



The economics of healthy and active ageing series  
**New evidence for the Western Pacific Region**  
**Mongolia**

# HOW DOES HEALTHY AGEING AFFECT ECONOMIC GROWTH IN MONGOLIA?

## Keywords

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## Acronyms

<b>GDP</b>	gross domestic product
<b>IHME</b>	Institute for Health Metrics and Evaluation
<b>UN</b>	United Nations
<b>WHO</b>	World Health Organization
<b>YLD</b>	years lived with disabilities

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## ***“Population ageing presents economic and societal challenges”***

### **Introduction**

Population ageing presents economic and societal challenges for countries around the world. Rising life expectancy coupled with lower fertility rates is shifting age demographics so that, globally by 2050, 1 in 6 people will be over the age of 65, up from 1 in 11 in 2019 (UN, 2019a). As the share of older people in the overall population increases, the workforce composition will also shift from young to relatively older age workers in many countries (Aiyar et al., 2016).

Some researchers have suggested that increases in the share of the population at older ages can have adverse economic implications (Fair & Dominguez, 1991; Acemoglu & Restrepo, 2018). This could occur through a number of pathways. For example, a large population share at older ages may put fiscal pressure on social security systems, pensions and health expenditure (Bloom, Canning & Fink, 2011); a large older population may exit the formal labour force en masse; and, in addition, some researchers suggest that older people who do continue in formal work may have lower productivity rates (Feyrer, 2008; Aiyar et al., 2016; ADB, 2019a).

The potential for population ageing to result in economic challenges through these pathways may be exacerbated if people age in poor health (Feyrer, 2008; Aiyar et al., 2016; Cylus, Normand & Figueras, 2018). A critical question therefore is how the health and disability of older people impacts economic growth and whether the potential adverse economic effects described above can be moderated by supporting healthy ageing.

This report presents estimates of macroeconomic effects of population ageing in Mongolia and considers the role of health and disability. Data and methods used for the analysis in this report are outlined in Box 1.

#### **Box 1: Data and methods for forecasting economic gains of healthy ageing**

To estimate the effects of population ageing on economic growth and consider the potential moderating effects of health and disability among the older working-age population, we make use of data from multiple sources. We use data on real per capita gross domestic product (GDP) from the World Bank (World Bank, 2020a), historical and forecasted population by age data from the United Nations (UN) Population Division (UN, 2019b), and data on years lived with disabilities (YLD) by age from the Institute for Health Metrics and Evaluation (IHME, 2020). We aggregate the data into three working-age groups: the young working-age (20–39 years old), the mid working-age (40–54 years old) and the older working-age (55–69 years old). Data are available from 1990 to 2017 for 180 countries.

Country fixed effects models are used to estimate real per capita GDP growth as a function of the shares of the population in each age group and the interaction between YLDs per person and the share of the population aged 55–69 years old. To illustrate the magnitude of the effects of supporting healthy ageing, we compare GDP growth projections holding baseline (2017) YLDs per person for 55–69-year-olds constant to an alternative healthy ageing scenario where disability rates are held constant at 5% lower than at baseline.

