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## ‘Poor–Old’ BRICS: Demographic Trends and Policy Challenges

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African perspectives  
Global insights

# Abstract

Contemporary global geo-economic and geostrategic change has resulted in further attention being paid to the five BRICS members (Brazil, Russia, India, China and South Africa), both individually and as a grouping. These five countries have little in common except for the fact that they are all large developing countries that are already (or within a decade will be) home to an ageing population. The onset of population ageing in the 'middle-income' economic phase – a phenomenon known as 'getting old before getting rich' – is not unique to BRICS. It has been in evidence since the mid-1990s and is starting to look like a new developmental norm. It is imperative that this shift is successfully accommodated in sustainable development strategies, not only among the BRICS members but also across the Global South. Proactively addressing demographic change within a local development context will not only help each BRICS member to avoid 'old before rich'-induced socioeconomic stagnation; it could also create a useful precedent to guide the sustainable development efforts of later developers.

This paper explores demographic trends and related economic policy challenges, including fiscal hurdles, the retirement age and pensions. It also stresses the need for BRICS members to invest in human capital development and technology-driven productivity. In this regard, countries need to invest in the education of younger population segments so that worker productivity is sufficient to ensure that economic growth and development are not derailed when the working-age population declines and the number of pensioners increases.

Policy recommendations in the paper include: extending the scale of ageing-related research and promoting the sharing of economic demography data and policy lessons among BRICS members via the BRICS University Network, Academic Forum and Think Tank Network; advancing 'ageing'-related business opportunities through the BRICS Business Forum; and encouraging the BRICS Bank to invest in sustainable industries and initiatives focusing on aged care and the development of demographic change-resistant infrastructure and industries.

# Introduction

Since its inception in 2001 (as BRICs) and its subsequent expansion in 2010 into BRICS (with the inclusion South Africa), the current five-country grouping has served as the face of an emerging geo-economic global power. The fact that at some stage in 2023 a major demographic transition involving two BRICS members, China and India, will result in the former passing the world's most-populous country title to the latter has recently drawn attention to global demographics. China's population reached a peak of 1.426 billion in 2022 and is now falling.<sup>1</sup> India's population stood at an estimated 1.425 billion in April 2023 and will continue to rise over the next few decades.<sup>2</sup> Today, and for many years hence, both countries are home to an expanding population of retirees – as are the other current BRICS members.<sup>3</sup>

Population ageing is understood to put downward pressure on economic growth. This is because a decline in the working-age population both in terms of number and share of the total population – in the absence of a shift from factor input-driven to productivity-driven growth – tends to retard technological progress. In addition, on the fiscal side, the transition towards population ageing can challenge the tax base while at the same time call for elevated fiscal outlays on pensions and healthcare, for example. Moreover, the savings rate of the elderly is relatively low. In fact, seniors tend to be net consumers, which also heightens the risk of upward pressure on interest rates and capital growth rates.

Efforts can be made, though, to alleviate these pressures during the demographic transition itself – for example, by investing in improving the quality of the human capital pipeline. Enhancing the quality of each future worker in the (comparatively smaller) labour force pipeline would not only potentially boost each future worker's productivity in relation to the current lower-quality human capital baseline but would also, for example, help to foster an improved healthcare system, which could ensure a more productive life. Investment (during demographically ripe years) in physical infrastructure and technological capital could also help to drive more capital-intensive growth as the demographic transition matures. Finally, as life expectancy increases, regular debates and reviews could facilitate a process of regular adjustment of the retirement age. In this way, the political economy of pension sustainability and seniors' cost burden would give way to longer, healthier lives and lower dependency fears.

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1 UN, 'India Overtakes China as World's Most Populous Country in April 2023' (United Nations projects, April 24, 2023), <https://www.un.org/en/desa/india-overtake-china-world-most-populous-country-april-2023-united-nations-projects>.

2 UN, 'India Overtakes China as World's Most Populous Country (Policy Brief No. 153, UN DESA, April 24, 2023), <https://www.un.org/development/desa/dpad/publication/un-desa-policy-brief-no-153-india-overtakes-china-as-the-worlds-most-populous-country/>; Alice Yan, "It's Hard for Women Over 50 to Find Jobs": Retirement age revision plans in China spark anger,' *South China Morning Post*, November 4, 2022, <https://www.scmp.com/lifestyle/family-relationships/article/3110984/its-hard-women-over-50-find-jobs-retirement-age>.

3 For the remainder of this paper, 'BRICS' refers to the five members of the grouping as at 2023.

In recognition of these realities, the XV BRICS Summit – Johannesburg II Declaration of August 24, 2023 states the following: ‘We remain committed to strengthening BRICS cooperation on population matters because the dynamics of population age structure change and pose challenges as well as opportunities, particularly with regard to women’s rights, youth development, disability rights, employment and the future of work, urbanisation, migration and ageing.’<sup>4</sup>

Against the above backdrop, this paper surveys key demographic trends and variables among the five BRICS member countries, with a specific focus on population ageing. Related policy initiatives and challenges associated with population ageing in BRICS members are discussed and compared, such as the retirement age. In addition, suggestions are provided for ‘ageing’-related areas of cooperation, business investment and policy initiatives that may help to realise the above-mentioned goal of the BRICS Summit 2023 declaration.

## Demographic indicators among BRICS members

The demographic transition is the process whereby declining death rates and increasing life expectancy rates combine to set off a population boom that continues until fertility rates decline – thereby producing a gradual shift in the population ageing structure towards an elevated share of elders.<sup>5</sup> So far, no country has developed socioeconomically without an underlying process of demographic transition.<sup>6</sup> A leading explanation for this is that, typically, improvements in health and education drive both a falling birth rate and a falling early and mid-life mortality rate, as well as a falling total fertility rate (TFR), the latter being the number of births a woman is expected to have in her lifetime.

BRICS member countries have all entered the demographic transition, with Russia (a relatively early entrant) now late in the transition and India and South Africa midway. India especially has seen a dramatic improvement in its under-five mortality rate, falling from 243 deaths per 1,000 children (by the time of their fifth birthday) in 1960 to 32 deaths in 2020 (Figure 1). The national figure in India’s case, however, hides a rural-urban gap. Although India experienced a more-than-50% decline in the under-five

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4 XV BRICS Summit – Johannesburg II Declaration of August 24, 2023, <https://www.thepresidency.gov.za/content/xv-brics-summit-johannesburg-ii-declaration-24-august-2023>.

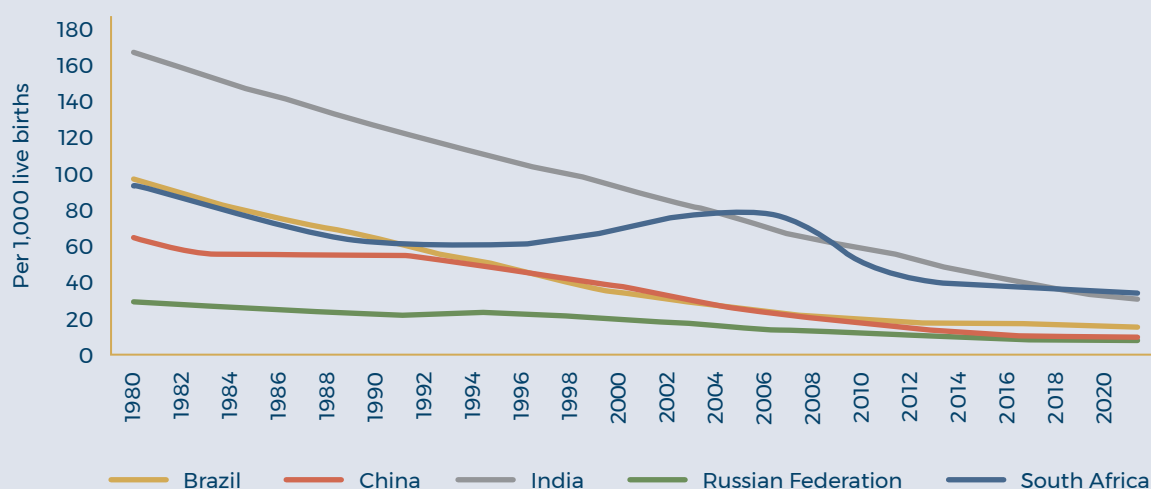
5 Anzelika Zaiceva and Klaus F. Zimmermann, ‘Migration and the Demographic shift,’ in Handbook of the Economics of Population Aging vol. 1 (Netherlands: North-Holland Publishing Company, 2016), 119-177; David E. Bloom et al., ‘Does age Structure Forecast Economic Growth?’, *International Journal of Forecasting* 23, no. 4 (2007): 569-585. <https://www.sciencedirect.com/science/article/abs/pii/S0169207007000891>.

