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# Shifting demographics

A global study on creating inclusive environments for ageing populations



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## Contents

Executive summary	2
About this report	5
Chapter 1: The future challenges of ageing	7
Bringing attention to ageing preparedness, and missed opportunities	9
Chapter 2: The Economist Intelligence Unit SHIFT Index	11
Chapter 3: Adaptive health and social care systems	12
Support for healthy ageing	14
Addressing common risk factors and conditions associated with ageing	14
Multidisciplinary and integrated care	15
Do we deliver quality health and social care services to those who need them?	16
Availability of health and social care services.	17
Representation of older people in health systems	19
Is care affordable to ageing populations?	19
Chapter 4: Accessible economic opportunity	21
Financial independence into old age	23
Productivity into old age: sharing a wealth of experience	24
Inclusive work environments	25
Agency to choose when to retire	28
Chapter 5: Inclusive social structures and institutions	31
Barriers to participation in society for older people	31
Social cohesion and participation	31
Isolation	33
Access to technology	33
Provision of a safe and inclusive environment in which to age	34
Inclusive social institutions	35
Conclusions	36

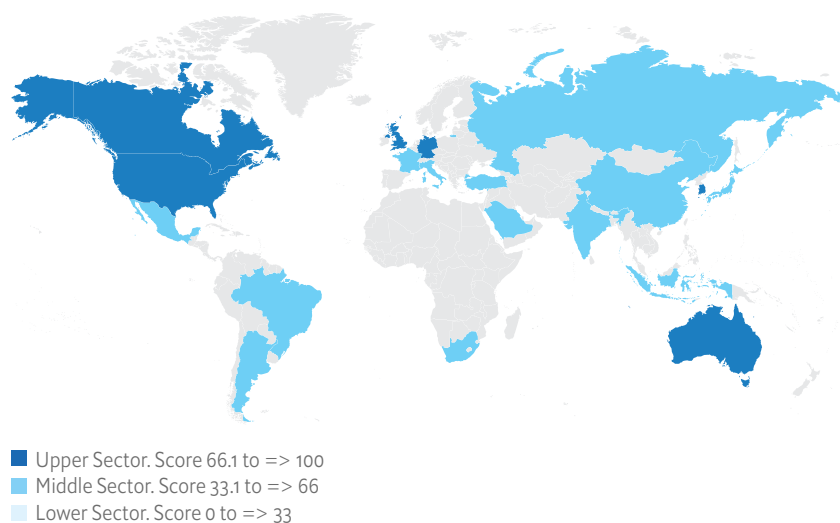
## Executive summary

People today are typically living to increasingly older ages. This, however, has created challenges in providing health and social services for burgeoning older populations and governments across the globe have been slow to react. What counts now is how societies can maximise this opportunity and provide effective, inclusive environments in which to age.<sup>1</sup>

This report from The Economist Intelligence Unit (EIU) is based on findings from the “Scaling Healthy ageing, Inclusive environments and Financial security Today” (SHIFT) Index, a benchmarking analysis around ageing societies, as well as ten in-depth interviews with global experts. The SHIFT Index benchmarks against a set of national-level leading practices in creating an enabling environment supportive of longevity and healthy ageing for societies in 19 countries comprising the Group of Twenty (G20)<sup>2</sup>. The *SHIFT Index* captures the multifactorial variables that impact healthy ageing across three domains:

- (1) Adaptive health and social care systems;
- (2) Accessible economic opportunity; and
- (3) Inclusive social structures and institutions

**Figure 1: G20 countries and overall EIU SHIFT Index score out of 100.**



1 The myth of an “ageing society”, World Economic Forum, Andrew Scott (May 29, 2018). See: <https://www.weforum.org/agenda/2018/05/the-myth-of-the-aging-society>

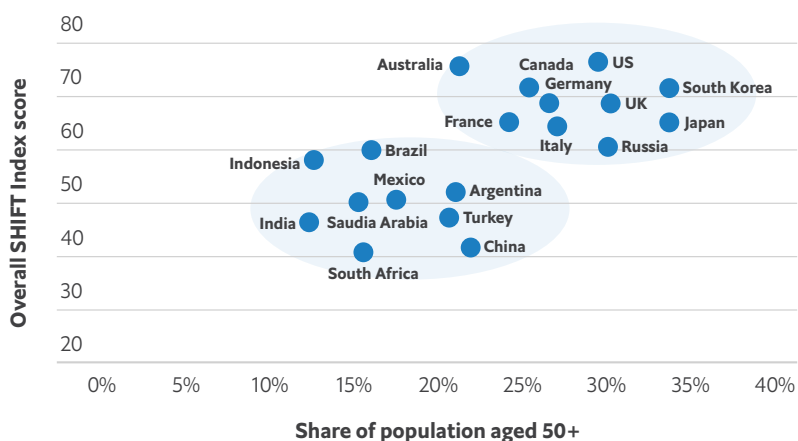
2 The 20th member—the European Union—was not assessed as part of the SHIFT Index.

In this foundational index, The EIU establishes a baseline understanding of each country's enabling environment and identifies several key findings:

**No G20 country is fully prepared to support healthy, financially secure, socially-connected older people.** Despite clear progress made, governments have more work to do to make sure their health systems are adaptive to the needs of older adults as they age, while also fostering inclusion and ensuring individual economic security. Broadly, those countries with a higher proportion of people aged over 50 are implementing more leading practices to enable inclusive environments (See Fig. 2).

### Figure 2. Countries with older populations tend to be better positioned

Correlation between overall SHIFT Index score and the share of the population over the age of 50



**Enabling adults to age well begins with taking a broad view of how society supports older members, not just focusing on the health system.** As a whole, the G20 countries perform best in providing adaptive healthcare systems and worst in providing inclusive social structures and institutions, indicating that countries still have work to do to shift the focus towards building more welcoming societies for older adults as they age. Countries also have room to grow to provide more accessible economic opportunities to older workers.

**Wealthy countries may find it easier to respond, but wealth is not a prerequisite for providing supportive environments.** The best scoring health systems tend to be high-income countries, but Indonesia (a lower-middle income country) has been making strides to improve its health system.

**Government data collection isn't yet robust enough to fully define and identify the problem and opportunity.** There are a lack of data on dedicated health professionals, the extent of isolation and loneliness, as well as mental health.

The SHIFT Index identified several priority areas that may form the basis of policy responses to improve the environment for older adults:

1. **Collect better data:** Countries should collect and publish detailed, age-disaggregated health and economic data annually so policymakers can develop evidence-based programs and policies.
2. **Address poverty among older people:** Some older adults choose to work longer, others must. Governments can ensure the financial health and security of older adults by creating more inclusive work environments. This starts with removing barriers to working longer that exist in some markets.
3. **Prevent a care crisis among the elderly:** The provision of care for older adults—both formal and informal—and the accessibility of, or access to, long-term care is ill-defined and is an area for further research.
4. **Enable older people's voices to be heard:** The views and needs of older people are not routinely collected and they are not represented well in policy consultation.
5. **Address age-related discrimination:** Few countries categorise age-discrimination as a crime outside of employment practices. Fighting discrimination as well as physical, emotional and financial abuse of older adults, will encourage greater social cohesion across generations.
6. **Support training and upskilling of older people:** Supporting older people with the skills and help needed to navigate increasingly complex and digitised health and social care systems should be an area of focus.

## About this report

*Shifting demographics: a global study on inclusive ageing* is a report by The Economist Intelligence Unit, sponsored by Amgen. It considers policy efforts to address active and inclusive ageing in 19 countries based on a first-of-its-kind index that benchmarks each country's performance across accessible and affordable healthcare, social connectivity among older adults, and finance security practices and policies.

The "Scaling Healthy ageing, Inclusive environments and Financial security Today" (SHIFT) Index and the related research programme whose findings form the basis for this report were informed by extensive research and guided by an international panel of experts from across academia, government, non-governmental organizations (NGOs) and international financial institutions.

The following 19 countries (comprising the G20 and excluding the EU) are included in this analysis: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the UK and the US. These were selected to broadly represent the world: covering roughly 65% of the population and 75% of global GDP.

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## Chapter 1. The future challenges of ageing

More people are living into old age than ever before. In 2018 The World Health Organization (WHO) predicted that by 2020 there would be more people aged over 60 years than there are children under 5 years.<sup>3</sup> This prediction appears on track to be correct,<sup>4</sup> and numbers in the older cohort continue to rise. Low fertility rates coupled with increasing life expectancy have resulted in the United Nations estimating that by 2050 there will be 2.1bn older people—more than four times the number today.<sup>5</sup>

In terms of progression, ageing is prominently defined by deterioration of function and

increase in vulnerability. Less often discussed is ‘healthy ageing,’ defined by WHO as “the process of developing and maintaining the functional ability that enables wellbeing in older age.” This definition gives ageing a broader context than merely the onset of disease. Another widely used term “longevity” is often used interchangeably with ageing. This is a distinct—although interrelated—concept. Longevity refers to a greater duration of life or life expectancy, but offers no qualification on quality of life.

For the purposes of our research and discussion here, we use the terms “ageing”

### Defining an era: Ageing vs longevity

Just as ageing is not a uniform experience, neither are the many definitions for “ageing” within the academic and political world. In terms of chronological age, ageing is often considered to start at age 50. However this definition varies significantly across reports and studies, and is sometimes defined as 55+ or 65+. Increasingly sub-categories of ageing are used to reflect the various and distinct characteristics associated with old age.

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For the purposes of our research and discussion here, we use the terms “ageing” and “ageing populations” in their broadest sense to mean those aged over 50 years.

3 World Health Organization (WHO). Ageing and health, WHO Factsheet (February 5, 2018). Available at: <http://www.who.int/news-room/fact-sheets/detail/ageing-and-health>

4 Our world in Data. Age Structure. <https://ourworldindata.org/age-structure>. Accessed 2020.

5 United Nations. World population prospects 2019: Ageing in G20 countries. 2019. [https://www.un.org/en/development/desa/population/events/pdf/other/35/Key%20Findings\\_28JUNE19.pdf](https://www.un.org/en/development/desa/population/events/pdf/other/35/Key%20Findings_28JUNE19.pdf)

6 World Health Organization (WHO). See the WHO website: <https://www.who.int/ageing/healthy-ageing/en/>



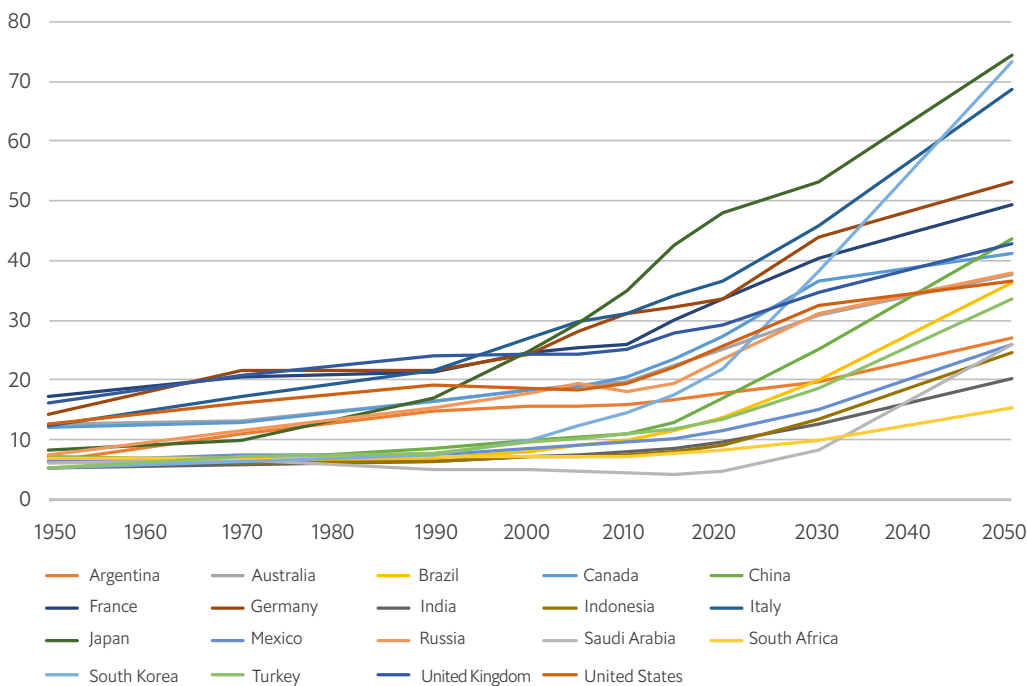
and “ageing populations” in their broadest sense to mean those aged over 50 years.

While increased longevity is a major achievement of science, society and healthcare, for most, if not all nations, this trend is presenting challenges. Countries with rapidly ageing populations are seeing their working-age population decline relative to retirees, and with it the tax income generated to fund health and pension systems. This phenomenon is illustrated by old-age-dependency ratios—that is the number of people aged 65 years or over per 100 persons

of working age (15–64 years; see Figure 3). The current trajectories in G20 countries suggest that already-strained public pensions and social care systems are likely to face challenges with financial sustainability in the long-term.

While on the surface this may seem unavoidable, the socio-economic concerns posed by an ageing population at current trajectories are not inevitable. Many are products of poor planning by governments, communities, healthcare systems and businesses. And each can be significantly improved to the social and economic

**Figure 3. Old-age dependency ratios 1950-2050 in the 19 countries of study**



Source: UN Department of Economic and Social Affairs, Population Dynamics <sup>7</sup>

<sup>7</sup> United Nations, Department of Economic and Social Affairs, Population Dynamics, “World Population Prospects 2019”, <https://population.un.org/wpp/Download/Standard/Population/>

benefit of ageing individuals, their families and their communities, and with positive contributions to economies via productivity and consumption.

Older people represent a growing share of the workforce and community. The Economist Intelligence Unit forecasts that the proportion of adults aged 50+ in G20 countries will range from 15% in India to 37% in South Korea by 2030, up from 9% and 18% in 2000, respectively. This has prompted questions about what policies and infrastructure are in place to support this population as personal, social and financial needs change. More often than not, the answers are unsatisfactory.

Furthermore, forecasts that frame an ageing population as a drain on society largely under-recognise the group's enormous social and economic contributions. For example, elderly people can be bigger consumers of goods and services than the young, and therefore an important contributor to global economies and GDP.<sup>8</sup> Their lifestyles and needs—from healthcare to leisure-travel—have a significant ripple effect through the wider economy and job market, and are increasingly contributors to a healthy economy.

