older adults also play an increasingly decisive role. By 2035 on a global scale, remaining life expectancy at age 65 is expected to rise by more than a year and at age 80 by more than half a year. By the end of our observation window in 2035, Japan's life expectancy at age 65 will be 24.2 years, making it the highest of our sample countries, followed by France, Australia, Switzerland, and Italy. The same ranking applies for life expectancy at age 80.

What Does It Mean?

Having established that the whole world is ageing and people are living longer lives, but heterogeneously both between and within continents, we need to understand what ageing means for a country's social and economic dynamics. This will illuminate the various opportunities and challenges for public and private decision makers. One helpful metric is

the old-age dependency ratio (OADR). It compares the size of two relevant populations by calculating the number of people who have reached retirement age (here defined as those aged 65+) as a percentage of the number of people of working age (aged 20–64). For each of our 31 in-scope countries we estimate the OADR for the years 2010, 2020, 2030, and 2035. In addition, we provide the change within the 15-year range between 2020 and 2035 (see Table 1). While not capturing important changes in the labor force participation by age, sex, level of education, or subnational regions, the OADR is a good guiding ratio for assessing potential stress on public pension systems and intergenerational solidarity, both of which are the backbone of social security and wellbeing in any country.

The OADR is a simple tool to illustrate the societal and economic impact of population ageing, serving as a call to action for policy makers and strategy planners and as a call for intergenerational dialogue within societies.

Japan will experience relatively little change in its OADR in the period 2020–2035: The OADR will increase by only 19.2%. But it should be noted that Japan's ratio of retirees to workers in 2020 was already the highest in the world (52 retirees per 100 people of working age) and it will remain the leader in 2035: By then there will be 62 people of retirement age for every 100 people of working age. Most other Asian countries face a faster OADR increase, although, with the exceptions of Japan and China, the actual dependency levels in Asia in 2035 will remain far below the level of any European country today. In 2035 China will reach an OADR level similar to the levels that European countries saw in 2020. The fastest percentage change is observed in Qatar: Its OADR will more than triple by 2035, but even then its projected OADR of 9.8 is still very low, indicating a very young population.

African countries have a different dependency ratio pattern, with several countries showing stagnation or even decline in their OADR. This is due to the very rapid growth of the working-age population, exceeding the speed of growth of the population aged 65 and above. The most extreme example is Niger where the OADR will decrease by 8.6% from 2020 to 2035. Even in South Africa, one of the most aged countries on this continent, the OADR in 2035 will be less than 13 older persons for every 100 people of working age. In the case of Africa, the low or even declining OADR is a strong signal that these countries should focus on the opportunities for economic development provided by their large and growing working-age populations.

	Old-Age Dependency Ratio (OADR) Size of population aged 65+ as a percentage of population aged 20–64				
	2010	**2020**	**2030**	**2035**	**Change 2020–2035**
Asia					
China	12.2	18.5	27.4	35.1	89.7%
India	9.3	11.3	14.1	15.7	38.9%
Indonesia	8.6	10.6	15.4	18.3	72.6%
I.R. Iran	8.4	10.621	15.8	19.2	81.1%
Japan	37.9	52.0	57.7	62.0	19.2%
Kazakhstan	11.3	13.9	20.4	21.2	52.5%
Qatar	0.9	2.1	6.0	9.8	366.7%
Turkey	12.6	15.2	20.8	24.1	58.6%
Africa					
Côte d'Ivoire	6.7	6.5	6.5	6.5	0.0%
DR Congo	7.4	7.4	7.4	7.5	1.4%
Egypt	9.1	10.2	12.2	12.7	24.5%
Ethiopia	8.1	7.8	7.7	8.1	3.8%
Niger	6.7	7.0	6.7	6.4	−8.6%
Nigeria	6.4	6.3	6.4	6.5	3.2%
South Africa	8.5	9.6	11.4	12.3	28.1%
Europe					
France	28.7	37.3	44.9	48.5	30.0%
Germany	33.9	36.5	47.7	54.4	49.0%
Italy	33.7	39.5	49.5	57.2	44.8%
Poland	20.8	30.5	40.2	42.2	38.4%
Russia	19.9	25.3	34.7	34.6	36.8%
Sweden	31.2	35.9	40.2	43.0	19.8%
Switzerland	27.2	31.3	41.2	47.2	50.8%
United Kingdom	27.8	32.0	38.5	41.7	30.3%
North America					
United States	21.8	28.4	36.0	38.1	34.2%
Latin America					
Brazil	11.4	15.5	22.0	25.7	65.8%
Chile	15.6	19.7	28.8	32.8	66.5%
Mexico	11.2	13.2	17.2	19.9	50.8%
Peru	11.6	14.7	19.6	22.6	53.7%
Oceania					
Australia	22.0	27.7	34.5	36.6	32.1%
New Zealand	22.1	28.3	37.0	40.4	42.8%
Papua New Guinea	6.9	7.0	8.2	8.9	27.1%

Table 1: Old-age dependency ratio (OADR) 2010–2035 in 31 selected countries across six continents. It is striking that Asia has the highest OADR increases while most African countries show shrinking or stagnating dependency ratios.

Data Source: Own calculations based on UN Population Division, *World Population Prospects, 2019 Revision*.

While Japan continues to be the world's leading country in terms of population ageing and OADR, as a continent *Europe* is the most ahead. In 2035 the OADR in Europe will range between 41.7 (UK) and 57.2 (Italy). The major exception is the Russian Federation with 34.6 retirees for every 100 workers in 2035, mainly due to low life expectancy, particularly among males.

With an OADR of 38.1, the US and North America as a whole will exhibit an age structure which is slightly younger than in Europe. Latin America and Oceania are even younger, with an OADR in 2035 of 19.9 in Mexico, 25.7 in Brazil, 32.8 in Chile, and 36.6 in Australia.

This global comparison of old-age dependency ratios highlights the heterogeneity of the upcoming challenges resulting from growing older age groups and stagnating/declining working age groups. As such, policy makers' priorities and timelines differ in different parts of the world, even for the modest timespan looking to 2035.

What Can Be Done?

Population ageing is already a reality and inevitability: One should not forget that the population that will be over 65 years old in 2085 has already been born. Generally speaking, **one can either mitigate population ageing (by acting on its causes) or adapt to it (by managing the consequences of ageing)** (see Figure 4).

In principle, there are three demographic processes that can **determine** the size and age structure of populations:

- fertility
- migration
- mortality

In many public policy arenas, we know that mitigation strategies have proven difficult, and the results are often uncertain. This holds particularly true for demographics and population ageing when faced with the time horizon of 2035.

- **It is not possible to mitigate ageing by 2035 via fertility:** Any changes in fertility cannot have any impact on the size of the working-age population until after 2035.

- **It is questionable whether it is possible to mitigate via migration:** Many countries face debates as to *whether* and *how* to attract the working migrants who would offset population ageing. Even if it were possible to attract migrants, it is not necessarily politically feasible – migration policies are a delicate subject in many countries. Another consideration is that migrants are also ageing and that short-term solutions might create more serious challenges in the long term. Furthermore, this is only the perspective of the receiving countries: While migrants could mitigate population ageing there, their departure would further induce population ageing in their countries of origin.

- **Finally, the only exception is mortality:** We can live longer (and better) by improving our health, thus mitigating not the degree of ageing but the severity of its effects. This approach can yield results within the timeframe, transforming ageing into a sustainable success for individuals and societies alike. Mitigation through health can be achieved via improved access to health care, including ever-improving preventive, curative, and rehabilitative measures. (It needs to be mentioned, of course, that reducing mortality at older ages will accelerate population ageing. But *increasing* mortality is not a desirable or ethical course of action.)

