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China's Demographic Peak: Lessons and Prospects for Africa

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African perspectives
Global insights

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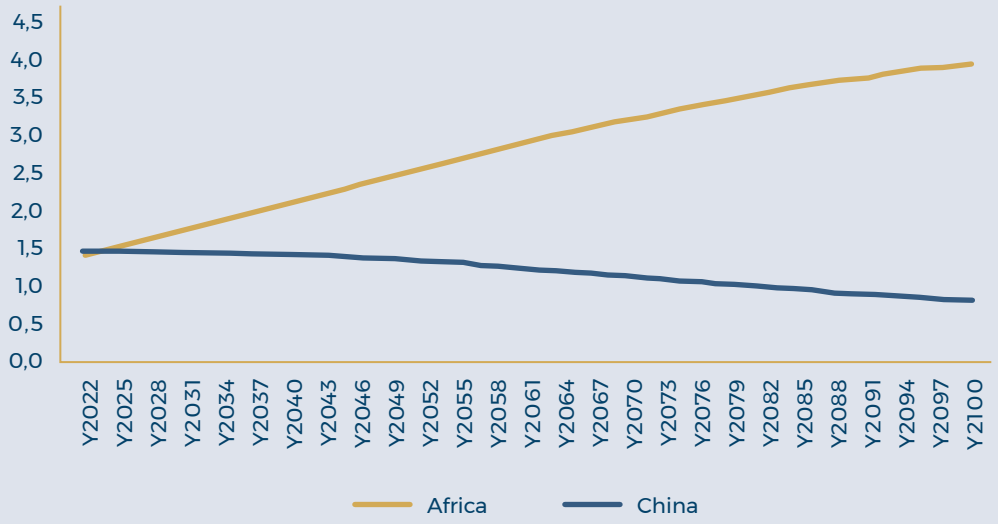
Abstract

The early 2020s mark an epochal point of demographic departure for China and Africa. In a moment where each comprised some 1.4 billion citizens, China's population departed on a downward trend as Africa's increased. China is Africa's most important external economic partner. As the 'poorer' and 'younger' of the two, it is imperative that Africa understands what intensive population ageing and decline likely means for Chinese and African economies. This paper first elucidates related demographic trends and explores the literature around what these mean specifically for China's economy. This sheds light on China's long-run attempt to be prepared for this economic demography phase – for nationally 'getting old before getting rich'. Although African countries face a unique set of contemporary 'mega-threats', a better and proactive understanding of China's economic trajectory and of its long-run underlying approach to economic demography change may turn these mega-threats into unique and contemporary mega-opportunities.

Introduction: China and Africa at a demographic departure

In mid-2022, the UN published the 27th edition of its official population estimates and projections, the *2022 Revision of World Population Prospects*. This publication offers population estimates from 1950 to 2022 for 237 countries or areas. It also presents population projections to the year 2100 that reflect 'a range of plausible outcomes at the global, regional and national levels.'[1] These projections provide a valuable basis for prospecting a few demographic scenarios for Africa and China (see Figure 1).

Figure 1 Total population projections (billions)



Source: UN Department of Economic and Social Affairs, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022

These and additional, updated estimates not only suggest that in 2022 China's population peaked, but also that in 2023 China will lose the 'world's most populous country' title (to India).[2] China has been the world's most populous country for decades and its labour-led economic powerhouse for almost half a century. What does the steady decline of China's population from a peak of some 1.4 billion, possibly to under 800 million by the end of the century, and an increasingly aged population mean for its economic

1 UN Department of Economic and Social Affairs, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022.

2 National Bureau of Statistics of China, Data Interpretation notice 410A04-0502-202301-0011, 'Wang Pingping: The total population decreased slightly and the level of urbanization continued to improve,' January 18, 2023, http://www.stats.gov.cn/xxgk/jd/sjjd2020/202301/t20230118_1892285.html; Brooke Unger, 'India will become the world's most populous country in 2023', *The Economist*, November 12, 2022.

development trajectory? Moreover, what does it mean for China–Africa relations as Africa's total population is expected to rise dramatically, possibly even toward 4 billion by the end of the century?

> What does the steady decline of China's population from a peak of some 1.4 billion, possibly to under 800 million by the end of the century, and an increasingly aged population mean for its economic development trajectory?

It is important to understand the impact of China's ageing population, not least because this can challenge economic growth momentum. As an upper middle-income country, China is faced with the challenge of maintaining relatively rapid growth to help it to reach the economic frontier. A continued decline in its working-age population – in the absence of a shift from factory input-driven to productivity-driven growth – risks a decline in its rate of technological progress. The savings rate of the elderly is relatively low and they are generally net consumers, which will, *ceteris paribus*, lead to a slowdown in capital growth. Improving productivity amid population ageing depends on a combination of broader structural reform, improved labour quality, increased human capital, and the ability to replace labour with automation.

The populations in some of China's key export markets, across most of the high-income world, are also ageing. Domestically, the recent over-reliance on fixed capital investment calls for a shift toward the growth of household consumption demand. This may prove to be a challenge, however. While it is possible that the growing population of elderly will shift from savings to consumer behaviour, their total savings may be low. This is particularly risky given that China was a poor country for most of today's seniors' lifespan. Given low retirement ages and rising life expectancy, retirees may need to thinly distribute their consumption over what is an uncertain length of time. The consumption contribution of China's elderly will, to some extent, be contingent on incremental state rises in the basic pension, on healthy ageing and the affordability and accessibility of healthcare.[3]

As China is Africa's largest external economic partner, China's preparation for this period of population ageing and how it responds to demographic change going forward will be significant for the continent. If population ageing leads to diminished fiscal resources, decreased national savings, and a stagnation of China's economic trajectory, there may be a drop in demand for African exports. This would also force China to reduce its foreign aid

3 Lauren A 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.

and become more cautious in investing in higher-risk destinations. Even if China continues to develop its economy amid dramatic population ageing and population decline, the necessary structural changes in China are likely to change the nature of its economic and political relations with African countries.

With a general focus on China's economic demography trajectory, this occasional paper first explores basic population projections for Africa and China from the *2022 Revision of World Population Prospects*. It then summarises China's unique long-term preparation for this period of population ageing and decline. The paper then explores research on what this means for China's economic trajectory. The focus then shifts to African economies and the impact that these developments may have. The final section sets out detailed policy recommendations for Africa.

Survey of the latest demographic projections

A demographic transition occurs when falling death rates and increasing life expectancy combine to set off a population boom, which continues until fertility rates decline. This in turn produces a gradual shift in the population ageing structure.[4] So far, no country has developed socioeconomically in the absence of an underlying process of demographic transition.[5] Typically, improvements in health and education drive a falling birth rate and early and mid-life mortality rate. Demographic transitions also produce an accelerated economic growth potential associated with changes in the population age structure, specifically with a larger working-age population relative to dependent populations of youth and the elderly.[6] Consequently, economic development supports rising life expectancy and often fewer births per woman, ultimately producing an elevated population share of seniors.

Europe's demographic transition began some two hundred years ago. In China, it took off more recently, in the early 1970s. China's fertility rate began to fall alongside its mortality rate, producing rising life expectancy and, gradually, a higher share of older persons (see Figure 2). The result was a dramatic shift in the population structure over the last fifty years, with a huge but temporary increase in the working age population.[7]

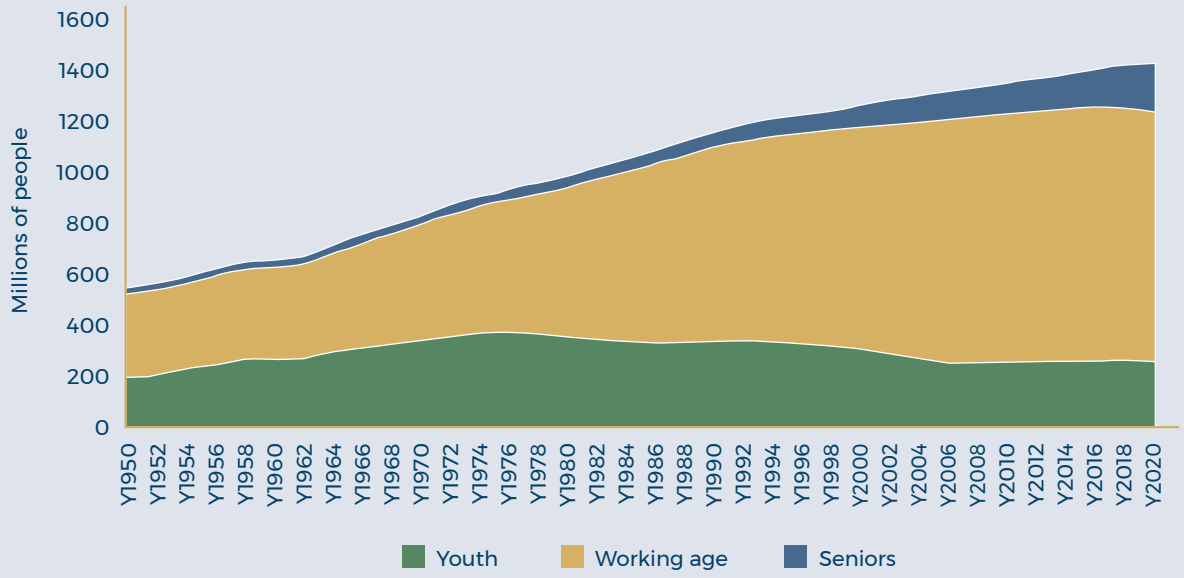
4 Anzelika Zaiceva and Klaus F Zimmermann, "Migration and the demographic shift," in *Handbook of the Economics of Population Ageing vol 1* (Netherlands: North-Holland Publishing Company, 2016), 119–177; David E Bloom et al, 'Does age structure forecast economic growth?', *International Journal of Forecasting* 23, no. 4 (2007), 569–585.

5 Renate Bähr, Dr Reiner Klingholz and Prof Dr Wolfgang Lutz, "When growth limits development," Foreward in *Africa's Demographic Challenges: How a Young Population Can Make Development Possible*, eds. Renate Wilke-Launer, Matthias Wein and Margret Karsch (Berlin: Berlin Institute for Population and Development: 2011), 4–5.

6 Choi, Yoonjoung, "Demographic transition in sub-Saharan Africa: implications for demographic dividend." In *Demographic Dividends: Emerging Challenges and Policy Implications* (Springer: Cham, 2016), 61–82.

7 In China the retirement age varies by industry and for males and females and tends to average between 55 and 60. For international comparability, and since older Chinese tend to do a disproportionate amount of household labour, data here reflects the population age structure around a working-age range of 15 to 64 years.