People are also extending their working lives. In the decade up to 2018, the labour force

participation rate of those aged 55-64 rose by nearly 8 percentage points on average in the OECD area.<sup>9</sup> Older people also provide a significant share of unpaid activities, such as caring for children and other adults and volunteering in the community. A 2004 UK report found that unpaid contributions by older people as volunteers or carers are valued at £270bn per year (or nearly 1.2% of GDP).<sup>10</sup> A more recent US report estimated the unpaid activity of those aged 50+ was worth US\$745bn in 2018, in addition to US\$8.3tn in economic activity.<sup>11</sup>

### **Bringing attention to ageing preparedness, and missed opportunities**

To realise the opportunity presented by older populations, more must be done to maintain good health and independence into old age. For policymakers, this will require a shift in the conversation away from unhealthy ageing and its costs. Efforts will be better spent on delivering policies that enable people to be healthier, independent and productive for longer.

As this report sets out, there is a broad range of policy targets and infrastructure goals that can help prepare countries to achieve this and improve older people's wellbeing.

8 EIU. The Longevity Economy. 2019.

9 OECD. 2019. Ageing and employment policies: Working better with age. Available at: <https://read.oecd.org/10.1787/c4d4f66a-en?format=pdf>

10 Age UK. 2010. Promoting Mental Health and Well-being in Later Life a guide for commissioners of older people's services. Available at: [https://www.ageuk.org.uk/Documents/EN-GB/For-professionals/Care/Mental%20Health%20and%20Wellbeing%20in%20later%20life\\_pro.pdf?dtrk=true](https://www.ageuk.org.uk/Documents/EN-GB/For-professionals/Care/Mental%20Health%20and%20Wellbeing%20in%20later%20life_pro.pdf?dtrk=true)

11 EIU. The Longevity Economy. 2019.

## Ageing in context: Vulnerability of older people in the covid-19 pandemic<sup>12</sup>

The covid-19 pandemic is impacting the global population in drastic ways. In many countries, older people are facing the most threats and challenges at this time. Although all age groups are at risk of contracting covid-19, older people face significant risk of developing severe illness if they contract the disease due to physiological changes that come with ageing and potential underlying health conditions.

As of April 2020, over 95% of covid-19 deaths occurred in those older than 60 years, and more than 50% of all fatalities involved people aged 80 years or older. Reports show that eight out of ten deaths are occurring in individuals with comorbidities, in particular cardiovascular disease, hypertension and diabetes, but also with a range of other chronic underlying conditions. The broader societal impacts of covid-19 for older people remain to be quantified, but the need for long-term social distancing and an economic recession are anticipated to have significant harmful effects.

More than ever it is important for older people to lead healthy, independent lives for as long as possible, avoiding the need for institutional care. Covid-19 may serve as a wake-up call for governments across the globe in providing appropriate environments in which populations can age.

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<sup>12</sup> <http://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/news/news/2020/4/supporting-older-people-during-the-covid-19-pandemic-is-everyones-business>

## Chapter 2: The Economist Intelligence Unit SHIFT Index

The Economist Intelligence Unit's SHIFT Index is an innovative policy and planning analysis tool that benchmarks the performance of the 19 countries forming the G20 against a set of national-level leading practices around longevity and healthy ageing.

The following 19 countries were included in the index: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the UK and the US. Collectively, these represent the G20 minus the EU.<sup>13</sup>

The SHIFT Index takes a broad definition of older adults—those aged 50 and older—in order to capture the environment in which adults start to plan for later life as they enter the biological ageing process.

The SHIFT Index comprises three categories that create a holistic picture of the factors that enable adults to live healthy, engaged and dignified lives as they age. They are:

- (1) Adaptive health and social care systems;
- (2) Accessible economic opportunity; and
- (3) Inclusive social structures and institutions

The framework contains both quantitative and qualitative indicators, with data collected from global and national sources. The findings are presented in an interactive workbook that accompanies this report. The domains in the SHIFT Index are weighted based on input from members of the expert panel. Users can also create customised weightings to test their own assumptions about the relative importance of each indicator.

For detailed indicator definitions and the methodology, see the accompanying methodology in the appendix.

### The G20's ageing population

The G20 is an international forum for the governments and central bank governors from 19 countries and the European Union (EU). The G20 countries were selected for this analysis to achieve a broad representation of the global population and economy: these 19 countries represent roughly 64% of the global population and nearly three-quarters (74%) of global GDP.

The share of the people aged over 65 years accounts for an average 10% of the total G20 population. This includes 28% of the Japanese population on the high end and 3.4% of the Saudi Arabia population on the low end.<sup>14</sup> Among the elderly G20 citizens, health trends are mixed, but mild disability and chronic disease are generally increasing.<sup>15</sup>

<sup>13</sup> G20. Participants. <https://g20.org/en/about/Pages/Participants.aspx>. Accessed 2020.

<sup>14</sup> United Nations. June 2019. World Population Prospects 2019: Ageing in G20 countries. Available at: [https://www.un.org/en/development/desa/population/events/pdf/other/35/Key%20Findings\\_28JUNE19.pdf](https://www.un.org/en/development/desa/population/events/pdf/other/35/Key%20Findings_28JUNE19.pdf)

<sup>15</sup> WHO. WHO Contribution To G20 2019 Presidency On Health-Related Issues. 2019. <https://www.who.int/ageing/g20-feb-2019.pdf>

## Chapter 3: Adaptive health and social care systems

### Key findings

- Preparedness to address the risk factors and conditions associated with ageing is increasingly common, but multidisciplinary and integrated care is a work in progress for most countries.
- A lack of data on ageing-specific specialists and services suggests there are limits to evaluating if societies can deliver quality health services to those who need them.
- The voice of older people must be represented in the system for both patients (through advocacy and personal autonomy) and their carers. Countries still have work to do on both fronts.
- Besides geographic availability, access to health services is the foundation for assessing affordable care. For the countries involved, universal or near-universal health coverage is the norm, but implementation of these services varies dramatically.

Today, due in part to medical advancements and sanitation, the prevalent infectious diseases of the last century have largely taken a back seat to non-communicable diseases (NCDs). By 2016, people were living much longer and the leading causes of deaths were heart disease, cancer, chronic lower respiratory diseases, strokes, Alzheimer's and diabetes.<sup>16</sup> While this pattern was initially seen in developed nations, developing nations have fast followed suit.

These changes affect ageing populations and economies in new ways. Because people are living longer, there is a greater chance that they will have more than one age-related chronic disease at a time, such as cancer, cardiovascular diseases and

neurodegeneration. Typically, these are more complicated and expensive to treat and take longer to cure or manage. Today, about 60% of healthcare spending in OECD countries goes to major NCDs such as heart disease and mental health, with the very-old having the highest per-capita health spend. Money spent on very old people (those aged over 85 years) is as much as six times that of those aged 55-59 years.<sup>17</sup>

Effective prevention and management of chronic diseases not only reduces costs, morbidity and mortality in older people, but also supports a longer and more productive life. Healthcare systems now find themselves pressured to reduce the incidence of costly NCDs and the prevalence

<sup>16</sup> Xu, J et al. Deaths: Final Data for 2016. National Vital Statistics Reports. 2018. [https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67\\_05.pdf](https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_05.pdf)

<sup>17</sup> OECD. Focus on Health Spending, 2016. <https://www.oecd.org/health/Expenditure-by-disease-age-and-gender-FOCUS-April2016.pdf>

of common risk factors. This will require fundamental changes to how many systems currently operate: instead of focusing solely on treating illness, more is needed to keep people healthy. Success will require a range of policy interventions from the societal to the individual level. Unfortunately, leading practices for healthy ageing are inconsistently implemented across countries.

To bring clarity to the issue, the first category of the EIU SHIFT Index is dedicated to healthy ageing and social care systems. It scores each country on proactive measures to address known risks and enable multidisciplinary and integrated health systems for older adults. The health and social care category's indicators cover population-based approaches to health and risk prevention, such as evidence of national nutritional guidelines, mental health guidelines, policies to reduce NCD risk, recommended density of healthcare workforce per head, health insurance coverage and more.

Overall, the 19 countries collectively score an average of 63.2 on a scale of 0 to 100, where 100 is the health system most adaptive to the needs of older adults. Every country still has work to do, and there were significant differences by country, and wide variations in strengths and weaknesses.

### SHIFT Index category 1: Adaptive health and social care systems

1	United States	87.8
2	United Kingdom	85.3
3	Germany	83.0
4	Australia	81.6
5	Italy	76.5
6	Indonesia	74.5
7	Japan	73.3
8	Canada	72.2
9	France	68.9
10	South Korea	64.5
	<b>AVERAGE</b>	<b>63.2</b>
11	Argentina	63.1
12	Mexico	59.0
13	Brazil	58.4
14	Russia	54.8
15	Turkey	44.4
16	Saudi Arabia	40.5
17	India	38.0
18	South Africa	37.6
19	China	36.5

## Support for healthy ageing

Much of ill health in older years is caused by health events that could have been avoided by addressing known risk factors and practicing healthy behaviours. This section reviews national plans and preparedness to prevent and manage the most significant risk factors of chronic conditions in older populations.

Generally, two themes arise. First, that some policies beneficial to older adults, but also often to a wider proportion of the population, have already become widespread, such as: policies to reduce NCD risk, treatment guidelines, use of living wills, or even universal health coverage. Yet other ideas have still not achieved general adoption but are appearing in some countries, such as policies that recognise the role of carers, specific disease plans beyond cancer, care integration and training in multi-morbidity. These tend to be associated more with system reform than policy creation.

## Addressing common risk factors and conditions associated with ageing

Countries which actively manage risk factors for NCDs may be more successful in promoting healthier ageing and longevity. As a bedrock component of healthy ageing, the index scored countries based on evidence of guidelines, policies and strategies that address the most common risk factors for diseases

prevalent among older adults. These plans are an important starting point because they show not only whether governments see the benefit of prevention, but also if they are prepared to put resources behind it.

The finding from this sub-category shows that health systems are aware of the important conditions associated with age and acknowledge that they need to be properly addressed. The four leading risk factors for chronic disease development as people age are physical activity, nutrition, tobacco use, and alcohol abuse. Taken together, they contribute to the vast majority of chronic disease, which most often manifests in people aged 50+.<sup>18</sup>

The Index also looked for national plans and published care guidelines for seven of the most common chronic conditions associated with ageing: cardiovascular disease, cancers, osteoporosis, chronic obstructive pulmonary disease (COPD), diabetes, dementia, and multi-morbidity. Chronic diseases have major health and economic consequences to ageing populations. For example, they are associated with lower rates of employment, economic hardship and restricted socialisation.<sup>19,20,21</sup>

Prevention is generally believed to be cost-effective compared to treatments and long-term care. And, critically, prevention facilitates the healthy ageing process, ultimately leading to economic gains to society and lower demands of health systems.

18 Peters R, et al. Common risk factors for major noncommunicable diseases, a systematic overview of reviews and commentary: the implied potential for targeted risk reduction. 2019. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6794648/>

19 Meek KP, et al. Restricted Social Engagement among Adults Living with Chronic Conditions. 2018. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5800257/>

20 OECD. Promoting healthy ageing. 2019. <https://www.oecd.org/g20/topics/global-health/G20-report-promoting-healthy-ageing.pdf>

21 Essue BM, et al. Economic Burden of Chronic Ill Health and Injuries for Households in Low- and Middle-Income Countries. 2017. <https://www.ncbi.nlm.nih.gov/pubmed/30212160>

While it is of great importance that plans and guidelines for common risk factors and common chronic conditions exist; it is nevertheless difficult to assess their quality or effectiveness on the ground in a single metric.<sup>22</sup> For example, stroke is the second most common cause of death globally and third leading cause of disability in adults.<sup>23</sup> It is largely preventable through the effective management of leading risk factors including hypertension and atrial fibrillation (AF). However, according to a global survey of physicians, the vast majority reported screening less than 25% of their at-risk patients (those age 65+) for hypertension, with a less than a 20% screening rate for patients most at risk (aged 40+) for AF.<sup>24</sup> There is a clear gap between availability of guidelines and their implementation.

Mental health is of particular importance for ageing populations, who are more vulnerable to isolation and depression than younger cohorts. According to the WHO, 15% of adults aged 60 and over suffer from a mental illness, the most common being dementia and depression, which affect approximately 5% and 7% of the world's older population, respectively.<sup>25</sup>

The SHIFT Index confirms that mental health is often considered separately from the health care system, but on the whole

there is movement in the right direction. It is noteworthy that only eight of 19 countries get full marks for 1) evidence that mental health guidelines exist for depression and dementia, 2) incorporating the role of the carer/family in managing care and 3) considering physical health conditions within the guidelines. Only Saudi Arabia scores zero for not having any of the above. The Americas, Western Europe and Australia score the highest, although wealth does not appear to be the only factor that determines outcome. Comparison with a previous 2016 analysis from Asia-Pacific shows how little progress has been made in this area.<sup>26</sup> This suggests that further effort is still needed to ensure mental health is being considered holistically and integrated into the wider healthcare system.

### Multidisciplinary and integrated care

Underlying the concern about the increase in chronic conditions is that most healthcare systems have historically focussed on acute, short-term care. NCDs often require lengthy, potentially life-long management.<sup>27</sup> Therefore, many healthcare systems will need structural change to effectively care for patients—both prevention and treatment—over their lifetime.

The SHIFT Index shows integrated health and social care is a common goal: most countries have a national policy or action plan on

22 Barth JH, et al. Why are clinical practice guidelines not followed? 2016. [https://www.eflm.eu/site/api/download/1063-3.CCLM\\_2016\\_WG-G.pdf/publications/Why%20are%20clinical%20practice%20guidelines%20not%20followed?](https://www.eflm.eu/site/api/download/1063-3.CCLM_2016_WG-G.pdf/publications/Why%20are%20clinical%20practice%20guidelines%20not%20followed?)

23 World Health Organization. Stroke: a global response is needed. 2016. <http://dx.doi.org/10.2471/BLT.16.181636>

24 EIU. Preventing stroke: uneven progress. 2017. [https://eiperspectives.economist.com/sites/default/files/Preventing%20Stroke\\_Uneven%20Progress.pdf](https://eiperspectives.economist.com/sites/default/files/Preventing%20Stroke_Uneven%20Progress.pdf)

25 WHO. Mental health of older adults. Fact Sheet. 2017. <https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults>

26 The Economist Intelligence Unit "Mental health and integration." 2016.

27 The Economist Intelligence Unit. "The shifting landscape of healthcare in Asia-Pacific." 2015. [https://eiperspectives.economist.com/sites/default/files/The%20shifting%20landscape%20of%20healthcare%20in%20Asia-Pacific\\_Oct%2015.pdf](https://eiperspectives.economist.com/sites/default/files/The%20shifting%20landscape%20of%20healthcare%20in%20Asia-Pacific_Oct%2015.pdf)



integrated care, including social care. This is particularly prevalent among high-income countries and notably in Indonesia. The SHIFT Index further looked for—and largely found—evidence that more coordination has been encouraged among healthcare professionals, specifically through the incorporation of health professionals like advanced nursing practitioners, patient navigators, community health workers, and case managers. All countries, except Russia, have evidence of at least one of these types of health professionals—a good start. This is crucial for ageing people as NCDs become more prevalent among older adults, staff must be trained to coordinate their complex care.