6 Renate Baehr, Reiner Klingholz and Wolfgang Lutz, ‘Foreword – When Growth Limits Development,’ in *Africa’s Demographic Challenges: How a Young Population Can Make Development Possible*, ed. Lilli Sippel, Tanja Kiziak, Franziska Woellert and Reiner Klingholz (Berlin: Berlin Institute for Population and Development, 2011).

mortality rate over the 20 years from 1992 to 2012, the decline in rural areas was less pronounced. It is the rural regions that, subject to maternal education and household income, contribute the most to the under-five mortality rate in India.<sup>7</sup>

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**Figure 1 Under-five mortality rate in BRICS member countries, 1980-2020**



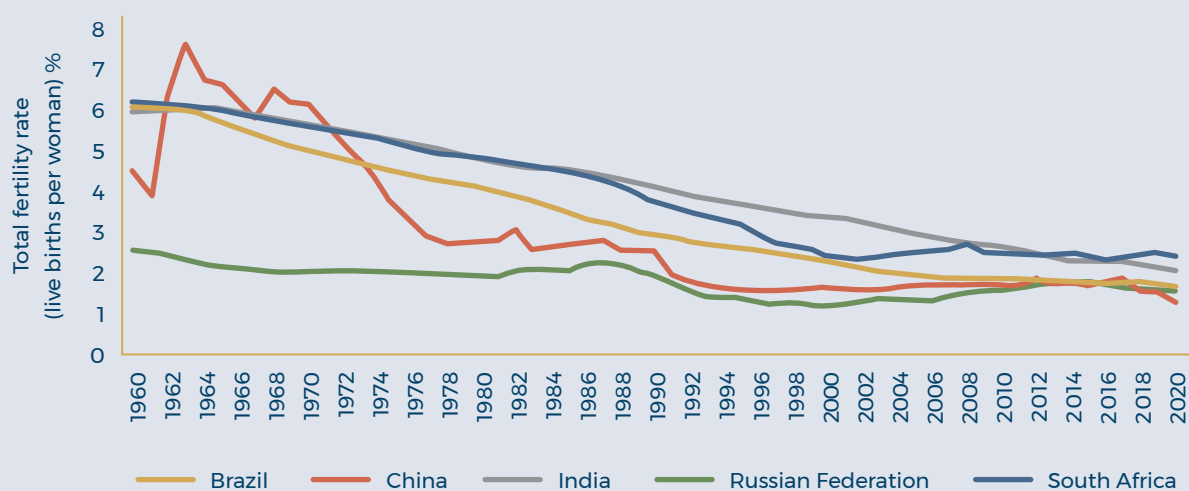
Source: World Bank, World Development Indicators (2023) <https://data.worldbank.org/indicator/SH.DYN.MORT> (accessed April 2, 2023)

In general, a falling under-five mortality rate in the early phase of development supports a gradual decline in the TFR. This is partly attributable to parents feeling more confident that children already born will survive into adulthood.

Where the TFR eventually falls below the population replacement rate – 2.1 births per woman – it signals the start of a more advanced phase of the demographic transition, with probably intensive population ageing and even a possible population decline in the future.

<sup>7</sup> Piyasa Chandan Kumar and Nandita Saikia, 'An Update on Explaining The Rural-Urban Gap in Under-Five Mortality in India,' *BMC Public Health* 22, no. 2093 (2022), <https://bmcpublihealth.biomedcentral.com/articles/10.1186/s12889-022-14436-7>.

**Figure 2 Total fertility rate in BRICS member countries, 1960–2020**



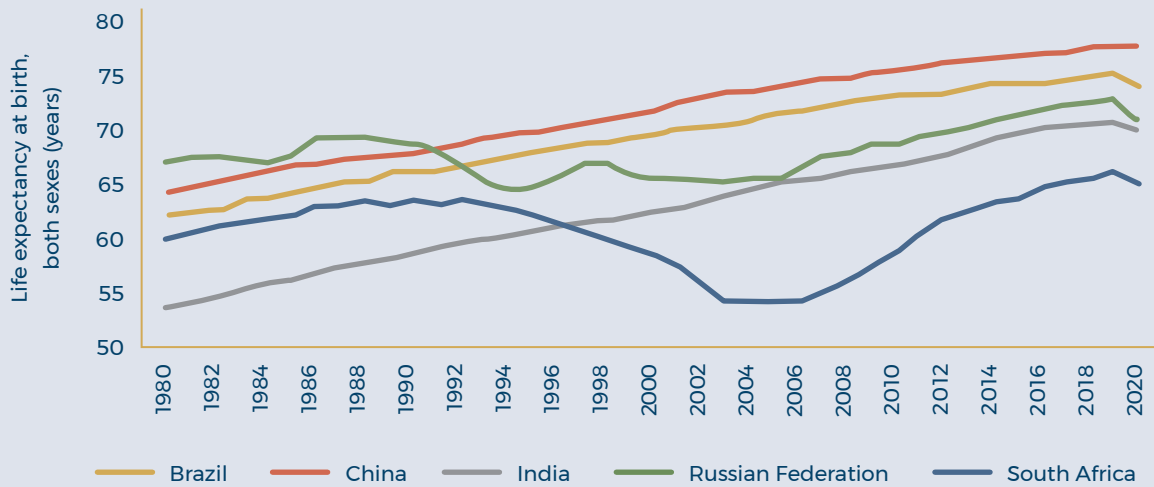
Source: World Bank, World Development Indicators (2023) <https://data.worldbank.org/indicator/SP.DYN.TFRT.IN> (accessed April 2, 2023)

Among the BRICS members, only South Africa had a TFR that was above 2.1 in 2020 – that is, 2.4 births per woman. India’s TFR was 2.1, while Brazil, Russia and China had TFRs of 1.6, 1.5 and 1.3 respectively.

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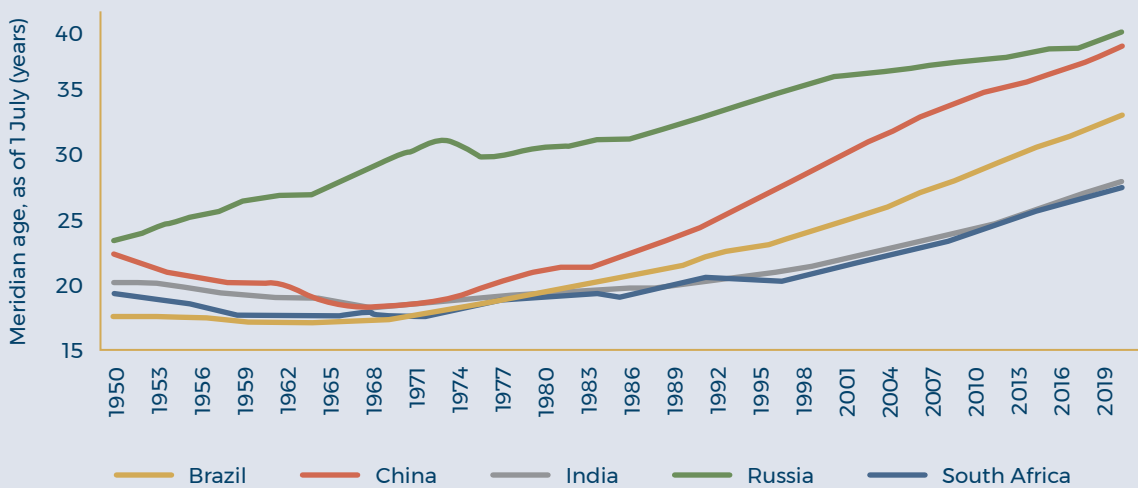
The gains in income, education and healthcare, as applied to women especially, that help to drive down the TFR also help to drive up life expectancy (Figure 3). Among the BRICS members, China has seen a dramatic increase in its life expectancy over the past four decades, adding years to the average retirement period and without any decline during the global pandemic (Figure 3). Brazil and India have seen rapid gains in life expectancy (Figure 3). In both Russia and South Africa, however, a challenging set of economic and institutional reforms, and in South Africa’s case a medical crisis surrounding HIV/AIDS, impacted life expectancy trends. Overall, until the onset of the COVID-19 pandemic, all BRICS members had enjoyed a decade of life expectancy gains.