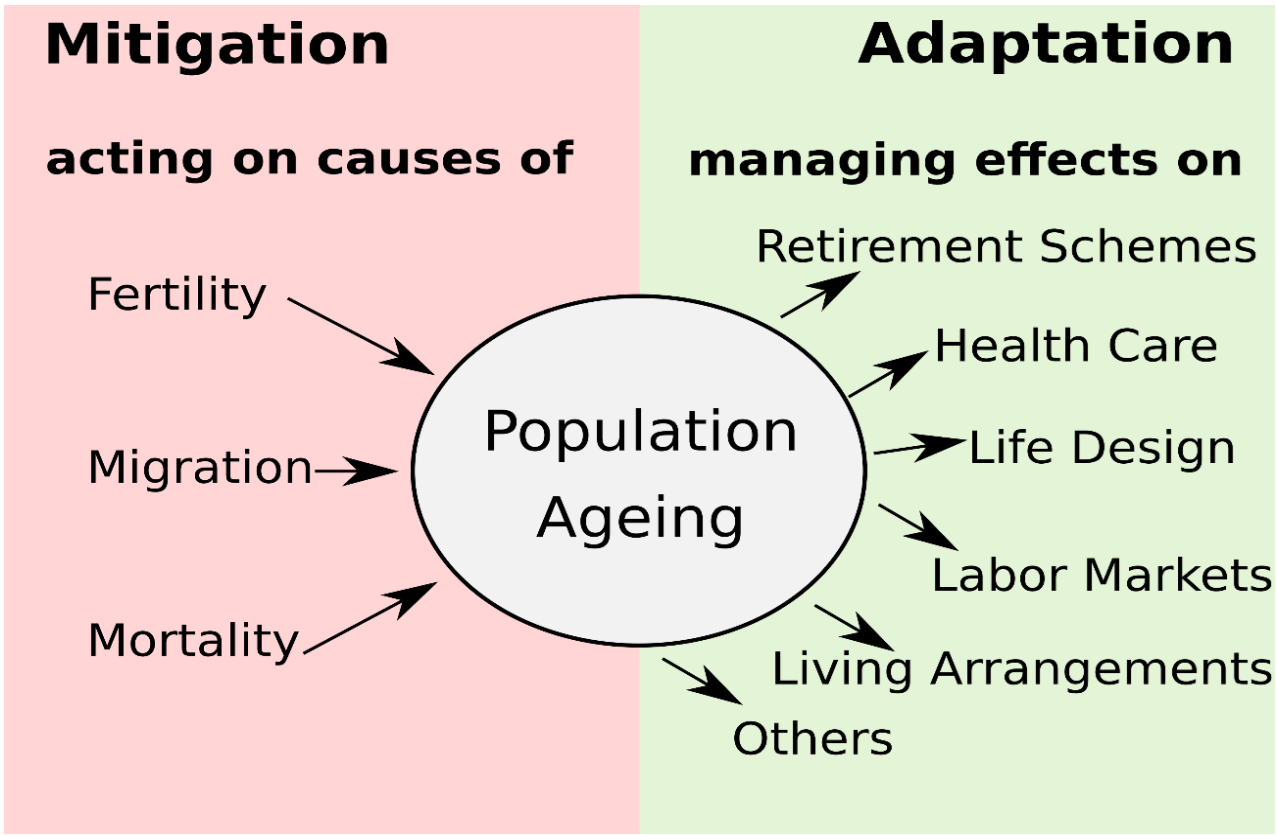


Figure 4: Mitigation and adaptation: How to address population ageing.

Most feasible policy options are therefore in the realm of adaptation rather than mitigation.

Hence, we can say that ageing is like gravity: We cannot stop it, but we can adapt to the effects of it.

The key concept of the **adaptation** approach is a “new life design”, i.e., a new model for the way we want to live and work. In an ideal world, future policies should reshape education systems, employment conditions, social security systems, intergenerational relationships, family dynamics, and gender roles, and should encourage us to critically appraise cultural values, all with the goal of forming structures and strategies that are effective and resilient through 2035 and beyond.

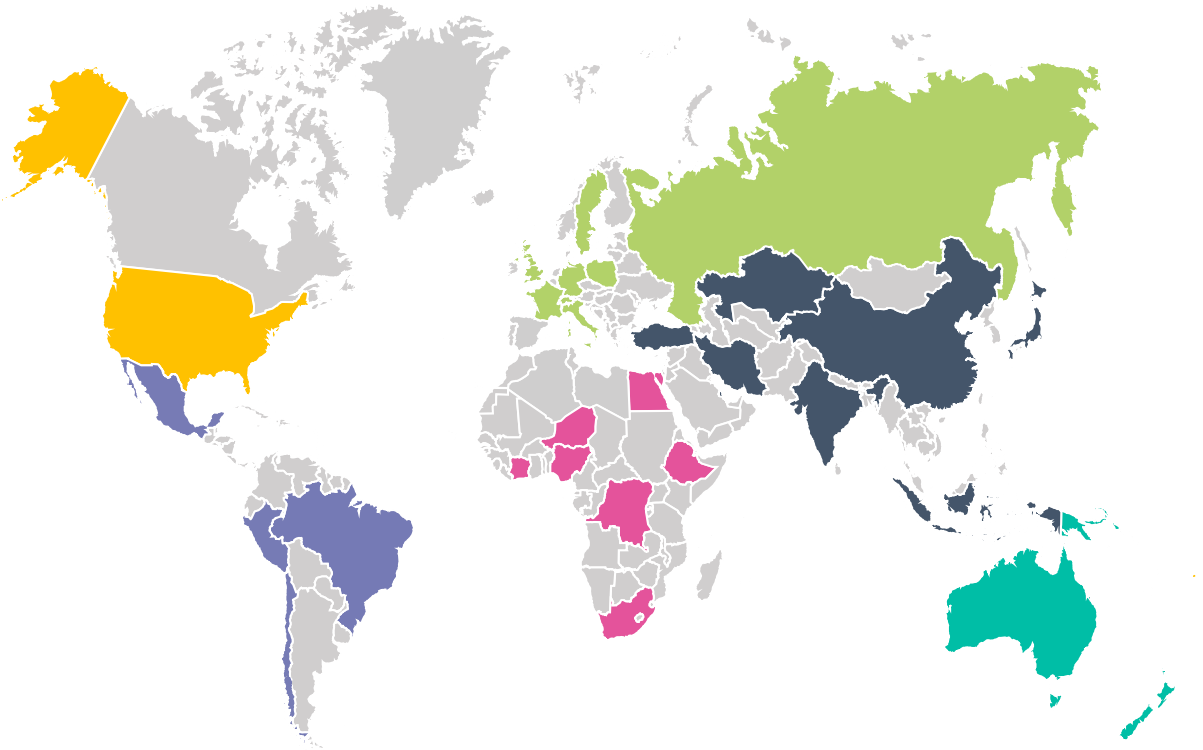
The currently accepted concept of the life course should undergo a profound modification, with corresponding changes in the purpose and meaning of the different stages of life. In order to implement adaptation policies, though, improving health at older ages is necessary: Indeed, the vision of an active and fulfilling longer life depends on at least a reasonable level of good physical and mental health. Good health is therefore the “gold standard” of any aspirations for successful planning for longevity.

What could adaptation policies and strategies for ageing societies look like? Linking the retirement age to changes in life expectancy, improving health care and access for all, and increasing labor force participation are just three illustrative examples. To provide detailed knowledge for policy building and strategy planning, Appendix 1 provides valuable insights for 31 countries distributed across six continents, as compiled and analyzed by the Faculty Members of the WDA Longevity Council. These insights go beyond demography by utilizing the untapped resources and capabilities of societies with longer lifespans.

Appendix 1

How Ageing Will Shape Nations Until 2035: A Demographic Perspective

31 Countries in Scope



Asia

China, India, Indonesia, Iran, Japan, Kazakhstan, Qatar, Turkey
(77% of population and 79% of GDP)
65+ in 2020: 10% (330m); in 2035: 15% (550m)

Africa

Côte d'Ivoire, DR Congo, Egypt, Ethiopia, Niger, Nigeria, South Africa
(57% of population and 64% of GDP)
65+ in 2020: 3% (23m); in 2035: 4% (36m)

Europe

France, Germany, Italy, Poland, Russia, Sweden, Switzerland, UK
(52% of population and 67% of GDP)
65+ in 2020: 19% (92m); in 2035: 25% (117m)

North America

United States
(90% of population and 93% of GDP)
65+ in 2020: 17% (55m); in 2035: 21% (76m)

Latin America

Brazil, Chile, Mexico, Peru
(60% of population and 70% of GDP)
65+ in 2020: 9% (35m); in 2035: 14% (62m)

Oceania

Australia, New Zealand, Papua New Guinea
(92% of population and 99% of GDP)
65+ in 2020: 12% (5m); in 2035: 17% (8m)

Data Source: Own illustration based on UN Population Division, *World Population Prospects, 2019 Revision*; World Bank national accounts data; and OECD national accounts data (2021).

Asia

With a population of 4.6 billion (60% of the world population) in 2020, Asia is the most populous region on our planet. It is also the continent with the most rapid ageing – particularly until 2035.

Diversity remains a key feature of this continent, including with respect to economic growth, social development, cultural heritage, and to what extent countries and territories have already undergone the demographic transition (DT). East Asian societies have among the lowest fertility rates and most rapidly ageing populations in the world, while South and Southwest Asian countries are further behind in their demographic transition.

Nevertheless, preparing for population ageing represents a common challenge for this continent. Asia's recent economic boom and the remaining potential of the demographic dividend (DD) in some of its countries set up the continent to remain an economic powerhouse for at least the coming two decades.

Demographic Ageing in China

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	1,439.3	1,461.1	1.5	0.10
Age group 15–64 years (%)	70.3	64.6	−8.2	−0.57
Age group 65+ years (%)	12.0	20.7	72.8	3.71
Age group 65–79 years (%)	10.1	16.6	63.8	3.34
Age group 80+ years (%)	1.8	4.1	121.9	5.46
Life expectancy at age of 65 (years)	16.7	18.4	9.8	0.62
Life expectancy at age of 80 (years)	7.7	8.6	11.3	0.72
Old-age dependency ratio (65+/20–64)	18.5	35.1	89.7	4.36
Total fertility rate (TFR)	1.7	1.7	1.8	0.12

What do we know? China – the largest country by population size – is positioned to be the fastest ageing society in the world. Low fertility and further improvement in health lead to the rapid growth of elderly age groups, especially the oldest-old (aged 80+). From 2020 to 2035 – just 15 years – China's old-age dependency ratio will nearly double from 18.5 to 35.1.