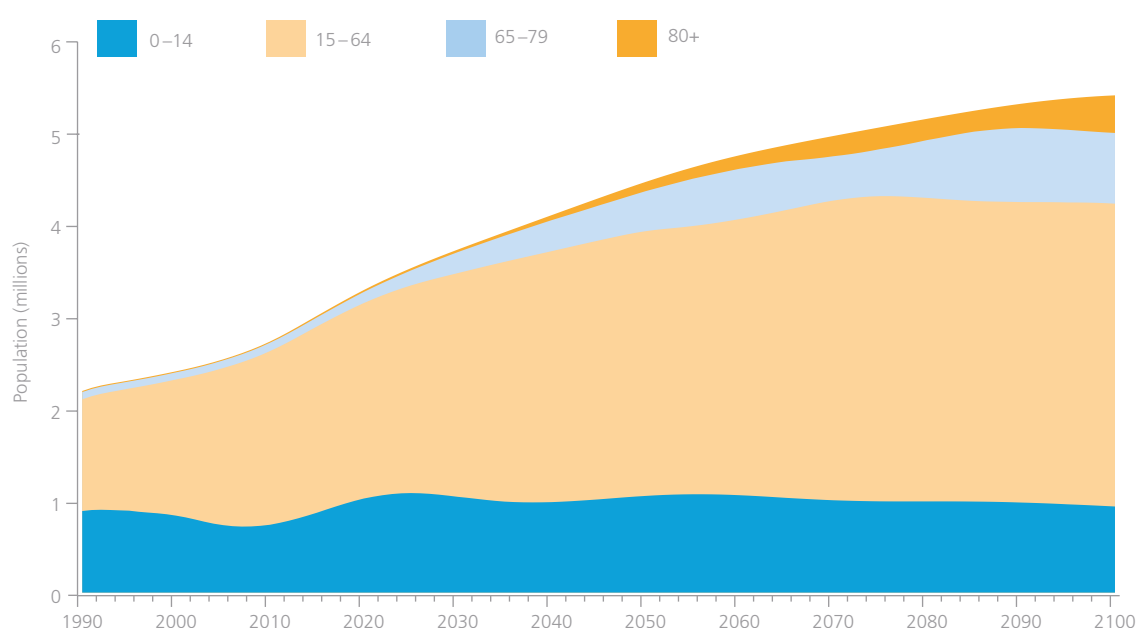
## The Mongolian context: demographics, health and disability, and the economy

Population (2020)	Shares of the population (%) 55–69 years old	2019 GDP per capita (PPP)	2018 Employment share of the population (%) 55–65+ years old	2017 Life Expectancy (years)	Years lived with disability (YLD) per 1000 population 55–69 years old in 2017
3.3 million	2020: 9.3% 2050: 15.3% 2080: 18.1%	\$12 820	55–64: 35.9% 65+: 10.6%	69.5	200.0

### *Mongolia's population is mostly young; however, it is predicted to experience rapid ageing in the next decades*

With a rapid growth rate since 1990, Japan's total population has reached a peak of 126.5 million in 2020. Due to low fertility rates, the total population is predicted to decline to 106 million people in 2050 and 75 million people in 2100 (Figure 1). Japan has the world's oldest population with a current median age of 48.4 in 2020 compared with 37.3 in 1990 (UN, 2019b); the share of people aged between 55–69 is 18.8% in 2020 compared to the younger working-age population (20–54 years old) of 42.5% (UN, 2019b). The median age is predicted to increase further in the upcoming decades as the population ages and the share of older people rises. Although the share of the older population aged 55–69 is projected to remain 18.8% by 2050 and slightly decrease to 17.5% by 2080, the old-age dependency ratio (ratio of population over 65 to population aged 20–64) is projected to substantially increase from 52% in 2020 to 83.3% in 2060 as the number of people over 65 rapidly rises (UN, 2019b).

**Figure 1.** Population age-mix in Mongolia, historical and projections (1990–2100)



Source: UN, 2019b.