Figure 2 China, population structure, 1950–2021 (estimates)



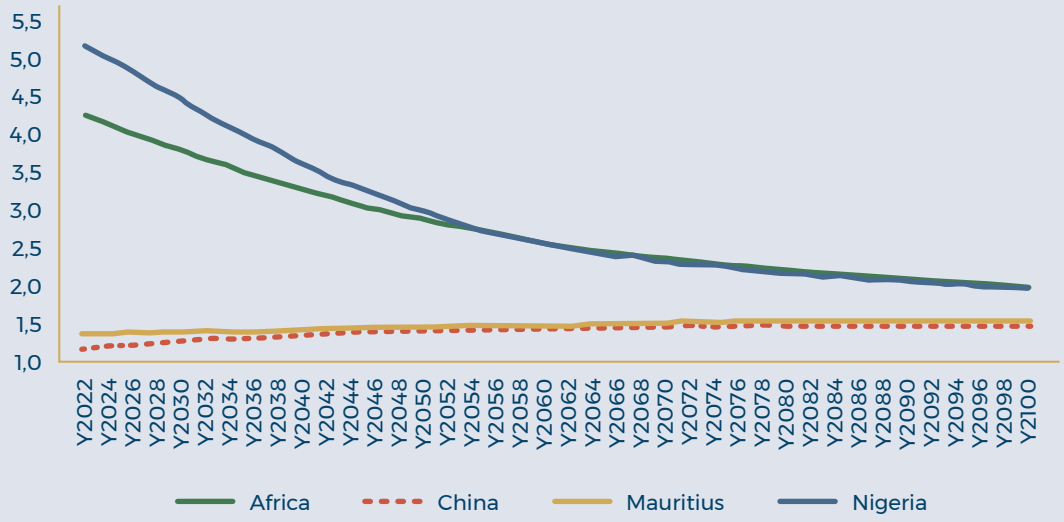
Source: UN, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022

Chinese authorities have implemented a series of family-friendly and redistributive policies, including extended maternity leave and subsidised childcare. Despite these changes, China's total fertility rate (TFR) will improbably not return to let alone exceed the replacement rate of 2.1 births per woman (see Figure 3) in the foreseeable future. In Africa, Mauritius, alongside a few North African countries, are in a similar position. Across the rest of Africa, the TFR remains mostly well above the replacement rate although it is trending down. The UN has predicted that from the current high rate of above four births per woman, Africa's overall TFR will trend downward toward the replacement rate by the end of the century. There are of course significant variations at the country and sub-regional levels.

In both Africa and China, life expectancy is expected to continue to increase. This is especially true in Africa, given the much lower current base. This shift will produce a rising median population age. In Africa's case it will go from below 20 years of age in 2022 to some 35 years by the end of the century. In China, the median age is projected to rise from almost 40 to above 50 in the same time frame (see Figure 4).

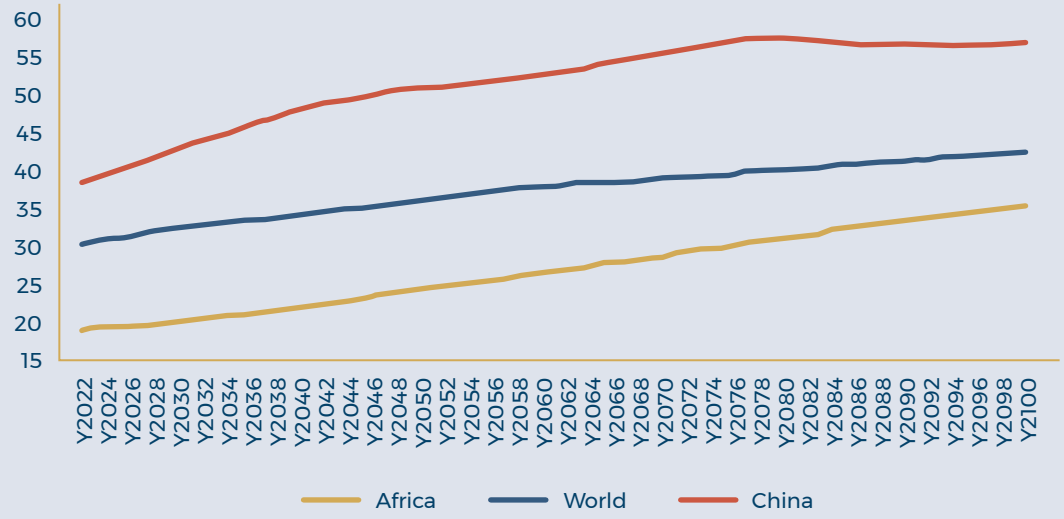
Africa is, however, in the earlier phase of the demographic transition. It also comprises some 54 countries – implying much greater policy and socioeconomic variation. Compared to China, African countries are also exposed to more uncertainty around the TFR's trajectory, whether they will fall to replacement level or not. Hence the overall projections for Africa are likely to embody a higher margin of error than those for China.

Figure 3 Total fertility rates (live births/woman)



Source: UN Department of Economic and Social Affairs, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022

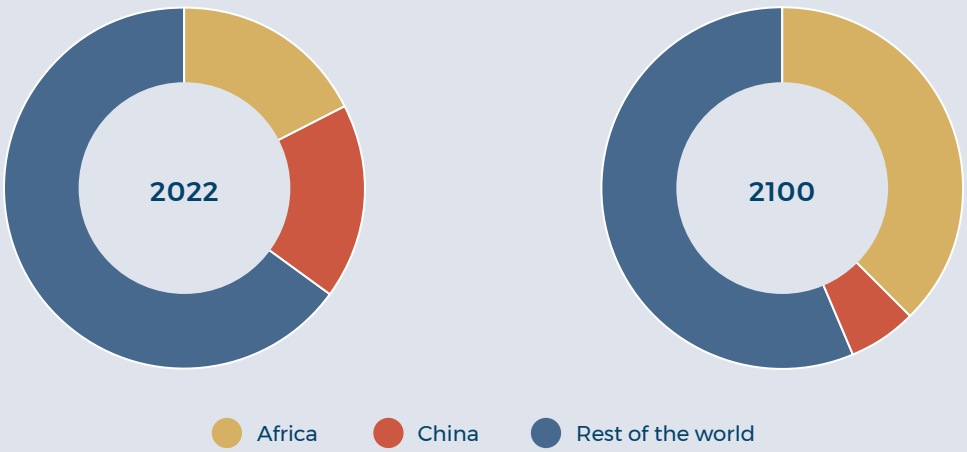
Figure 4 Median age, selected countries (estimates)



Source: UN Department of Economic and Social Affairs, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022

Those forecasts underpin a projected dramatic reshaping of the distribution of the world's population over the rest of the century. Where in 2022 both China and Africa comprise around 17% of the world's population – with a population of some 1.4bn each (see Figure 5) – by 2100 Africa's population may comprise almost 38% of the world's population

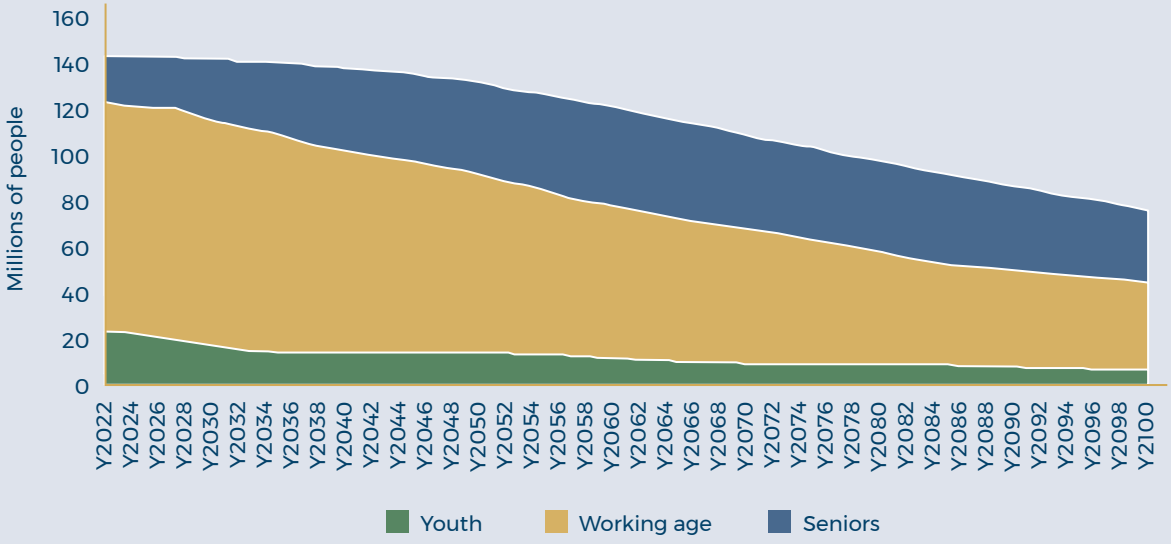
Figure 5 Regional distribution of world population, 2022 and 2100 (estimates)



Source: UN Department of Economic and Social Affairs, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022

and China little more than 7%. While Africa's population will grow and remain relatively young, China's will decline to less than 800 million with a dramatic increase in the share of the population of those aged 65 and over (see Figure 6).

Figure 6 China population structure, 2022–2100 (estimates)



Source: UN, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022

Where in 2022 both China and Africa comprise around 17% of the world's population – with a population of some 1.4bn each – by 2100 Africa's population may comprise almost 38% of the world's population and China little more than 7%

The rapid and intensive population ageing trajectory confronting China today presents a new challenge: there are no historical precedents for how to progress and administer societies where the population is as aged, let alone one with a population that ages as quickly. British economist John Maynard Keynes warned in 1937 that once population growth was controlled there would come a new risk that unemployment would arise as a consequence of lower aggregate demand, lower aggregate savings, less capital accumulation – 'if we are careless'.[8]

Whether, or not, China's policy makers, society, and entrepreneurs can successfully socioeconomically adjust to epochal population structure change will have dramatic impact on the world economy, including Africa. China is the world's second-biggest economy and a leading contributor to global growth. China's preparedness for the period will also matter. Fortunately, China's policy makers have been broadly preparing for this 'old, not yet rich' period since the 1980s and hence appear to have attempted to avoid being 'careless'.[9]

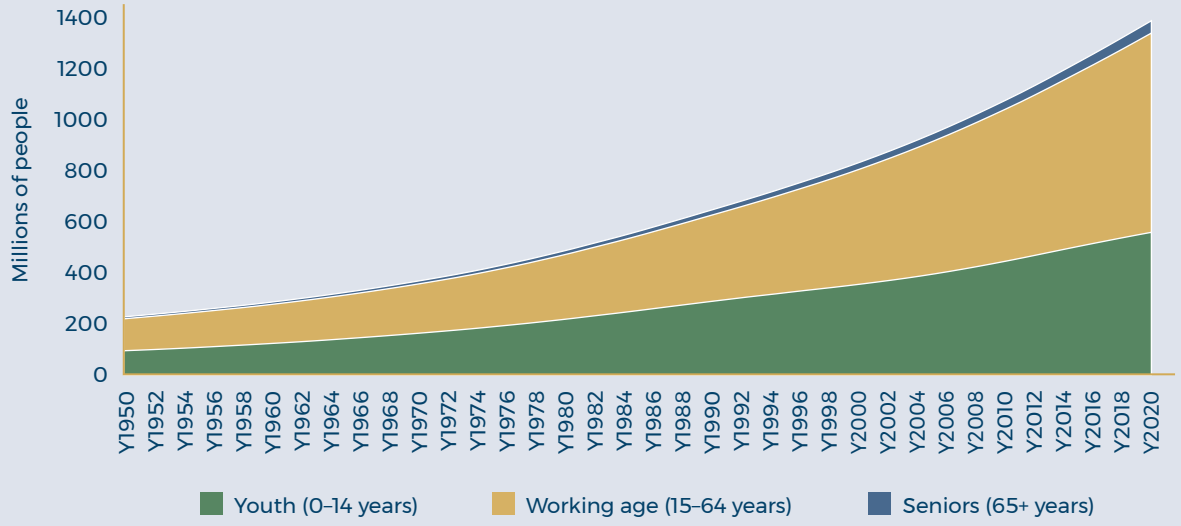
Summary of demographic prospects in African countries

Africa is the world's 'youngest' continent and Niger the world's 'youngest' country regarding their population share of young citizens (those aged 0–14 years). Moreover, the number of young people on the continent has increased from 95 million in 1950 to 562 million from 1950 to 2021 (see Figure 7). Rising life expectancy and an average falling TFR mean that the share of young people on the continent is expected to fall (see Figure 8).