**Figure 3** Life expectancy in BRICS member countries, 1980–2020



Source: World Bank, World Development Indicators <https://data.worldbank.org/indicator/SP.DYN.LE00.IN> (accessed April 2, 2023)

**Figure 4** Median population age in BRICS member countries (years of age), 1950–2019



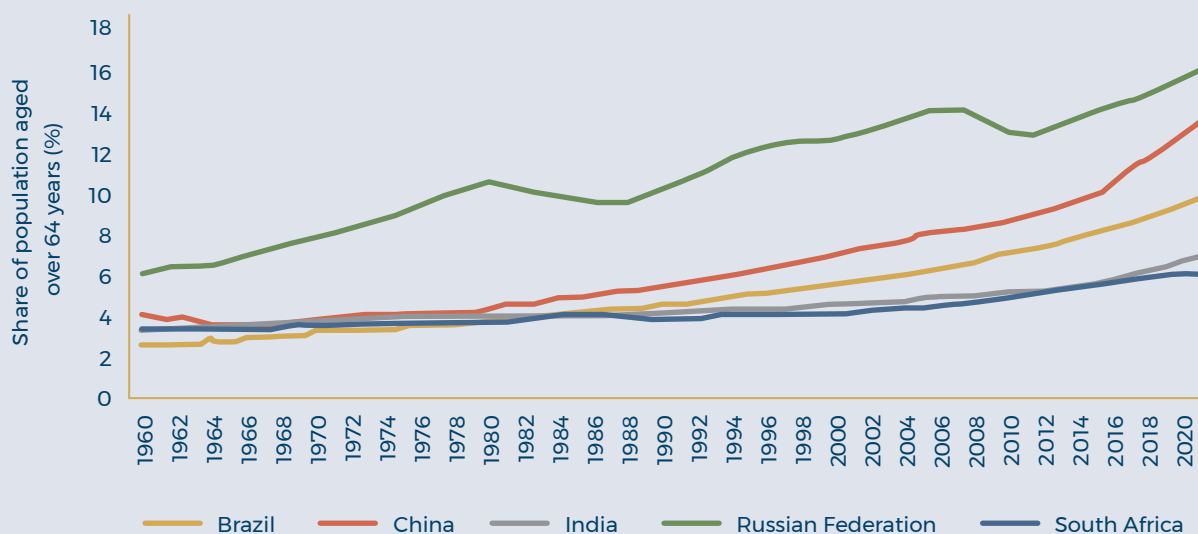
Source: UN World Population Prospects (medium variant estimates)

The above-mentioned trends mean that, over the past few decades, all BRICS members have been home to populations with a rising and relatively elevated median age and a growing share of seniors. Figures 4 and 5 tell this story. Alongside its unusually rapid development, China has seen the greatest increase in the median age of its citizens in recent years, with the median age up from below 20 years in the 1970s to close to 40 years



today. In other words, in China's case, there has been a dramatic doubling of the median age in just half a century, reflecting a gain of some 15 years in life expectancy enjoyed by the large cohort born in the 1950s and 1960s when the TFR was high. Other BRICS members have seen a comparable increase in their median age, with Brazil's median age rising by nearly two decades (Figure 4).

**Figure 5 Share of population in BRICS member countries aged 65 and older, 1960–2020**



Source: World Bank, World Development Indicators (2023), <https://data.worldbank.org/indicator/SP.DYN.LE00.IN> (accessed April 2, 2023)

The speed of the demographic transition, across countries and time, is also accelerating, including within the BRICS context. A population is ranked as 'ageing' when at least 7% of the total population are aged 65 or older; 'aged' when 14% or more of the population are aged 65 and older; and 'super-aged' when 21% or more of the population are aged 65 and older.<sup>8</sup> France and Sweden both entered the demographic transition in the 1800s, and each had more than 7% of their population aged 65 and older before 1900. From then on, it took these two countries 114 years and 82 years respectively to reach the 'aged' population threshold.<sup>9</sup> Japan, a later developer, made the same demographic transition in just

8 World Health Organization, Western Pacific, 'Preparing for Population Ageing in the Western Pacific Region' (WHO Western Pacific, December 9, 2020), <https://www.who.int/western-pacific/news-room/commentaries/detail-hq/preparing-for-population-ageing-in-the-western-pacific-region>.

9 Barry Mirkin and Mary Beth Weinberger, *The Demography of Population Ageing*, Technical Meeting on Population Ageing and Living Arrangements of Older Persons: Critical Issues and Policy Responses (book), Population Division, Dept. of Economic and Social Affairs, United Nations Secretariat, New York, NY, 2000, [https://www.un.org/development/desa/pd/sites/www.un.org/development.desa.pd/files/unpd\\_egm\\_200002\\_weinbergermirkin.pdf](https://www.un.org/development/desa/pd/sites/www.un.org/development.desa.pd/files/unpd_egm_200002_weinbergermirkin.pdf).



24 years, from 1970 to 1994.<sup>10</sup> Table 1 presents ageing threshold data for the BRICS members – retrospectively for Russia and mostly as forecasts for the other BRICS members.

	<b>Year reaching 7% aged 65 years and older</b>	<b>Year reaching 14% aged 65 years and older</b>	<b>Time gap (years)</b>
<b>Brazil</b>	2011	2033	22
<b>Russia</b>	1967	2017	50
<b>India</b>	2023	2048	25
<b>China</b>	2001	2023	22
<b>South Africa</b>	2030	2059	29

Sources: For a date before 2021, the figure is taken from the World Bank, World Development Indicators; for a date after 2021, the figure is an estimate taken from the UN, World Population Prospects

Russia, the ‘oldest’ of the BRICS members, enjoyed a 50-year transition and adaptation period between the two ageing thresholds. With Russia’s population having already peaked three decades ago (in 1992 at 148,538,197),<sup>11</sup> it is now in a sustained decline. The UN’s medium variant estimates suggest that Russia’s population will decline to 112 million by the end of the century, with the share of seniors peaking at almost one-third of the population in around 2090 (Figure 6).

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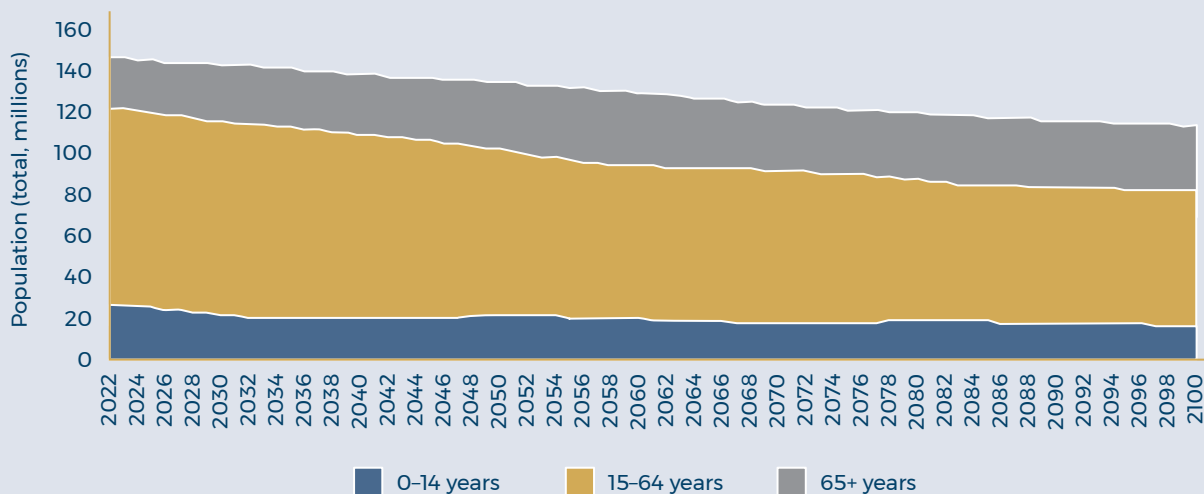
China, too, has passed its modern population peak, though far more recently – in 2021. As in the case of Russia, and according to UN estimates, China’s total population is expected to gradually decline over the rest of the century, falling to some 800 million from a peak of 1.413 billion.<sup>12</sup> In China’s case, the share of those aged 65 and older in the population is forecast to peak in the 2080s, at 42% of the population.

<sup>10</sup> Mirkin and Weinberger, Population Ageing.

<sup>11</sup> The World Bank, *Population, total – Russian Federation* (The World Bank, 2022), <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=RU>.

<sup>12</sup> The World Bank, *Population, total – China* (The World Bank, 2022), <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=CN>.