What does it mean? Given its size and economic power, such rapid ageing has both domestic and global implications. China can no longer rely on a labor-intensive and export-oriented economic growth model. Anticipation of ageing already contributed to increased savings. Rising numbers of elderlies will generate new demands in consumption and health care, making China a major global market. Increased public spending on health care and pensions will constrain government investment and induce tax increases for the working-age population.

What can be done? China can reap the benefits of an evolving new labor force that has a higher education level. In addition, reforming the health care sector to reduce costs and increase quality of life are topics to be addressed. Slowing down government spending in pension plans, maintaining the competitive advantages of its economy, increasing labor force participation among the older population, and postponing the retirement age will all become high priorities in China's policy making.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in India

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	1,380.0	1,553.7	12.6	0.79
Age group 15–64 years (%)	67.3	68.4	1.8	0.12
Age group 65+ years (%)	6.6	9.6	46.1	2.56
Age group 65–79 years (%)	5.6	8.0	42.7	2.40
Age group 80+ years (%)	1.0	1.6	66.3	3.45
Life expectancy at age of 65 (years)	14.9	15.7	5.7	0.37
Life expectancy at age of 80 (years)	6.9	7.3	5.0	0.33
Old-age dependency ratio (65+/20–64)	11.3	15.7	38.9	2.22
Total fertility rate (TFR)	2.1	1.9	−10.3	−0.72

What do we know? With a current annual growth of about 0.8% India will become the biggest country in the world by population size. By 2035, Indians aged 65 years and above will make up 9.6% of the Indian population. In absolute numbers, about 160 million Indians will be aged 65 and above. According to current projections LE at 65 or 80 years will only slightly increase by about 5–6% from 2020 to 2035, which is a small lifespan gain compared to other developing Asian countries.

What does it mean? A stagnating working-age population will result in higher labor costs and thus challenge India's future international competitiveness. A larger elderly population will force governments to spend a major share of national GDP on health care, pensions, and social security. The quality of life must be carefully monitored as lifespans increase, and broad access to health care is urgently needed to cope with the burden of chronic diseases.

What can be done? Long-term strategic planning for post-retirement lives is a new priority for India. However, the true challenge would be to strike a balance between both the young and the experienced but ageing Indians. Innovative approaches to empower the elderly in productive activities rather than marginalizing them will become a new component of the future competitive advantages of the country.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Indonesia

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	273.5	309.8	13.2	0.83
Age group 15–64 years (%)	67.8	67.2	−0.9	−0.06
Age group 65+ years (%)	6.3	10.9	74.0	3.76
Age group 65–79 years (%)	5.4	9.4	74.1	3.77
Age group 80+ years (%)	0.9	1.5	73.3	3.73
Life expectancy at age of 65 (years)	15.0	16.3	8.3	0.53
Life expectancy at age of 80 (years)	6.6	7.2	9.6	0.61
Old-age dependency ratio (65+/20–64)	10.6	18.3	72.6	3.72
Total fertility rate (TFR)	2.2	2.0	−9.9	−0.69

What do we know? From 2020 to 2035, the proportion of Indonesians aged 65 years and over will increase by 74.0%, contributing to 10.9% of the country's total population by the end of that period. Their average life expectancy after the age of 65 will be 16.3 years in 2035. Currently, over 32.5 million Indonesians live in poverty. Only 25% of older people receive an old age pension, while 75% of non-formal workers have no old-age security at all.

What does it mean? The elderly in Indonesia will increasingly struggle with poverty. They need care and support as they have less access to education, earn less money, and face prejudice and exclusion from home and community decision-making processes.

What can be done? A comprehensive multi-stakeholder old-age security strategy should be developed and implemented with tax benefits for charities that assist the elderly. Essential training and long-term assistance in cash and kind should be ensured for families caring for the sick and frail. The government should employ incentives to encourage more residents to obtain health insurance.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

.

Demographic Ageing in I.R. Iran

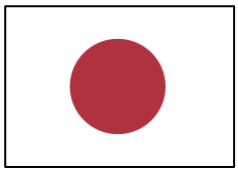
	2020	2035	Total change (%)	Change per year (%)
Population (millions)	84.0	95.8	14.1	0.88
Age group 15–64 years (%)	68.7	68.4	−0.5	−0.03
Age group 65+ years (%)	6.6	11.6	76.9	3.88
Age group 65–79 years (%)	5.5	9.9	79.7	3.98
Age group 80+ years (%)	1.1	1.7	62.7	3.30
Life expectancy at age of 65 (years)	16.2	17.9	10.9	0.69
Life expectancy at age of 80 (years)	6.6	7.6	16.2	1.00
Old-age dependency ratio (65+/20–64)	10.6	19.2	81.1	4.06
Total fertility rate (TFR)	2.1	2.0	−5.7	−0.39

What do we know? In recent decades, Iran has experienced one of the fastest fertility declines in the world, and will see its fertility level drop further, to below the replacement level by 2035. At some time later its population will start to shrink. A rapid population ageing process has already started, with the relative size of the 65+ age group growing from 6.6% of the total population in 2020 to 11.6% in 2035.This means that the old-age dependency ratio will increase by 81.1% in the same time period.

What does it mean? Iran will face an increasingly pressing demographic challenge through 2035, with its elderly population expanding at a fast pace. Yet given its recent fertility decline, there is a window for a demographic dividend (DD) with a large labor force.

What can be done? Iran still has time to prepare for the prospect of population ageing. It can do so by: (1) strengthening its social and economic support system for the elderly; (2) creating conditions to encourage young people to have children, to slow a further decline in fertility; and (3) creating employment opportunities particularly for its youth.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.



Demographic Ageing in Japan

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	126.5	117.2	−7.4	−0.51
Age group 15–64 years (%)	59.2	56.5	−4.5	−0.30
Age group 65+ years (%)	28.4	32.5	14.5	0.91
Age group 65–79 years (%)	19.4	18.6	−4.3	−0.29
Age group 80+ years (%)	9.0	13.9	55.1	2.97
Life expectancy at age of 65 (years)	22.9	24.2	5.6	0.37
Life expectancy at age of 80 (years)	11.1	11.9	7.3	0.47
Old-age dependency ratio (65+/20–64)	52.0	62.0	19.2	1.19
Total fertility rate (TFR)	1.4	1.5	8.8	0.56

What do we know? With those aged 65+ representing 28.4% of the total population in 2020, Japan is the most aged society in the world. This elderly proportion will increase to 32.5% by 2035, due almost solely to increases of the oldest-old (age 80+), which will reach 13.9% of the total population by 2035.

What does it mean? The advanced ageing of Japan's population will pose formidable challenges to its economy and social systems including public pensions and national health insurance. The ratio of the elderly to working-age (age 20–64) populations will rise from about 52 per 100 in 2020 to about 62 per 100 in 2035. Further, the corresponding ratio of the 80+ to working-age populations will increase from about 15 per 100 to 25 per 100, the highest in the world. The Japanese economy and society will have to make accommodations to adapt to such rapid shifts in dependency structures, all without previous experiences to learn from.

What could be done? Demographically, to counter population ageing and decline, the options are to raise fertility and/or old-age mortality. As intentionally raising old-age mortality is out of question, Japan needs to think about how fertility can be elevated. Given the serious social and economic costs associated with very low fertility, Japan needs to make the labor market more family friendly, and the home more gender equal. It also needs to try to make the elderly more economically active and productive.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Kazakhstan

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	18.8	21.5	14.4	0.90
Age group 15–64 years (%)	63.0	64.9	3.1	0.20
Age group 65+ years (%)	7.9	11.9	50.4	2.76
Age group 65–79 years (%)	6.3	9.5	55.4	2.98
Age group 80+ years (%)	1.6	2.1	31.1	1.82
Life expectancy at age of 65 (years)	16.0	17.0	6.6	0.43
Life expectancy at age of 80 (years)	7.3	7.9	8.2	0.52
Old-age dependency ratio (65+/20–64)	13.9	21.2	52.5	2.88
Total fertility rate (TFR)	2.6	2.3	−11.8	−0.84

What do we know? Kazakhstan has entered an advanced phase of its demographic transition (DT), with the fertility rate falling towards replacement level. Its total population is still growing: While its working-age population continues to grow slowly, the growth of the elderly population is starting to gain momentum. Life expectancy among the elderly population is projected to improve, but only modestly through to 2035.

What does it mean? The time period 2020–2035 presents a one-time opportunity to reap a demographic dividend (DD) from fertility decline and slightly growing working-age populations. Since Kazakhstan's population will also live longer, the societal implications must be addressed. The country must prepare for an increasing old-age dependency ratio, albeit from a low level.