8 John Maynard Keynes, 'Some Economic Consequences of a Declining Population,' *The Eugenics Review* 29, no. 1 (1937): 13–17.

9 Lauren A Johnston, "The economic demography transition: Is China's 'not rich, first old' circumstance a barrier to growth?" *Australian Economic Review* 52, no. 4 (2019): 406–426; Lauren A Johnston, "Getting Old Before Getting Rich": Origins and Policy Responses in China." *China: An International Journal* 19, no. 3 (2021): 91–111.

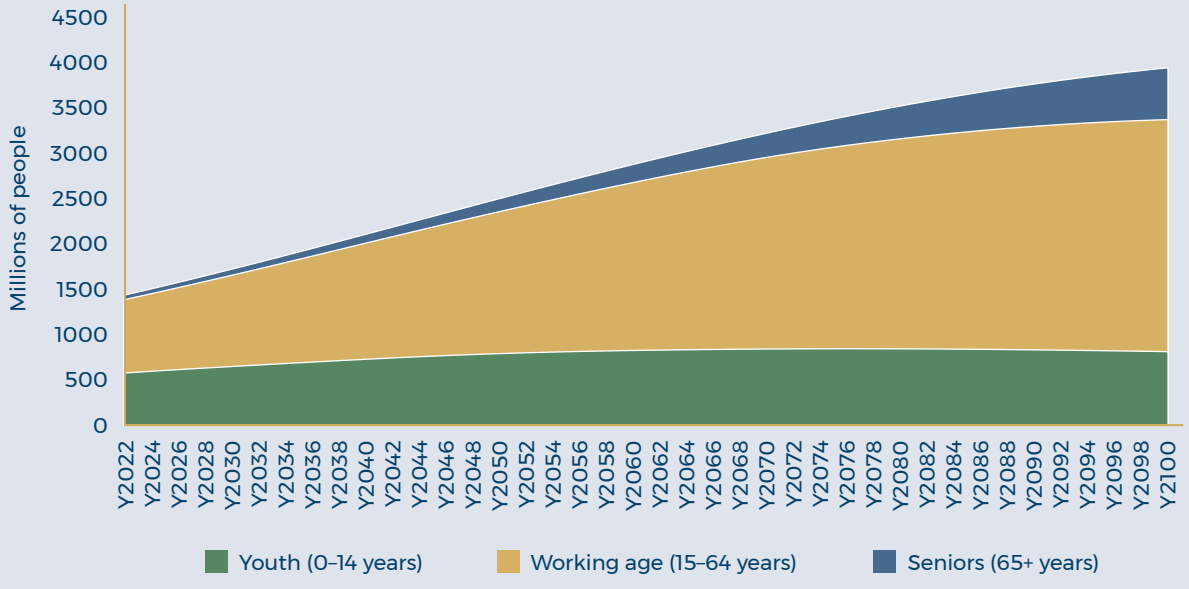
Figure 7 Population structure, Africa, 1950–2020 (estimates)



Source: UN, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022

Figure 8, however, hides vast demographic diversity across Africa. For example, the relative ageing of populations in Northern Africa and the 'youthfulness' of Central African countries – particularly in Angola, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of Congo [DRC], Equatorial Guinea, Gabon, and Sao Tome and Principe.

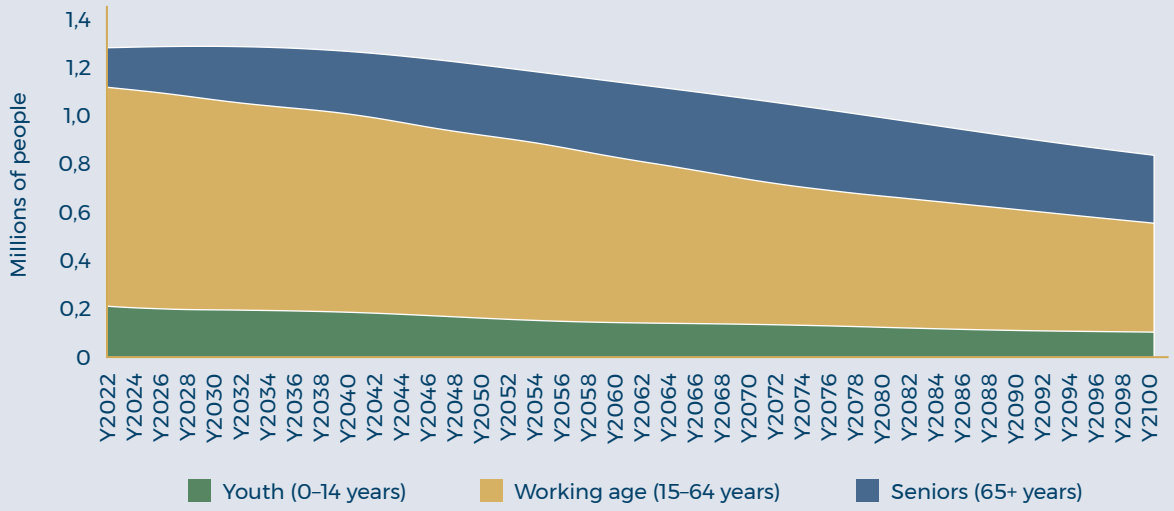
Figure 8 Population structure, Africa, 2022–2100 (estimates)



Source: UN, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022

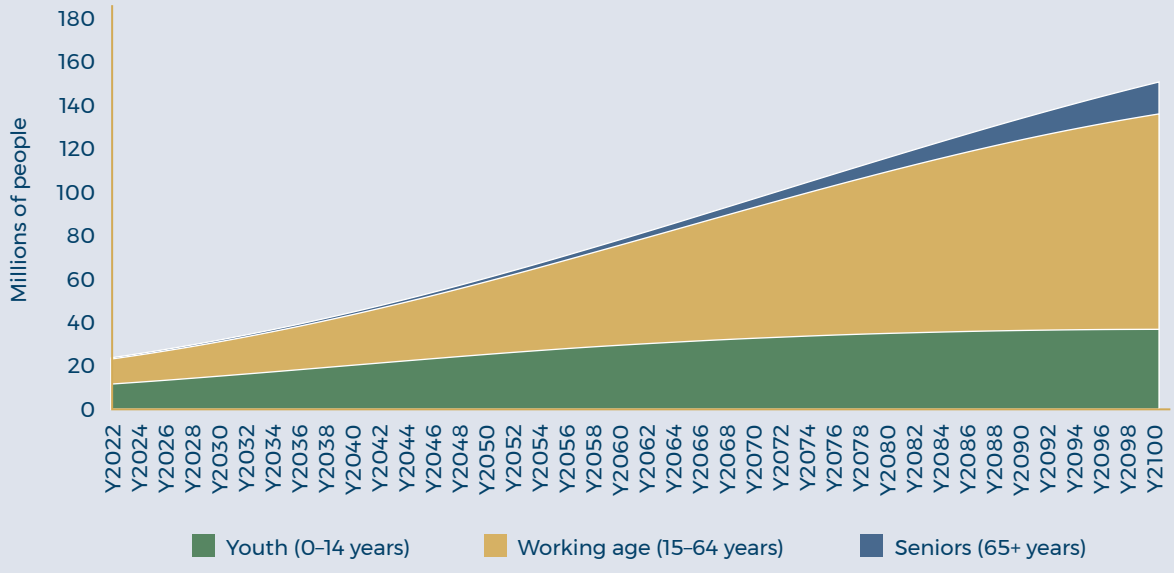
Against Niger's median age of just 15.2 years, Mauritius is the oldest country in Africa with a median age of 37.5 years.[10] The UN has estimated that the population of Mauritius will peak in 2030. Niger's population, on the other hand, is forecast to grow throughout the century (see Figures 9 and 10).

Figure 9 Population structure, Mauritius 2022–2100 (estimates)



Source: UN, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022

Figure 10 Population structure, Niger, 2022–2100 (estimates)



Source: UN, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022

10 UN, *World Population Prospects 2022*.

Table 1 offers a comprehensive country-level window to one aspect of this African population structure-related diversity – timing of onset of 'ageing'. Beginning with a pre-2020s aggregated category, it lists the decade in which each African country has entered or will enter the official phase of 'population ageing.' This is indicated when a country reaches a senior share – when 7% of the population is aged 65 and above.

> Where two African countries – Seychelles and Tunisia – entered a 'population ageing' phase late last century, not until the 2080s will six other African countries enter the 'ageing' category

Data in Table 1 shows that where two African countries – Seychelles and Tunisia – entered a 'population ageing' phase late last century, not until the 2080s will six other African countries enter the 'ageing' category. This is an entire century after Seychelles.

TABLE 1 DECADE REACHING AGEING POPULATION 7% SENIOR POPULATION SHARE, AFRICAN COUNTRIES (ESTIMATES)

Decade	Countries
Pre-2020s	Seychelles (1980); Tunisia (1999); Mauritius (2004); Morocco (2016)
2020s	Algeria (2025); Cabo Verde (2028)
2030s	South Africa (2030); Libya (2031); Egypt (2037); Djibouti (2038)
2040s	Botswana (2044); Gabon (2048); Comoros (2049); Ghana (2049)
2050s	Eswatini (2053); Equatorial Guinea (2054); Namibia (2055); Rwanda (2055); Kenya (2056); Lesotho (2056); Ethiopia (2057); Eritrea (2058); Madagascar (2058); Senegal (2058)
2060s	Sierra Leone (2060); Sudan (2062); Guinea (2063); Guinea-Bissau (2063); Gambia (2064); Sao Tome & Principe (2064); Mauritania (2065); Zimbabwe (2065); Malawi (2066); Liberia (2067); Tanzania (2068)
2070s	Togo (2070); Zambia (2070); Burkina Faso (2071); Congo Rep (2071); South Sudan (2071); Uganda (2071); Burundi (2072); Cameroon (2072); Mozambique (2073); Benin (2074); Cote d'Ivoire (2074); Nigeria (2074); Angola (2077)
2080s	Mali (2081); Central African Republic (2082); Somalia (2082); Congo DRC (2083); Chad (2086); Niger (2088)

Source: UN, *World Population Prospects 2022*, https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022; World Bank, *World Development Indicators*, https://databank.worldbank.org/source/world-development-indicators

Those forecasts, however, may prove to under- or overestimate the rate of change of countries' demographic transitions. This may be especially true with case of unexpectedly rapid falling of the TFR or rising life expectancies.