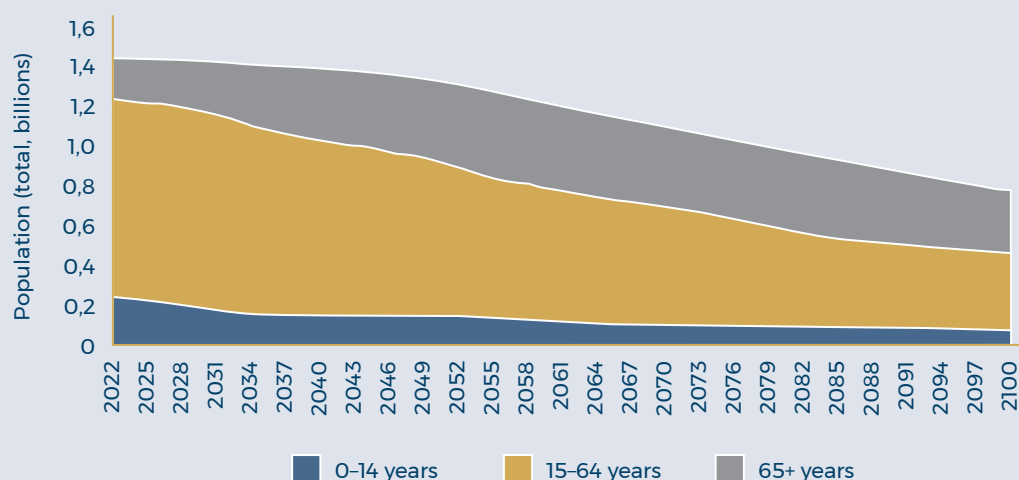
**Figure 6** Projected population structure in Russia (millions of people, estimates), 2022–2100



Source: UN World Population Prospects (medium variant estimates)

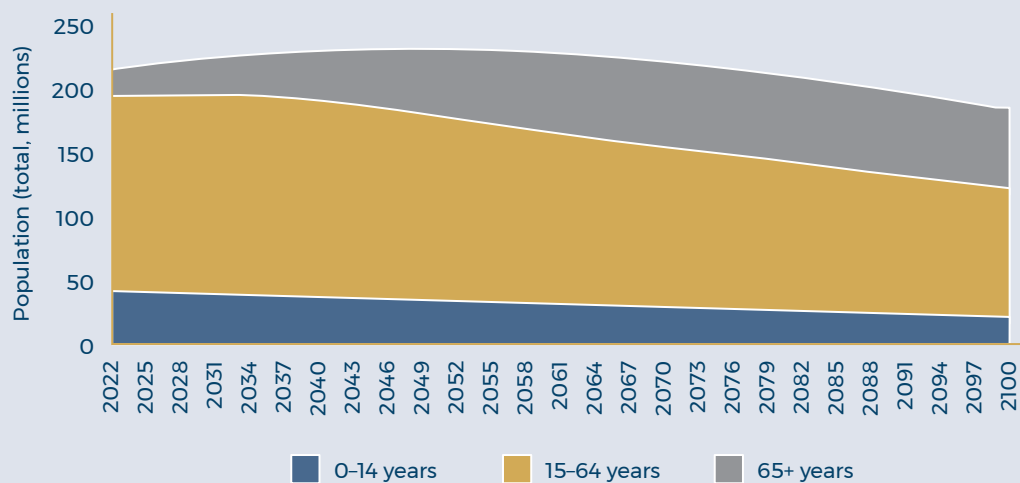
Brazil (Figure 8), like China (Table 1 and Figure 7), is ageing relatively rapidly. However, unlike China or Russia, Brazil's population is a quarter of a century away from reaching its total peak. According to the UN, that peak will arrive around mid-century (2046–2047) and the share of seniors is forecast not to peak until 2100, at one-third of the population (Figure 8). However, as early as 2033, Brazil will transition from the 'ageing' to the 'aged' population category (Figure 8).

**Figure 7** Projected population structure in China (billions of people, estimates), 2022–2098



Source: UN World Population Prospects, median variant estimates

**Figure 8** Projected population structure in Brazil  
(millions of people, estimates), 2022–2098



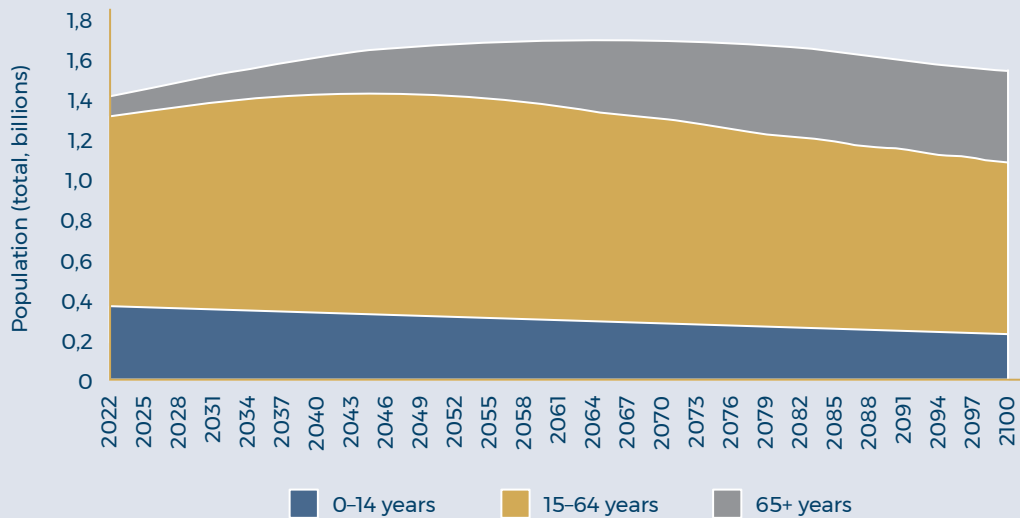
Source: UN World Population Prospects (medium variant estimates)

The remaining two BRICS members, India and South Africa, are ‘younger’ and hence have more demographic time on their side. It is understood that India’s population is expected to enter the ‘ageing’ category in 2023. The country then has an estimated 25 more years to prepare to become ‘aged’ – that is, India is forecast to reach the share threshold of 14% of the population being seniors in the year 2048 (Table 1). Looking further into the future, India’s population is forecast to peak in the early 2060s, and the share of seniors will have reached some 30% of the population by the end of the century (Figure 9).

By 2024, according to UN estimates, South Africa will be the sole BRICS member with a population that remains (by statistical definition) ‘non-ageing’ – that is, whose share of seniors will be below the 7% ageing threshold. However, as early as 2030, South Africa is forecast to join the ‘population ageing’ club and by around 2060 it will be home to an ‘aged’ population

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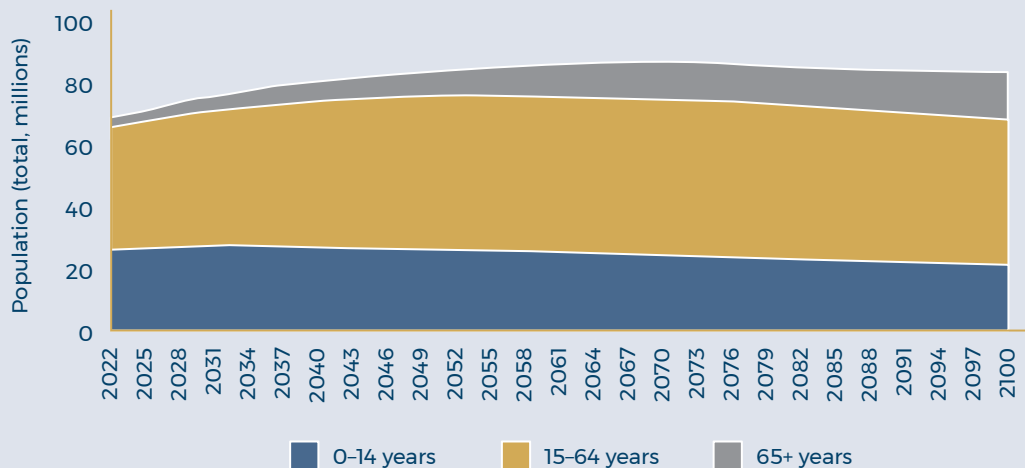
**Figure 9** Projected population structure in India (billions of people, estimates), 2022–2098



Source: UN World Population Prospects

‘aged’ population (Table 1 and Figure 10). With a population peak predicted for 2074, South Africa’s share of seniors is expected to reach only 21% of the population by the end of the century (Figure 10), a level that Russia is expected to reach four decades earlier, in the mid-2030s (Figure 6). Russia, however, has 50 years between the two thresholds, whereas South Africa will have under 30 years to adjust socioeconomically.