What can be done? A demographic dividend (DD) can materialize only if the corresponding institutional conditions exist. The young population needs to have productive employment opportunities. The country also needs to prepare for an ageing population – economically and socially.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Qatar

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	2.9	3.5	21.4	1.30
Age group 15–64 years (%)	84.7	80.5	−4.9	−0.34
Age group 65+ years (%)	1.7	7.5	342.9	10.43
Age group 65–79 years (%)	1.5	6.8	342.4	10.42
Age group 80+ years (%)	0.1	0.6	348.4	10.52
Life expectancy at age of 65 (years)	18.2	20.0	10.3	0.66
Life expectancy at age of 80 (years)	10.6	11.2	6.1	0.40
Old-age dependency ratio (65+/20–64)	2.1	9.8	366.7	10.89
Total fertility rate (TFR)	1.8	1.6	−11.2	−0.79

What do we know? Compared to those in OECD countries, elderly people still represent a very small proportion of Qatar's overall population. But change is ahead. By 2035, individuals aged 65+ will make up 7.5% of the population. This is an annual growth rate of 10.43%. After reaching age 65 a Qatarian will then on average live another 20 years. As such, the old-age dependency ratio is expected to increase from 2.1 in 2020 to 9.8 in 2035. This is an almost 4-fold increase, albeit from a very low starting level.

What does it mean? The working-age population is declining relative to the 65+ population. A smaller share of productive citizens is available to contribute to finance the rising social security entitlements. Living longer will mean a rise in illnesses such as diabetes, hypertension, and dementia, whose likelihood increases with age. Immigration will continue to play a prominent role in offsetting the challenges of increasing numbers of elderlies and to keep the working-age population at a level to secure growth and wealth.

What can be done? It is essential to have a proficient nursing workforce that is well skilled to work with an ageing population in both a preventative and responsive way. Baccalaureate nursing programs specializing in the areas of geriatric care should be set up for the growing ageing population of Qatar. Moreover, the entire society should be encouraged to attain healthy ageing.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Turkey

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	84.3	91.9	8.9	0.57
Age group 15–64 years (%)	67.1	66.1	−1.5	−0.10
Age group 65+ years (%)	9.0	14.2	58.2	3.11
Age group 65–79 years (%)	7.2	11.1	53.3	2.89
Age group 80+ years (%)	1.7	3.1	78.6	3.94
Life expectancy at age of 65 (years)	18.7	20.4	9.3	0.60
Life expectancy at age of 80 (years)	8.1	9.2	13.3	0.84
Old-age dependency ratio (65+/20–64)	15.2	24.1	58.6	3.1
Total fertility rate (TFR)	2.0	1.8	−8.5	−0.59

What do we know? Turkey still has a fairly young age structure: The elderly (age 65+) made up only 9.0% of the total population in 2020. The corresponding proportion of the working-age population (age 20–64) was very sizable at 67.1%. Consequently, the ratio of the elderly to working-age people was only 15.2 per 100 in 2020. However, Turkey's demographic profile will change dramatically by 2035: The elderly proportion will increase from 9.0% in 2020 to 14.2% in 2035, which is a 58.2% increase in 15 years.

What does it mean? Turkey's low old-age dependency ratio – 15.2 in 2020 – is favorable for its economy and social systems. However, by 2035 its old-age dependency ratio will rise to 24.1, or by 58.6%. This fast societal ageing is due in part to declining old-age mortality, but also due to declining fertility. Turkey's fertility (TFR) will drop from 2.0 in 2020 – just below replacement level – to 1.8 in 2035. This means that the country's population will also begin to shrink some time afterward.

What can be done? These anticipated rapid shifts in Turkey's demographics imply that the country will face increasingly demanding challenges, burdening its economy and social systems. As there is not much time left, pre-emptive policy efforts should be made to help Turkish couples balance employment and family life, providing such assistance as childcare services and child allowances.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Africa

About 30 years after the other less developed regions such as Northern Africa (see Egypt), sub-Saharan African (SSA) countries are entering the next stage of their demographic transition, i.e., the decline of the fertility rate.

Not all SSA countries are at the same place within the demographic transition (DT). South Africa is much more advanced in the demographic transition than, for example, Niger. Ethiopia is mid-way through the last stage of the demographic transition and is probably on its path to replacement level fertility. However, stalls in fertility decline could still occur.

The various SSA countries will continue to evolve at different speeds with regard to fertility decline. Old-age dependency is not a problem yet for SSA countries. Rather, these countries' major challenge is their high fertility level, which translates into large numbers of young people who need education, health services, and jobs.

What are the priorities at this stage of demographic transition? The priorities are to refine and/or re-design public policies: (a) to invest in education for all; (b) to strengthen reproductive rights; (c) to further develop the health systems with access for all; and (d) to create employment for the exponentially growing numbers of young people.

Demographic Ageing in Côte d'Ivoire

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	26.4	37.8	43.2	2.42
Age group 15–64 years (%)	55.6	58.6	5.3	0.35
Age group 65+ years (%)	2.9	3.1	9.1	0.58
Age group 65–79 years (%)	2.6	2.8	8.4	0.54
Age group 80+ years (%)	0.3	0.3	15.4	0.96
Life expectancy at age of 65 (years)	11.8	12.3	4.5	0.29
Life expectancy at age of 80 (years)	4.7	4.9	4.5	0.29
Old-age dependency ratio (65+/20–64)	6.5	6.5	0.0	0.08
Total fertility rate (TFR)	4.4	3.7	−15.5	−1.1

What do we know? Côte d'Ivoire is half-way through its fertility decline. The TFR is expected to reach 3.7 by 2035 which is a 15.5% reduction since 2020. But infant mortality is still estimated at 56 per 1,000 live births. With about 3% of the total population aged 65+, demographic ageing is still at a very early stage.

What does it mean? The country has started modernizing demographically, but at a slower pace than would guarantee the capturing of a first demographic dividend and the rapid improvement of the prospects for longevity.

What can be done? The country needs an ambitious population policy agenda, including the pursuit of declines in mortality and fertility as well as the strengthening of the health sector, including the deployment of a modern system of health care.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in DR Congo

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	89.6	137.3	53.3	2.89
Age group 15–64 years (%)	51.2	55.6	8.6	0.55
Age group 65+ years (%)	3.0	3.3	10.4	0.66
Age group 65–79 years (%)	2.6	2.9	9.4	0.60
Age group 80+ years (%)	0.3	0.4	17.4	1.07
Life expectancy at age of 65 (years)	13.8	14.4	4.2	0.27
Life expectancy at age of 80 (years)	6.0	6.2	3.9	0.26
Old-age dependency ratio (65+/20–64)	7.4	7.5	1.4	0.03
Total fertility rate (TFR)	5.5	4.1	−24.7	−1.88

What do we know? The DRC, which has the third largest population in SSA, is just starting the second stage of its demographic transition, i.e., the reduction of fertility. The country has achieved major strides in decreasing mortality, but infant mortality is still estimated at 64 per 1,000 live births. In addition, fertility is still very high and a more vigorous family planning program should be launched. Elderly age groups continue to be a small proportion (about 3%) of the total population

What does it mean? The logistics of this vast country are particularly difficult, and some regions of DRC are very unstable (e.g., Eastern DRC). This means that the implementation of public population policies will be a challenge.

What can be done? The implementation of efficient public population policies will require more political stability as well as massive assistance from the donor community. The good news is that the DRC leadership appears keen to implement these policies. What is also needed is a focus on reduction of poverty and regional inequalities.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Egypt

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	102.3	130.3	27.4	1.63
Age group 15–64 years (%)	60.7	63.9	5.3	0.34
Age group 65+ years (%)	5.3	6.9	29.6	1.74
Age group 65–79 years (%)	4.6	5.9	27.9	1.66
Age group 80+ years (%)	0.7	1.0	39.6	2.25
Life expectancy at age of 65 (years)	14.4	15.6	8.2	0.52
Life expectancy at age of 80 (years)	6.4	6.9	8.9	0.57
Old-age dependency ratio (65+/20–64)	10.2	12.7	24.5	1.48
Total fertility rate (TFR)	3.1	2.7	−13.7	−0.98

What do we know? Egypt is the largest Northern African country. Infant mortality has decreased significantly, and general mortality conditions have also improved. This means that ageing trends align with the completion of the demographic transition. However, fertility appears to have slightly increased in recent years, particularly in Upper Egypt. This situation is linked to the political turmoil and probably to a weaker political commitment to accelerating the demographic transition. Instead, the government of Egypt has been promoting the building of new cities, prioritizing population relocation instead of population growth reduction.

What does it mean? Egypt may experience a period when the demographic transition is not fully complete, with significant differences and inequalities across the sub-regions of the country. Population ageing will soon kick in. To prepare the country there is a need to strengthen the health care system to increase prospects for longevity.

What can be done? Public population policies to accelerate the demographic transition are always difficult to design and implement. Policy priorities should focus on adapting to population ageing, improving prospects for longevity, and reducing both inequalities and poverty.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Ethiopia

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	115.0	160.2	39.4	2.24
Age group 15–64 years (%)	57.0	62.0	9.0	0.58
Age group 65+ years (%)	3.5	4.2	17.6	1.09
Age group 65–79 years (%)	3.0	3.5	15.3	0.96
Age group 80+ years (%)	0.5	0.7	31.5	1.84
Life expectancy at age of 65 (years)	14.8	15.7	6.1	0.40
Life expectancy at age of 80 (years)	6.4	6.9	7.6	0.49
Old-age dependency ratio (65+/20–64)	7.8	8.1	3.8	0.23
Total fertility rate (TFR)	3.8	2.9	−25.1	−1.91

What do we know? Ethiopia has the second largest population of SSA. Fertility has declined significantly and is now already around 3.8 children per woman. However, the country might experience a stall in fertility decline. Mortality conditions have improved as well, although the infant mortality rate is still estimated at 47 per 1,000 live births. The country still has a very young population, with those aged 65+ representing only 3.5% of the overall population. The old-age dependency ratio is low and projected to rise only a little.