For ageing populations, integrated health care holds obvious attractions. Integrated and patient-centred care models look at a patient's entire set of medical, and sometimes even broader social needs collectively, rather than treating diseases in isolation. This is especially important where older people may live with multiple complex conditions which worsen as they age. Older patients, therefore, would benefit from a system where stakeholders have a better understanding of competing health requirements, where constant learning and updated practices are encouraged, and where the patient's ideal outcome is seen in their wider context, including lifestyle choices and care provision outside of the core healthcare system.<sup>28,29</sup>

Furthermore, staff in an integrated health system need to be better equipped with the skills to manage comorbidities in older adults. Data from the UK estimate that over the next 20 years there will be a significant expansion of multi-morbidity (two or more diseases) and particularly complex multi-morbidity (4+ diseases).<sup>30</sup> The study adds that primary care—the usual source of chronic disease management—is unlikely to adequately care for the needs of these older people.

With this in mind the SHIFT Index searched for the existence of provider training programmes for multiple chronic diseases. This might be training received as part of their medical education, or training received in service. Unfortunately, only five countries showed evidence of a training programme (Germany, Indonesia, Mexico, UK and US), suggesting more emphasis is needed in order to avoid a rise in under-treated patients.

### **Do we deliver quality health and social care services to those who need them?**

For a healthcare system to be effective for its population, it must have a strong, accessible primary care system—the first line of defence for prevention, management of short-term and long-term conditions and injury. Emergency and specialist services should also be available for ageing populations as they

28 EIU. Future-proofing Western Europe's healthcare: A study of five countries.

29 Briggs A, et al. Elements of integrated care approaches for older people: a review of reviews. 2018. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5892746/>

30 Kingston A, et al. Projections of multi-morbidity in the older population in England to 2035: estimates from the Population Ageing and Care Simulation (PACSim) model. 2018. <https://doi.org/10.1093/ageing/afx201>

have unique conditions and are more prone to traumatic injury.<sup>31,32</sup>

However, this is often a challenge to deliver. Most health systems have gaps in accessibility, affordability or are simply overcrowded and understaffed, particularly for remote, low-income and more vulnerable populations.<sup>33</sup> As populations age they become increasingly vulnerable. Continuous and unobstructed access to quality health and social care services can mean the difference between their healthy, productive contributions to society and economy or becoming a source of strain.

### Availability of health and social care services

Throughout the SHIFT Index a correlation emerges between national wealth and the availability of services, particularly health services. Often, wealthier countries are able to, and do, put money towards medical services, staff and training. However, even in wealthy nations like the US and UK, one does not need to look far to see that supply of services are failing to keep up with demand. It remains to be seen what demographic trends

mean for the sustainability of elder care, even for the most well-funded of nations.

According to the SHIFT Index, when the 19 countries are viewed by income it is not surprising that wealthy countries are able to have better funded healthcare systems. Therefore, they are likely to be in better shape to allocate resources for the elderly. For example, in 2010, people 65 and older accounted for over one third of US medical spending.<sup>34</sup> In the UK, 40% of the National Health Service budget is spent on those aged over 65 years.<sup>35</sup> In Japan where 28% of the population are older than 65 years (compared with 15% of Americans and 21% of Germans<sup>36</sup>), healthcare for the elderly accounted for as much as 35.4% of total national healthcare expenditure in 2014, with an expected increase of 1.2% annually.<sup>37,38</sup>

Unfortunately, while the older population is quickly rising, funding for care of older populations is not keeping pace. Consequently, unmet needs of the ageing population are increasing, and there are less positive experiences with healthcare services. More elderly patients experience delays and longer wait times for care, to the detriment of their overall wellbeing.

31 Llompart-Pou JA, et al. Severe trauma in the geriatric population. 2017. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5415855/>

32 Injury in the aged: Geriatric trauma care at the crossroads. 2015. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4976060/>

33 EIU. Enabling people to manage their health and wellbeing: Policy approaches to self-care. 2019.

34 De Nardi M, et al. Journal of Applied Public Economics. Medical Spending of the US Elderly. 2016. <https://doi.org/10.1111/j.1475-5890.2016.12106>

35 Robineau D. The Guardian. Ageing Britain: two-fifths of NHS budget is spent on over-65s. 2016. <https://www.theguardian.com/society/2016/feb/01/ageing-britain-two-fifths-nhs-budget-spent-over-65s>

36 The Economist. Japan Tries To Keep the Elderly Out of Hospital. 2019. <https://www.economist.com/asia/2019/01/12/japan-tries-to-keep-the-elderly-out-of-hospital>

37 Matsuda S. JMA Journal. Health Policy in Japan – Current Situation and Future Challenges. 2019. <https://www.jmaj.jp/detail.php?id=10.31662%2Fjmaj.2018-0016>

38 The Economist. Japan Tries To Keep the Elderly Out of Hospital. 2019. <https://www.economist.com/asia/2019/01/12/japan-tries-to-keep-the-elderly-out-of-hospital>

The World Health Organization's estimates a minimum of 4.45 doctors and nurses combined per population of 1,000 are needed to deliver universal healthcare.<sup>39</sup> Ideally, this would provide adequate coverage for primary care interventions of common risk factors and chronic conditions. In the countries studied, the combined ratio of general practitioners (GPs), and nurses to the general population are above the WHO's recommended ratio

in all but five. And again, a clear relationship between wealth and health system resources emerges, as all high-income nations exceed the WHO recommendations. While these numbers give an overall impression of preparedness, they must be interpreted with caution. The optimal number of healthcare professionals required is influenced by local disease burden and system efficiency.

**Table 1: Number of doctors and nurses per 1,000 population**

	Number of physicians (per 1,000 people)	Number of nurses (per 1,000 people)	Total number of physicians and nurses (per 1,000 people)
Argentina	3.96	2.58	6.54
Australia	3.59	11.68	15.27
Brazil	2.15	1.47	3.62
Canada	2.61	9.96	12.57
China	1.79	2.70	4.49
France	3.23	10.80	14.03
Germany	4.21	12.93	17.14
India	0.78	1.50	2.28
Indonesia	0.38	1.16	1.54
Italy	4.09	6.71	10.80
Japan	2.41	11.34	13.75
Mexico	2.25	2.90	5.15
Russia	4.01	8.47	12.48
Saudi Arabia	2.39	5.70	8.09
South Africa	0.91	1.32	2.23
South Korea	2.37	6.91	9.28
Turkey	1.76	2.07	3.83
UK	2.81	7.80	10.61
US	2.59	11.74	14.33

Source: World Bank; OECD; EIU calculation.

39 WHO. Health Workforce Requirements For Universal Health Coverage And The Sustainable Development Goals. 2016. <https://apps.who.int/iris/bitstream/handle/10665/250330/9789241511407-?sequence=1>

Furthermore, healthcare for ageing extends beyond the remit of general practitioners and nurses. Other specialists, including dentists and opticians, should also be considered. As ageing populations grow, geriatrics and palliative care also emerge as high-demand specialties. Countries rarely have capacity to train enough specialists to meet the demand, therefore these services will need to be integrated into mainstream medicine.

As with other healthcare delivery statistics, it is prudent to note that overall availability does not mean there is equal on the ground coverage. The large geographic footprint and rising urbanisation in many countries is widening the urban-rural distribution of qualified healthcare professionals. And in countries where there are private and public health systems, private staffing usually outweighs public coverage.<sup>40,41</sup>

### Representation of older people in health systems

Older populations are not necessarily well prepared to handle medical issues. As a function of healthy ageing, giving a voice to older patients is an important factor to ensure the health system is adaptive to their changing needs.

Patient advocates are key players in facilitating these conversations. They help provide patient support and ensure their best interests are at the forefront of the conversation. Advocates are often individuals with higher degrees

in nursing, social work, or gerontology.

The SHIFT Index found that there is at least one national patient advocacy group for common chronic conditions in all countries except China, which suggests this is low-hanging fruit for elderly care even in less economically developed nations. Further research suggests that there are also active civil society groups advocating for the needs of older people in the majority of G20 countries.

The SHIFT Index further looked for evidence that countries provide instruments, such as advanced directives or living wills, for individuals to make appropriate health decisions. Living wills and other advance directives are written, legal instructions that state a person's preference for medical care if they are unable to make decisions for themselves. For example if a patient is terminally ill, seriously injured, in a coma, in the late stages of dementia or near the end of life. This gives patients more control to avoid any unnecessary suffering.

### Is care affordable to ageing populations?

In addition to coverage and access, healthcare must be affordable. As ageing people become more vulnerable and susceptible to illness, medical expenses can quickly add up. Without the support of funding schemes and subsidies, care may be unaffordable. Universally accessible, affordable and sustainable systems are designed to ensure that all of the aged receive care. For most of the countries

40 World Health Organisation. Minimum data sets for human resources for health and the surgical workforce in South Africa's health system. 2015. [https://www.who.int/workforcealliance/031616south\\_africa\\_case\\_studiesweb.pdf?ua=1](https://www.who.int/workforcealliance/031616south_africa_case_studiesweb.pdf?ua=1)

41 EIU. Enabling people to manage their health and wellbeing: Policy approaches to self-care. 2019. <https://eiuperspectives.economist.com/healthcare/enabling-people-manage-their-health-and-wellbeing-policy-approaches-self-care>

involved, universal or near-universal health coverage is the norm.

The SHIFT Index shows that the level of health insurance in the study countries is 75% or greater (or there is universal health coverage) for all but two countries (India and South Africa). It is prudent to note, however, that formal coverage does not mean access. For example, Brazil reports 100% of the population has insurance coverage and China over 99%, but the WHO calculates that, in both cases, only 79% of the population has access to 12 essential services used as indicators for wider universal care.<sup>42,43</sup>

Long-term care needs vary by individual, but ultimately, about 70% of people over 65 will require at least some type of long-term care services during their lifetime. Our research shows that all but four G20 countries have some form of long-term care insurance (either as part of universal healthcare or a standalone option), an emerging but important instrument for adults to plan for unforeseen financial burdens of long-term care (eg nursing home costs). The countries with no insurance—China, India, Mexico, Russia, and Turkey—have relatively less developed economic infrastructure than other countries examined. The main implication of these results is that having a more advanced economy, in particular one which provides a wider range of financial products such as

insurance, is a big asset in dealing with the challenges of ageing.

Additionally, in countries where access to long-term care is provided as part of the health insurance system, notional and actual access can be quite different. Brazil receives the highest score on this indicator because the SUS (the country's national public healthcare service) notionally provides long-term care to those in need. This, however, falls to municipalities to deliver, and in the absence of a long-term care policy or regulation of care facilities, the services available can vary.<sup>45</sup>

It should be noted that this indicator looks for countries where it is possible for individuals to obtain coverage if they have the resources—not if the country has set aside funds to pay for it. Indeed, out-of-pocket health expenditure measured in the SHIFT Index shows that wealthier nations are not particularly better at assisting their population.

Finally, only nine of our study countries have a national policy that subsidises carers for older people. With increasing populations of older people, the extensive level of informal care provided for—and by—older people is an area requiring closer analysis.<sup>46</sup> Along with the finding that few of countries collect data on the number of carers, this suggests that attention is only just turning towards the necessary role of carers identify ways to support them.

42 WHO. Flawed but fair: Brazil's health system reaches out to the poor. 2019. <https://www.who.int/bulletin/volumes/86/4/08-030408/en/>

43 BMJ. China's Health system reforms: review of 10 years of progress. 2019. [https://www.bmj.com/sites/default/files/attachments/resources/2019/06/china\\_health\\_reform\\_full.pdf](https://www.bmj.com/sites/default/files/attachments/resources/2019/06/china_health_reform_full.pdf)

44 Longtermcare.gov. The basics. Accessed 2020. <https://longtermcare.gov/the-basics/>

45 Lylia Tramuja Vasconcellos Neumann et al. "Ageing in Brazil." *Gerontologist*, 2018.

46 M. Plöthner, et al. "Needs and preferences of informal caregivers regarding outpatient care for the elderly: a systematic literature review." *BMC Geriatrics*, 2019.

## Chapter 4: Accessible economic opportunity

### Key findings

- The workforce is rapidly ageing, and the oldest workers are making up increasingly greater portions of that workforce. This holds a key to financing longevity and easing fears over a rising pension burden.
- While some of the increase in the ageing workforce is due to progressive policies such as extending the retirement age and flexible working patterns, much is still done in spite of it or because they have little choice financially.
- There is a crisis of elderly poverty in some countries: the poverty rate for retired-age people (66+) in South Korea and Australia is over 10 percentage points higher than the rate for the total population.
- Some policies to encourage extending working lives and delay retirement have become nearly universal (eg via pensions and anti-discrimination rules to protect older citizens). Other ideas are taking more time.
- Some countries have set aside substantial funds to cover pensions, while others have not. The latter could be in trouble if they expect current workers to continue to fund the pensions of older citizens through social security taxes.
- Retirement policies need to be adaptive to an ageing workforce to allow for workers who want to work longer to be able to do so.

According to 2019 research by the OECD, the average number of retirees (those 50 and over not in the labour force) in the G20 could increase by nearly 60%—from 35 per 100 workers in 2019 to almost 55 per 100 workers in 2050—if entry and exit patterns in the labour force do not change.<sup>47,48</sup> Statistics like these generally spark fear in policymakers. Public finances for pensions and other retirement funds are already under pressure. On the current course, they are not sustainable.

Fortunately, trends are heading in the right direction. The oldest workers are increasingly making up greater portions of that workforce. While some of this increase is due to progressive policies such as extending the retirement age and flexible working patterns which provide agency for older workers to choose to work, other drivers are more sinister. There is an elderly poverty crisis among some older populations (Table 2), many older workers have little choice between

47 OECD. Adapting to Demographic Change. 2019. <http://www.oecd.org/g20/summits/osaka/OECD-Ageing-and-Demographic-change-G20-JPN.pdf>.