The last set of UN estimates, in 2019, for example, estimated Cabo Verde would enter the population ageing category in the 2030s. Only three years later, the 2022 estimates show Cabo Verde reaching this point in the 2020s. In another example, in the 2019 estimates Niger and Somalia were expected to transition to ageing population status in the 2090s, but by the 2022 estimates, that transition is forecast to occur in the 2080s.[11]

To some extent, Africa's overall population structure forecast through the 21st century (see Figure 8) is broadly comparable to China's from 1950 until around 2020 (see Figure 2), but at a different scale. Both show a steadily increasing elder population share, a progressively falling child population share, and a burgeoning potential worker population. For Africa, this could lead to reaping a demographic dividend – a boost in output that results from a (transitory) elevated working-age population share.

The World Bank's *World Development Indicators* demographic dividend threshold indicators – pre-dividend, early dividend, late dividend, and post-dividend – offer a respective set of demographic indicators. These are child population share, working age population ageing (15–64 years), senior population share (aged 65 years plus), and the economic implications of those projections. These can be used to survey each country's approximate contemporary dividend-related demographic phase. This paper does not explore such demographic details of African countries – there is insufficient space, and moreover other studies recently have.[12] That data and the selected papers find that most African countries remain in the pre- and early dividend window, including large population countries such as the DRC, Ethiopia, Nigeria, and Tanzania. Talk of a contemporary 'African' demographic dividend remains premature.

At the country level, however, Morocco and South Africa are among a minority of countries at least demographically well-positioned to realise such potential. Capture of demographic dividend potential for development is, however, not automatic but instead is policy dependent. For example, it is highly dependent upon investments in health and education, which may be lacking in many countries in Africa.[13] Accordingly, uncertainties around imperfect data, especially concerning child labour, informal employment, education quality, and senior workers, complicate our understanding of Africa's economic demography dynamics.[14]

Moreover, demographic change will play out differently in economic and political context across countries in Africa (as it will across the world). South Africa, for example, has long

11 Lauren A 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.

12 Johnston, 'Getting Old Before Getting Rich'.

13 David Canning, Sangeeta Raja, and Abdo Yazbeck, eds., *Africa's Demographic Transition: Dividend or Disaster?* (World Bank Publications 2015); Ahmed Amer et al. 'How Significant Is Sub-Saharan Africa's Demographic Dividend for Its Future Growth and Poverty Reduction?', *Review of Development Economics* 20, no. 4 (2016): 762–93; David Bloom, Michael Kuhn, and Klaus Prettner, 'Africa's Prospects for Enjoying a Demographic Dividend,' *Journal of Demographic Economics* 83 no. 1 (2017): 63–76.

14 John May and Vincent Turbat, 'The Demographic Dividend in Sub-Saharan Africa: Two Issues that Need More Attention,' *Journal of Demographic Economics* 83, no. 1, (2017): 77–84.

been a magnet for job-hunters from across the continent. This pattern is expected to become more pronounced as populations in poorer countries increase, while South Africa's population growth slows. In response, South Africa could align its demographic transition advance with incremental greater opening of rights for workers coming from other African countries. South Africa may also foster new outbound investment. For these and other economic demography-related preparations to be successfully implemented, however, policy effectiveness, data availability, and scenario scoping and planning need to be improved.[15]

Regardless of demographic dividend proximity – or the speed of any related change – all countries can benefit from adopting a domestic and cross-country demography approach to economic development. For 'younger' countries, reviewing the experiences and lessons of 'older' countries might be helpful. China offers a case in point thanks to the developmental policy implications of its strict family planning regime of the 1980s.

China's unique 'getting old before getting rich' development policy approach

China's demographic dividend years (1970s–2010s)

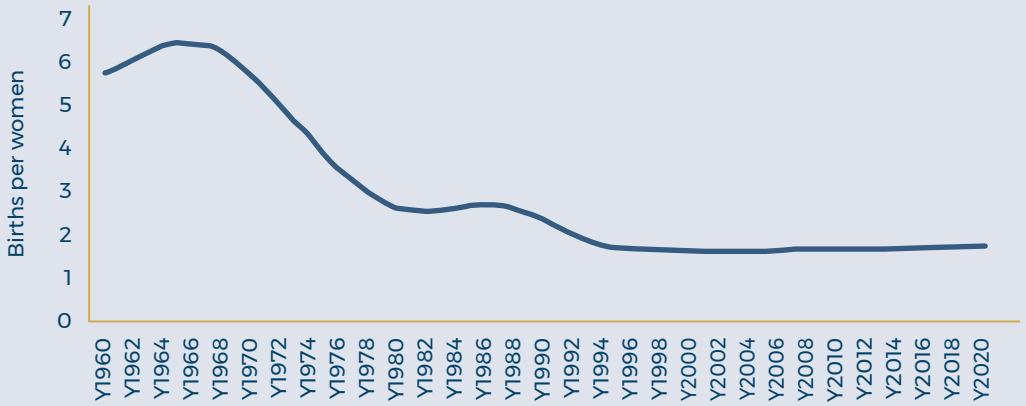
Prior to the implementation of the One Child Policy in the 1980s, China had experienced three decades of population growth. In the 1950s and 1960s it was exceptionally rapid and ultimately contributed to political disorder and a tragic famine. From the 1970s, China adopted a population growth moderation agenda known as the 'later, longer, fewer campaign', referring to a call that couples start forming a family 'later', wait 'longer' between children, and have 'fewer' children overall. The agenda led to rapid declines in China's total fertility rate (see Figure 11), and an elevated working-age population share over the following decades (see Figure 12).

China expected that a bumper crop of hundreds of millions of low-income citizens would come of working-age in the 1980s (see Figure 12). In preparation, in December 1978, China's then paramount leader Deng Xiaoping launched a dramatic turn away from the country's policy of broad economic isolation in international trade and investment. With his speech 'Emancipate the mind, seek truth from facts, and unite as one to face the future on 13 December 1978, he launched China's 'reform and opening' era.[16] The goal was not only support the modernisation of the economy and elevate income levels, but also to

15 Letitia Jentel (Futures Programme Manager, South Africa Institute of International Affairs), interview by Lauren A Johnston, December 2022.

16 Barry Naughton, 'Deng Xiaoping: the economist,' *The China Quarterly* 135 (1993): 491–514.

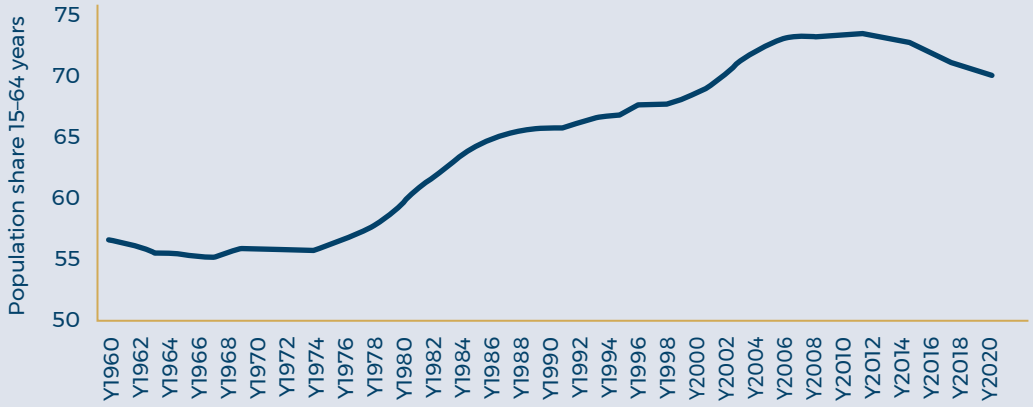
Figure 11 Total fertility rate, China



Source: World Bank, World Development Indicators Fertility rate, total (births per woman) https://data.worldbank.org/indicator/SP.DYN.TFRT.IN

create jobs for the hundreds of millions of Chinese born in the 1950s and 1960s.[17] This new approach also marked a new political imperative to modernise China's socioeconomic circumstance and shift the country towards the international frontier.

Figure 12 Working-age population share, China



Source: World Bank, World Development Indicators (working age population share, aged 15–64 years) https://data.worldbank.org/indicator/SP.POP.1564.TO

17 The following day the UN General Assembly passed resolution 33/52 recognising the need to call worldwide attention to the serious challenges of ageing and agreed to convene an inaugural world ageing assembly in 1982. China's representatives loosely instigated early national population ageing preparedness.

Realising these modernisation objectives on a per capita level – given rates of population growth – would require high rates of economic growth per capita. Even though the TFR had fallen dramatically in the 1970s (see Figure 11), China's population growth rate remained above replacement level. To reduce the growth rate required for modernisation (to address other factors such as food security) the government introduced the 'One-Child-Per-Couple' policy (OCP), incrementally from 1980.[18] As a result of this policy, hundreds of millions of Chinese born in the 1950s and 1960s did not increase China's total population further beyond its domestic food security limits or bring political instability in the process.

Implementation of the OCP, moreover, all but fixed China's demographic trajectory at a time when China was still a low per capita income country. The decision to impose extreme household formation restrictions also led the state to forecast all possible consequences for socioeconomic development. One forecast revealed that there was no feasible growth rate via which China would get 'rich' – become a high per capita income country – before it became 'old'.[19] Under the most optimistic of the scenarios, China would only become a middle-income per capita country by the time of intensification of population ageing. In Chinese, that economic demography destiny became known as 'first old, not (yet) rich', and that in turn in English as 'getting old before getting rich'.

Getting old before rich was a concern for policymakers because a falling working-age population share would put early pressure on productivity per worker. Population ageing would contribute to diminishing low wage-related factor advantages ahead of China's accumulated new factor advantages, such as elevated human and technological capital levels. China feared it would not be able to replace its labour advantages with capital advantages. Worse, it would need to redirect human and financial resources away from national development and into care and pensions, from when population ageing intensified.[20]

Where China has tended to look to successful regional economies – including Japan, Singapore, Taiwan, and Hong Kong – as lighthouses for charting its development path, these economies are all high-income economies with a demographically young population. For forging a 'getting rich after getting old' model of development, there was, that is, no roadmap.[21] This pathway of getting rich may not even be possible, yet China had no choice but to forge such a likely – and new – scenario.

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18 Quanbo Jiang, Shuzhuo Li and Marcus W Feldman, 'China's Population Policy at the Crossroads: Social Impacts and Prospects,' *Asian Journal of Social Science* 41, no. 2 (2013): 193–218.

19 Cangping Wu, 'The objective criterion to measure the adaptation of population development and economic development: The economic basis for advocating a couple to have only one child at the current stage in China,' *Population Research* 1 (1980): 32–38 (in Chinese); Cangping Wu, *Population Ageing Discussion* (Shenyang: Liaoning People's Publishing House 1986) (in Chinese); Cangping Wu and Guangzong Mu, 'Low fertility rate, market economy and population control in China,' *China Population Science* 3 (1996): 1–10 (in Chinese); Cangping Wu, 'Population as a consistent challenge in sustained economic growth,' *Population Research* 30, no. 2 (2006): 2–9; Cangping Wu and Peng Du, *Population Ageing in China: Changes and Challenges* (Beijing: China Population Publishing House 2006) (published in Chinese).

20 Lauren A Johnston, 'The Economic Demography Transition: Is China's "Not Rich, First Old" Circumstance a Barrier to Growth?' *Australian Economic Review* 52, no. 4 (2019): 406–426.

21 Lauren A Johnston, et al., 'Getting old after getting rich: Comparing China with Japan,' *East Asia Forum*, vol. 22 (2012).