What does it mean? The current political situation in Ethiopia is very shaky and this could jeopardize the smooth continuation of the demographic transition, with severe disruptions in the delivery of family planning programs and other health services. Moreover, the COVID-19 pandemic might also increase mortality somewhat, affecting the country's prospects for longevity.

What can be done? At this juncture, public population policies appear to be inefficient unless the general political situation of the country improves significantly. To move forward, peace should be restored in the country as soon as possible.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Niger

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	24.2	41.4	71.0	3.64
Age group 15–64 years (%)	47.7	51.3	7.4	0.48
Age group 65+ years (%)	2.6	2.6	−1.7	−0.12
Age group 65–79 years (%)	2.4	2.3	−4.1	−0.28
Age group 80+ years (%)	0.2	0.3	22.7	1.37
Life expectancy at age of 65 (years)	12.9	13.5	4.8	0.31
Life expectancy at age of 80 (years)	5.0	5.3	6.1	0.40
Old-age dependency ratio (65+/20–64)	7.0	6.4	−8.6	−0.68
Total fertility rate (TFR)	6.5	5.1	−21.4	−1.59

What do we know? Niger has the highest fertility rate and the youngest population of the world with 50% of the population aged 15 years and younger. It has also the highest rate of natural growth rate (close to 4% per year). However, a recent fertility survey in Niger seems to indicate that fertility has decreased, perhaps to 6.5 or 6.2 children per woman. The forecast is to have a TFR of 5.1 by 2035. Men postpone getting married because the economic crisis has made it more difficult for them to raise money for the dowry. Contraceptive use, however, has not increased and remains at about 10% of couples.

What does it mean? The population will continue to increase rapidly. The society will continue to be dominated by young age groups, while elderly age groups will continue to be a minority. As consequence Niger's old-age dependency ratio is not only one of the lowest in the region, but is even set to decline by 8.6% from 2020 to 2035.

What can be done? The main policy priorities for Niger are to accelerate the decrease of infant and child mortality, to increase female education, and to increase contraceptive use, all of which will contribute to a significant decrease in the fertility rate.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Nigeria

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	206.1	295.0	43.1	2.42
Age group 15–64 years (%)	53.8	57.4	6.7	0.43
Age group 65+ years (%)	2.7	3.0	11.2	0.71
Age group 65–79 years (%)	2.5	2.8	10.7	0.68
Age group 80+ years (%)	0.2	0.2	18.2	1.12
Life expectancy at age of 65 (years)	11.1	11.7	5.4	0.35
Life expectancy at age of 80 (years)	4.2	4.5	5.9	0.38
Old-age dependency ratio (65+/20–64)	6.3	6.5	3.2	0.19
Total fertility rate (TFR)	5.1	4.1	−19.1	−1.40

What do we know? Nigeria has the largest population of SSA and will reach almost 300 million people in the next decade. Despite progress on the mortality front, infant mortality is still estimated at 58 per 1,000 live births, and fertility has remained very high, at above five children per woman. As a consequence, the population is growing by about 2.4% per year. It is noteworthy that, in terms of absolute growth, it is particularly the young and working-age populations that are increasing, while the increases in the 65+ age groups are relatively small.

What does it mean? Nigeria has not yet reached the end of its demographic transition process, and it looks unlikely to do so rapidly, in part because of the leadership's lack of commitment to this goal and because of the absence of efficient on-the-ground programs.

What can be done? Despite several national population policies that have announced ambitious goals, the reality on the ground is far from satisfactory. Public population policies, including family planning programs, will need to be implemented more aggressively, with a view to reducing the gap between the South and the North of the country. Public population policies should also keep a focus on the reduction of inequality and poverty.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in South Africa

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	59.3	68.8	16.0	1.00
Age group 15–64 years (%)	65.7	68.2	3.9	0.25
Age group 65+ years (%)	5.5	7.4	33.5	1.94
Age group 65–79 years (%)	4.8	6.5	32.6	1.90
Age group 80+ years (%)	0.7	1.0	39.5	2.24
Life expectancy at age of 65 (years)	13.5	13.9	3.4	0.22
Life expectancy at age of 80 (years)	5.5	5.8	3.9	0.26
Old-age dependency ratio (65+/20–64)	9.6	12.3	28.1	1.66
Total fertility rate (TFR)	2.3	2.1	−10.4	−0.73

What do we know? South Africa, the economic powerhouse of the SSA region along with Nigeria, has almost completed its demographic transition. Mortality has improved overall despite the plight of HIV/AIDS and, more recently, COVID-19. Infant mortality remains fairly high at 24 per 1,000 live births. Fertility is almost at replacement level. The share of the population aged 65+ age is starting to grow and will reach 7.4% of the total population by 2035. This is one of the highest shares in sub-Saharan Africa.

What does it mean? South Africa is entering a modern demographic stage, with lower mortality and very low fertility. This should enable the country to benefit from increased longevity. It is also a call for action to prepare accordingly and to adapt to population ageing.

What can be done? The full completion of the demographic transition should be pursued vigorously, with a special focus on the reduction of inequality and poverty, especially in the poorer segments of urban areas, which are plagued by unemployment and occasionally civil unrest. Policy makers must also attend to the growing number of elderly people and their needs.

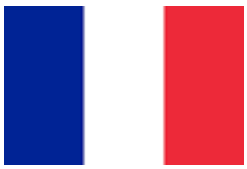
Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Europe

Europe is the oldest continent. While Japan is the frontrunner in terms of population ageing, no other continent features as many countries at such advanced stages of the demographic transition. It is projected that three in ten people will be 65 years or older in countries such as Italy and Germany in 2035. Indeed, 10% of the population will be 80 years or older in Italy. It is also the continent of relatively high remaining life expectancy: Already today, 65-year-olds in Italy, Switzerland, and France can expect to live close to 22 more years.

But the ageing landscape is heterogeneous. In contrast to the aforementioned countries that have high life expectancies or large proportions of older persons, there are countries – primarily in Eastern Europe – with a rather low life expectancy and a relatively low old-age dependency ratio. Coupled with different pension systems, the challenges and policy options vary considerably across Europe.

While some countries need to react fast to the ever-increasing pressure caused by population ageing, other countries need to recognize their unique windows of opportunities and prioritize making their welfare systems resilient, before the challenges become almost unsurmountable and fewer strategic options are available.



Demographic Ageing in France

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	65.3	67.2	3.0	0.20
Age group 15–64 years (%)	61.6	58.4	−5.2	−0.35
Age group 65+ years (%)	20.8	25.7	23.7	1.43
Age group 65–79 years (%)	14.6	16.7	14.4	0.90
Age group 80+ years (%)	6.2	9.0	45.6	2.54
Life expectancy at age of 65 (years)	21.9	23.3	6.2	0.40
Life expectancy at age of 80 (years)	10.4	11.2	8.0	0.51
Old-age dependency ratio (65+/20–64)	37.3	48.5	30.0	1.77
Total fertility rate (TFR)	1.9	1.8	−0.5	−0.04

What do we know? In contrast to its neighbor Germany, France's population is expected to grow by almost two million by 2035. As it is the case for most European countries, the proportion of people of working age will shrink whereas the share of those of retirement age will continue to grow.

What does it mean? The OADR will rise from 37.3 to 48.5. That is the same level at baseline as in Germany but a more moderate increase. In contrast to Germany, the increase of the proportion of older persons is primarily driven by the oldest-old (i.e., those aged 80 and above).

What can be done? The additional pressure on pay-as-you-go systems will not be as high as in Germany. The policy options appear to be more limited, though, since the ageing of the population is primarily driven by the oldest-old. The probability of them remaining net contributors to pay-as-you go systems is extremely low. Instead, it is more likely that they will increase the demand for care.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Germany

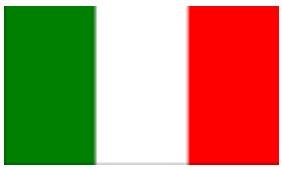
	2020	2035	Total change (%)	Change per year (%)
Population (millions)	83.8	82.7	−1.4	−0.09
Age group 15–64 years (%)	64.4	57.5	−10.6	−0.75
Age group 65+ years (%)	21.7	28.6	31.7	1.85
Age group 65–79 years (%)	14.7	20.4	38.9	2.22
Age group 80+ years (%)	7.0	8.2	16.5	1.02
Life expectancy at age of 65 (years)	20.2	21.8	7.7	0.49
Life expectancy at age of 80 (years)	9.3	10.2	9.8	0.62
Old-age dependency ratio (65+/20–64)	36.5	54.4	49.0	2.7
Total fertility rate (TFR)	1.6	1.7	3.7	0.24

What do we know? Germany's population is expected to shrink by almost a million people between 2020 and 2035. This decline does not affect all age groups to the same degree. The proportion of the population who are of working age will reduce from 64.4% to 57.5% whereas the proportion of retirement age will grow from 21.7% to 28.6%. The main driver for this increase are those aged 65–79, whose proportion will increase from 14.7% to 20.4%, whereas the 80+ will 'only' grow from a 7.0% to 8.2% share.