48 OECD. Promoting healthy ageing. 2019. <https://www.oecd.org/g20/topics/global-health/G20-report-promoting-healthy-ageing.pdf>

**Table 2. Elderly poverty rates in G20 countries**

2018, or latest year	Poverty rate, 66+	Poverty rate, total
South Korea	43.8%	17.4%
Australia	23.2 %	12.4 %
Mexico	24.7 %	16.6 %
US	23.1 %	17.8 %
Japan	19.6 %	15.7 %
UK	15.3 %	11.9 %
Russia	14.1 %	12.7 %
Canada	12.2 %	12.1 %
Turkey	17.0 %	17.2 %
Germany	9.6 %	10.4 %
Italy	10.3 %	13.9 %
France	3.4 %	8.1 %
South Africa	20.7 %	26.6 %

Source: OECD

continued employment and poverty. In some cases, they work in the face of age-prejudice (ageism) in the workplace, which has a negative impact on physiological and social wellbeing as well as their productivity.

There are several policy approaches shown to help reduce the poverty rate in old age, including pension reform. Other approaches, according to the OECD, include improving the labour force inclusion of women, youth and migrants to help mitigate the consequences of ageing on the financing of pensions. Such improvements can also reduce old-age inequality and poverty.

If ageing working populations are to be supported, there must be a review of their opportunities in the late stages of their working life and their financial security in retirement.

The SHIFT Index found that several important policies for extending and promoting ageing populations' financial health and labour contributions to society have become nearly universal, including for example, the existence of pensions, and anti-ageing discrimination rules to protect older citizens in the workforce. Other ideas are less widely implemented. In some cases, as with healthcare, the uptake of these ideas show that it is simply easier to live in an economically advanced country.

Notably, those countries with the most aged populations appear to be those who have gone further to implement certain workplace-related indicators such as paid leave for carers and incentives to hire older workers. They are likely pragmatic experiments, which may well be adopted by other countries in time.

### SHIFT Index category 2: Accessible Economic Opportunity

1	South Korea	80.1
2	United States	75.7
3	Russia	75.4
4	Australia	75.2
5	Brazil	73.9
6	Canada	73.0
7	Germany	70.3
8	Japan	68.2
	<b>AVERAGE</b>	<b>62.4</b>
9	Italy	60.9
10	India	58.1
11	Saudi Arabia	57.9
12	France	57.7
13	Turkey	56.3
14	Indonesia	56.0
15	United Kingdom	53.9
16	Mexico	50.7
17	Argentina	49.8
18	South Africa	48.2
19	China	44.9

### Financial independence into old age

The significance of financial independence in old age cannot be underplayed, specifically after retirement. Studies have demonstrated that people who are financially independent

or have a high net worth are better looked after in old age than their counterparts with poor finances.<sup>48</sup> Although cultural norms differ across countries, it is not uncommon for many older people to live alone without a family support system.<sup>50</sup> Without a balance of sufficient income and public services, it becomes difficult for less wealthy older people to access proper care and support.

To ensure financial independence in old age, advanced planning is needed at the individual and governmental level. The SHIFT Index shows that most countries enable various financial schemes at the national level to help support financial independence.

Public social security pensions have become essential tools to ensure that older persons receive a stable income in retirement and throughout their old age.<sup>51</sup> When and how much income a person can receive from their pension is usually the determining factor for when to retire. If older people receive a pension that is inadequate to keep them from living in or falling into poverty, they may try to work into old age in spite of declining health or other issues that make retirement more appropriate.

Public expenditure on pensions is already enormous. In the OECD, it is often the largest single item of social expenditure, accounting for 18.4% of total government spending on

48 University of Bristol. Financial wellbeing in later life Evidence and policy. 2014. <http://www.bristol.ac.uk/media-library/sites/geography/migrated/documents/pfrc1402.pdf>

49 Age UK. Evidence Review: Loneliness in later life. [https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/health--wellbeing/rb\\_june15\\_loneliness\\_in\\_later\\_life\\_evidence\\_review.pdf](https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/health--wellbeing/rb_june15_loneliness_in_later_life_evidence_review.pdf)

50 UNDESA. Income poverty in old age: an emerging development priority. <https://www.un.org/esa/socdev/ageing/documents/PovertyIssuePaperAgeing.pdf>

51 OECD. Pensions at a glance 2019. 2019. <https://www.oecd-ilibrary.org/docserver/b6d3dcfc-en.pdf?expires=1583274134&id=id&accname=guest&checksum=0FoDB5B62A6178B838A680F11E7C608>



average in 2015.<sup>52</sup> However, the fiscal impact of more retired people living longer is projected to be significant. On average, public pension expenditure across OECD countries is projected to increase from 8.8% of gross domestic product (GDP) in 2015-16 to 9.4% of GDP in 2050.<sup>53</sup>

Access to a national pension or retirement savings scheme is an important driver of financial security in older age. According to the SHIFT Index findings, every country except South Africa has some kind of national pension or mandatory savings scheme. This indicates a widespread understanding that to address the challenge of ageing some kind of pension system is necessary.

The existence of a pension is an insufficient finding on its own. National pension funds need to be sustainable in order to support adults in retirement. For this, the SHIFT Index looked to the asset-to-GDP ratio in each country, one indicator of a country's ability to continue making pension payments.

The OECD average asset-to-GDP ratio, weighted according to the GDP of each country, was 82.3% in 2018.<sup>54</sup> For the G20, the average is 47.8%.

The SHIFT Index figures show that poorer countries have a lot of catching up to do, but

also reveals a split by economic development. Countries that have relied largely on unfunded pension arrangements—where current workers pay the pensions of retired ones—have very low reserves (Germany, France, Italy, for example).

Those which have used mandatory contributions to fund pension pots, or which have used the tax system to encourage private pension savings, are in much better shape (Australia, Canada, the UK, and US all have more than 100% of GDP in either public or private pension reserves).<sup>55</sup> As countries age and life expectancy increases, those with unfunded pensions are likely to find it harder to keep paying out.

### Productivity into old age: sharing a wealth of experience

Where lifespans and health-spans (ie the period of life when an individual is 'healthy') increase, people are continuing to work for longer. As many are not financially prepared for a long retirement, it's not uncommon for older people to work well past their expected retirement age.<sup>56</sup> In the US, for example, the labour market is projected to grow at an average rate of 0.6% per year between 2016 and 2026, but drilling down, the 65–74 age

52 OECD. Pensions at a glance 2019. 2019. <https://www.oecd-ilibrary.org/docserver/b6d3dcfc-en.pdf?expires=1583274134&id=id&accname=guest&checksum=0FoDB55B62A6178B838A680F11E7C608>

53 Ibid.

54 Ibid.

55 Note: This indicator looks at the ratio of assets of pension funds to the country's gross domestic product (GDP). A pension fund is defined as any plan, fund, or scheme that provides retirement income. This indicator assesses the extent to which pension assets cover the country's total pension liabilities.

56 Schwartz J, et al. Deloitte. 2018. No time to retire. Available at: <https://www2.deloitte.com/us/en/insights/focus/technology-and-the-future-of-work/redesigning-work-for-our-aging-workforce.html?nc=1>

group is projected to grow by 4.2% annually, and the 75+ worker group is projected to grow by 6.7% annually.<sup>57</sup>

This is generally a good thing. It means pensions are not needed as quickly. It is also better for people, as research shows that people who stop working and retire may suffer from depression, heart attacks and feel a lack of purpose in their lives.<sup>58,59</sup> For businesses, employee age can correspond with workplace wisdom, expertise and successful entrepreneurialism.<sup>60</sup>

But structural changes in the workplace and workplace legislation are not keeping pace. Many current concepts around retirement are outdated and counterproductive, which make working in old age particularly challenging. Societies are now challenged to better harness the potential of older people, both inside and outside the labour market.

### Inclusive work environments

Countries take varied legal approaches to ageing workforces that impact the ability of a population to be productive and earn income in an old age. This domain in the SHIFT Index explores where policymakers can significantly contribute to the healthy

and productive extension of working lives. We find outcomes are split, as about half the countries have most recommended policies for this purpose.

National or even company-level measures to address working time are impactful in increasing workforce participation in old age. Measures include flexible hours, voluntary work-time reductions, vacation and leave policies, phased retirement, mentorship opportunities, and hiring and contracting strategies. These examples, which consider how work will affect other aspects of life, are more mindful of the physical, medical and psychological needs associated with ageing.<sup>61,62,63</sup>

Governments can be influential in this transformation. For example, in one quantitative study of a large sample of imminent retirees in New Zealand followed over a three-year period after mandatory retirement was abolished, three-quarters chose to make phased transitions into retirement. In another study, 60% were able to identify changes in terms of flexible working that they felt may have influenced them in deciding to continue working.<sup>64</sup>

57 Special Committee on Aging. United States Senate. 2017. America's aging workforce: Opportunities and challenges. Available at: [https://www.aging.senate.gov/imo/media/doc/Aging Workforce Report FINAL.pdf](https://www.aging.senate.gov/imo/media/doc/Aging%20Workforce%20Report%20FINAL.pdf)

58 NHS. Depression and older adults. <https://www.nia.nih.gov/health/depression-and-older-adults>

59 The British psychology society. Retirement, health and wellbeing. <https://thepsychologist.bps.org.uk/retirement-health-and-wellbeing>

60 <https://hbr.org/2018/07/research-the-average-age-of-a-successful-startup-founder-is-45>

61 US Senate. Special Committee on Aging, America's aging workforce. 2017. [https://www.aging.senate.gov/imo/media/doc/Aging Workforce Report FINAL.pdf](https://www.aging.senate.gov/imo/media/doc/Aging%20Workforce%20Report%20FINAL.pdf)

62 Barclays. Leading the way in supporting older workers. 2017. <https://home.barclays/news/2017/02/supporting-older-workers/>

63 Koetti J. World Economic Forum. 2015. Are older workers less productive? Available at: <https://www.weforum.org/agenda/2015/09/are-older-workers-less-productive/>

64 Wood A, et al. Department for Work and Pensions. A comparative review of international approaches to mandatory retirement. 2010. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/214445/rrep674.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/214445/rrep674.pdf)

### Lifelong learning

Many of those who want to work for longer need to be educated further. Access to life-long learning allows older adults to develop new hard and soft skills and launch second careers. In many office settings it is useful to stay familiar with updated computer systems and digital technologies. And for people unable to continue in physical labour, switching to technical office jobs can help keep their employment viable.

The SHIFT Index found that in the last three years only nine of 19 countries created or renewed a policy to support lifelong learning or skills development for older adults.

On the one hand, this seems like low-hanging fruit, but for some countries this should not be a surprise. India and South Africa, for example, both have a median age in the population of 27 and high general unemployment.<sup>65</sup> Trying to up-skill older adults would seem to be a low priority in employment policy.

Additionally, while the SHIFT Index looked for evidence of national policies as an indication of importance placed on a topic by governments, it does not account for devolved or sub-national accountability. For example, the Canadian government's Targeted Initiative for Older Workers in 2016 funded provincial government programmes that provided training for those aged 55 to 64.<sup>66</sup>

### Incentives to hire older workers

Age bias is a major challenge in the workplace. According to a study by ADP, two thirds of US individuals aged 45-74 have experienced age-related discrimination.<sup>69</sup> This makes it a challenge for older people to maintain their current employment or secure new employment.

While there are many reasons why companies should value older workers,<sup>70,71,72,73</sup> the reality is that many are hesitant to do so. Incentives such as wage subsidies or tax credits for hiring older workers are often needed to encourage multigenerational workplaces.

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- 65 United Nations. World Population Prospects. 2019: Ageing in G20 countries. 2019. [https://www.un.org/en/development/desa/population/events/pdf/other/35/Key%20Findings\\_28JUNE19.pdf](https://www.un.org/en/development/desa/population/events/pdf/other/35/Key%20Findings_28JUNE19.pdf)
- 66 2016 Evaluation of the Targeted Initiative for Older Workers. 2017. <https://www.canada.ca/en/employment-social-development/corporate/reports/evaluations/2016-targeted-initiative-older-workers.html>
- 67 Abrams D, et al. UK Government Office for Science. The barriers to and enablers of positive attitudes to ageing and older people, at the societal and individual level. 2015. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/454735/gs-15-15-future-ageing-attitudes-barriers-enablers-er06.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/454735/gs-15-15-future-ageing-attitudes-barriers-enablers-er06.pdf)
- 68 HBR. The Case for hiring older workers. 2019. <https://hbr.org/2019/09/the-case-for-hiring-older-workers>
- 69 ADP. The Workforce View in Europe 2019. 2019. <https://www.adp.co.uk/hr-insights-topics-trends/employee-engagement-talent-management/workforce-view-2019/>
- 70 Thomas WH, et al. Journal of Occupational and Organizational Psychology. A meta-analysis of the relationships of age and tenure with innovation-related behavior. 2013. <https://doi.org/10.1111/joop.12031>
- 71 Ng TW et al. Journal of Applied Psychology. The relationship of age to ten dimensions of job performance. 2008. <https://doi.org/10.1037/0021-9010.93.2.392>
- 72 Uschi GB, et al. Sage Journals Organizational Studies. Effect of workforce age on quantitative and qualitative organizational performance: Conceptual framework and case study evidence. 2011. <https://doi.org/10.1177/0170840611416746>
- 73 Schmiedek F, et al. Frontiers in Aging Neuroscience. Hundred Days of Cognitive Training Enhance Broad Cognitive Abilities in Adulthood: Findings from the COGITO Study. 2010. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2914582/>

Only six countries in the study have national tax credits and/or wage subsidies available to employers who hire workers over the age of 60. However two have the largest proportion of those over 65 anywhere in the world (Japan and Italy) and South Korea is one of the fastest ageing countries in the world. Such a policy may become far more widespread in the future as other countries are faced with the need to keep older workers in employment.