A long-run policy response to 'getting old before getting rich'

Fear that 'getting old before getting rich' would inhibit China's long-run development aspirations, led however, to innovative policy planning. It produced a uniquely cointegrated approach to economic and demographic change – and even a model of development.[22] That 'economic demography transition strategy' is simplified in the paragraphs below as a two-tier approach. The first tier sought to identify and implement policies to ensure China captured its low-wage demographic dividend period for rapid economic development. The second tier concerned early incremental preparations, both direct and indirect, for the later period of intensive population ageing. That is, when China would be 'old' but not yet 'rich' and need to cater for large numbers of elderly at the same time as continuing a process of economic development.[23] See Table 2 for the broad chronology of this economic demography development strategy.

TABLE 2	OVERVIEW OF CHINA'S ECONOMIC DEMOGRAPHY TRANSITION STRATEGY
1980–1990s	Capture demographic dividend (labour-intensive investment incentives)
	Better educate the next (smaller) cohort to ensure later elevated productivity potential
	Create population ageing commission to lead the instigation of a population ageing-preparedness agenda
2000s	Focus on preparations for elevated human welfare and elevated population dependents, such as a rising numbers of pensioners (eg, health, social security, and pensions)
	Scale up investment in science and technological capacity (to support more capital-intensive over labour-intensive growth)
2010s	Promote capital-intensive investment and investment in universities, science, and technology
	Develop active ageing-industries strategy and incentivisation (eg, equipment and services needed by the elderly; pension and wealth management industry incentives)
2020s	Push for social and economic ageing-related tech and industry innovation; push up technology value chain; and foster economic drivers to shift from labour- to capital-related factor advantages
2030s	Ensure each cohort is progressively richer and more educated than last (ie, a constant if not rising effective labour supply) to accommodate older population's needs without derailing national development

Source: Summarised from Lauren A Johnston, *China's Economic Demography Transition Strategy: A Population Weighted Approach to the Economy and Policy* No. 593, GLO Discussion Paper, 2020, https://www.econstor.eu/handle/10419/222235; Lauren A Johnston, "Understanding demographic challenges of transition through the China lens," in *The Palgrave Handbook of Comparative Economics*, pp. 661–691, Palgrave Macmillan, Cham, 2021

The path for realising the first tier – maximising the development potential of the demographic dividend – involved a set of policies unique to China's Maoist baseline of autarky and socialism. Early reforms included the 'Law on Chinese-Foreign Equity Joint Ventures' of 1979 that committed China to offering a greater level of protection of foreign

22 Johnston, 'The Economic Demography Transition'; Johnston, 'Getting Old Before Getting Rich'.
23 Johnston, 'The Economic Demography Transition'; Johnston, 'Getting Old Before Getting Rich'.

property.[24] The 'Trial Measures on Using Imports to Support Exports' also of 1979 introduced a trade/exchange regime that was favourable for imports used in the development of exports.[25] Moreover, given China's scale and autarky baseline, its opening began along the coast, via the Coastal Development Strategy.[26]

In August 1980, the 'Guangdong Special Economic Zones (SEZs) Regulations' were approved, leading to trade and modernisation powerhouse SEZs in Shenzhen, Zhuhai, Shantou and Xiamen that have since changed the world economy also.[27] Rights were established for waves of migrant rural labour to move from informal employment in the countryside to formal employment in urban areas and export-oriented coastal hot spots.[28] Such policies laid the foundations for China to reap a 42-year demographic dividend – from 1972 to 2014 – which boosted growth by as much as 1.4% annually.[29]

The second tier, preparing for the ageing population in advance, had both social and economic policies. These included aged care-related preparations and promoting education of China's smaller younger cohort. The social programs focused on establishing necessary pensioner and aged care policies and physical infrastructure, including seniors' rights and health system foundations. The principal related policy reforms in Table 3 highlight policymaking's intensive and systematic gradualism over time. However, there was and still remains uncertainty that China will meet the needs of its burgeoning aged population.

This implies that African countries, despite being home to a youth bulge today – as China was in 1980 – should advance a successful locally-adjusted cointegrated economic demography transition approach too. In China's case, a choice was made in that context to impose the OCP. Even in the absence of family planning policy interventionism in Africa, socioeconomic progress is already increasing life expectancy. The number and share of seniors are changing (see Table 1) as are household formation patterns. Each country's national development strategy should dynamically and comprehensively accommodate economic and demographic change. Even in the 'youngest' country, a long-run economic demography approach that appropriately optimises that youthfulness both within the

24 John Zhengdong Huang, 'An introduction to foreign investment laws in the People's Republic of China,' *J. Marshall L. Rev.* 28 (1995): 471–471.

25 Dali L Yang, 'China adjusts to the world economy: the political economy of China's coastal development strategy,' *Pacific Affairs* 65, no. 1 (1991): 42–64.

26 By 2020, although China remained a middle-income country, its coastal provinces – and especially those that were the focus of the CDS – were mostly high per capita income sub-regions, including Beijing, Tianjin, Jiangsu, Shanghai, Zhejiang, and Fujian, alongside Guangdong. The regional sequencing of growth underpinned China's success, but also led to such cross-regional inequalities; Yang, 'China adjusts,' 42–64.

27 Zai Liang, 'Foreign investment, economic growth, and temporary migration: The case of Shenzhen special economic zone, China,' *Development and Society* 28, no. 1 (1999): 115–137.

28 Fang Cai and Meiyan Wang, 'Growth and structural changes in employment in transition China,' *Journal of Comparative Economics* 38, no. 1 (2010): 71–81; Fang Cai and Du Yang, 'Wage increases, wage convergence, and the Lewis turning point in China,' *China Economic Review* 22, no. 4 (2011): 601–610.

29 Andrew Mason et al, 'Support ratios and demographic dividends: Estimates for the World' (Technical Paper 1, New York (NY): Population Division, UN, 2017); Ross Garnaut, Ligang Song and Fang Cai eds., *China's 40 years of reform and development: 1978–2018* (Australia: ANU Press, 2018).

country and across countries may improve economic development prospects across the whole population and time.[30]

TABLE 3 SELECTED POPULATION-AGEING RELATED POLICY INITIATIVES, CHINA (1982–2020)		
Year of issuance	**Policy/Issue**	**Description**
1982	Committee on ageing formed to participate in the First World Assembly on Ageing	The first group of officials dedicated to ageing issues.
1983	National Working Commission on Ageing formed	Commission was charged with identifying important issues and laying the foundation for national ageing-related architecture and implementing or overseeing the related work.
1991	UN and China adopt the Principles for Older Persons	On 16 December 1991, the UN General Assembly adopted the UN Principles for Older Persons (Resolution 46/91).
1994	Seven-Year Development Outline on China's Work on Ageing (1994–2000)	Proposed the general objectives of China's work on ageing, defined by ageing-related items for national economic and social development.
1996	Law of Safeguarding Rights and Interests of the Elderly	The state is responsible for establishing an old-age insurance system, safeguarding the basic livelihoods of the elderly (the first legal recognition of elderly rights).
1999	Year of the Elderly; China reaches ageing milestone	The General Assembly (Resolution 47/5) decided to observe the year 1999 as the International Year of Older Persons – the same year China's share of population aged 60 and above reached 10%, which is the threshold of 'ageing'.
1999	World Health Organisation proposed 'Active Ageing'	Policy framework for informing discussion and action plan formulation that promote healthy and active ageing. By definition, 'active ageing is the process of optimising opportunities for health, participation and security to enhance quality of life as people age.'
2000	The Communist Party of China (CPC) Central Committee and the State Council Decision on Strengthening Work on Ageing	Safeguard elderly rights and interests; develop the service sector for the elderly; ensure related funding and infrastructure; carry out advocacy for the elderly.
2001	Outline of the 10th Five-Year Plan for China's Work on Ageing (2001–2005)	Establish an urban-rural old-age security system; establish a community-based elderly management and service system; expand the activities for the elderly; advocacy; establish a normal investment mechanism for work on ageing; and improve the overall ageing-related system.
2001	Decision to Strengthen the Work on Ageing issued by Central Committee of the CPC and the State Council	A policy system built on the Elderly Law, guided by the five-year plan goals for ageing and socio-economic development, with emphasis on active response to population ageing. The system covers policymaking of elderly welfare in various aspects such as social security, elderly health, services, education, social participation, and age-friendly environment construction.

30 There may also be a new basis for cross-country child sponsorship programs – for persons in countries with few children and a low-child population share to sponsor childrens' progress in 'child-rich' countries.

Year of issuance	Policy/Issue	Description
2006	The 11th Five-Year Plan for China's Work on Ageing (2006–2010)	Establish an elderly social security system compatible with the economy and society, and as with other security systems; establish a comprehensive system of policies and regulations on ageing; and actively promote the construction of elderly-friendly infrastructure.
2011	The 12th Five-Year Plan for China's Work on Ageing (2011–2015)	Establish basic strategic framework centring on ageing; improve the urban-rural social old-age security system; improve basic elderly medical care system; enhance home-based and community-based care networks; promote planning and construction standards for elderly-friendly infrastructure; and increase amenities for elderly culture, education, and fitness activities.
2013	Opinions on Supporting Development of Elderly Services Industry of Health Services	Opinions issued by the State Council which called for deeper all-round investment in direct and indirect areas that underpin development of a modern and sustainable elderly services industry and related health services.
2015	Opinions on Encouraging Private Capital to Participate in the Development of Pension Services	Opened the aged care sector to greater private investment, including foreign investors. Marked the beginning of a greater role for private investors in areas such as operating residential homes, pension funds, and establishing links between the medical sector and medical training sector and aged care services.
2016	13th Five-Year Plan includes section on 'actively responding to population ageing'	Emphasise the need to shift to new growth drivers; optimise human capital development; expand the scientific and innovative frontier in China; and actively respond to population ageing.
2017	The 13th Five-Year Plan for National Work on Ageing and Elderly Care System Construction	Improve the multifaceted, inclusive, fair, and sustainable social security system; improve home care, community support, institutional backup and medical nursing care integration; enable institutional structure to facilitate government and market roles; and create a social environment that is congenial to work on ageing and old-age care system.
2017	Several Opinions of the General Office of the State Council on Fully Liberalising the Elderly Service Market and Improving the Quality of Elderly Service	Establish a subsidy system for financially strapped and incapacitated seniors; develop home-based old-age care services; enforce the migration of household registration of the elderly who move to their children's place; promote the construction of elderly-friendly communities and cities; further expand coverage of legal aid; and increase integration of medical and nursing care.
2019	Opinions on Promoting the Development of Aged-care Services	Comprehensive agenda for advancing every aspect of aged care, from staffing to granting land for age-related infrastructure, and bond-related and foreign investment in pension-related financial services.
2019	The mid- and long-term national plan for actively responding to population ageing (Nov.)	States the related challenges and opportunities; a proactive national response is a requirement for achieving high-quality development and for maintaining social harmony and stability in this context.
2020	Guiding Opinions on Promoting the Development of the Aged Products Industry	Encourage all economic sectors to be innovative and productive in sectors of importance to older populations, eg, mobility-related technology products, healthcare products, and related communication-facilitating technologies.