What does it mean? Germany's old-age dependency ratio will increase by almost 50% from 36.5 to 54.4. That means that in 2020 there was a ratio of about 3 people of working age per pensioner, but there will be only about two working-age people per pensioner in less than 15 years from now. The ratio is already one of the highest in the world and will continue to grow. This will put the pay-as-you-go systems of social welfare under increasing pressure.

What can be done? The newly elected governing parties agreed not to change the retirement age. This would have been a policy option to ease the impending burden on the pension system. Nevertheless, one can expect that an increase of the retirement age will soon be back on the political agenda since a) the new coalition plans to keep the current pension levels and contributions the same and b) the required tax subsidies to keep the pension system afloat will be missing in other areas.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.



Demographic Ageing in Italy

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	60.5	58.1	−3.8	−0.26
Age group 15–64 years (%)	63.7	58.1	−8.8	−0.61
Age group 65+ years (%)	23.3	30.9	32.6	1.90
Age group 65–79 years (%)	15.8	21.1	33.2	1.93
Age group 80+ years (%)	7.5	9.8	31.3	1.83
Life expectancy at age of 65 (years)	21.5	22.9	6.2	0.40
Life expectancy at age of 80 (years)	9.8	10.6	8.0	0.51
Old-age dependency ratio (65+/20–64)	39.5	57.2	44.8	2.49
Total fertility rate (TFR)	1.3	1.4	9.2	0.59

What do we know? Italy is expected to shrink by about two million people by 2035. As in Germany, the proportion of people who are of working age will decrease by 8.8% from a 63.7% share of the total population to a 58.1% share. At the same time, the proportion of older persons will increase from 23.3% to 30.9%.

What does it mean? Among our 31 in-scope countries, Italy will be the second oldest country after Japan, as measured by the OADR of 57.2 in 2035. That means that there will be fewer than two people of working age for each person in retirement.

What can be done? While Germany and Italy seem to age in a similar manner, there is a substantial difference: Germany's proportion of older people increases primarily because of the growth of those aged 65–79, whereas the increase in Italy is driven just as much by those aged 80+ as by those aged 65–79. This will limit the policy options in Italy.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Poland

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	37.8	36.2	−4.4	−0.30
Age group 15–64 years (%)	66.0	62.7	−5.1	−0.35
Age group 65+ years (%)	18.7	24.2	29.4	1.73
Age group 65–79 years (%)	14.1	16.3	15.0	0.94
Age group 80+ years (%)	4.6	8.0	73.5	3.74
Life expectancy at age of 65 (years)	19.3	20.8	8.0	0.51
Life expectancy at age of 80 (years)	9.3	10.2	9.1	0.58
Old-age dependency ratio (65+/20–64)	30.5	42.2	38.4	2.18
Total fertility rate (TFR)	1.5	1.6	6.8	0.44

What do we know? Poland's population is projected to decline by more than 1.5 million from 2020 to 2035. It is accompanied, as in many other countries, by a declining population of working age and an increasing proportion aged 65+. It is projected that in 2035 about a quarter of the population will be in this age bracket. While there are relatively few people aged 65–79, the proportion of the oldest-old will be on a level comparable to Sweden, Switzerland, or Germany.

What does it mean? The old-age dependency ratio will increase to a level of 42.2, which is approximately equivalent to Sweden. However, Poland started on a much lower level in 2020 than its neighbor across the Baltic Sea.

What can be done? The OADR systematically underestimates the ratio of retirees to workers in Poland. The retirement age was due to increase gradually to 67 years. It was decided in 2016, however, to return to the previous retirement ages of 65 years for men and 60 years for women. As a result, any pay-as-you-go retirement system will be under more stress in Poland than in another country with the same level of population ageing as measured by the OADR.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Russia

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	145.9	141.1	−3.1	−0.22
Age group 15–64 years (%)	66.1	64.1	−3.1	−0.21
Age group 65+ years (%)	15.5	19.9	28.0	1.66
Age group 65–79 years (%)	11.6	14.8	27.6	1.64
Age group 80+ years (%)	3.9	5.0	29.2	1.72
Life expectancy at age of 65 (years)	16.5	17.5	6.0	0.39
Life expectancy at age of 80 (years)	7.9	8.5	7.2	0.47
Old-age dependency ratio (65+/20–64)	25.3	34.6	36.8	2.10
Total fertility rate (TFR)	1.8	1.8	0.5	0.04

What do we know? The population of the Russian Federation is expected to shrink by more than four million by 2035. The proportion who are of working age will decrease slightly – partly due to premature mortality for working-age males – whereas the proportion of those aged 65 and above will increase from 15.5% to 19.9%. Despite this apparent population ageing in Russia, the proportion of older persons is smaller there than in any other European in-scope country.

What does it mean? The old-age dependency ratio (OADR) in Russia will "jump" from about 1:4 to around 1:3. This is considerably lower than in any other European country in our sample, which is partly an outcome of relatively low life expectancy at 65 years. The observed improvements in life expectancy since 2005 give hope that the Russian Federation will finally catch up to other European countries. It can be expected that this positive development will also put more stress on retirement systems in the future.

What can be done? With current retirement age below 65 years, the OADR could be misleading. A few years ago, the Russian government began to gradually increase the retirement age (until 2028). It remains to be seen whether this will ease the burden on the retirement systems sufficiently, especially with the expected improvements in health and mortality.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Sweden

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	10.1	10.8	7.2	0.47
Age group 15–64 years (%)	62.0	60.1	−3.1	−0.21
Age group 65+ years (%)	20.3	23.4	14.9	0.93
Age group 65–79 years (%)	15.1	15.5	2.7	0.18
Age group 80+ years (%)	5.3	7.9	49.7	2.73
Life expectancy at age of 65 (years)	21.0	22.4	6.7	0.44
Life expectancy at age of 80 (years)	9.5	10.3	8.4	0.54
Old-age dependency ratio (65+/20–64)	35.9	43.0	19.8	1.21
Total fertility rate (TFR)	1.8	1.8	0.0	0.00

What do we know? Sweden is one of the few European countries with a growing population - partly due to a comparatively high total fertility rate, albeit below population replacement level. In addition, the country has a long history of continuously increasing life expectancies, which are among the highest in the world. Given the advanced stage of its demographic transition, it is particularly the 80+ age group that will increase in the coming decades.

What does it mean? The slight decrease of the working-age population and the robust growth of 65+ age groups will result in a rising OADR – however, not to such a high level as in Germany or Italy.

What can be done? Sweden must deal with a dual challenge: (1) How can the country maintain economic prosperity with a declining proportion of the population being of working age? Can it activate the human capital of those aged 65–79 (the young-old) to close gaps in the labor force? (2) How can the country cope with the future care demand of increasing numbers of people aged 80 and above?

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Switzerland

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	8.7	9.4	8.5	0.54
Age group 15–64 years (%)	65.9	59.8	−9.4	−0.65
Age group 65+ years (%)	19.1	25.8	35.0	2.02
Age group 65–79 years (%)	13.8	18.0	30.8	1.81
Age group 80+ years (%)	5.3	7.7	45.7	2.54
Life expectancy at age of 65 (years)	21.8	23.1	5.9	0.38
Life expectancy at age of 80 (years)	10.0	10.7	7.5	0.48
Old-age dependency ratio (65+/20–64)	31.3	47.2	50.8	2.77
Total fertility rate (TFR)	1.6	1.6	3.2	0.21

What do we know? Switzerland's population continues to grow. Usually this means that a given nation is getting younger. But in the case of Switzerland the opposite is the case. Ongoing low fertility rates and increasingly longer lives result in unprecedented population ageing. The country is in a transition towards a "100-year life". From 2020 to 2035 the proportion of the population aged 15–64 will decrease by 9.4%, while the proportion aged 65+ will increase by a stunning 35.0%. A particularly high growth momentum is projected for the 80+ generation. Their proportion will increase by 45.7% which means that by 2035 7.7% of the Swiss population will be 80 years and older.

What does it mean? Demographic ageing will increasingly threaten Switzerland's competitive advantages and the sustainability of its social security measures. These challenges also include the country's capacity to continue to generate wealth, prosperity, and welfare based on deep roots of intergenerational solidarity!

What can be done? In order to finance an ageing population, Switzerland must tap into the human capital of longer lives in good health. The country must engage in a broad public discussion on how to live and how to work with longevity in mind.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in the United Kingdom

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	67.9	71.5	5.4	0.35
Age group 15–64 years (%)	63.7	60.9	−4.4	−0.30
Age group 65+ years (%)	18.7	23.1	23.6	1.42
Age group 65–79 years (%)	13.6	16.0	18.2	1.12
Age group 80+ years (%)	5.1	7.0	37.9	2.17
Life expectancy at age of 65 (years)	20.3	21.9	7.9	0.51
Life expectancy at age of 80 (years)	9.3	10.2	9.5	0.61
Old-age dependency ratio (65+/20–64)	32.0	41.7	30.3	1.78
Total fertility rate (TFR)	1.8	1.8	1.1	0.08

What do we know? In contrast to most other European countries, the population of the United Kingdom is expected to grow. Nevertheless, the population is ageing as the proportion of people of working age declines and the proportion aged 65+ reaches almost a quarter. The proportion of the "young-old" and the "oldest-old" will grow by about two percentage points each (65–79: 13.6% to 16.0%, 80+: 5.1% to 7.0%). Thus, the oldest-old population will grow at a faster pace than the young-old population.