### Age discrimination in the workplace

Generally, the benefits of older workers on business performance are positive.<sup>74</sup> Some reports show that work quality and judgment improves with age<sup>75,76,77</sup> that experienced workers can help fill talent gaps,<sup>78</sup> and that this employee segment is more engaged in their work.<sup>79</sup> Older workers may also have more positive business behaviours (eg show up on time, help teammates, avoid gossip).<sup>80,81</sup>

However, ongoing age discrimination continues to be a significant deterrent to workforce participation and productivity. According to research by ADP, European employees feel that age is the biggest factor preventing them from progressing in their career.<sup>82</sup> Ageism restricts employment opportunities, and reduces workplace productivity and innovation.<sup>83,84</sup>

A slew of work-related legislation is needed to combat ageism and to ensure that people who are less able can still be productive in a work setting. In the UK, for example, the Equality Act protects workers from direct discrimination, indirect discrimination, harassment and victimisation. An example may be where an employer does not promote someone because they are 'too old' or only offers training courses for recent (young) graduates.<sup>85,86</sup> In Europe, the European Union Directive 2000/78/EC established a general

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- 74 Schmiedek F, et al. 2010. *Frontiers in Aging Neuroscience*. Hundred Days of Cognitive Training Enhance Broad Cognitive Abilities in Adulthood: Findings from the COGITO Study. 2010. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2914582/>
- 75 Thomas WH, et al. *Journal of Occupational and Organizational Psychology*. A meta-analysis of the relationships of age and tenure with innovation-related behavior. 2013. <https://doi.org/10.1111/joop.12031>
- 76 Ng TW et al. *Journal of Applied Psychology*. The relationship of age to ten dimensions of job performance. 2008. <https://doi.org/10.1037/0021-9010.93.2.392>
- 77 Uschi GB, et al. *Sage Journals Organizational Studies*. Effect of workforce age on quantitative and qualitative organizational performance: Conceptual framework and case study evidence. 2011. <https://doi.org/10.1177/0170840611416746>
- 78 Schwartz J, et al. Deloitte. No time to retire. 2018. <https://www2.deloitte.com/us/en/insights/focus/technology-and-the-future-of-work/redesigning-work-for-our-aging-workforce.html?nc=1>
- 79 Harter J, et al. Gallup. Older baby boomers more engaged at work than younger boomers. 2015. <https://news.gallup.com/poll/181298/older-baby-boomers-engaged-work-younger-boomers.aspx>
- 80 Ng TW et al. The relationship of age to ten dimensions of job performance. 2008. <https://doi.org/10.1037/0021-9010.93.2.392>
- 81 Marcie Pitt-Catsouphes et al, The Center on Aging & Work/Workplace Flexibility at Boston College. The national study report: Phase II of the national study of business strategy and workforce development. 2007. 2007. [https://www.bc.edu/content/dam/files/research\\_sites/agingandwork/pdf/publications/RH04\\_NationalStudy.pdf](https://www.bc.edu/content/dam/files/research_sites/agingandwork/pdf/publications/RH04_NationalStudy.pdf)
- 82 ADP. *The Workforce View in Europe 2019*. 2019. <https://www.adp.co.uk/hr-insights-topics-trends/employee-engagement-talent-management/workforce-view-2019/>
- 83 Swift H, et al. *The Risks of Ageism Model: How Ageism and Negative Attitudes toward Age Can Be a Barrier to Active Aging*. 2016. <https://eprints.bbk.ac.uk/21658/6/21658.pdf>
- 84 Abrams D, et al. UK Government Office for Science. The barriers to and enablers of positive attitudes to ageing and older people, at the societal and individual level. 2015. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/454735/gs-15-15-future-ageing-attitudes-barriers-enablers-er06.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/454735/gs-15-15-future-ageing-attitudes-barriers-enablers-er06.pdf)
- 85 Age UK. Ageism at work. Accessed 2020. <https://www.ageuk.org.uk/information-advice/work-learning/discrimination-rights/ageism/ageism-at-work/>
- 86 UK Governemnt. Equality Act 2010 Guidance. 2010. <https://www.gov.uk/guidance/equality-act-2010-guidance>

framework that prohibits discrimination in employment and occupation due to age and other grounds.<sup>87</sup>

The majority of countries who have age-discrimination protection make reporting violations easy. Two countries, however, do not have such processes: Italy and Indonesia. In Italy, the courts have successfully been used to resolve discrimination claims.<sup>88</sup> Indonesia has no-such precedent. In short, rules against age-discrimination in the workforce, and tools to use them, are now fairly common.

### Agency to choose when to retire

Flexible retirement plans ensure an older person has the option to continue working past retirement age but also begin to receive pension payments. These arrangements make it more conducive for older adults to remain in the workforce.

The SHIFT Index shows most countries have realised that cutting pension payments will discourage older workers from remaining in the workforce, so allow some income to be drawn early. The exceptions are South Africa, which does not have a national pension, and India and China, which tend to have fragmented or complex pension systems, so

change may take longer. This is nevertheless low-hanging fruit if the goal is to have older individuals stay in the workforce.

Once much more common, our research shows that mandatory retirement ages—a cap on working age—are now slowly being eliminated. A majority of indexed countries (11 out of 19) now have no such age-based requirement, because they either never had one (such as Mexico) or abolished it (the US and UK, for example<sup>89,90</sup>).

This is a trend in the right direction. Mandatory retirement ages can discourage or prevent older adults from working as long as they would like. The WHO also recommends that mandatory retirement age policies be abolished for the benefits of workers, employers and economies.<sup>91</sup>

Additionally, the age at which individuals can choose to start their retirement has an impact on workforce participation.

In the US, age 62 is currently set as the earliest a person in the US can start receiving retirement benefits.<sup>92</sup> But in response to rising life expectancy and pension funding concerns the age at which retirees receive their full benefits is changing incrementally, from 65 to 66 and soon to be 67.<sup>93</sup> In China, where an

87 United Nations General Assembly. Report of the Secretary General on follow up to the Second World Assembly on Ageing. 2013. <https://www.un.org/development/desa/ageing/news/2014/07/follow-up-to-the-second-world-assembly-on-ageing/>

88 Age Discrimination. Italy. 2018. <http://www.agediscrimination.info/international-age-discrimination/italy>

89 Age UK. Retirement age. Accessed 2020. <https://www.ageuk.org.uk/information-advice/work-learning/retirement/retirement-age/>

90 von Wachter T. The End of Mandatory Retirement in the US: Effects on Retirement and Implicit Contracts. 2009. [http://www.econ.ucla.edu/tvwachter/papers/vonwa\\_mr\\_2009.pdf](http://www.econ.ucla.edu/tvwachter/papers/vonwa_mr_2009.pdf)

91 World Health Organization (WHO). 2015. World Report and Aging and Health. Available at: [https://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811\\_eng.pdf;jsessionid=735DA2A85101740EE9C7478453962BB5?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811_eng.pdf;jsessionid=735DA2A85101740EE9C7478453962BB5?sequence=1)

92 Social Security – US Government. Benefits Planner: Retirement. Accessed 2020. <https://www.ssa.gov/planners/retire/background.html>

93 AARP. Is the Social Security retirement age going up? 2018. <https://www.aarp.org/retirement/social-security/questions-answers/is-the-full-retirement-age-going-up/>

## When mandatory doesn't mean mandatory

The SHIFT Index only views mandatory retirement ages from a legal perspective. It is therefore notable that the “mandatory” age is sometimes more important as a social signal than in having any practical effect, especially if strong cultural norms shape behaviour in this area.

According to OECD figures in the UK, for example, labour force participation among those aged 65 to 69 rose from 12.6% to 20.3% in the eight years before the compulsory retirement age was abolished in 2010. In the eight years since then, however, it has risen only slightly (21.7% in 2018).<sup>94</sup>

On the other hand, Japan's legal retirement age of 60—in some cases 58—in practice marks more a change in the legal protections available to employees than in their employment activity. The labour force participation rate for those 65 to 69 is 48%, the highest in the OECD.<sup>95</sup>

Thus, encouraging countries to eliminate the retirement age would be of limited use absent changes to wider cultural assumptions. It can, however, send a signal about how the government hopes culture will change.

average retirement age of 53 coupled with average life expectancy of 75 means more than two decades of pensions funding, a rising retirement age has become an important policy focus for maintaining long-term financial sustainability.<sup>96,97</sup> In the UK, the state pension age is proposed to increase from 65 to 68 between 2037 and 2030.<sup>98,99</sup>

Implications of a rising retirement age for population health are unclear. On one hand, many people want to retire sooner than later, and may have health conditions and family obligations that also make early retirement more appropriate.<sup>100</sup> On the other hand, a rising retirement age can help sustain funding for the health and pension systems, and is

94 OECD. LFS by sex and age – indicators. Accessed 2020. [https://stats.oecd.org/Index.aspx?DataSetCode=LFS\\_SEXAGE\\_I\\_R](https://stats.oecd.org/Index.aspx?DataSetCode=LFS_SEXAGE_I_R)

95 Ibid.

96 The Economist. Paying for the Grey. 2014. <https://www.economist.com/china/2014/04/05/paying-for-the-grey>

97 Wang X, et al. Journal of Economic and Political Studies. Raising the retirement age: the impact on the individual and actuarial balance for Chinese urban workers' basic pensions. 2016. <https://doi.org/10.1080/20954816.2016.1251135>

98 UK Gov. Proposed new timetable for State Pension age increases. 2017. <https://www.gov.uk/government/news/proposed-new-timetable-for-state-pension-age-increases>

99 UK Gov. Department for Work & Pensions. Policy paper: State Pension age timetable. 2014. <https://www.gov.uk/government/publications/state-pension-age-timetable/state-pension-age-timetable>

100 World Health Organization (WHO). World Report and Aging and Health. 2015. [https://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811\\_eng.pdf;jsessionid=735DA2A85101740EE9C7478453962BB5?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811_eng.pdf;jsessionid=735DA2A85101740EE9C7478453962BB5?sequence=1)

shown to positively contribute to successful and healthy ageing

Furthermore, the underlying justification for increasing the retirement age—an increasing average health-span and longevity—is not equally enjoyed by older populations. It has been established that most of these gains are attributed to the higher end of the income distribution. For example, a 15 year gap in life expectancy has been identified in the US's poorest 1% of men, and a 10 year gap for the poorest 1% of women.<sup>101</sup> Therefore minorities, uneducated and low-income workers may be disproportionately impacted by increases to the retirement age.<sup>102,103</sup>

Ultimately, we find that nine of 19 countries have not changed their retirement ages or linked them to life expectancy in the past decade. In some cases with high average median ages, such as Japan, Canada, and even China, this is presumably a political decision. Canada, for example, has some of the highest pension savings as a percentage of GDP, so can better afford it. On the other hand, given the low median ages for South Africa, Saudi Arabia, and India (all well below 30), this is simply not a pressing policy issue.

Overall, adjusting the minimum retirement age is being done where it is politically possible and economically necessary. It is clearly not a step to be taken lightly given that it is often accompanied by protests or at least political danger.

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101 Chetty R, et al. The Association Between Income and Life Expectancy in the United States, 2001-2014. 2016. <https://jamanetwork.com/journals/jama/article-abstract/2513561>

102 Moore K, et al. Sage Journals. The Inequitable Effects of Raising the Retirement Age on Blacks and Low-Wage Workers. 2019. <https://doi.org/10.1177/0034644619843529>

103 Rutledge MS. Center for Retirement Research at Boston College. What Explains The Widening Gap In Retirement Ages By Education? 2018. [http://crr.bc.edu/wp-content/uploads/2018/05/IB\\_18-10.pdf](http://crr.bc.edu/wp-content/uploads/2018/05/IB_18-10.pdf)

## Chapter 5: Inclusive social structures and institutions

### Key findings

- Living in a safe, healthy and inclusive environment is the foundation for older adults to age well.
- Social cohesion is largely predicated on indicators that need constant updating and more consistency. Wealthy countries dedicate more resources to inclusive social institutions and policy for the ageing, adding weight to the theme that wealthier countries may offer the best environments for ageing.
- Older people enjoy widespread respect in most Index countries, but better data are needed to understand isolation and loneliness among older adults.
- Isolation and loneliness is a significant issue that can be made worse by transportation challenges to and within communities. More data are needed to understand the extent of the issue.
- Data is falling behind on important indicators that are rapidly changing, such as internet access and digital literacy.

The ability to connect and socialise with others and to access public services has a significant impact on the quality of ageing. Many interventions and policies have evolved in the past decades that make these elements more accessible to ageing people with reduced mobility. Still, there is more to be done.

### Barriers to participation in society for older people

Healthy ageing is not just about physical and financial health. Interactions between young and old, social attitudes towards older people, isolation and loneliness can also impact both the social, psychological and even physical

dimensions of ageing. In this domain, we review data on ageism and existence of policies known to improve social interaction.

### Social cohesion and participation

Ageism is a barrier to the inclusion and full participation of older people in society, but it also affects everyone by obscuring general understanding of the ageing process.

Age discrimination is associated with worse psychological wellbeing and poorer physical health outcomes. Moreover, by reinforcing negative stereotypes, ageism can even shape patterns of behaviour that are potentially detrimental to people's self-interest and, indirectly, the economy.<sup>104,105</sup>

104 Abrams D, et al. UK Government Office for Science. The barriers to and enablers of positive attitudes to ageing and older people, at the societal and individual level. 2015. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/454735/gs-15-15-future-ageing-attitudes-barriers-enablers-er06.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/454735/gs-15-15-future-ageing-attitudes-barriers-enablers-er06.pdf)

105 Lamont et al. A review and meta-analysis of age-based stereotype threat: negative stereotypes, not facts, do the damage. 2015. <https://doi.org/10.1037/a0038586>



### SHIFT Index category 3: Inclusive social structures and institutions

1	South Korea	69.6
2	Canada	67.9
3	France	67.3
4	Australia	66.6
5	United Kingdom	61.5
6	United States	60.8
7	Saudi Arabia	53.9
8	Italy	51.1
	<b>AVERAGE</b>	<b>51.0</b>
9	Russia	50.4
10	Japan	48.9
11	Germany	46.3
12	Brazil	45.3
13	China	44.3
14	India	44.2
15	Turkey	40.3
=16	Argentina	38.3
=16	Mexico	38.3
18	Indonesia	36.8
19	South Africa	36.3

Attitudes towards older people vary culturally and can impact both the social, psychological and physical dimensions of ageing. The WHO analysed the results of a survey that asked 83,000 people of all age groups in 57 countries about their attitudes to older people; it found 60% said the elderly were not respected.<sup>106</sup> The richer the country, the higher that figure was.

Older people themselves are not immune from the negative perceptions. Self-stereotyping can have a terrible impact on their emotions, plans and behaviours. One study outlines the self-perpetuating cycle in which people have lower expectations of themselves, which leads to low confidence and underperformance. Negative perceptions can also lead to taking fewer steps to maintaining their own health, believing it is futile.<sup>107</sup>

Thus it is with interest that the SHIFT Index uncovered a 2018 Gallup World Poll that shows a large majority of those aged over 50 (over 85% in most countries, over 90% in 12 of 19 Index countries) believe that they have been treated with respect in the last day. Although receiving respect in the last day may not equate to respect felt generally, this is a good starting point for a society coming to terms with the challenges around an ageing population.

It is also a useful indicator to use for warning that stereotypes do not necessarily apply. One hears a lot about Asian societies respecting their elders. Japan even has a Respect of the Elderly holiday.<sup>108</sup> But the two lowest scores on this indicator are for Japan (61%) and South Korea (62%). India (81%) and China (87%) were also lower than every Western country (all about 90%). Since the poll was subjective, these numbers may indicate a higher-level of expectation for respect in the Eastern countries than in the West.