**Figure 10** Projected population structure in South Africa (millions of people, estimates), 2020–2100



Source: UN World Population Prospects, medium variant estimates

The speed of population ageing has major implications, especially for government policies that should, for example, provide for and sustain pension schemes and support healthcare and economic goals.<sup>13</sup> Moreover, as large middle-income countries that are experiencing rapid population ageing, the BRICS members are all 'getting old before (if ever) getting rich'.<sup>14</sup> In China's case, a unique set of circumstances, especially the implementation of strict family planning policies – and notably the One Child Policy – led to 'demographically early' awareness among policymakers and the research community, from the mid-1980s, of the 'getting old before getting rich' phenomenon.<sup>15</sup> That, in turn, prompted consideration of immediate and long-term population issues, from an economic development perspective, specifically in the early or 'young' phase of the demographic transition, as well as in the low per-capita-income range.<sup>16</sup>

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In the case of 'poor-old' BRICS, whether it is already in the population ageing category or not, the adoption of an equivalent population-weighted development approach may help to foster socioeconomic resilience and long-term growth and development. Moreover, it may help to set an explicit and more generalisable (rather than just Chinese-centred) precedent for today's younger developing countries. To nudge forward such a debate among the BRICS members, the next section highlights some of the policy variables that countries will need to explore if their demographic change agenda is to bear fruit.

## Economic policy challenges of population ageing

A caveat here is that each of the five BRICS members is unique, not only in demographic terms but also across innumerable other variables. For example, in terms of aggregate economic size, China is the overall economic giant among them, with an economy that is bigger than all the other BRICS economies combined (Figure 11). China's per capita income,

13 Aurora Teixeira, Renuga Nagarajan and Sandra T. Silva, 'The Impact of Ageing and the Speed of Ageing on the Economic Growth of Least Developed, Emerging and Developed Countries, 1990–2013,' *Review of Development Economics* 21, no. 3 (2016), <https://onlinelibrary.wiley.com/doi/10.1111/rode.12294>.

14 Lauren Johnston, 'Getting Old Before Getting Rich: Origins and Policy Responses in China,' *China: An International Journal* 19, no. 3 (2021): 91–111, <https://muse.jhu.edu/pub/43/article/805759/summary>; The World Bank, World Development Indicators.

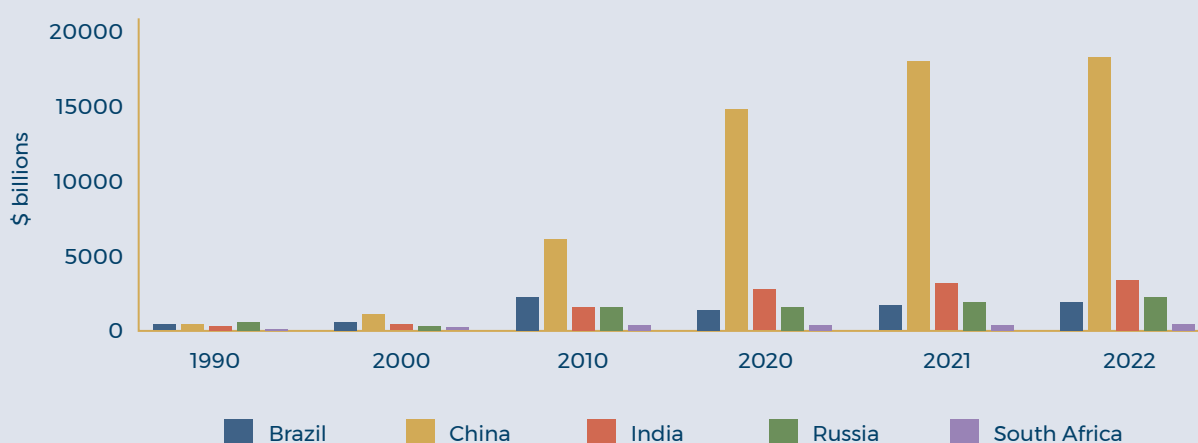
15 Johnston, 'Getting Old Before Getting Rich.'

16 Lauren Johnston, 'The Economic Demography Transition: Is China's "Not Rich, First Old" Circumstance a Barrier to Growth?,' *The Australian Economic Review* 52, no. 4 (2019): 406–426, <https://onlinelibrary.wiley.com/doi/10.1111/1467-8462.12325>.

however, is less exceptional, especially compared to that of Russia (Figure 12). Yet scale may offer China cost and home market advantages when addressing challenges around population ageing. For example, a tiny margin on health-related items for seniors might allow manufacturers to make a profit on what could become affordable goods for seniors, whereas in smaller home market countries the production and sales costs per unit might not be as affordable.

This argument makes the case for greater integration of ageing-related goods and services markets, including among BRICS members, and is a topic that could be raised via the BRICS Business Forum.

**Figure 11** Aggregate gross domestic product (GDP) in BRICS member countries, selected years

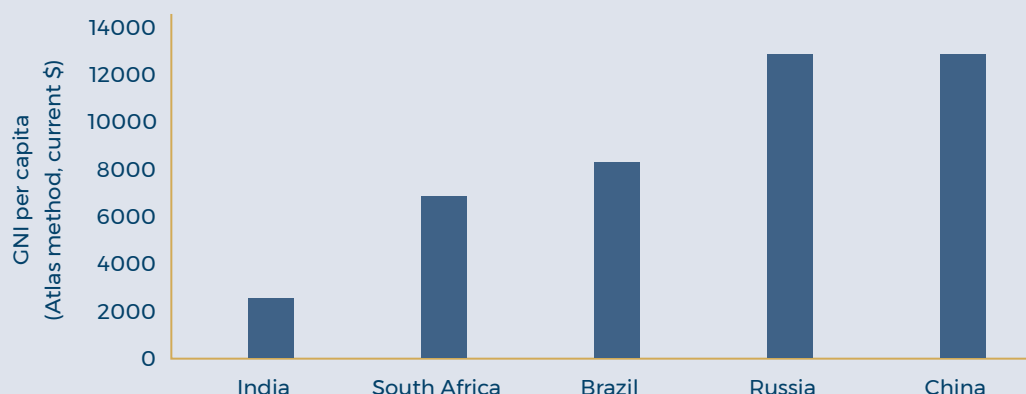


Source: World Bank, World Development Indicators (accessed April 2 and May 11, 2023)

Meanwhile, it is not yet known if or how uniquely India and South Africa will respectively realise, from a socioeconomic perspective, the potential of their current relatively 'youthful' populations during periods of working-age population abundance; nor how the 'ageing' Brazil, China and Russia will navigate the present and evolving political economy challenges of population ageing.

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Figure 12 Gross national income (GNI) per capita in BRICS member countries, selected years



Source: World Bank, World Development Indicators (accessed April 2 & May 11, 2023)

This raises some general policy considerations while also offering a number of macro suggestions. The aim is not to attempt to provide all the answers to every BRICS member's concerns, but rather to stimulate more interest in, and prompt more illuminating research and policy proposals on, thematic sector and country-specific studies, which can help to inclusively and economically sustain population ageing across BRICS.

In general, economic models predict that population ageing will constrain economic growth via labour and capital channels, but also that the effects can be shifted by varying the related policies pertaining to retirement age, migration and the adoption of productivity-enhancing technologies

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Some have argued that population ageing might even directly help to induce automation-related innovation.<sup>17</sup> In China, some have called for the government to proactively support

<sup>17</sup> Daron Acemoglu and Pascual Restrepo, 'Demographics and Automation,' *The Review of Economic Studies* 89 no. 1 (2022): 1-44, <https://academic.oup.com/restud/article-abstract/89/1/1/6295889>.



leading industries in the introduction of automation techniques, such as industrial robots and artificial intelligence applications, with a view to replacing the ‘demographic dividend’ of the past with a ‘technological dividend’.<sup>18</sup> Others warn that automation, though important, should not be viewed as the solution to ageing-related labour constraints.<sup>19</sup>

Furthermore, the weight of population ageing is unique to a country’s national circumstances, especially the political economy of ageing itself. For example, in China, population ageing has emerged as part of a process of ongoing development and so China has sought to ensure that a sizeable share of the future (smaller) working-age population is more educated than the (larger) retired or retiring cohort. In this way, the productivity potential of the current smaller working-age population may even exceed the productivity potential of the earlier larger working-age population. However, making the transition from a quantity-driven to a quality-driven workforce growth model is not easy.<sup>20</sup> An important lesson is that policymakers must aim for a sustainable economic demography trajectory over time.<sup>21</sup> Beyond the ageing-growth nexus, a number of other variables need to be considered.

## Fiscal challenges

An increasing share of retirees in the population equates to an increasing elder dependency ratio, which, all else remaining constant, puts upward pressure on government expenditures. Areas likely to call for higher public spending include healthcare, elder care and social security. Government spending may even become more important in the face of consumption-led demand. Where expenditures exceed government revenues, however, it drives up government debt and induces associated macroeconomic challenges. The political economy not only of debt but also of taxation may become fraught, especially if there is perceived inter- and intra-generational unfairness.<sup>22</sup>

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18 Xiang Deng, Wei Zhang and Wenjing Wang, ‘Does Population Aging Induce Automation?’, *Modern Economic Analysis* 12 (2018): 17–24.