Year of issuance	Policy/Issue	Description
2021	14th Five-Year Plan (2021–2025) (March), and the 14th Five-Year Plan for the National Ageing Industry Development and Elderly Care Service System (Dec).	Further promote ageing-related infrastructure, including smart products that facilitate real-time usage data and equipment that helps with elder safety. China will also work toward created an integrated nursing home and health care facilities service. A focus on disabled elders living with the least means was announced.
2022	Report of the State Council on the Progress of Strengthening and Promoting Ageing Work (Aug.)	China's highest policy-making body, the State Council, published a comprehensive review of preparations for intensive population ageing, with recommendations for how to improve progress.
2022	20th National Congress of the Communist Party of China (Oct.)	Promise to continue proactively responding to population, including via constructing a family-friendly society that may boost birth rates.

Sources: National Population and Family Commission website, www.nhfpc.gov.cn (accessed 2019-2022); Lauren A Johnston, '"Getting Old Before Getting Rich": Origins and Policy Responses in China,' *China: An International Journal* 19, no. 3 (2021): 91–111; Wu, Yushao. 'Retrospect and prospect of China's ageing policy in the past 20 years,' *China Journal of Social Work* (2022): 1–8; Elena Glinskaya, Bert Hofman and Lauren A Johnston (World Bank mimeo); China National People's Congress, Report of the State Council on the Progress of Strengthening and Promoting Ageing Work, August 30, 2022

Maintaining constant output with a declining working-age population share, all else constant, requires elevated productivity per worker. This is driven either by elevated human capital or technology improvements.[31] In the case of a developing country, however, this means there must be significant investments in education of smaller and younger cohorts during the process of demographic transition – but resources available for educating a falling youth population share may be limited. Since 'most investments in human capital raise observed earnings at older ages, because returns are added to earnings then, and lower them at younger ages, because costs are deducted from earnings then' there is a high chance that fiscal revenues and household income are instead allocated to immediate needs and not toward long-run national economic demography needs.[32] Later however, when population ageing intensifies and there is a smaller working-age cohort who do not have sufficient human capital or technology to drive productivity that accommodate the whole population's needs and continue growing the economy, there lies an increased risk of stagnating or decreasing per capita living standards.[33] These circumstances would also produce elevated incidence and depth of senior poverty too.

In China's case, investment in the future workforce's education, as well as technology and automation, has been significant over recent decades. It has, however, also been

31 Nicole Maestas and Julie Zissimopoulos, 'How longer work lives ease the crunch of population aging,' *Journal of Economic Perspectives* 24, no. 1 (2010): 139–60.

32 Gary S Becker, 'Investment in human capital: A theoretical analyses,' *Journal of Political Economy* 70, no. 5 (Part 2, 1962): 48.

33 This late phase of elderly dependency-ratio-induced stagnation, a corollary to the Malthusian Trap, has been identified as the Johnston Trap (Johnston, *The Economic Demography Transition*; Johnston, *Getting Old Before Getting Rich*).

biased toward youth in and the economies of China's wealthier coastal provinces.[34] The education of the much larger share of youth in China's remote and rural regions, however, substantively lags behind. Nonetheless, by 2018, more than 45% of new entrants to the labour force had a tertiary-level qualification. Data shows that 45.7% of students enrolled in post-secondary vocational colleges and universities are 18 to 22-year-olds,[35] many of whom are science and technology (STEM) subject area graduates.[36] It is not known if the share of quality of human capital – at the average level and in terms of the required total for modernisation – will be sufficient for China's ambitious modernisation agenda, given these rates of demographic change.

Overall, the government's approach targets achieving a 'Youth Education Effect' that in turn produces a 'Cohort Replacement Effect'. The aim is at least a constant level of effective labour – even as the number and population share of workers fall. This underpins a targeted change from the demographic dividend growth increment to a talent-based growth increment as population ageing intensifies. China has stated that this transition from labour quantity to labour quality is geared toward 'higher quality growth'. Whether China is likely to achieve this necessary balancing act is far from given.[37]

A recent estimate suggests that China's human resources-adjusted population will rise (in 2020 population equivalent terms) from 1.425 billion to 1.644 billion by 2050.[38] This equates to an average annual growth rate for China's human resources stock of 0.48% – despite a broader trend of population decline. That favourable human capital trajectory is, however, the product of a long-run economic-demography-weighted development agenda that began in the 1980s. A local equivalent should be formulated in every country, including those in Africa.

In summary, early in the 1980s, China embarked on a process of reform to create jobs for the hundreds of millions of citizens born in the 1950s and 1960s, while reaping a demographic dividend in the process. It also traced the rate of demographic change and projected what this would likely mean for the economy at each stage of development, and into the long run. A long-run economic demography transition strategy was put in place that would include building health- and aged-care and pension foundations when China's population was still 'young'. Moreover – and despite fiscal limitations – China fostered 'early' investments in education and science. This was done to ensure that China would

34 Scott Rozelle and Natalie Hell, "Invisible China," In *Invisible China* (Chicago: University of Chicago Press, 2020).

35 'Chinese University Graduates Rise Exponentially, Have Diverse Career Options,' *Xinhuanet*, June 24, 2019, http://www.xinhuanet.com/english/2019-06/24/c138169311.htm.

36 American Institute of Physics, 'Rapid Rise of China's STEM Graduates Chartered by National Science Board Report,' *Science Policy News Bulletin*, January 31, 2018, https://www.aip.org/fyi/2018/rapid-rise-china%E2%80%99s-stem-workforce-charted-national-science-board-report. It is not known if the share of quality of human capital, at the average level and in terms of the required total for modernisation, will be sufficient for China's ambitious modernisation agenda.

37 Rozelle and Hell, *Invisible China*; Johnston, 'Getting Old Before Getting Rich'; Pettis, Michael, "The contentious debate over China's economic transition" *Policy Outlook, Carnegie Endowment for International Peace*, March 25, 2011; Michael Pettis, 'China must sacrifice GDP growth to rebalance its economy,' *South China Morning Post*, October 6, 2022, https://www.scmp.com/comment/opinion/article/3194792/china-must-sacrifice-gdp-growth-rebalance-its-economy.

38 'Li Daokui, 'Although the total population has reached its peak, the total human resources will continue to grow before 2040,' *Sina News*, February 12, 2023, https://finance.sina.com.cn/tech/roll/2023-02-12/doc-imyfnefq9410757.shtml.

be ready to reap a talent dividend once the demographic dividend began to fade. That is, when China was still a middle-income country and could use the talent dividend to keep pensioners out of poverty and keep the country on track to become a high-income per capita nation. Many challenges lie ahead, however. The implications of China's success – or otherwise – in confronting the reality of its population ageing are vast, for China and the world economy.

China's economy with intensive population ageing

Population ageing can challenge economic growth momentum. A loss of working-age population numbers and population share – in the absence of a sufficient shift from factor input-driven to productivity-driven growth – risks a decline in the rate of technological progress. Alongside this, the savings rate of the elderly is generally low, for they have transitioned into being net consumers. Such a transition on a large scale, all else constant, leads to a slowdown in capital growth. For China, that prospect is of significant concern. Currently, it is only an upper middle-income country, but it has ambitions to continue relatively rapid growth to catch the economic frontier.

On the one hand, as elaborated, China has been broadly and socioeconomically preparing for this period since the 1980s. Nevertheless, transitioning to new growth drivers is infamously challenging at this stage of a nation's development. Its development dilemma is compounded by intensifying geopolitical rivalry with major economic powers. There are many variables and policy reform areas in that context. In terms of how the demographic change variable – population ageing – is being addressed, China is intensifying its long-standing, proactive approach to the economics of demographic change (see Table 3).[39]

China has been broadly and socioeconomically preparing for this period since the 1980s. Nevertheless, transitioning to new growth drivers is infamously challenging at this stage of a nation's development

The overall agenda aims to shift from a high-speed growth phase to a high-quality development stage, emphasising sustainable improvement in essential public service supply system and the social welfare system for all residents and across the whole life

39 Johnston, 'Getting Old Before Getting Rich'; Origins and Policy Responses in China, *China: An International Journal*, 19(3), 91–111.

cycle.[40] The expectation is that this would gradually yet sufficiently foster elevated labour quality, increased productivity, increased growth rate on the supply side, and heightened domestic demand. The national policy umbrella that mainstreams the agenda in China is the 'mid- and long-term plan for proactively responding to population ageing'.

The mid- and long-term plan for proactively responding to population ageing

This plan of November 2019 ('the Plan') highlights that population ageing is an essential and enduring social development with profound significance for the economy and society. It states the related challenges and opportunities and asserts that a proactive national response is a requirement for achieving high-quality development and for maintaining social harmony and stability. The Plan details the general elements of this response, including undertaking necessary supply-side structural reforms to support economic growth, building a long-term institutional framework, formulating policies with tangible outputs, and sharing within a context of modest capacities. There are five specific policy goals, outlined in Table 4.

TABLE 4 MEDIUM AND LONG-TERM PLAN FOR THE STATE TO ACTIVELY RESPOND TO POPULATION AGEING (2019)

Goal	Agenda
1. Consolidate the social wealth reserves to cope with the ageing of the population	1.1. Expand the whole, optimise the structure, improve efficiency; and adapt economic development to the ageing of the population.
	1.2. Improve the system of national income distribution and optimise distribution pattern among government, enterprises, and residents; steadily increase the old-age wealth reserves; and create a fairer and more sustainable social security system.
	1.3. Continue to improve the well-being of all people.
2. Improve effective labour supply in the context of an ageing population	2.1. Improve the overall quality of human resources by improving the quality of population policies and improving the quality of the labour force pipeline, and by building a lifelong learning system for the elderly to continue to learn.
	2.2. Promote the development and utilisation of human resources; achieve higher quality and full employment; and ensure a sufficient total level and quality of human resources is actively responding to the ageing of the population.
3. Create a high-quality supply system for elder services and products	3.1. Actively promote the construction of a healthy China; establish and improve a comprehensive and ongoing health service system for the elderly including health education, preventive health care, disease diagnosis and treatment, rehabilitation care, long-term care, and hospice care.
	3.2 Improve the multi-level elderly care service system based on the home, community reliance, fully developed institutions, and organically integrated medical care; expand the supply of products and services suitable for the elderly in multiple channels and fields and improve the quality of products and services.

40 'Interviews at the Two Session Cai Fang, deputy to the National People's Congress: Pay attention to China's population changes and promote high-quality development,' *Qiushi*, March 6, 2022, http://www.qstheory.cn/laigao/ycjx/2022-03/06/c_1128443952.htm.

4. Strengthen scientific and technological innovation capabilities in response to the ageing of the population	4.1 Implement the innovation-driven development strategy; take technological innovation as the first driving force and strategic support for actively responding to population ageing.
	4.2 Comprehensively improve the intelligent level of the national economic industrial system.
	4.3 Improve the level of technology and informatisation of services for the elderly.
	4.4 Increase health technology support for the elderly.
	4.5 Strengthen research and development and application of assistive technologies for the elderly.
5. Build a social environment for providing for the elderly, filial piety, and respect for the elderly	5.1 Strengthen the legal environment in response to the ageing of the population and protect the legitimate rights and interests of the elderly.
	5.2 Build a family support system, build an elderly-friendly society, and form a good atmosphere for the participation of the elderly, family, society, and the government.