<sup>106</sup> World Health Organization (WHO). Discrimination and negative attitudes about ageing are bad for your health. 2016. <http://www.who.int/news-room/detail/29-09-2016-discrimination-and-negative-attitudes-about-ageing-are-bad-for-your-health>

<sup>107</sup> RSPH. That Age Old Question: How attitudes to ageing affect our health and wellbeing. 2018. <https://www.rsph.org.uk/uploads/assets/uploaded/010d3159-0d36-4707-ae54e29047c8e3a.pdf>

<sup>108</sup> Guidable. Facts about Respect for the elderly day and seniors' day in Japan. 2017. <https://guidable.co/culture/facts-about-respect-for-the-elderly-day-and-seniors-day-in-japan/>

## Isolation

Isolation is also a significant problem for ageing populations.<sup>109</sup> It affects 10-15% of older people, and approximately one-third of older people will experience some degree of loneliness later in life.<sup>110,111</sup>

Policymakers are reminded that at any age, spending time with other people can prevent feelings of loneliness or anxiety. As people age, the need for closeness and companionship does not dissipate. Unfortunately, in general, older adults have smaller social networks than their younger counterparts due to changes in their life cycle, such as retirement or age-related losses, along with a declining health and increasing mobility limitations.<sup>112</sup>

It has been long recognised that older people living alone may be at increased risk of isolation and suicide. Isolation and loneliness can impact both the social, psychological and physical dimensions of ageing. According to the WHO, the lack of social interaction is now recognised as a risk factor not only for depression, but also for cognitive decline,

which are both serious and costly disabling conditions in older age. Continued social engagement is seen as a priority.<sup>113</sup>

The SHIFT Index looked for regularly published information on this matter. Results are not positive; only four countries have published recent data on this matter: France, Germany, Russia and South Korea.

There are some notable examples of initiatives and research programmes in this area. In the UK, the government included loneliness in its community life survey 2016-2017 and has committed to gather data on the question regularly in the future.<sup>114,115</sup> The French National Statistical Agency, meanwhile, which did not publish in the last three years, did release three reports on social isolation in the country over the last two decades.<sup>116</sup>

## Access to technology

According to the Centre for Policy on Ageing, “the potential impact of these technological developments for older people is huge.”<sup>117</sup> Digital inclusion among the ageing populations

- 109 BMC. Malcolm M. Loneliness and social isolation causal association with health-related lifestyle risk in older adults: a systematic review and meta-analysis protocol. 2019. <https://systematicreviewsjournal.biomedcentral.com/articles/10.1186/s13643-019-0968-x>
- 110 Landeiro F, et al. 2017. Reducing social isolation and loneliness in older people: a systematic review protocol. <https://bmjopen.bmj.com/content/7/5/e013778>
- 111 Grenade L, et al. Social isolation and loneliness among older people: issues and future challenges in community and residential settings. 2008. doi:10.1071/AHo80468
- 112 Kemperman A, et al. Loneliness of Older Adults: Social Network and the Living Environment. 2019. <https://dx.doi.org/10.3390%2Fijerph16030406>
- 113 Rachel B, et al. World Health Organization (WHO). How can health systems respond to population ageing? 2009. [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0004/64966/Eg2560.pdf](http://www.euro.who.int/__data/assets/pdf_file/0004/64966/Eg2560.pdf)
- 114 Pyle E. Office for National Statistics. Loneliness - What characteristics and circumstances are associated with feeling lonely? 2018. <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/lonelinesswhatcharacteristicsandcircumstancesareassociatedwithfeelinglonely/2018-04-10>
- 115 HM Government. A connected society A strategy for tackling loneliness – laying the foundations for change. 2018. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/750909/6.4882\\_DCMS\\_Loneliness\\_Strategy\\_web\\_Update.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/750909/6.4882_DCMS_Loneliness_Strategy_web_Update.pdf)
- 116 Rfi. Eye on France: Feeling lonely? 2019. <http://www.rfi.fr/en/france/20190905-eye-france-feeling-lonely-mobile-phones-human-contact-extreme-relational-isolation>
- 117 Centre for Policy on Ageing. The potential impact of new technologies. 2014. [https://www.ageuk.org.uk/Documents/EN-GB/For-professionals/Research/CPA-The\\_potential\\_impact\\_of\\_new\\_technology.pdf?dtrk=true](https://www.ageuk.org.uk/Documents/EN-GB/For-professionals/Research/CPA-The_potential_impact_of_new_technology.pdf?dtrk=true)

in developed and developing areas is increasing (although there are still income and age disparities to be solved for), adding familiarity to the internet and technologies, from smartphones and tablets to smart-home tools (eg Google Home and Amazon Alexa).

Already assistive technology can help the ageing and their carers monitor activities and safety, provide virtual home visiting, activate reminder systems, increase home security and convey information. This can support people who are ageing at home at a cost saving.

Wearable technology devices can also help older people to maintain healthier lifestyles in the medical field. For example, monitoring blood sugar levels.<sup>118</sup> Wearable devices can also provide people with instant feedback on their actions, which can have an enormous impact on behaviour—such as the Apple Watch, that can passively monitor the wearer's body and warn for pending problems. And medical technologies, sometimes referred to as medtech solutions, are continually being developed and integrated with wearables for diagnostics and disease detections.

Innovation in robotics, artificial intelligence and other assistive technologies, even social media platforms, can further be impactful

in regards to the social aspects of ageing—such as the prevention of social isolation and social exclusion. Often, the engagement with robots or online communication with distant connections, gives elderly people more sense of companionship and purpose.<sup>119,120,121,122</sup>

Technology is continuously advancing, with the result that older populations have greater autonomy to age in place and self-care outside of formal healthcare services, such as hospitals and GP visits. But technology capability alone may not be enough—more research is needed to see what will really help people to change their behaviour and lead healthier lives.

### Provision of a safe and inclusive environment in which to age

Our health, financial stability and social activities are not just influenced by genetics and personal characteristics. The environment in which we live has a strong impact on how we age and our ability to respond to disease.<sup>123</sup> It also impacts our ability to give back through unpaid or paid work, self-care and live independent lives.

The WHO describes age-friendly environments as those that are accessible,

118 Fernandez CR. Labiotech. Needle-Free Diabetes Care: 8 Devices that Painlessly Measure Blood Glucose. 2019.

119 DiNuovo A. Independent. How Robot Carers Could be the Future for Lonely Elderly People. 2018. <https://www.independent.co.uk/life-style/gadgets-and-tech/features/robot-carer-elderly-people-loneliness-ageing-population-care-homes-a8659801.html>

120 Palmer A. Daily Mail. Senior citizens fight loneliness by finding companionship in talking robots and an app that lets them order 'on-demand grandchildren' who come to their house and provide company. 2019. <https://www.dailymail.co.uk/sciencetech/article-6744487/Senior-citizens-fight-loneliness-talking-robots-demand-grandchildren-app.html>

121 Thang LL. Quartz. Before we give them fuzzy robots, let's try solving elderly loneliness with people. 2018. <https://qz.com/1490605/before-we-give-them-fuzzy-robots-lets-try-solving-elderly-loneliness-with-people/>

122 Fearn N. Forbes. Norwegian Startup Wants To Eradicate Loneliness With Robots. 2018. <https://www.forbes.com/sites/nicholasfearn/2018/11/21/norwegian-startup-wants-to-eradicate-loneliness-with-robots/#4475b54b47c3>

123 WHO. Age-friendly environments. Accessed 2020. <https://www.who.int/ageing/projects/age-friendly-environments/en/>

equitable, inclusive, safe and secure and supportive.<sup>124</sup> Without these conditions, the organisation warns, health for all cannot be achieved.

### **Inclusive social institutions**

Countries that set up dedicated national institutions focused on ageing are better positioned to promote valuable research and leadership around healthy ageing in their population. This includes institutions with dedicated funding for scientific research into age-related diseases and conditions, as well as institutions committed to ageing-friendly infrastructure, policies and practices.

The results of the SHIFT Index show that institutes with a mandate to support healthy ageing and longevity are present in most countries (14 out of 19). They tend to be missing only in countries that are both at lower levels of economic development and where the population is relatively young.

The SHIFT Index further looks for evidence of a national ministry, department or agency whose mandate includes preventing elder abuse. This is a niche but important issue for ageing populations because they are vulnerable to physical, verbal, psychological, financial and sexual abuse; abandonment; neglect; and serious losses of dignity and respect. According to the WHO, some estimates suggest that one in six older people experience elder abuse.<sup>125</sup>

For those affected, there can be serious and potentially long-lasting physical, psychological and financial consequences that impact their ability to age in a healthy and productive way. A high-level commitment is required to ensure older adults who are protected from abuse.

The SHIFT Index found that eight of the G20 countries have some such agency, although the further research seems to indicate that recognition of elder abuse as a specific phenomenon is a work in progress. For example, Canada receives credit for this indicator because it has a lead agency that is investigating the extent of the issue and what to do about it.

That said, this appears to be one area where countries are encouraged to pay greater attention. Elder abuse, after all, is an extreme version of ageism. Addressing the former is important and might also start a broader consideration of the latter.

124 WHO. Age-friendly environments. Accessed 2020. <https://www.who.int/ageing/projects/age-friendly-environments/en/>

125 WHO. Mental health of older adults. 2017. <https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults>

## Conclusions

The global response to ageing populations must evolve, and do so quickly. Current practices are unsustainable for financial, healthcare and social systems. Too many older people are struggling to live healthy, fulfilled independent lives. This is changing, but not fast enough to keep pace.

By not keeping pace with the needs of the ageing cohort, distracted by the cost burdens, we inadvertently make the situation more challenging. Healthy, connected independent older people are significant contributors to the economy and providers of valuable paid and unpaid labour. By building communities that support them we simultaneously create spaces that encourage positive social behaviours from society as a whole.

Although wealth has emerged as a theme in the SHIFT Index as a contributing factor towards healthy ageing indicators, it is not necessarily required. Even lower-income nations can take low-cost measures that improve ageing societies, such as enacting inclusive work environment policies and fostering inclusive and enabling social environments.

The SHIFT Index points to a way forward to develop more accessible and inclusive societies for older people. The following areas should be prioritised:

1. **Better data are needed:** Countries should collect and publish detailed, age-disaggregated health and economic data annually so policymakers can develop evidence-based programs and policies.
2. **Address poverty among older people:** Some older adults choose to work longer, others must. Governments can ensure the financial health and security of older adults by creating more inclusive work environments. This starts with removing barriers to working longer that exist in some markets.
3. **Prevent a care crisis among the elderly:** The provision of care for older adults—both formal and informal—and the accessibility of, or access to, long-term care is ill-defined and is an area for further research.
4. **Enable older people's voices to be heard:** The views and needs of older people are not routinely collected and they are not represented well in policy consultation.
5. **Address age-related discrimination:** Few countries categorise age-discrimination as a crime outside of employment practices. Fighting discrimination as well as physical, emotional and financial abuse of older adults, will encourage greater social cohesion across generations.
6. **Support training and upskilling of older people:** Supporting older people with the skills and help needed to navigate increasingly complex and digitised health and social care systems should be an area of focus.

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# SHIFT Index: Methodology Report

## Scaling Healthy ageing, Inclusive environments and Financial security Today

The SHIFT Index is an innovative policy and planning tool that establishes a set of national-level leading practices around longevity and healthy ageing. The SHIFT Index benchmarks the performance of the 19 member countries

of the G20<sup>1</sup> against this set of practices. The methodology for the index, developed by The Economist Intelligence Unit (EIU), including category and indicator definitions, scoring criteria, and data sources, is provided below.

**Defining older adults:** The SHIFT Index takes a broad definition of older adults, i.e. those aged 50 and older, in order to capture the environment in which adults start to plan for later life through the ageing process.

### Scoring criteria and categories

Indicators were chosen using a two-step process. First, The EIU carried out a literature review to inform the selection of indicators to measure how societies enable adults to live healthy, engaged and dignified lives as they age.

Second, The EIU consulted an international panel of experts as a means of verifying the choice of indicators and overall construction of the index. The panel comprised eight leading experts, representing academia, government, NGOs and international financial institutions. The EIU convened the panel in Washington, DC in November 2019 to review the initial framework and help select and prioritize indicators for the SHIFT Index.

Members of the expert panel included:  
Martin Baily (Brookings Institution),

Elena Glinskaya (World Bank), John Morley (St. Louis University's Division of Geriatric Medicine), Dorothea K. Vafiadis (National Council on Aging), Kanwaljit Soin (Mount Elizabeth Medical Centre, Singapore), Eduardo Sosa-Tinoco (Ministry of Health, Mexico), Nora Super (Milken Institute Centre for the Future of Ageing), and Erwin Tan (AARP).

### Identifying categories

The SHIFT index is composed of three categories. These three categories aim to create a holistic picture of the factors that enable adults to live purposeful lives as they age. If countries implement the leading practices across these three areas, societies will be well-placed to reap the benefits of life at any age.

<sup>1</sup> The 19 individual countries in the G20 are: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, United Kingdom, United States. The 20th member of the G20, the European Union, was not assessed as part of the SHIFT Index.

### **Category 1: Adaptive health and social care systems**

Societies should proactively address risks to enable multidisciplinary and integrated health systems for older adults.

- This category highlights a society's capacity to provide its members with access to meaningful health information; robust, flexible and accessible health and social care services; impactful training and advocacy resources; and access to insurance.

### **Category 2: Accessible economic opportunity**

Societies create access to economic opportunity and security by putting in place systems and policies to support the financial well-being of adults in older age, both in retirement or through access to employment opportunities.

- This category focuses on a society's capacity to ensure its members have the agency, information and flexibility to maintain a healthy financial position throughout their

life through sustainable and supportive pension systems; flexible retirement policies; access to affordable housing; and options for older people to remain in or leave the workforce at their pace.

### **Category 3: Inclusive social structures and institutions**

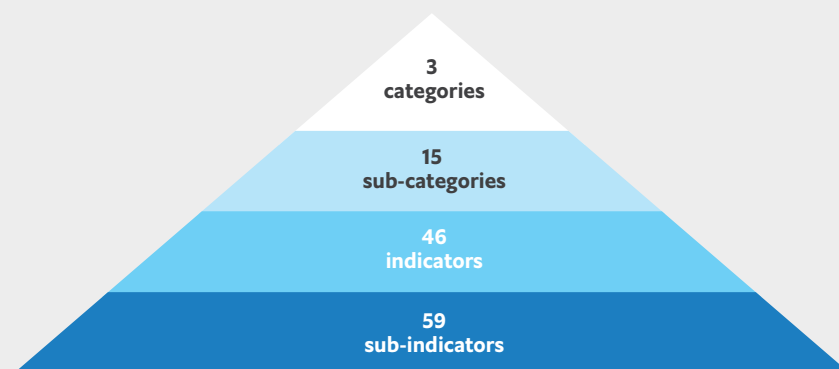
Societies need to create inclusive and secure environments for their adults to age well.