## ***Death rates have been decreasing, leading to increases in life expectancy***

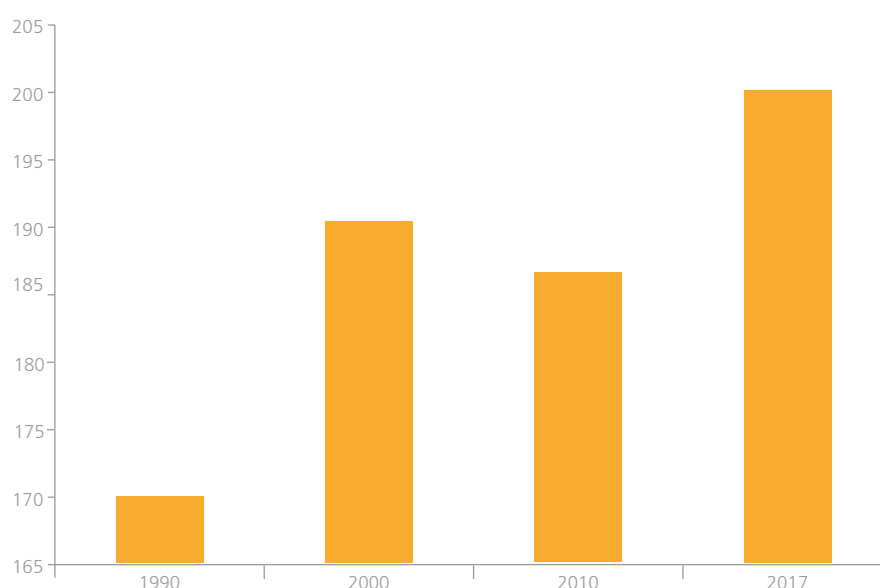
Life expectancy at birth in Mongolia has substantially improved since 1960, with a gradual increase from 50.7 to 69.5 years in 2017. Although life expectancy remains lower than the World Health Organization (WHO) Western Pacific Region's average of 76.6 years, Mongolia's infant mortality and death rates are decreasing. Particularly for the older population aged 50–69, death rates have fallen from 2591 deaths per 100,000 in 1990 to 1799 per 100,000 in 2017 (IHME, 2017). Extended life expectancy and fewer deaths can be linked to public health initiatives and a reduction in infectious diseases due to immunization programmes covering 96% of the population (Tsilaajav et al., 2013; WHO, 2015a).

## ***Non-communicable diseases are the main cause of disability***

The main drivers of disability and morbidity in Mongolia are non-communicable diseases, cardiovascular diseases, cancer (notably liver cancer) and injuries. In fact, 80% of the burden of disease in Mongolia is attributed to a rise in non-communicable diseases, which are mostly related to increasing population risk factors, including high levels of obesity, physical inactivity, smoking and alcohol consumption. The prevalence of obesity among adults in 2016 is 20.6%, which is remarkably high when compared with the Western Pacific Region's prevalence of obesity among adults of 6.4% in 2016 (WHO, 2017). In addition, 18.6% of adults in Mongolia led a lifestyle with insufficient physical activity in 2016 (WHO, 2018). Consumption of alcohol is projected to be 8.8 litres per person in 2020 and to increase to 9.9 litres in 2025, accelerating the incidence of chronic liver cancer (WHO, 2016). Moreover, 45.4% of adult males are projected to smoke tobacco in 2020 compared with 4.5% for females (WHO, 2015b). Optimistically, both are predicted to decrease in 2025 respectively to a prevalence of 43.5% and 3.8% (WHO, 2015b). Further, high disability rates affect the population in Mongolia. In particular, people aged between 55–69 approximately experienced roughly 200 YLDs in total per 1000 population in 2017 (or alternatively, one can consider an equivalent conceptualization that around 20% of the population aged 55–69 was fully disabled for the entire year). Disability rates in Mongolia are higher than in other countries in the region, including Viet Nam and Republic of Korea, which respectively report per 1000 population YLDs of 166.9 and 171 (IHME, 2020).

Figure 2 displays how YLDs have been on the rise in Mongolia since 1990, from 169.9 to 190.3 in 2000. Although YLDs witnessed a slight decrease by 2010, they have started to increase again at a faster rate, rising from 186.5 per 1000 population in 2010 to 200 per 1000 population in 2017 (IHME, 2020).

**Figure 2.** *Years lived with disabilities per 1000 population, for 55–69-year-olds in Mongolia, historical (1990–2017)*



Source: Authors' calculations using IHME, 2020 and UN, 2019b.



## ***The economy improved over the last decade, but the adverse economic toll of COVID-19 is likely to escalate in the near term***

After establishing and adopting a market economy model in the 1990s, Mongolia's economic growth has been positive and stable since the 2000s. Investments, notably foreign direct investments (FDI), are the biggest drivers of economic growth in Mongolia (Nganou, Batsuuri, 2020). In addition, the economy is highly dependent on the mining industry, agriculture and herding, exports of key minerals and commodity prices (ADB, 2019b). In the past few years, Mongolia's economy has witnessed a significant expansion. With improved fiscal and macroeconomic policies, private investment recovery and favourable commodity prices, the country's real GDP growth was at 5.3% in 2017 (World Bank, 2020).