Source: Government of China, The Central Committee of the Communist Party of China and the State Council issued the "*Medium and long-term plan for the country to actively respond to population ageing,*" (Beijing, November 21), http://www.gov.cn/zhengce/2019-11/21/content_5454347.htm

The Plan envisaged that by 2020 the relevant basic foundations would be put in place; by 2035 significant progress in reaching the objectives would be achieved; and by mid-century the Plan would be fully realised. The Plan actively seeks to capture the full economic potential of the ageing industry that will need to evolve around China's hundreds of millions of seniors – from health care to aged care-related technologies. On the demand side, healthcare will be especially important both directly in accommodating the needs of the elderly and indirectly in healthcare costs that play a major role in discretionary spending. In particular, driving precautionary savings for unexpected healthcare-related costs risk the agenda of fostering elevated domestic consumption as another new growth element.[41] Pension coverage has also varied widely according to level, geography, and employment sector, risking old age poverty for elderly rural women especially. Efforts to reform the pension system to ensure that all elderly Chinese are covered, even if highly unequally, have been broadly successful.

On the supply side concerning the potential labour stock, the prospect of retirement age reforms in China will be important as the retirement age is lower than in comparable economies. The retirement age is 50 years for blue-collar female workers and 55 for other female workers. It is 55 for blue-collar male workers and 60 for other male workers. One challenge to retirement age reforms lies in the fact that most of today's older workers are poorly educated and they started working relatively young. They are also likely to work in physically demanding jobs and retraining may offer limited returns. As an example,

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

although China's educational investments have expanded since the 1990s, illiteracy was only eliminated in 2011 – and then only among China's young and middle-aged workers.[42]

Proactively responding to population ageing also means directly fostering new, high-quality sources of economic growth. Innovation in science and technology and promoting the development of the digital economy is one growth area in focus. In December 2021, China's Ministry of Industry and Information Technology, the Ministry of Civil Affairs, and the National Health Commission together issued the 'Notice on the Action Plan for the Development of a Smart Elderly Care Industry (2021–2025)'. This plan included geographic positioning technologies to help seniors remain in their homes safely. Innovation in technology and their affordable application also is likely to benefit other sectors and industries, such as the automation and automotives industries.

Perversely, China's COVID-19 lockdown may help in the long run also, by enabling new breadth and depth of biometric data to support better healthcare and foster new biomedical innovation.[43] The Plan also notes that officials should promote international cooperation and policy dialogues around ageing with countries that are signatories to China's Belt and Road Initiative (BRI). The BRI is China's flagship foreign economic development policy initiative, opening a window for deeper demographic change-related dialogue between China and African signatory countries. This window has been further opened by the pandemic, with the extension of a sub-agenda of the BRI – the health-related, cooperation-focused 'Health Silk Road initiative'.

In the aftermath of the COVID-19 pandemic, intensive population ageing, and ongoing geopolitical tensions, there is no guarantee that China will succeed in its socioeconomic modernisation agenda. Growth of China's now $18 trillion economy (against some $3 trillion for Africa) has slowed significantly, and many fear China will struggle to find a sufficient level of growth momentum in the future. For Africa, this would mean a lower level of Chinese growth to support investing in Africa. For China, this makes tapping into Africa's investor growth potential even more essential. It also emphasises an urgent need to continue to advance the political economy of China–Africa ties.

Those circumstances may also help explain General Secretary Xi Jinping's emphasis on global development in his work report to the National Congress of the Communist Party of China on October 2022. Xi promised to construct the 'Belt and Road' jointly and ensure it became an international public good as an international cooperation platform. Promising China would adhere to the 'correct' direction of globalisation and oppose 'decoupling and building walls', he stated that China is willing to increase resource investment in global development cooperation, devote itself to narrowing the gap between the North

42 UNDP, *China Human Development Report 2016*, August 18, 2016, https://www.cn.undp.org/content/china/en/home/library/human_development/china-human-development-report-2016.html; China Power Team, 'How Does Education in China Compare with Other Countries?' China Power, November 15, 2016, https://chinapower.csis.org/education-in-china/.

43 Lauren A Johnston, "Why China's Covid Zero Strategy Might Underwrite China's High-Quality Development and Common Prosperity Agenda's – At Home and Away?" (Understanding China Brief, University of Sydney, June 2022).

and the South, and to firmly support and help developing countries to speed up their development.[44]

Ageing population China: Considerations for Africa

In October 2022, the *Financial Times* ran an article with the headline 'China's demographic crisis looms over Xi's third term', with the sub-heading 'The world's most populous country will start shrinking this year, weakening the government's economic tools'.[45] According to this article, 'The rapid ageing of China's population – a process that will accelerate during Xi's third term – will further chip away at Beijing's powers to stimulate growth and manage economic crises.' In contrast, however, others believe that the decline of China's labour bounty and its push into higher quality development will be favourable for African development, especially in shifting Africa's terms of trade towards its industrialisation vision.[46]

In general, population ageing impacts not only the growth rate but most economic variables, including the interest and savings rates. It may lead to a lag in innovation or, conversely, motivate accelerated innovation. In middle-income China's case, the ageing of the population could add momentum to areas of reform that may have significant onward impact, including further liberalisation of Chinese financial markets. Lessons from other economies suggest that liberalisation would lead to a large increase in capital coming in and going out, with outflows exceeding inflows. It has been predicted that this could lead to a one-time net capital outflow adjustment of some 11–18% of China's GDP, driven partly by the diversification of savings by Chinese households.[47] China is also developing a digital currency that may steadily open new policy levers. This may include an improved ability to monitor and control cross-border currency flows. The related timelines are uncertain and will be developed in sync with additional financial and currency reforms.[48] How China's extensive technology and automation investments will impact growth, net outbound investment, or the level and structural composition of trade, remains unknown. The same applies to the more specific ways population ageing will shape China's economy.

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44 'Xi Jinping presides over the meeting and delivers an important speech as the 20th National Congress of the Communist Party of China Concludes in Beijing,' Chinese Government website, October 22, 2022, http://www.gov.cn/xinwen/2022-10/22/content_5720918.htm.

45 Wang Feng, China's demographic crisis looms over Xi Jinping's third term, *Financial Times*, October 2, 2022, https://www.ft.com/content/199c92ca-4f1e-4898-9152-d021936f6ab4.

46 Lauren A Johnston, 'China's Second Centennial Goal will be Easier on some Developing Countries – and Harder on Developed Countries,' SOAS University of London, December 01, 2020, https://blogs.soas.ac.uk/china-institute/2020/12/01/chinas-second-centennial-goal/; Lauren A Johnston, 'Harvesting from "Poor Old" China to Harness "Poor Young" Africa's Demographic Dividend?' *Bridges of Africa* 7 no. 5 (2018).

47 Tamim Bayoumi and Franziska Ohnsorge, "Do inflows or outflows dominate? Global implications of capital account liberalization in China" (Working Paper No. 2013/189, The IMF).

48 Yanliang Miao and Tuo Deng, 'China's capital account liberalization: a ruby jubilee and beyond,' *China Economic Journal* 12, no. 3 (2019): 245–271; Zheng Liu, Mark M Spiegel and Jingyi Zhang, 'Optimal capital account liberalization in China,' *Journal of Monetary Economics* 117 (2021): 1041–1061.

What is known with more certainty is that China is deeply integrated into the global economy through production networks and trade channels. Its economy has a fundamental impact on the shape of the global economy – and for Africa even more so. Since China is Africa's largest trade partner, its largest bilateral official creditor, and its most important external provider of infrastructure services, how population ageing shapes China is likely also to shape Africa.[49]

China is Africa's largest trade partner, its largest bilateral official creditor, and its most important external provider of infrastructure services, how population ageing shapes China is likely also to shape Africa

In terms of growth rate impacts, for comparison, a growth deceleration simulation caused by population ageing in China was found to have negative effects on the economies of China's nearer neighbours in East and South-East Asia.[50] Another simulation, this time of the world economy with varying Chinese fertility and savings rates, found that future reductions could cause a 7% decline in global GDP against a baseline projection for 2050.[51] The effects on specific countries, however, depends on the intensity of their financial and trade interaction with China and on their comparative advantage against China. India – a country with low real wages and rapid population growth – is a notable beneficiary. African countries may benefit also, though some, including major oil exporters, are likely to benefit less. It was, for example, only a few years after China's working-age population share peaked in 2010 that China switched from being a net recipient of foreign direct investment (FDI) to a net investor. In pursuit of new sources of growth and investor returns, youth-rich and potential-rich Africa will be a target of China's investment.[52]

In sum, it is difficult to forecast with certainty the net impact of population ageing on China itself, let alone on China–Africa economic relations.

49 Chris Alden, 'The Changing Dynamics of China's Engagement in Africa," *Journal of African Development* 13 no. 1–2 (2011): 177–96; Giorgio Giovannetti and Marco Sanfilippo, 'China's Economic Cooperation with Africa,' *Journal of African Development* 13 no. 1–2 (2011): 143–76.; Carlos Oya and Florian Schaefer, 'Chinese Firms and Employment Dynamics in Africa: A comparative analysis,' (IDCEA Synthesis Report 2019).

50 Andrew Mason, 'Support ratios and demographic dividends'.

51 Jane Golley, Rod Tyers and Yixiao Zhou, 'Fertility and savings contractions in China: Long-run global implications,' *The World Economy* 41, no. 11 (2018): 3194–3220.

52 Ross Garnaut, Ligang Song, Ca Fang and Lauren A Johnston, 'China's new sources of economic growth: A supply-side perspective,' *China's new sources of economic growth: Reform, resources and climate change* (2016): 1–21; Michael Ehizuelen and Hodan Abdi, 'Sustaining China–Africa relations: Slotting Africa into China's one belt, one road initiative makes economic sense,' *Asian Journal of Comparative Politics* 3, no. 4 (2018): 285–310.

Priorities for Africa amid new global demographic reality

Tracking – and tapping – unprecedented global economic demography conditions

In his recent book *MegaThreats: Ten Dangerous Trends That Imperil Our Future, and How to Survive Them*, American economist Nouriel Roubini shares his view that a seven-decade 'golden period' for the world economy has come to an end thanks to the arrival of ten extreme 'mega-threats'.[53] These threats include climate change, new geopolitical rivalries, and large-scale population ageing. He notes that:[54]

> This balkanization of the global economy is deeply stagflationary, and it coincides with demographic ageing, not just in developed countries but also in large emerging economies such as China (see Figure 13). Because young people tend to produce and save more, whereas older people spend down their savings and require many more expensive services in health care and other services, this trend, too, will lead to higher prices and slower growth.

While the complex and dynamic impacts of such trends is not yet known, what is clear is that even in terms of economic demography, overall conditions have changed against those of recent decades.

In a comparative development context, where a manufactured goods export-oriented development strategy was central in East Asia in the second half of the 20th century, it may be less likely to be repeated for later developers due to changes in the structure of global demand.[55] That strategy worked because each country successively joined the region's global value chain – often amid a period of emerging demographic dividend – and exported to the high-income world, mainly Europe and North America. Today, however, global value chains are breaking down, populations are ageing, income inequality is rising, and environmental constraints are growing. These and additional factors are putting pressure on equivalent goods consumption demand. On the one hand, high-income coastal provinces in China may rise as consumers of international goods and services, offering a new source of international demand. As China has its own near complete supply chain, even the structure of this demand is likely to be different. The key point here is that the new structural global economic demography means a different structural context for global development going forward.