- This category outlines a society's capacity to enable its members to engage in an inclusive and meaningful life, supported by robust social networks; accessible transportation systems; available internet and technology; safe and healthy communities; and a national recognition of ageing concerns, including research, policy institutions and political commitments.

### **Types of indicators included**

The SHIFT Index framework comprises a total of 59 sub-indicators, organized across 46 indicators, 15 sub-categories and 3 major categories (see Figure 1).

**Figure 1. SHIFT Index framework**





The framework contains both quantitative and qualitative indicators, with data collected from central and national sources. Several indicators have sub-indicators in cases where additional detail was required.

### **Quantitative indicators**

17 of the index's 59 sub-indicators are based on quantitative data (see page 44 for a full list of indicators). In some cases, quantitative inputs have been transformed onto a 0-4 scale by bucketing into ranges to allow for a more direct comparison with qualitative indicators.

Data for the quantitative indicators are drawn from national and international statistical sources. Where there were missing values in quantitative or survey data, The EIU has used estimates based on national sources or noted there was no publicly available data.

The main sources used in the SHIFT Index are The Economist Intelligence Unit, Gallup World Poll, OECD, UNDP, World Bank, and Yale Environmental Index.

A full list of sources can be found in the indicator framework (page 44).

### **Qualitative indicators**

Forty-two sub-indicators qualitatively assess how each country creates a strong enabling environment for older adults to age well.

These qualitative indicators were scored by EIU analysts based on evidence collected against a uniform series of questions. As much as possible, qualitative indicator questions were designed to be binary, where "yes" equals

one and "no" equals zero. This substantially removes subjectivity in the scoring.

### **Data challenges**

In developing the SHIFT Index, the research team encountered two challenges in the data collection process: availability of age-specific data and general data availability.

**Age-specific data:** In many cases, health and economic data are not consistently broken out by different age groups, which makes measuring the specific challenges and successes faced by older adults difficult. Even when data is disaggregated into segments by age, this tends to be for all adults over the age of 50 or 65, for example, rather than by five- or ten-year age groups (e.g. 50-54, 55-59, 60-64, 65-69, 70-74). The EIU included age-specific metrics wherever possible (e.g. the poverty rate for adults 66+), but could not identify comparable data for other metrics, such as health spending or health insurance coverage for older adults. Some country-specific age-disaggregated data do indeed exist, but it remains challenging finding internationally-comparable age-disaggregated data.

In addition, it proved difficult to collect data on health professionals with a focus on ageing, such as the number of geriatricians, due to lack of national data sources.

**Data availability:** There were several indicators where The Economist Intelligence Unit scored countries on whether or not there is publicly available data (see Table 1), since there was no known comparable data set in existence.

**Table 1: Data availability in the SHIFT Index: Countries with and without publicly-available data**

#	Indicator	# countries with data	# countries without
1.1.4	Data on the proportion of national healthcare budget allocated to public health and chronic disease prevention	14	5
1.3.2c	Data on the number of social workers	9	10
1.3.2d	Data on the number of carers	6	13
3.5.3b	Availability of statistics for crimes against older adults	9	10

Given the limited availability of data for some indicators, this limits the extent to which we can identify and understand the specific challenges facing older adults.

## Country selection

The 19 countries included in the 2020 SHIFT Index are:

**Table 2: 2020 SHIFT Index countries**

Argentina	France	Japan	South Korea
Australia	Germany	Mexico	Turkey
Brazil	India	Russia	United Kingdom
Canada	Indonesia	Saudi Arabia	United States
China	Italy	South Africa	

The G20 countries were selected to achieve a broad representation of the global population and economy: these 19 countries represent roughly 64% of the global population and nearly three quarters (74%) of global GDP.

## Data modelling

Since the variables are measured in different units, to compare data points across countries, as well as to construct aggregate scores for

each country, The Economist Intelligence Unit had to make the gathered data comparable. To do so, all indicators were “normalised” on a scale of 0 to 100 using a min-max calculation. Normalisation rebases the raw data to a common unit so that it can be aggregated. The normalised value is then transformed into a positive number on the scale of 0-100 to make it directly comparable with other indicators.

This calculation has the benefit of being simple and it does not require a large sample size.

The indicators for which a higher value indicates a more favourable environment for older adults—such as government health expenditure per capita or the number of physicians—have been normalised on the basis of:

$$x = (x - \text{Min}(x)) / (\text{Max}(x) - \text{Min}(x))$$

where  $\text{Min}(x)$  and  $\text{Max}(x)$  are, respectively, the lowest and highest values in the 19 economies for any given indicator. The normalised value is then transformed from a 0-1 value to a 0-100 score to make it directly comparable with other indicators. This in effect means that the country with the highest raw data value will score 100, while the lowest will score 0.

For the indicators for which a high value indicates an unfavourable environment for older adults—such as the elderly poverty rate or out-of-pocket expenditure (as a share of total currently health expenditure)—the normalisation function takes the form of:

$$x = (x - \text{Max}(x)) / (\text{Min}(x) - \text{Max}(x))$$

where  $\text{Min}(x)$  and  $\text{Max}(x)$  are, respectively, the lowest and highest values in the 19 economies

for any given indicator. The normalised value is then transformed into a positive number on a scale of 0-100 to make it directly comparable with other indicators.

## Index construction

The index is an aggregate score of all of the underlying sub-indicators listed below. The index is first aggregated by indicator and then category and finally, overall, based on the composite of the underlying category scores. To create the category scores, each indicator and sub-indicator was aggregated according to an assigned weighting determined by a panel of experts (see below). The category scores were then rebased onto a scale of 0-100.

## Weightings

Two sets of weightings are provided in the index. The first option is equal weights, which assumes all subcategories are equally important and distributes weightings evenly across the three major categories.

The second option, known as peer panel recommendation, or expert weights, is based on input from members of the expert panel. These weights are based on the averages of the weightings suggested by seven members of the 2020 expert panel.

The expert weightings are the default weightings in the model. The model workbook also enables users to create customised weightings to allow them to test their own assumptions about the relative importance of each indicator.

## Category and subcategory weights: Expert weights

### Category weights

<b>Category 1: Adaptive health and social care systems</b>	39.1%
<b>Category 2: Accessible economic opportunity</b>	31.9%
<b>Category 3: Inclusive social structures and institutions</b>	29.0%

### Subcategory weights

<b>Category 1: Adaptive health and social care systems</b>	
1.1) Capacity to address common risk factors and conditions associated with ageing	19.1%
1.2) Multidisciplinary and integrated care	20.0%
1.3) Availability of health and social care services	20.0%
1.4) Training and patient advocacy	18.3%
1.5) Access to insurance and affordable care	22.6%
<b>Category 2: Accessible economic opportunity</b>	
2.1) National pension systems	22.7%
2.2) Inclusive work environments	15.8%
2.3) Housing affordability	19.7%
2.4) Individual financial security	24.6%
2.5) Economic stability	17.2%
<b>Category 3: Inclusive social structures and institutions</b>	
3.1) Social cohesion and participation	24.5%
3.2) Access to public transportation and services	22.4%
3.3) Access to technology	14.3%
3.4) Presence of inclusive social institutions	20.4%
3.5) Environment, safety and security	18.4%

## Indicator framework

The table below outlines the individual categories, indicators and sub-indicators, along with indicative sources, for the SHIFT Index.

#	Indicator name	Description/Rationale	Question	Source
<b>1</b>	<b>Adaptive health and social care systems</b>	<b>Societies should proactively address risks to enable multidisciplinary and integrated health systems for older adults</b>		
<b>1.1</b>	<b>Planning to address common risk factors and conditions associated with ageing</b>	<b>Strategies and guidelines to address the specific risk factors and health conditions affecting adults aged 50+ provides a more robust healthcare system to service older adults</b>		
1.1.1	Management of common risk factors for diseases common among older adults	Countries which actively manage risk factors for disease may be more successful in promoting healthier ageing and longevity. Taken together, these four risk factors (physical activity, nutrition, tobacco use, and alcohol abuse) contribute to the vast majority of chronic disease which most often manifests in adults aged 50 or older	Indicator is scored based on 1.1.1.a, 1.1.1.b, 1.1.1.c and 1.1.1.d	-
1.1.1a	Evidence of physical activity guidelines	Provides older adults with guidance on how to sustain a healthy lifestyle	Is there evidence of appropriate physical activity guidelines in accordance with global standards? 1 = Yes 0 = No	EIU research (scored 0-1)
1.1.1b	Evidence of national nutritional guidelines	Provides older adults with updated guidance on how to sustain a healthy diet	Is there evidence of appropriate nutritional guidelines in accordance with global standards? 1 = Yes 0 = No	EIU research (scored 0-1)
1.1.1c	Evidence of policy, strategy or action plan to prevent tobacco use	Tobacco use is a leading risk factor for chronic disease development as people age	Is there an operational policy, strategy or action plan against tobacco use? 1 = Yes 0 = No	EIU research (scored 0-1)
1.1.1d	Evidence of policy, strategy or action plan to prevent alcohol abuse	Alcohol abuse is a leading risk factor for chronic disease development as people age	Is there an operational policy, strategy or action plan against alcohol abuse? 1 = Yes 0 = No	EIU research (scored 0-1)
1.1.2	Evidence of a national prevention and management strategy for conditions common among older adults	Common conditions associated with ageing include cardiovascular disease, cancers (neoplasms), osteoporosis, chronic respiratory disease, diabetes.	Is there a current national prevention and management plan for any of the following chronic conditions? a. cardiovascular disease b. cancers (neoplasms) c. osteoporosis d. chronic respiratory disease	EIU research (scored 0-7)

			<p>e. diabetes</p> <p>f. dementia (including alzheimer's disease)</p> <p>g. Multiple chronic conditions</p> <p>Countries receive 1 point for each plan (Score 0-7)</p>	
1.1.4	Proportion of national healthcare budget allocated to public health and chronic disease prevention	The proportion of the national healthcare budget spent on public health/prevention can indicate how each countries comparatively prioritise disease prevention	Is there publicly available data on the proportion of the national healthcare budget that is spent on public health and prevention? 1 = Yes 0 = No	EIU research (scored 0-1)
<b>1.2</b>	<b>Multidisciplinary and integrated care</b>	<b>The existence of multidisciplinary and integrated care practices provide a more robust health system for adults aged 50+</b>		
1.2.1	Evidence of multidisciplinary care pathways, integrated healthcare systems and/or care coordination	Optimizing patient care includes multidisciplinary, integrated approaches, especially for conditions commonly associated with ageing	Indicator is based on 1.2.1.a, 1.2.1b and 1.2.1.c	-
1.2.1a	Existence of a policy, strategy or action plan specific to integrated care	To assess whether the country has a policy on the need for integrated health services delivery (IHSD). This person-centred, comprehensive, multidisciplinary, coordinated approach is an important basis for the delivery of good care	Does the country have a national policy, strategy or action plan on integrated care overall? 1 = Yes 0 = No	EIU research (scored 0-1)
1.2.1b	Health and social care coordination by the same ministry	To assess whether the country has a governance structure to support integrated health services delivery (IHSD). This person-centred, comprehensive, multidisciplinary, coordinated approach is an important basis for the delivery of good care	Is health and social care coordinated by the same ministry or government body? 1 = Yes 0 = No	EIU research (scored 0-1)
1.2.1c	Care pathway coordination	As non-communicable diseases become more prevalent among older adults, specialised staff who are trained to coordinate complex care will become more important	Does the country have healthcare professionals trained to undertake healthcare coordination tasks?  This could be one or more of the following healthcare professionals: - Advanced nursing practitioners - Patient navigators	EIU research (scored 0-1)

- Community health workers
- Case managers
- 1 = Four of these exist
- 1 = Three of these exist
- 1 = Two of these exist
- 1 = One of these exist
- 0 = None of these exist

<p>1.2.2 Existence of a mental health guideline</p>	<p>Mental health is an important component of overall wellbeing and should be available, though it is often considered separately from the health care system</p>	<p>Do mental health guidelines exist for depression and dementia that incorporate the role of the carer/family in managing care and consider physical health conditions within the guidelines?</p> <p>3 = There are mental health guidelines on both depression and dementia that both incorporate the role of carer/family in managing care and consider physical health conditions within the guidelines.                  2 = There is a mental health guideline on depression or dementia that incorporates the role of carer/family in managing care and considers physical health conditions within the guideline.                  1 = There is a mental health guideline on depression or dementia that incorporates the role of carer/family in managing care or considers physical health conditions within the guideline.                  0 = There is a mental health guidelines on depression or dementia but it does not incorporate the role of carer/family in managing care nor considers physical health conditions within the guidelines, or there is no mental health guideline for depression or dementia.</p>	<p>EIU research (scored 0-3)</p>
<p>1.2.3 Existence of provider training programmes for multiple chronic conditions</p>	<p>Providers need to be prepared to manage the comorbidities of specific diseases and conditions that affect older adults</p>	<p>Does the country offer a training framework for healthcare professionals on multiple chronic conditions care?</p> <p>Note: This might be training received as part of their medical education, or training received in service. A score of 1 should be awarded if the country does both or either one of these.</p> <p>1 = Yes 0 = No</p>	<p>EIU research (scored 0-1)</p>

<b>1.3 Availability of health and social care services</b>		<b>Access to health and social care services is the basis of an adaptive healthcare system</b>		
1.3.1	Public expenditure on health per capita	Demonstrates the government's commitment to spending on health services	Domestic general government health expenditure per capita (US\$, PPP)	World Bank
1.3.2	Availability of health workforce for ageing populations	Demonstrates the availability of health personnel to provide health services specifically for older adults	Indicator is scored based on 1.3.2a, 1.3.2b, 1.3.2c and 1.3.2d	-
1.3.2.a	Density of physicians	Demonstrates the availability of health personnel to provide health services	Number of physicians per 1,000 population	World Health Organization; World Bank
1.3.2.b	Density of nurses	Demonstrates the availability of health personnel to provide health services	Number of nurses per 1,000 population	World Health Organization; World Bank; OECD
1.3.2.c	Data on the number of social workers	Demonstrates the availability of health personnel to provide health services specifically for older adults	Has the government collected and published data on the number of social care workers in the last three years? 1 = Yes 0 = No	EIU research (scored 0-1)
1.3.2.d	Data on the number of carers	Demonstrates the availability of health personnel to provide health services specifically for older adults	Has the government collected and published data on the number of carers in the last three years? 1 = Yes 0 = No	EIU research (scored 0-1)
<b>1.4 Patient advocacy</b>		<b>Health workers and individuals need to be prepared to manage the specific conditions that affect older adults and make appropriate decisions</b>		
1.4.1	Existence of patient advocacy organisations	Giving a voice to patients is an important factor to ensure the health system is adaptive to patients' changing needs	Does the country have a patient advocacy group inclusive of at least one of the six highlighted conditions commonly associated with ageing? - cardiovascular disease - cancers (neoplasms) - osteoporosis - chronic respiratory disease - diabetes - dementia (including alzheimer's disease) 2 = Yes, there is evidence of two or more of these groups. 1 = Yes, there is evidence of one of these groups. 0 = No	EIU research (scored 0-2)