Due to the COVID-19 pandemic, economic growth is projected to witness a significant slowdown in 2020. Although Mongolia has taken rapid action to suppress the spread of the virus, according to the World Bank estimate, economic growth is expected to decelerate to 2.4%, lower than the original prediction of 5.3% (World Bank, 2020). Being a key exporter of minerals and having high forward linkages as commodity exports account for more than a third of GDP, the economy has been subject to a demand shock due to the global decline in commodity prices and production of manufactured goods. Inflation and account deficits are also likely to increase, caused by supply-side risks (World Bank, 2020b).

However, the latest economic downturn is not expected to remain in the long term as better quality minerals will boost the mining industry and export growth, and private investments will boost the manufacturing and services sectors, enhancing private consumption. In fact, growth is expected to bounce back at 5% in 2021 (World Bank, 2020b). In addition, to lessen the economic and social impact of the pandemic, Mongolia has taken extensive social protection measures, including the provision of free COVID-19 testing and treatment, boosting income support to citizens including sickness benefits, employment retention subsidies, family leave and care policies, wage subsidies to small merchants and loan guarantees for small and medium enterprises (UNDP, 2020; World Bank, 2020b).

To achieve an efficient economic recovery and ensure macroeconomic stability in the post-pandemic era, Mongolia will have to further improve the business environment by adopting sound credit policies and strengthening the banking sector (World Bank, 2020b). However, if the impact of the COVID-19 pandemic persists globally, impeding commodity prices, demand and financial markets, the potential economic downturn is likely to persist.

As regards population ageing, the number of older people in the labour force has steadily been increasing. In 2018, 92,000 people aged between 55 to 64 were employed compared with 48,000 in 2010. The same pattern is observed for people over 65 years, with 15,000 employed in 2018 compared to 13,000 in 2010 (ILOSTAT, 2018).

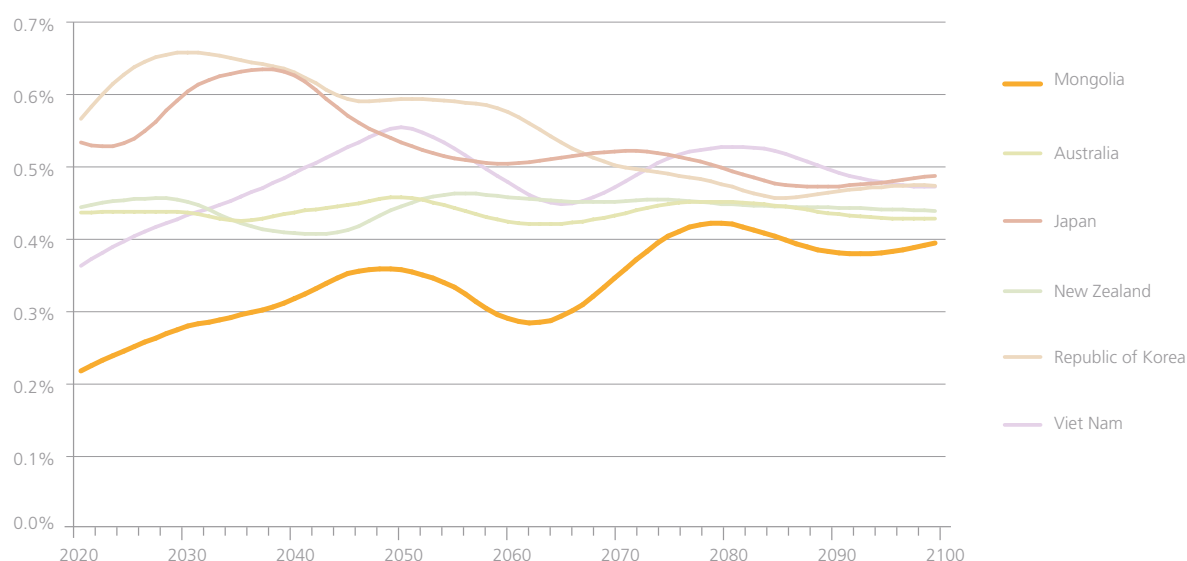
## **How will population ageing in Mongolia affect economic growth according to the models?**

Without accounting for the level of disability of the population, the increase in the share of the population aged 55–69 is expected to coincide with a slowdown of per person GDP growth. From 2020 to 2050, the share of the population aged 55–69 is expected to increase from 9.27% to 15.28%, contributing to a slowdown in per person GDP growth of around 4.1% according to model estimates. Additionally, taking a longer projection from 2020 to 2100, the share of the population aged 55–69 is expected to increase from 9.27% to 16.86%, which, according to our model estimates, would be expected to reduce per person GDP by around 5.2%.