19 Thomas des Garets Gedes, ‘Cai Fang on Promoting Growth With an Ageing and Declining Population’, *Sinification*, May 11, 2023, <https://www.sinification.com/p/cai-fang-on-promoting-growth-with>.

20 Cai Fang, ‘Population Dividend and Economic Growth in China, 1978–2018’, *China Economic Journal* 11, no. 3 (2018): 243–258, <https://www.tandfonline.com/doi/abs/10.1080/17538963.2018.1509529>; Lauren Johnston, ‘China’s Demographic Peak: Lessons and Prospects for Africa’ (Occasional Paper 340, South African Institute of International Affairs, Johannesburg, 2023), <https://saiia.org.za/research/chinas-demographic-peak-lessons-and-prospects-for-africa/>.

21 Johnston, ‘The Economic Demography Transition,’ 406–426.

22 Xiaoyan Lei, Peking University World Bank EAP Chief Economist Lecture Series, July 24, 2020.

Governments of all countries, but especially larger, ageing developing countries, are advised to adopt a taxation policy approach that makes provision for economic demography change. For example, this may involve increasing specific consumption taxes that best and most fairly capture how the economic demography changes over time. It should be borne in mind that as people age they tend to move home less often, meaning that housing-related taxes on the sale of homes may be less revenue-generating and fair across generations these days than in the past. There is an emerging literature and debate in this area specific to BRICS, which needs to be expanded.<sup>23</sup>

## Pension sustainability and equity

Social security systems are designed differently from one country to the next and typically weigh worker contributions differently against age-related promises and public versus private contributions, among other variables. It may be understood that governments will directly contribute to the payment of pensions if sufficient provision has not been made for these during working-age population-rich times. If so, then when the working-age population is falling and the number of retirees is rising, fiscal resources may come under pressure, especially when there is a heavy dependency on labour-related taxes.

There is also a risk that pension-related promises made in one time period will prove to be excessively generous in a later period, thus weighing heavily on the active economy

There is also a risk that pension-related promises made in one time period will prove to be excessively generous in a later period, thus weighing heavily on the active economy. This has been the case with the higher education sector in the 'older' United Kingdom, which is grappling with the ongoing pension expectations of, and other promises made to, now-retired scholars dating back to the 1970s and 1980s. As a result, a large proportion of resources is diverted away, eroding current productivity.<sup>24</sup> Things become particularly contentious when current workers are not given these generous promises but are nevertheless expected to support those better-off (in pension terms) retirees. Furthermore, in a developing country context, many workers may fall outside the formal pension system; yet over time they may also fall outside other traditional means of old-age support, such as

23 Ivan Keaorata Galodikwe and Gisele Mah, 'Budget Deficit and Economic Growth in BRICS Countries: Panel Approach,' *African Journal of Business and Economic Research* 18, no. 2 (2023): 295-317, <https://journals.co.za/doi/10.31920/1750-4562/2023/v18n2a14>; Vladimir V Vagin and Sergey V Romanov, 'Budgeting Initiative in the BRICS Countries,' *Finansovyy zhurnal—Financial Journal* 4 (2017): 113-121, <https://ideas.repec.org/a/fru/finjrn/170409p113-121.html>.

24 Martin Wolf, 'It is Folly to Make Pensions Safe by Making Them Unaffordable,' *Financial Times*, June 27, 2021, <https://www.ft.com/content/138974df-5dc0-47e4-acb8-e2eb048fe8bd>.

family support systems – especially in the case of women. This rising risk of impoverishment of senior citizen retirees should be aggressively addressed by BRICS, especially where elders are vulnerable to abuse or violence.<sup>25</sup>

Running parallel to the ageing issue are modern economic issues as well. For example, studies have shown that digital platform workers, such as those working as online shopping delivery drivers and private taxi (such as Uber) drivers, find that while benefiting from more flexible working hours, they are otherwise at risk of being completely excluded from their country's social security laws and norms.<sup>26</sup> In China, which has one of the world's most advanced digital commerce ecosystems, there is also a fear that the absence of protection for these digital platform workers is already negatively impacting growth in aggregate consumption in the present, let alone what it will do to workers' future retirement prospects.<sup>27</sup> Social security systems must therefore not only be fiscally sustainable in the short and long terms, but should also cater to structural challenges in the developing country and digitised economy contexts.

## The retirement age

When the working-age share of the population is falling, some policy interventions can help to mitigate the effects, including those that increase workforce participation. One intervention is to extend the working lifespan by increasing the retirement age. In the case of increasing longevity, and healthy longevity especially, it is logical to continually adjust the retirement age as such changes manifest. This is not an easy step to take, however, since citizens may plan their lives around a particular retirement age. In addition, life expectancy prospects may have improved disproportionately for richer and better educated citizens, and not for less well-off citizens.

Other ways of fostering increased workforce participation are to encourage women to join the formal workforce and to implement re-training schemes for workers who, having not worked for a period, are finding it challenging re-entering the workforce, despite being of a working age.

In the context of BRICS, the 'older' members – China, Russia and Brazil (Table 1) – are already looking to increase the retirement age and are facing political economy headwinds as a result. In recent years, all three countries have been gripped by large-scale public protests by workers when authorities have sought to increase the retirement age – especially in 2018

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25 Meng, Li and Li Zhang, 'Effects of Public Pensions on Elderly Poverty: Insights From an Ageing China,' *Post-Communist Economies* (2021): 1–23, <https://www.tandfonline.com/doi/abs/10.1080/14631377.2021.2006496>.

26 Bin Chen, Tau Liu, Lin Guo and Zhenglin Xie, 'The Disembedded Digital Economy: Social Protection for New Economy Employment in China,' *Social Policy and Administration* 54, no. 7 (2020): 1246–1260, <https://onlinelibrary.wiley.com/doi/abs/10.1111/spol.12603>; Lixing Li, Yiqing Mo and Guangsu Zhou, 'Platform Economy and China's Labor Market: Structural Transformation and Policy Challenges,' *China Economic Journal* 15, no. 2 (2022): 139–152, <https://www.tandfonline.com/doi/abs/10.1080/17538963.2022.2067685>.

27 Li, Mo and Zhou, 'Platform economy and China's labor market.'

in Russia and in 2019 in Brazil.<sup>28</sup> Younger members India (Figure 9) and South Africa (Figure 10) have the advantage of foresight and can accordingly act to reduce such retirement-age political economy risks before they intensify in the face of population ageing. For example, it may make sense to shift the retirement age debate to an earlier period in the demographic transition so that, as life expectancy increases across cohorts and over time, there is a parallel and sophisticated means of fairly adjusting the retirement age. A BRICS-wide study of potential ways of achieving this may enhance learning and innovation, thus giving policymakers more room to move.

‘Older’ members – China, Russia and Brazil – are already looking to increase the retirement age and are facing political economy headwinds as a result. In recent years, all three countries have been gripped by large-scale public protests by workers when authorities have sought to increase the retirement age – especially in 2018 in Russia and in 2019 in Brazil

## Labour force productivity: worker-level and over time

In the economics literature, an inverted U-shaped relationship has been identified between population ageing and worker productivity, with productivity peaking around the mid-career of the working-age population and showing a modest decline at higher working ages. This relationship, however, is subject to various policy interventions and workplace changes, as well as the longer-term national economic demography context.<sup>29</sup> For example, in rapidly ageing and high income-per-capita Singapore, mid-career funds are available for workers – even employed workers – to undergo another period of employment-related training. This is for the purpose of both extending their working life and fostering more immediate worker productivity as an investment for later working years.<sup>30</sup>

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- 28 Yan, ‘It’s hard for women over 50 to find jobs’; ‘Brazilians Strike Against Bolsonaro’s Pension Plans,’ *DW*, June 14, 2019, <https://www.dw.com/en/brazilians-strike-against-bolsonaros-pension-plans/a-49213851>; ‘Thousands Protest in Russia Against Plans to Hike Pension Age,’ *The Guardian*, September 2, 2018, <https://www.theguardian.com/world/2018/sep/02/thousands-protest-in-russia-against-plans-to-hike-retirement-age>.
- 29 Bernhard Mahlberg, Inga Freund, Jesús Crespo Cuaresma and Alexia Prskawetz, ‘Ageing, Productivity and Wages in Austria,’ *Labour Economics* 22 (2013): 5–15, <https://www.sciencedirect.com/science/article/pii/S0927537112001042>; Katharina Frosch, ‘Workforce Age and Innovation: A Literature Survey,’ *International Journal of Management Reviews* 13, (2011): 414–430, <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-2370.2011.00298.x>; Eric Rietzschel, Hannes Zacher and Wolfgang Stroebe, ‘A Lifespan Perspective on Creativity and Innovation at Work,’ *Work, Aging and Retirement* 2, no. 2 (2016): 105–129; <https://academic.oup.com/workar/article-abstract/2/2/105/2427957>.
- 30 Grace Koh, ‘Mid-Career Switch: Courses and Subsidies in Singapore [2022],’ *Homage*, <https://www.homage.sg/resources/mid-career-switch-courses-subsidies/>; Arthur Chia, ‘Mid-career and Middle-Aged Workers’ Woes: Is Training the Solution?’, *Academia | SG*, March 16, 2020, <https://www.academia.sg/academic-views/mid-career-and-middle-aged-workers-woes-is-training-the-solution/>.