1.4.2	Existence of decision-making assistance policies	Provides instruments, such as advanced directives or living wills, for individuals to make appropriate health decisions.	Are instruments such as advanced directives or living wills available in the country for individuals to make appropriate health decisions? 1 = Yes 0 = No	EIU research (scored 0-1)
<b>1.5</b>	<b>Access to insurance and affordable care</b>	<b>The availability of affordable insurance options provides adults with security and independence</b>		
1.5.1	Level of health insurance coverage	Access to health insurance is a foundation for accessing affordable care	What share of the population is covered by health insurance? 4 = Over 90%, or there is universal health coverage 3 = 75-89% 2 = 50-74% 1 = 25-49% 0 = 0-24%	EIU research (scored 0-4)
1.5.2	Long-term care insurance	Long-term care insurance is an important instrument for adults to plan for unforeseen financial burdens arising from the need for long-term care (e.g. nursing homes)	Is long-term care insurance available if long-term care is not provided by regular health insurance? 1 = Yes, or long-term care is provided by regular insurance 0 = No	EIU research (scored 0-1)
1.5.3	Out-of-pocket healthcare spending per capita	Higher out-of-pocket health expenditure represents a financial burden on adults Unpaid caregiving for older adults can be an economic barrier	Out-of-pocket expenditure per capita, PPP (current international \$)	World Bank
1.5.4	Carer subsidy	Unpaid caregiving for older adults can be an economic barrier	Is there a national level policy or programme subsidising carers for older people? 1 = Yes 0 = No	EIU research (scored 0-1)
1.5.5	Financial protection for prescription medications	People may need many prescriptions to manage their conditions, and the cost of these can be prohibitive, especially for countries where these are not covered under the health system. Ideally steps should be taken to protect these individuals from this financial impact	Does the country employ pharmacy exemption certificates/safety nets? Yes = 1 No = 0  Note: If prescriptions are covered by the health system, score 1	EIU research (scored 0-1)

<b>2</b>	<b>Accessible economic opportunity</b>	<b>Access to economic opportunity and security requires societies to have the systems and policies in place to support the financial well-being of adults in older age, both in retirement or through access to employment opportunities</b>		
<b>2.1</b>	<b>National pension systems</b>	<b>Strong public finances are important to ensure expenditure on health and social security for older adults remains sustainable</b>		
2.1.1	Existence of a national pension plan	Access to a national pension or retirement savings scheme is an important driver of financial security in older age	Is there a national pension plan or mandatory savings scheme for retirement accessible to all adults? 1 = Yes 0 = No	EIU research (scored 0-1)
2.1.2	Funded pensions as a share of GDP	National pension funds need to be sustainable in order to support adults in retirement	Funded and private pension plans + public pension reserve funds (as a % of GDP)	OECD; national sources
2.1.3	Sufficiency of retirement income	The net replacement rate is defined as the individual net pension entitlement divided by net pre-retirement earnings, taking into account personal income taxes and social security contributions paid by workers and pensioners. It measures how effectively a pension system provides a retirement income to replace earnings, the main source of income before retirement. Access to a sufficient income stream in retirement is important for financial security	Net pension replacement rate (average rate for men and women)	OECD; EIU calculations
<b>2.2</b>	<b>Inclusive work environments</b>	<b>Governments and employers should consider policies to ensure older people can remain productive and active members of the workforce for as long as they desire</b>		
2.2.1	Support for life-long learning	Access to life-long learning allows older adults to develop new skills and launch second careers	Is there a national policy, strategy or plan to support lifelong learning and skills development for older adults that has been published or updated in the last three years? 1 = Yes 0 = No	EIU research (scored 0-1)
2.2.2	Flexible work policies	Flexible working arrangements makes it more conducive for older adults to remain in the workforce	Indicator is scored based on 2.3.2a and 2.3.2b	-

2.2.2a	Flexible retirement plans	Flexible retirement plans ensure an older person has the option to continue working past retirement age but also begin to receive pension payments	Are there retirement plans available that allow part-time work or partial pension cutting without cutting pension earnings? 1 = Yes 0 = No	EIU research (scored 0-1)
2.2.2b	Existence of paid family leave	The ability for individuals to take leave to care for family supports older individuals' ability to age in place	Do all citizens have access to paid family leave? Note: This must include family care, not just parental leave. 1 = Yes 0 = No	EIU research (scored 0-1)
2.2.3	Adaptive retirement policy	Retirement policies need to be adaptive to an ageing workforce to allow for workers who want to work longer to be able to do so	Indicator is scored based on 2.3.3a, 2.3.3b and 2.3.3c	-
2.2.3a	Mandatory retirement	Mandatory retirement ages can discourage or prevent older adults from working as long as they would like to work	Does the country have a mandatory retirement age? 1 = No 0 = Yes	EIU research (scored 0-1)
2.2.3b	Minimum retirement age to collect benefits	As life expectancy is increasing, the statutory retirement age is not keeping up. This gives healthy, productive older people a disincentive to leave the workplace and begin collecting retirement payments	Is the statutory retirement age (i.e. the minimum retirement age to collect benefits) linked to life expectancy, or has the statutory retirement age increased in the last 10 years? 1 = Yes 0 = No	EIU research (scored 0-1)
2.2.3c	Incentives to hire older workers	Incentives such as wage subsidies or tax credits for hiring older workers will encourage multigenerational workplaces	Are there national tax credits and/or wage subsidies available to employers who hire workers over the age of 60? 1 = Yes 0 = No	EIU research (scored 0-1)
2.2.4	Anti-discrimination protections	Older adults need to be protected from ageism in the workplace	Indicator is scored based on 2.2.4a and 2.2.4b	-
2.2.4a	Legal protection for age-based discrimination	Older adults need to be protected from ageism in the workplace to ensure their economic opportunity	Is there national legal protection against age-based discrimination for older adults? 1 = Yes 0 = No	EIU research (scored 0-1)
2.2.4b	Implementing antidiscrimination protections for older workers	Legislation is not enough - tools, mechanisms, and reporting chains are necessary to ensure legislation is thoroughly implemented.	Are there tools (e.g. hotlines or websites), mechanisms and/or reporting chains to implement antidiscrimination rules/laws for older adults in the workplace? 1 = Yes 0 = No	EIU research (scored 0-1)

<b>2.3 Housing affordability</b>		<b>Affordable housing is a foundational part of older adults' long-term financial security</b>		
2.3.1	Households' housing cost burden (mortgage and rent cost) as a share of disposable income	Represents the financial burden of housing costs as a % of disposable income	Households' housing cost burden (mortgage and rent cost) as a share of disposable income. Estimates made for Argentina, Brazil, China, India, Indonesia and Saudi Arabia based on non-OECD average data.	OECD; EIU calculations
2.3.2	Availability of subsidies for affordable housing	Subsidies to develop affordable housing for older adults or rent supports that extend to older adults help mitigate the high cost of housing for low-income adults	Are there subsidies available for the development of affordable housing for older adults or for rent-support for older adults? 1 = Yes 0 = No	EIU research (scored 0-1)
<b>2.4 Individual financial security</b>		<b>Financial security for older adults depends on access to reliable income and the absence of undue financial burdens</b>		
2.4.1	Elderly poverty rate	A high poverty rate among the elderly is indicative of financial insecurity among older adults	Elderly poverty rate (66 year-olds and older)	OECD; national sources
2.4.2	Economic inequality between men and women	A gap between female and male incomes would indicate potentially higher financial insecurity for women	Male to female income ratio	UNDP; EIU calculations
2.4.3	Financial literacy programmes	Financial literacy is a critical skill to ensure older people are well-informed of all options at their disposal	Is there a financial literacy programme in the country aimed at older adults? This could include regular courses, online resources and/or service agents. 1 = Yes 0 = No	EIU bespoke indicator
2.4.4	Food security	Availability and access to affordable healthy food enables older adults to receive the nutrients necessary for healthy ageing	Overall country score on EIU Global Food Security Index 2019	EIU Global Food Security Index (scored 0-100, where 100=best)
2.4.5	Food subsidies for older adults	Food subsidies provide much-needed assistance to older adults that lack sufficient financial resources	Are there national food subsidies available to older adults? 1 = Yes 0 = No	EIU research (scored 0-1)

<b>2.5</b>	<b>Economic stability</b>	<b>Economic stability is critical to ensure older adults have access to economic opportunity within their country</b>		
2.5.1	Economic stability	Economic stability includes price stability, budget balance, level of government debt, currency volatility, external trade balance, quality of policymaking, institutional underpinning and asset prices	Overall economic stability score from EIU Business Environment Rankings	EIU Business Environment Rankings (scored 0-10, where 10=best)
<b>3</b>	<b>Inclusive social structures and institutions</b>	<b>Societies need to create inclusive and secure environments for its adults to age well</b>		
<b>3.1</b>	<b>Social cohesion and participation</b>	<b>Social cohesion across generations and participation in society of older adults are important components to foster health ageing</b>		
3.1.1	National attitudes toward older people	Negative attitudes about ageing and older people also have significant consequences for the physical and mental health of older adults	Percent of adults 50+ saying they were treated with respect in the past day	Gallup World Poll
3.1.2	Measures of isolation and loneliness of older adults	Elevated levels of isolation and loneliness among older adults indicates a lack of social cohesion	Has the national statistical agency collected and published annual data on the level of loneliness/isolation among its citizens disaggregated by age in the past three years? 1 = Yes 0 = No	EIU research (scored 0-1)
3.1.3	Social participation of older adults	Social engagement among older adults is an important contributor to social cohesion	Percent of adults aged 50+ who have volunteered time in the past year	Gallup World Poll; national sources
<b>3.2</b>	<b>Access to transportation</b>	<b>Quality public transport and access to services creates options for older adults who might face decreased mobility</b>		
3.2.1	Transportation infrastructure quality	Access to quality public transit is an important contributor to mobility for older adults, allowing them to remain connected to society	Assessed by EIU analysts on a scale of 0-10, where 10=best.	EIU Business Environment Rankings (scored 0-10, where 10=best)

3.2.2	Existence of policy that promotes access to transportation for older persons	Policies specifically targeting improving transportation access for older adults will support their social connectivity and mobility	Is there a national transportation policy or plan incorporate specific considerations or programs for access to transport for older adults? 1 = Yes 0 = No	EIU research (scored 0-1)
3.2.3	Existence of national mandatory accessibility requirements	Mandates for accessibility are important to make sure public infrastructure is usable for disabled persons, or persons with reduced physical capacity as they age	Are there national mandatory accessibility requirements? 1 = Yes 0 = No	EIU research (scored 0-1)
<b>3.3</b>	<b>Access to technology</b>	<b>Access to technology creates opportunity for older adults who might face decreased mobility or feel isolated to actively participate in society</b>		
3.3.1	Access to the Internet	Access to computer and the Internet provides older adults with access to health information, services (eg telehealth) and ways to connect socially	Percent of adults 50+ living in homes with access to the Internet	Gallup World Poll
3.3.2	Existence of policy that promotes access to technology for older persons	Policies specifically targeting improving technological access for older adults will support their connectivity	Is there a national policy, strategy or plan to promote access to technology among adults aged 65 and older that has been published or updated in the past three years? 1 = Yes 0 = No	EIU research (scored 0-1)
<b>3.4</b>	<b>Presence of inclusive social institutions</b>	<b>National institutions with a dedicated focus on ageing promotes valuable research and leadership to enable healthy ageing</b>		
3.4.1	National research programmes and scientific studies of ageing	Dedicated funding for scientific research into diseases and conditions associated with ageing is required to improve the healthspan associated with longevity	Was there dedicated national funding for scientific research into diseases and conditions associated with ageing provided in the past year? 1 = Yes 0 = No, or there is no publicly available evidence	EIU research (scored 0-1)
3.4.2	Policy institutions focused on ageing	Existence of policy institution(s) focused on ageing will create an enabling environment to support healthy ageing	Is there a dedicated national institute or agency with a mandate to provide multidimensional support for healthy ageing and longevity in the country? 1 = Yes 0 = No	EIU research (scored 0-1)

3.4.3	High-level political commitment to healthy ageing	High-level political commitment is required to ensure that societies are focused on developing the inclusive institutions and infrastructure for older adults to age healthily	Is there a ministerial or cabinet position, or high-level committee/council, dedicated with a specific mandate for issues related to older adults? 1 = Yes 0 = No	EIU research (scored 0-1)
3.4.4	National agency to prevent elder abuse	High-level commitment is required to older adults who are protected from financial and physical abuse	Is there a national ministry, department or agency whose mandate includes preventing elder abuse? 1 = Yes 0 = No	EIU research (scored 0-1)
<b>3.5</b>	<b>Environment, safety and security</b>	<b>Older adults need to feel safe, have access to affordable food and a clean environment</b>		
3.5.1	Environmental health	Older adults need access to clean air and water to support a healthy lifestyle	Country score on Yale Environmental Performance Index	Yale Environmental Performance Index (scored 0-100, where 100=best)
3.5.2	Considerations to protect vulnerable older adults in national disaster plans	Some older adults are particularly vulnerable during and after disasters due to their impaired physical mobility, diminished sensory awareness, chronic health conditions, and/or social and economic limitations that prevent adequate preparation and hinder adaptability during disasters	Does the country's national disaster response plan include specific considerations for older adults? 1=Yes 0=No	EIU research (scored 0-1)
3.5.3	Personal safety and elder victimization	Personal safety is an important component of individual security and wellbeing	Indicator is scored based on 3.5.3a and 3.5.3b	-
3.5.3a	Perceptions of personal safety, adults 50+	Personal safety is an important component of individual security and wellbeing	Percent of adults 50+ who responded yes to "Do you feel safe walking alone?"	Gallup World Poll
3.5.3b	Rates of crime against senior citizens	Personal safety is an important component of individual security and wellbeing	Are there published national crime statistics that disaggregate victims by age? 1 = Yes 0 = No	EIU research (scored 0-1)

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