What does it mean? In relation to comparable European economies among our in-scope countries, the United Kingdom remains relatively young through 2035: Its expected old-age dependency ratio of 41.7 in 2035 is considerably smaller than in France (48.5), Germany (54.4), or Italy (57.2).

What can be done? The UK belongs to a small group of countries which started linking retirement age to changes in life expectancy. Coupled with a relatively low OADR, the UK is in a more favorable situation than its European G7 peers France, Germany, and Italy. Will this make decision makers in the UK complacent? Or will they use this to their advantage by planning ahead? Finally, the fast growth of the oldest-old age group will force policy makers to prepare for increasing care and nursing demands.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

North America

Broadly speaking, the USA and Canada have relatively high (albeit distinctly sub-replacement) fertility levels and relatively high levels of immigration compared with other more developed societies.

These trends suggest that moderate population growth will continue in the years ahead, and that the tempo of population ageing will be less pronounced than in Japan and Europe.

Capitalizing upon these demographic advantages will be key for this region.

Demographic Ageing in the United States

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	331.0	358.7	8.4	0.54
Age group 15–64 years (%)	65.0	61.4	−5.5	−0.38
Age group 65+ years (%)	16.6	21.2	27.5	1.63
Age group 65–79 years (%)	12.7	14.7	15.8	0.98
Age group 80+ years (%)	4.0	6.5	64.8	3.39
Life expectancy at age of 65 (years)	19.9	21.6	8.7	0.56
Life expectancy at age of 80 (years)	9.7	10.7	10.4	0.66
Old-age dependency ratio (65+/20–64)	28.4	38.1	34.2	1.97
Total fertility rate (TFR)	1.8	1.8	1.1	0.07

What do we know? By comparison with other OECD countries the USA has a relatively favorable demographic "pyramid" due to its relatively high fertility levels and its welcoming attitude to immigration, but to capitalize upon these demographic opportunities the USA must concentrate on augmenting the human capital of longer lives.

What does it mean? The USA has been slow to bring to policy attention the headwinds against improvements in health, education, and labor market participation – matters that will become even more urgent to address if population growth falters and elderly age groups steadily increase in absolute and relative numbers in the years ahead.

What can be done? Given the country's ongoing ageing there is urgency for: (1) increasing labor force participation; (2) improving the pace of educational improvements for all cohorts; (3) addressing life expectancy stagnation (LE at birth was no higher in 2019 than in 2010 – a lost decade not solely due to the opioid crisis); and (4) containing the exploding expense of health care entitlements.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Latin America

Latin America is experiencing rapid changes in population age structure, moving from a young age structure to an older one, a transition that started in the second half of the last century. The proportion of the 65+ population for Latin America will overtake all other age groups by 2050 according to the 2019 World Population Prospects.

These demographic changes have important implications since the region is marked by large socio-economic inequality and is not fully prepared for the higher fiscal costs that ageing imposes. However, during this period, the region will face a window of opportunity to tackle social problems because the old-age dependency ratio will first decline before increasing.

It is important to note that Latin America is marked by large regional and social heterogeneity, and these characteristics must always be considered.

Demographic Ageing in Brazil

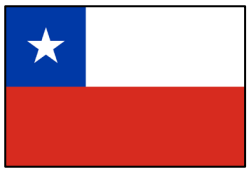
	2020	2035	Total change (%)	Change per year (%)
Population (millions)	212.6	227.2	6.9	0.44
Age group 15–64 years (%)	69.7	67.4	−3.4	−0.23
Age group 65+ years (%)	9.6	15.7	63.6	3.34
Age group 65–79 years (%)	7.6	12.0	57.1	3.06
Age group 80+ years (%)	2.0	3.7	88.9	4.33
Life expectancy at age of 65 (years)	19.0	20.3	7.0	0.45
Life expectancy at age of 80 (years)	9.7	10.3	6.2	0.40
Old-age dependency ratio (65+/20–64)	15.5	25.7	65.8	3.45
Total fertility rate (TFR)	1.7	1.6	−6.6	−0.45

What do we know? Brazil is facing rapid population ageing. In 2035, the share of the population aged 65+ will reach 15.7% of the total population compared to 9.6% in 2020. The share of the working-age population will continue to decline. The demographic changes in the country are explained by the rapid fertility decline to sub-replacement levels over recent decades.

What does it mean? The rapid change in Brazilian population will pose challenges to the public pension programs and health care system. The number of elderly adults for every 100 working-age adults (aged 20–64) will rise from 15.5 in 2020 to 25.7 in 2035, which is a 65.8% increase. These changes indicate the end of the demographic dividend period. As indicated by this 65.8% increase of its old-age dependency ratio, the country will face difficulties to sustain economic growth especially in the context of significant income inequality and a large informal labor market.

What can be done? Brazil needs to make policy and societal efforts to stabilize the labor market, to increase female labor force participation, and to formalize the labor market. It also needs to try to make the elderly more economically active and productive. Companies will have to adapt to an older labor force. All these efforts depend on improvements in health, education, and training to help people make the most of living longer.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.



Demographic Ageing in Chile

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	19.1	19.9	4.0	0.26
Age group 15–64 years (%)	68.5	64.8	−5.4	−0.37
Age group 65+ years (%)	12.2	19.4	58.1	3.10
Age group 65–79 years (%)	9.4	14.2	50.7	2.77
Age group 80+ years (%)	2.8	5.1	82.8	4.10
Life expectancy at age of 65 (years)	20.2	21.9	8.6	0.55
Life expectancy at age of 80 (years)	9.9	10.9	10.0	0.64
Old-age dependency ratio (65+/20–64)	19.7	32.8	66.5	3.45
Total fertility rate (TFR)	1.6	1.6	−1.9	−0.13

What do we know? Chile is facing rapid population ageing. From 2020 to 2035, the share of the total population that is aged 65 and over will increase from 12.2% to 19.4%, while the size of the population that is of working-age will shrink by 5.4% from a 68.5% share to a 64.8% share.

What does it mean? These dynamics in the Chilean population will pose challenges for the public and private pension programs and health care system. The number of elderly adults (age 65+) per 100 working-age adults (age 20–64) will rise from 19.7 in 2020 to 32.8 in 2035, which is a 66.5% increase. Such rapid shifts in the dependency structures will accompany difficult accommodations that Chile's society will have to make, especially in the context of large socio-economic inequality.

What can be done? Chile needs to make policy and societal efforts to make the labor market more family friendly and increase the formalization of the labor market. It also needs to try to make the elderly more economically active and productive.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Mexico

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	128.9	145.8	13.0	0.82
Age group 15–64 years (%)	66.5	67.1	0.8	0.05
Age group 65+ years (%)	7.6	11.9	55.8	3.00
Age group 65–79 years (%)	6.0	9.4	55.3	2.98
Age group 80+ years (%)	1.6	2.5	57.6	3.08
Life expectancy at age of 65 (years)	17.8	19.2	7.6	0.49
Life expectancy at age of 80 (years)	8.9	9.5	6.7	0.43
Old-age dependency ratio (65+/20–64)	13.2	19.9	50.8	2.79
Total fertility rate (TFR)	2.0	1.8	−11.3	−0.8

What do we know? Mexico is starting to face important changes in population ageing: In 2035, 11.9% of the population will be aged 65 and over, compared to 7.6% in 2020. This is a 55.8% increase in just 15 years. These population dynamics are mainly explained by a rapid decline in the fertility rate.

What does it mean? The changes in the age structure of the Mexican population will pose challenges for the public pension programs and health care system. The number of elderly adults per every 100 working-age adults (age 20–64) will rise from 13.2 in 2020 to 19.9 in 2035, which is a 50.8% increase. These changes indicate the end of the demographic dividend period and the country will face difficulties to sustain economic growth, especially in the context of significant income inequality and a large informal labor market.

What can be done? Mexico needs to make policy and societal efforts to stabilize the labor market, to increase female labor force participation, and to formalize the labor market. It also needs to try to make older adults stay in the labor force for longer and increase their productivity levels. Adjustments to pension programs should be discussed while the ageing process is slower than in Europe and other more developed countries.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Peru

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	33.0	37.4	13.4	0.84
Age group 15–64 years (%)	66.6	65.4	−1.8	−0.12
Age group 65+ years (%)	8.7	13.1	50.2	2.75
Age group 65–79 years (%)	6.9	10.1	45.4	2.53
Age group 80+ years (%)	1.8	3.0	68.5	3.54
Life expectancy at age of 65 (years)	18.9	20.3	7.9	0.51
Life expectancy at age of 80 (years)	8.9	9.7	9.3	0.59
Old-age dependency ratio (65+/20–64)	14.7	22.6	53.7	2.9
Total fertility rate (TFR)	2.2	1.9	−11.1	−0.78

What do we know? Peru is facing rapid population ageing, but slightly slower than other countries in the region. From 2020 to 2035, the share of the total population that is 65 and over will increase from 8.7% to 13.1%. The working-age population share will reduce during the same period, at a rate of 0.12% per year. Life expectancy at older ages will also increase significantly in the coming years. A combination of changes in fertility and mortality leads to an important shift in the old-age dependency ratio, which will increase by 53.7% from 14.7 people aged 65+ per 100 working-age adults in 2020 to a ratio of 22.6 per 100 in 2035.