Singapore offers a mid-career training boost to drive sustained productivity improvement among individual workers. Yet at the aggregate level in population-ageing countries, it is especially important to invest in the education of younger cohorts. These (fewer) younger workers should be empowered through the development of their human capital to be sufficiently more productive than retirees. Their elevated productivity can then compensate for the decline in worker numbers and the increased dependency burden.<sup>31</sup> There is some evidence to support a transition towards higher human capital investment per child as the TFR and the mortality rate fall.<sup>32</sup>

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In a developing country context, there may be issues surrounding the affordability of education. For example, in the case of lower per-capita-income countries, governments may not have the resources to invest in education that delivers gains only in the future. Consequently, there may be a need for bilateral and international donor organisations and civil society to help support these long-run, beneficial – and even necessary – educational investments.<sup>33</sup>

Building on the Singapore example and recognising these financing challenges, BRICS members could, for example, establish selective pooled systems for mid-career re-training and cross-country study and work experience, as well as access to digital educational platforms. Not only may these help to increase the availability and cost-effectiveness of such efforts, but they may also help to mitigate some of the risks of labour productivity being adversely impacted by population ageing, which would be detrimental to the development process.

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31 Klaus Prettner, David Bloom and Holger Strulik, 'Declining Fertility and Economic Well-being: Do Education and Health Ride to the Rescue?,' *Labour Economics* 22 (2013): 70-79, <https://www.sciencedirect.com/science/article/abs/pii/S0927537112000620>

32 Ronald Lee and Andrew Mason, 'Some Macroeconomic Aspects of Global Population Aging,' *Demography* 47 (2010): 151-172, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3470908>.

33 Lauren Johnston, 'Getting Old Before Getting Rich and Africa: Of What Relevance is China's Economic Demography Transition?,' *Journal of African Development* 22, no. 2 (2021): 249-278, <https://scholarlypublishingcollective.org/psup/african-development/article-abstract/22/2/249/293261/Getting-Old-Before-Getting-Rich-and-Africa-Of-What?redirectedFrom=fulltext>.

## Healthcare and eldercare: costs and opportunities

When it comes to fiscal expenditure and spending patterns, healthcare and health insurance costs sit alongside pension payments and contributions as having notable impacts on the impact of population ageing itself.<sup>34</sup> As populations age, it becomes necessary to affordably adjust (both for the public in aggregate and individuals) the focus of the health system from communicable diseases, which are common among the young, to chronic illnesses, which are more common among older citizens. Healthcare that is too expensive will on the one hand heighten the risk of health-related poverty and diminishing worker productivity while on the other hand foster precautionary savings that curtail consumption and hence growth.<sup>35</sup>

As populations age, it becomes necessary to affordably ... adjust the focus of the health system from communicable diseases, which are common among the young, to chronic illnesses, which are more common among older citizens

The same applies to late-life elder care and the individual and national affordability thereof. Moreover, there is a complex interrelationship between increased longevity and changing lifestyle patterns induced by higher incomes and urbanisation, which affect the overall composition of healthcare expenditures.<sup>36</sup> Ways to address these risk factors are part of a broad set of future healthcare reforms aimed at creating a less hospital-centric system, with higher-quality healthcare provision at all levels and an increased focus on disease prevention rather than treatment. It would be beneficial if researchers in BRICS member countries studied the challenges associated with their respective health systems, thereby creating opportunities for cross-country learning and lesson sharing. This would help to ensure that population ageing is as sustainable and fair as possible both across the population and over time.

Healthcare and health insurance costs may also bring new opportunities. China, which has had the longest-standing proactive approach to population ageing within the BRICS group, also has a proactive assistive technologies agenda that seeks to foster new economic growth and technology innovation, while also improving the lives of elders and reducing

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34 Lauren Johnston, 'China's Smart Health Care Plan Can Unlock its Economic Future,' Nikkei Asia, December 14, 2021, <https://asia.nikkei.com/Opinion/China-s-smart-health-care-plan-can-unlock-its-economic-future>.

35 Johnston, 'China's Smart Health Care Plan.'

36 Defu Ma, Hiromichi Sakai, Chihiro Wakabayashi, Jong-Sook Kwon, Yoonna Lee, Shuo Liu, Qiaoqin Wan, Kumiko Sasao, Kanade Ito, Ken Nishihara and Peiyu Wang, 'The Prevalence and Risk Factor Control Associated with Noncommunicable Diseases in China, Japan, and Korea,' *Journal of Epidemiology* 27, no. 12 (2017): 568-573, <https://pubmed.ncbi.nlm.nih.gov/28623056/>.

the cost to the nation for their care.<sup>37</sup> Assistive technologies include monitoring devices that quickly inform third parties if an individual falls or ceases their normal usage of utilities like water and electricity at home. The global market for assistive technologies has been growing by nearly 20% annually over the past decade and provides opportunities to sustain the population ageing process.<sup>38</sup> All BRICS members can learn from China's proactive approach to ageing and technology. Where China has a global lead in a particular area, other BRICS members could consider forming a joint venture with a Chinese firm locally so as to produce the same technologies closer to home; alternatively, they could import them affordably.

## Urban and rural preparedness

In 2007, the World Health Organization published its 'Guidelines for the Construction of Global Friendly Cities for the Aged', aimed at engaging cities to become more age-friendly to harness the potential of older people. The guidelines set out a basic framework for what such cities might look like, noting that an age-friendly city 'encourages active ageing by optimising opportunities for health, participation and security in order to enhance quality of life as people age'.<sup>39</sup>

Central to the 'age-friendly city' concept is the notion of a 'compact city'. Here an urban area is organised around public transport stations and green open spaces, with collections of high-density, mixed-use and pedestrian-friendly central areas within convenient walking distance of these amenities. This is known as transit-oriented development. Climate-resilient urban development, in turn, implies green infrastructure, such as bike paths and public transportation systems and parks, flood and drought risk management, and air quality and microclimate improvements, while also providing relevant services for elders, such as accessible transport and healthcare facilities.

Population ageing can increase the demand for dwellings but also change the size of dwellings that are in demand, with many older people living in smaller housing units. These units need to be located in clean and pedestrian-friendly urban environments that offer accessible healthcare services and infrastructure.<sup>40</sup> The availability of such dwellings may also help to ensure that larger homes are available for prime-aged workers and their

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37 Mark Wehde, 'Healthcare 4.0,' IEEE Engineering Management Review 47, no. 3 (2019): 24–28, <https://ieeexplore.ieee.org/document/8782570>; Xiangzhu Gao, Jun Xu and Hong Liu, 'Current Status of Healthcare and Available E-Health Solutions in China,' *E-Business in the 21st Century: Essential Topics and Studies*; World Scientific Pub. Co. Inc.: Singapore (2021): 169-199 (Chapter 8), <https://www.worldscientific.com/worldscibooks/10.1142/12150#t=aboutBook>.

38 Government of the People's Republic of China, Ministry of Industry and Information Technology and Ministry of Civil Affairs National Health and Wellness Commission, *Action Plan for the Development of Intelligent Health and Aging Industry (2021–2025)*, Ministry of Industry and Information Technology Joint Electronic, no. 154 (2021), [http://www.gov.cn/zhengce/zhengceku/2021-10/23/content\\_5644434.htm](http://www.gov.cn/zhengce/zhengceku/2021-10/23/content_5644434.htm).

39 World Health Organization, *Global Age-Friendly Cities: A Guide* (WHO, 2007), <https://www.who.int/publications/i/item/9789241547307>.

40 Yan-bin Chen and Xiao-liang Chen, 'The Influence of Population Aging on China's Urban Housing Demand,' *Economic Theory and Business Management*, no. 5 (2013): 45-58, [https://www.scirp.org/\(S\(351jmbntvnsjt1aadkposzje\)\)/reference/referencespapers.aspx?referenceid=1538483](https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/referencespapers.aspx?referenceid=1538483).



families who need to be mobile and to be able to afford to live near to their workplace and schools, given the elevated importance of their productivity. As India and Africa especially urbanise, BRICS members can facilitate age-friendly urban planning from the outset, reducing costs and the likelihood of compounded challenges later.