Accounting for the level of disability among those aged 55–69, however, moderates any adverse effects of population ageing according to model estimates.

To illustrate, projections of per person GDP growth holding 2017 disability rates among the 55–69-year-old population constant in the future are compared to projections where a 5% improvement in disability rates is assumed. Figure 3 shows that reducing disability among the older working-age population is associated with increases in per person GDP growth. The 5% reduction in disability rates among the older population contributes positively to annual per person GDP growth, adding just around 0.2% in 2020 but rising to nearly 0.4% per year around 2080.

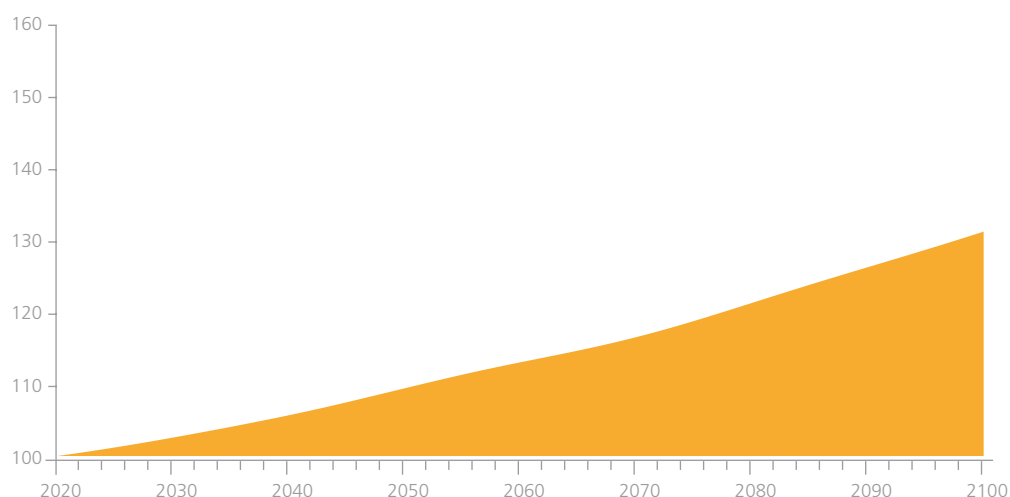
**Figure 3.** GDP growth attributable to a 5% improvement in disability rates among older population (55–69 years) compared to 2017 baseline disability rates, projections (2020–2100)



Source: Authors' calculations.

To get a sense of the full contribution of healthy ageing over the projection period, Figure 4 shows the cumulative effect of this growth due to lower disability. If disability rates among 55–69-year-olds were constant but 5% lower than in 2017, Mongolia could expect to see an additional 31.1 percentage points of GDP growth per person by the end of the century.

**Figure 4.** Cumulative GDP growth attributable to a 5% improvement in disability rates among older population (55–69 years) compared to 2017 baseline disability rates, projections (index 2020 =100)



Source: Authors' calculations.

## Discussion

This report suggests that, although population ageing has historically been associated with slower economic growth, a healthy and active older population can have economic benefits. Model estimates indicate that relatively small improvements in disability rates among older people in Mongolia can result in sizeable economic impacts by the end of the century.

Policies aiming to promote healthy and active ageing can play an important role in mitigating the adverse economic effects of ageing. Some effective policies that have been proposed in the literature to promote healthy ageing and improve disability rates reflect a life-course approach, including: preventing disease progression, cognitive and frailty declines; workplace initiatives; and other interventions outside the health system (Cylus, Normand & Figueras, 2018). An assessment of possible approaches to support the health needs specific to Mongolia's ageing population would be useful so that appropriate policy interventions can be considered and the full potential of the older population realized.

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