What does it mean? Changes in population age structure will have an important effect on both public and private sectors. They will both have to adapt to deal with a different population compared to previous years with implications for labor, consumption, and other socio-economic aspects. It is important to note that the country is marked by large regional and social heterogeneity, and these characteristics also need to be considered.

What can be done? Policy goals include creating support to increase the labor force participation of older adults and continuing investments in education to increase labor productivity. Companies will have to adapt to an older labor force.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Oceania

Oceania consists of Australia, New Zealand, and the Pacific Island nations. The largest Pacific Island nation is Papua New Guinea, situated to the north of Australia. While Australia and New Zealand are at an advanced stage of their demographic transition (DT), the Pacific Islands are at various earlier stages.

The life expectancies of the populations of Australia and New Zealand are among the highest in the world. In these countries, fertility is below replacement level (2.1 births per woman), but has not fallen to extreme levels. Ageing is therefore not as advanced as in countries with extremely low fertility. Population ageing in these countries is also curtailed by the immigration of young adults under skilled migration policies.

The Pacific Islands have lower life expectancies and higher fertility than Australia and New Zealand. They also tend to be countries of out-migration, often providing labor to Australia and New Zealand, among other countries.

From 2020 to 2035 the demographic situation in Oceania is unlikely to change significantly if current policies are continued. While the population of Oceania is expected to grow and life expectancy to increase, population ageing is not expected to occur at a rapid rate.

Demographic Ageing in Australia

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	25.5	29.4	15.3	0.96
Age group 15–64 years (%)	64.5	62.2	−3.6	−0.25
Age group 65+ years (%)	16.2	20.4	25.7	1.54
Age group 65–79 years (%)	12.1	13.9	15.4	0.96
Age group 80+ years (%)	4.1	6.4	55.7	3.00
Life expectancy at age of 65 (years)	21.9	23.1	5.8	0.38
Life expectancy at age of 80 (years)	10.1	10.8	7.1	0.46
Old-age dependency ratio (65+/20–64)	27.7	36.6	32.1	1.87
Total fertility rate (TFR)	1.8	1.7	−2.8	−0.19

What do we know? Australia's population reached 25 million in 2020 and will continue to grow at a relatively rapid rate for a developed country – about 1% per year, boosted by immigration. Population ageing is moderate. The older population will grow rapidly, particularly at ages 80+ because of the ageing of the large baby boom cohort and continuing increases in longevity. Life expectancy is high and increasing, especially at older ages.

What does it mean? The large increase in the population aged 65+ will not be matched in the working-age population, producing an increase in the old-age dependency ratio. Though the working-age population is boosted by young adult skilled immigration, this is not enough to match the growth of the older population.

What can be done? A continuation of skilled labor immigration would help to curb population ageing and slow the increase of the old-age dependency ratio. As the major public cost of ageing is health and social care, Australia could benefit from promoting healthy lifestyles through health education and facilitating healthy lifestyles through other policies.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in New Zealand

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	4.8	5.3	10.2	0.65
Age group 15–64 years (%)	64.2	60.7	−5.5	−0.38
Age group 65+ years (%)	16.4	22.1	35.0	2.02
Age group 65–79 years (%)	12.5	15.5	23.9	1.44
Age group 80+ years (%)	3.9	6.6	70.9	3.64
Life expectancy at age of 65 (years)	21.1	22.5	6.6	0.43
Life expectancy at age of 80 (years)	9.7	10.4	7.6	0.49
Old-age dependency ratio (65+/20–64)	28.3	40.4	42.8	2.40
Total fertility rate (TFR)	1.9	1.8	−4.3	−0.29

What do we know? New Zealand's population of 4.8 million in 2020 will grow by 0.5 million by 2035, representing a moderately rapid growth rate, which is partly due to immigration. Population ageing is moderate, but the older population is increasing rapidly in relation to the total population and the working-age population. Life expectancy is high and rising.

What does it mean? Rapid rates of growth of the older population will not be matched by growth in the total and working-age populations, producing relatively rapid population ageing and an increase in old-age dependency. Although immigration helps to maintain the population in the working-age group, the old-age dependency ratio will still increase by 42.8% over the next 15 years.

What can be done? Continued or increased skilled labor immigration would help to curb population ageing and the rising old-age dependency ratio. To reduce the public costs of ageing, policies include greater promotion of healthy lifestyles through health education and facilitation, as well as an increased state pension age.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Demographic Ageing in Papua New Guinea

	2020	2035	Total change (%)	Change per year (%)
Population (millions)	8.9	11.6	29.7	1.75
Age group 15–64 years (%)	61.3	63.9	4.3	0.28
Age group 65+ years (%)	3.6	4.8	35.2	2.03
Age group 65–79 years (%)	3.3	4.4	35.1	2.03
Age group 80+ years (%)	0.3	0.4	36.8	2.11
Life expectancy at age of 65 (years)	11.6	12.1	4.3	0.28
Life expectancy at age of 80 (years)	4.7	5.0	6.1	0.39
Old-age dependency ratio (65+/20–64)	7.0	8.9	27.1	1.57
Total fertility rate (TFR)	3.4	2.9	−14.5	−1.04

What do we know? The population of Papua New Guinea was 8.9 million in 2020 and will grow at close to 2% per annum. This relatively high rate of growth is due to the high birth rate and moderate life expectancy increases. The demographic transition (DT) is at an early stage and population ageing (seen in the proportion aged 65+) is correspondingly low. As the DT progresses, both fertility and mortality will decline.

What does it mean? The expected reduction in the birth rate and ongoing increases in life expectancy will increase the proportions in both the working and older age groups. This will increase the ageing of the overall population. Greater increases at older ages than at working ages will produce an increased old-age dependency ratio, though it will remain relatively low, as is typical for less developed countries.

What can be done? As a largely rural population living a traditional lifestyle, steady demographic change at a slow to moderate pace is appropriate. Policies designed to assist the process of DT include better access to health care, including reproductive health services, and improved education.

Data Source: UN Population Division, *World Population Prospects: 2019 Revision*.

Glossary

Age Group %: The percentage of the total population who are within a specified age bracket. The total change and change per year therefore refer to the change in proportion, rather than the change in absolute numbers.

Demographic Dividend (DD): The demographic dividend (DD) refers to the economic growth potential associated with the change in a population's age structure when its share of working-age population (aged 15 to 64 years) significantly exceeds its share of non-working-age, or dependent, population (aged under 14 years, and 65 and older); its time window is limited.

Demographic Transition (DT): The theory of the demographic transition (DT) describes the change from a high-mortality and high-fertility society to a low-mortality and low-fertility society, as experienced in many European countries over the past centuries. It is common practice to classify countries by which phase of the DT they are in. It should be noted that in many countries the transition to low fertility rates has not stopped at the replacement level. Instead, many countries experience below-replacement fertility for a prolonged time.

Infant Mortality Rate (IMR): Despite its name it is not a rate but a probability. The IMR is the probability of dying within the first year of life. The IMR is a common indicator of population health.

Life Expectancy (LE) at Age *x*: LE at age *x* denotes the average number of years an *x*-year-old person can expect to live. LE estimates typically assume that current age-specific mortality rates remain constant over time.

Mortality Rate: The number of deaths within a specified population, typically for single ages or age groups. Often denoted as "deaths per 1,000" or "deaths per 100,000".

Old-Age Dependency Ratio (OADR): The number of people of retirement age (65+) as a percentage of the number of people of working age (20–64). This is a common measure to describe the potential pressure on pay-as-you-go retirement systems. Although retirement ages vary across countries, the threshold age of 65 years is well established. Instead of the traditionally used entry age of 15, we chose age 20 as it better reflects the current actual age at which people enter the labor market.

Total Fertility Rate (TFR): The total fertility rate (TFR) is the sum of the age-specific fertility rates and could be interpreted as the average number of children per woman if a) all women survived until the end of their reproductive ages and b) age-specific fertility remains constant over time.

Young-old/Oldest-old: A common classification used by demographers. They divide people aged 65 and above into two groups: the young-old (ages 65–79) and the oldest-old (80 and above).

About the WDA Forum

As a think tank, the WDA Forum actively shapes the discussion on demographic topics. We work closely with the Institute of Insurance Economics at the University of St. Gallen as well as other educational and research institutions including the Harvard T.H. Chan School of Public Health in Boston, Global Coalition on Aging (GCOA) in New York, Stanford University in California, the American Enterprise Institute in Washington, D.C., the Population and Ageing Centre at the University of New South Wales in Sydney, Fudan University in Shanghai, the Demography Competence Centre Demografik in Basel and the swissnex network of science and technology represented in Boston, San Francisco, Shanghai, Singapore and Tokyo.

The **WDA Global Longevity Council** was founded in 2021 and is a discussion platform centered around the megatrend “Demographic Change” with top-tier demographers from all continents.

www.wdaforum.org