## Policy recommendations

### Leadership in population and development

The five BRICS members are different across many dimensions; yet a common characteristic is that they are or will be old before they are rich. Fortunately, in the wake of an earlier period of more intensive population ageing, a broader trend of socioeconomic development emerged from around the mid-1990s, with people with lower per-capita incomes now having better health and education opportunities than in the past. Moreover, this process is accelerating as time goes by, which calls for an increasingly nimble approach to policymaking. In their 2023 Summit Declaration, BRICS leaders recognise the importance of managing both new opportunities and risks arising from this process of change, especially with respect to the rights and needs of youth, women and the disabled.

BRICS members are well-placed to foster collaboration in the area of population ageing. In doing so they will not only support their own future socioeconomic development but also set a helpful precedent for many other later developers. This is important as they are not only among the 'oldest' developing countries, but also among the best resourced. In this regard, BRICS members should manage demographic change across all working groups and shared policy areas and evolve and promote a new model of sustainable economic demography-weighted development.

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These initiatives may best be launched within the purview of the BRICS Academic Forum since it has the flexibility to facilitate the initial exploration of ideas and broader discussions before progressing to the more formal BRICS discussion protocols, the BRICS Think Tank Network and policy-shaping processes. In South Africa, the BRICS Think Tank Forum and Academic Forum are hosted by the National Institute for the Humanities and Social Sciences. This paper calls for greater collaboration between these platforms on population and development networks across the BRICS members and beyond to be spearheaded

by a small number of suitably qualified thought leaders. Appropriate thought leadership and policies and the exchange of research ideas, including how BRICS can realise the UN's principles and charters as they relate to the rights of elders, will help to secure safe livelihoods for millions of less-well-off BRICS seniors over the coming decades – especially for women. It will also educate BRICS youth to respect and support their seniors at times when the politics and resource costs of ageing could give rise to friction and tensions.

## Creating an ageing and development and policy research network

The BRICS Think Tank Network, Academic Forum and University Network should be encouraged to establish a network of policy-focused researchers who collaborate in the unique area of population ageing and development. These researchers could share lessons in innovative, cost-effective and inclusive eldercare and healthcare for citizens of developing countries, as well as macroeconomic policy imperatives in the face of 'poor-old' population ageing and other problems.

Prior to the 1990s, most countries were demographically young when they developed, but this is becoming less common – countries now often get 'rich' after they get 'old'

Such a move is especially important today. BRICS members are among the best-resourced developing countries, and development in the face of population ageing is a relatively new and emerging trend. Prior to the 1990s, most countries were demographically young when they developed, but this is becoming less common – countries now often get 'rich' after they get 'old'. The sharing of lessons across large, ageing developing countries may stimulate ideas and innovations that support sustainable ageing and development and also help to reduce the risks of encroaching poverty among elders and the derailment of ageing-related development.

## BRICS, ageing and communities at risk: elder women

An important aspect of any ageing agenda is gender: women tend to live longer than men, earn less income, and accumulate less wealth and fewer pension entitlements over their lifetime compared to men. This becomes a double whammy and a livelihood risk in old age when women are at much greater risk of slipping into poverty. In some cases, this can lead to elevated risk of violence against women. As BRICS members' populations age, it would be a tragedy if these countries also became home to large numbers of under-supported, impoverished and at-risk elder women. It would also be a disaster for families if population ageing was managed badly across generations and over time, resulting in diminished fiscal

resources for younger households and children. Consequently, women and children have a deep vested interest in BRICS members being able to successfully navigate population change and development – concurrently.

**As BRICS members’ populations age, it would be a tragedy if these countries also became home to large numbers of under-supported, impoverished and at-risk elder women**

The BRICS Think Tank community and Academic Forum should be able to tap into related policy, civil society and academic networks to mainstream these interests, not only in direct response to BRICS socioeconomic agendas but also to help drive a sustainable process of demographic change and development across the BRICS group.

### **Fostering investment in sustainable healthcare and elder-friendly products and services**

The cost of healthcare will be particularly important in ‘poor-old’ developing countries, both in terms of how much income older citizens need to spend and hence contribute to the economy and in terms of the cost burden borne by governments in their attempts to foster development and cater to the needs of an increasing number and share of elder citizens in the population. Given the relatively recent emergence of the ‘getting old before getting rich’ phenomenon, the sharing of relevant lessons, technologies and medicines that support sustainable ageing and affordable healthcare should also become a new norm. The BRICS members and the New Development Bank (colloquially known as the ‘BRICS Bank’) should invest resources, both financial and human, to improve the availability and affordability of healthcare among member countries. This could also be a sub-agenda item for the BRICS Business Forum.

In the early days of BRICS, certain member countries took the lead in ensuring that vital drugs would be made available more cheaply in developing countries. BRICS could similarly take the lead in finding innovative ways to deliver affordable healthcare against the backdrop of a development process marked by population ageing. One example is China’s promotion of, and provision of fiscal policy incentives for, investment in ‘elderly tech’ and products geared for seniors, such as walking frames and locational technologies that enable elders to safely continue living at home. Another example is China’s appeal to developers of social media and digital commerce applications to offer simpler/more straightforward alternatives with larger icons for older users so that they can stay engaged with the economy and their communities. Ideally, the BRICS Business Forum should establish a working group to actively target ageing-related industries and promote

affordable products across the BRICS group, which sustainably support the health and livelihoods of seniors at both the national and individual levels in developing countries.

## Sharing policy lessons

As the 'older' BRICS members, China and Russia should be called upon to share their lessons and learning curves, drawing on their in-depth experience of population trends and development. Which areas did policymakers not foresee and are now struggling with that could have been avoided? Regarding the retirement age and pension sustainability, China has a deep network of researchers and government agencies in the country working on these policy areas. An explicit arrangement whereby the 'younger' BRICS members draw on, for example, China's lessons would foster a collaborative spirit within the group, while also helping to reduce related socioeconomic risks.

Similarly, and more recently, China has been experimenting with different models of elder healthcare, especially late-life care. If China, or 'old' Russia, share some of the related policy lessons it has accumulated from its experimental policy agenda, which also deliberately straddle different provinces and income groups in the country, it may yield valuable insights for later developers within BRICS. The same approach can be applied with the ageing-related technology trajectory. What has changed in terms of technology that may also shift the technology trajectory over time?

Chinese academics and those working in think tanks who are engaged in BRICS-related initiatives could take the lead in aggregating their most relevant and valuable lessons so that other BRICS members can learn from them.

## Investing in data

Demographic data is imperative for sustainable population ageing and development, just as it is for broader economic policymaking. To give a rich country example, less than a decade ago Australia's Treasury installed a demographics department to better inform fiscal decision-making from a demographic perspective as well. BRICS members, too, should monitor their economies over time in terms of demographic change – the economic demography transition – and make data available to arrive at a better comparative understanding and to maximise socioeconomic opportunities across countries.

## BRICS Bank and ageing-friendly development

Where the BRICS Bank is investing in development in BRICS member countries, it is important to ensure that it takes into account not only environmental needs but also demographics-related needs. For example, BRICS Bank-funded projects in the domain of physical infrastructure should factor in population ageing – from the optimal density of urban spaces and the sustaining of public transport to the accessibility of all public

transport for the elderly (especially ease of boarding and disembarking). The BRICS Bank can also expand its investments to cover sustainable and affordable care initiatives for the aged, an area in which the World Bank has already begun expanding its investments and advisory services.

In addition, the BRICS Bank or BRICS member country researchers and/or industry associations could be called upon to actively promote ageing-related industries, such as ‘silver tourism’, agricultural and medicinal products that support healthy ageing, and ageing-related tech and manufacturing, such as mobility equipment, walking frames and other devices.

In sum, by collaborating in the population ageing and development arena, the BRICS member countries have an opportunity not only to enhance their own macro-level socioeconomic development and resilience, but also to protect potentially vulnerable communities, such as elder women, and to set a powerful economic demography and development precedent, while also sharing important lessons with other developing countries

In sum, by collaborating in the population ageing and development arena, the BRICS member countries have an opportunity not only to enhance their own macro-level socioeconomic development and resilience, but also to protect potentially vulnerable communities, such as elder women, and to set a powerful economic demography and development precedent, while also sharing important lessons with other developing countries. The expansion of the BRICS group with effect from 2024 may offer additional resources and possibilities for achieving these aims.

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## Cover image

A grandfather sits with his grandson on his lap, teaching him how to play chess in Langebaan, Western Cape, South Africa (Getty/Africalimages)

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