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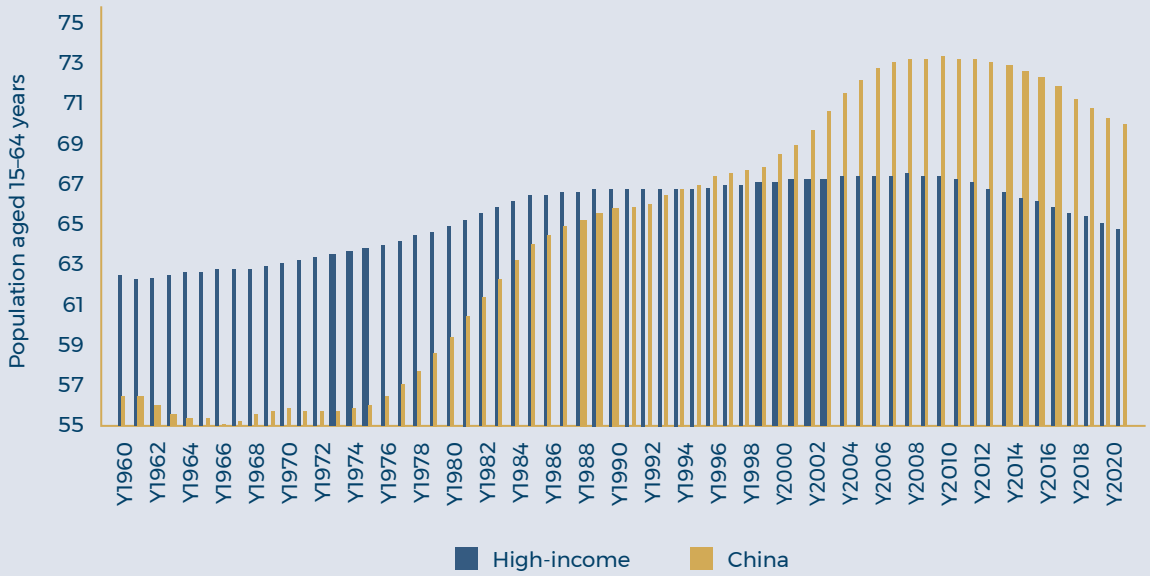
53 Nouriel Roubini, *Mega Threats: Ten Dangerous Trends That Imperil Our Future, And How to Survive Them*, (Boston: Little Brown, 2022).

54 Nouriel Roubini, 'The Age of Megathreats,' *Project Syndicate*, November 4, 2022, https://www.project-syndicate.org/onpoint/age-of-megathreats-war-climate-debt-inflation-technology-by-nouriel-roubini-2022-11.

55 William Cline, 'Can the East Asian model of development be generalized?' *World Development* 10, no. 2 (1982): 81–90; Alice Amsden, 'Diffusion of development: The late-industrializing model and greater East Asia,' *The American Economic Review* 81, no. 2 (1991): 282–286.

Figure 13 Working-age population shares, China and high-income countries (1960–2021)



Source: World Bank, WDI, 2022, https://data.worldbank.org/indicator/SP.POP.1564.TO

At a product level this shift means, for example, that elder citizen nappies are now in greater demand in many high-income countries than baby nappies.[56] It also means that a town in China's Shandong province has captured a new export niche – it makes some 90% of the coffins used in Japan. Japan is now the world's demographically oldest country, and due to deaths exceeding births, the national population has been in decline since 2011.[57] Other growing industries in high-income countries include healthcare, biotech, nursing, and aged care. Similarly, technological inventions and their manufacture and the related processed material inputs are also newly in high demand.

At a product level this shift means, for example, that elder citizen nappies are now in greater demand in many high-income countries than baby nappies. It also means that a town in China's Shandong province has captured a new export niche – it makes some 90% of the coffins used in Japan

56 Adam Pasick, 'Sales of Adult Diapers to Surpass Baby Diapers in Aging Japan,' *Quartz*, July 11, 2013, https://qz.com/103000/sales-of-adult-diapers-surpass-baby-diapers-in-aging-japan.

57 Qi Xijia, 'Small Inland Chinese County Makes 90% of Coffins in Japan,' *Global Times*, May 26, 2021, https://www.globaltimes.cn/page/202105/1224537.shtml.

The key takeaway is that the 'Bottom Billion' as Oxford Professor Paul Collier once labelled Africa – the 'youngest billion' is a contemporary synonym – should be cognisant of the reality that more than 85% of global GDP is now derived in fast-ageing populations. This means a very cross-regional structural economic opportunity compared to the recent past.[58] In the case of China and Africa, one emerging and new impact is that China has, over recent decades, seen a rising demand for Africa's donkeys.[59] Donkey-hide specifically is an input into a traditional Chinese medicine known as *ejiao*, considered to support ageing and blood vitality. Rising incomes alongside population ageing and a new pro-natality push in China mean rising demand for *ejiao* and the slow-breeding donkey. For Africa, however, this comes as a trade shock. It has resulted in cases of illegally slaughtered and exported donkey parts, and less donkeys for the continent's poorest. Economic demography change in major economies will bring both newly positive and newly negative opportunities. Countries should be regulatorily and economically prepared.

BOX 1 A HUNAN PROVINCE PILOT FOR A NEW ERA OF CHINA–AFRICA ECONOMIC RELATIONS

In September 2020, a Pilot Free Trade Zone was launched in China's Hunan province, aiming to build a world-class advanced manufacturing cluster. This comprises an international investment and trade corridor linking the Yangtze River Economic Belt and the Guangdong–Hong Kong–Macao Greater Bay Area and was intended to become a leading area for in-depth economic and trade cooperation between China and Africa. In April 2021, it was further announced that Hunan would become a 'pilot zone for in-depth China–Africa economic and trade cooperation.'[a]

Speaking in July 2022, the vice-governor of Hunan, Li Dianxun, noted that Hunan is coordinating the promotion of three major China–Africa projects: i) the Hunan Pilot Free Trade Zone; ii) the China–Africa Economic and Trade Expo; and iii) the China–Africa Economic and Trade In-depth Cooperation Pilot Zone (Hunan News, 2022). According to Li, these projects focus on working through 'pain' and 'choke points' in China–Africa economic and trade cooperation. In line also with Xi's 20th CPC Congress speech which noted planned Renminbi policy shifts, more specific pilot projects include the settlement of trade with Africa in local currency and a China–Africa cross-border Renminbi centre.[b]

a China (Hunan) – 'Africa Economic and Trade Cooperation matchmaking Conference held in Changsha signed 14 projects,' Human News, July 28, 2022, http://www.hn.chinanews.com.cn/news/2022/0728/454755.html (in Chinese)

b Report by Xi Jinping on behalf of the Central Committee of the 19th General Assembly to the Twentieth National Congress of the Communist Party of China in Beijing, http://www.gov.cn/xinwen/2022-10/16/content_5718884.htm

58 Paul Collier, 'The bottom billion,' *Economic Review – Deddington* 25, no. 1 (2007): 17; Johnston, 'Getting Old Before Getting Rich'.

59 Lauren A Johnston, 'China, Africa and the Market for Donkeys – Keeping the Cart Behind the Donkey,' South African Institute of International Affairs Occasional Paper No. 339, January 2023.

It is important to track how other countries, especially key economic partner countries, respond to such changes. There is an emerging yet nascent pilot specifically for fostering emerging China–Africa economic relations. The pilot focuses on currency experimentation – in terms of trade using local rather than major international currencies – and advanced manufacturing especially. It also encourages generally working through chokepoints of the China–Africa relationship (see Box 1).

'Getting old before getting rich': Factoring a potential new development norm

'China's Predicament,' according to the title of a 2018 article, is that of 'getting old before getting rich.'[60] But getting old before getting rich – or 'first old, not rich' – is far from China's 'predicament'. In fact it is likely something closer to a new contemporary development norm.[61] Table 5 illustrates the trend of countries getting demographically old in recent decades, using three population ageing thresholds: i) senior (> 64 years) population share of more than 7%; ii) child (0-14 years) population share of less than 30%; and iii) ratio of i/ii < 0.3. The share of countries classified as old increased across all indicators over a two-decade period (1996-2016), most dramatically by the child share indicator: up from 35.7% to 61.0% of 182 countries sampled.

TABLE 5 COUNTRIES BY 'YOUNG' AND 'OLD' BINARY INDICATORS, 1996 & 2016

	Senior (age ≥ 65) share > 7%				Child (age < 15) share < 30%				Ratio: old/young < 0.3			
	1996		2016		1996		2016		1996		2016	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Total	182	100	182	100	182	100	182	100	182	100	182	100
Young	125	68.7	106	58.2	117	64.3	71	39	132	72.5	108	59.3
Old	57	31.3	76	41.8	65	35.7	111	61	50	27.5	74	40.7

Source: Lauren A Johnston, "The economic demography transition: Is China's 'not rich, first old' circumstance a barrier to growth?" *Australian Economic Review* 52, no. 4 (2019): 406–426: Table 2

Table 6 also considers the change in per capita income group to the demographic transition data of Table 5. Over the same 1996–2016 period, it shows how countries did or did not change in both demographic and per capita income group. Percentages on the left-right diagonal axis (the shaded numbers) reflect countries that did not transition from either group. Overall, Table 6 shows that countries are getting older faster than they are

60 'China's Predicament', *The Economist*, August 14, 2018, https://www.economist.com/special-report/2018/08/14/chinas-predicament.
61 Johnston, 'The economic demography transition'.

getting more affluent, and that countries that are getting older are relatively likely to join the high-income country group.

Specifically, countries that were upper-middle income and 'old' in 1996 (a period that includes transition economies of Europe) had a nearly 70% chance of entering the high-income group by 2016 – the highest probability of transfer into the high-income group over this interval. By comparison, only 16.7% of young middle-income countries in 1996 had entered the high-income group by 2016. Similarly, 21.4% of old lower-middle income countries had entered the high-income group by 2016, but no young lower-middle income countries had. Among countries that were low-income in 1996, those classified as old by 2016 had a higher chance of having also moved into the lower-middle income group than those classified as still classified as young by 2016 – 66.7% vs. 44.1%.

In sum, there are signals of a cointegration of the demographic and economic transition – of an economic demography transition – with countries starting at lower per capita incomes than decades earlier. This implies that developing countries should proactively account for an economic and demography change cointegration in the context of their development and national planning.

TABLE 6 ECONOMIC DEMOGRAPHY TRANSITIONS (% OF COUNTRIES BY TRANSITION BY CATEGORY, 1996–2016)

			2016							
			Young				Old			
		Income	Low	Lower-middle	Upper-middle	High	Low	Lower-middle	Upper-middle	High
1996	Young	Low (Poor)	47.5	44.1	5.1	0	0	1.7	1.7	0
		Lower-middle	0	39.1	37	0	2.2	4.3	17.4	0
		Upper-middle	0	0	41.7	25	0	0	16.7	16.7
		High (Rich)	0	0	0	50	0	0	0	50
	Old	Low	0	0	0	0	9	66.7	33.3	0
		Lower-middle	0	0	7.1	0	0	14.3	57.1	21.4
		Upper-middle	0	0	0	7.7	0	0	23.1	69.2
		High	0	0	0	0	0	0	0	100

Note: 'Old' here reflects the case of share of population aged over 64 above 7%

Source: Lauren A Johnston, "The economic demography transition: Is China's 'not rich, first old' circumstance a barrier to growth?" *Australian Economic Review* 52, no. 4 (2019): 406–426 (Appendix 2)

Countries transitioning to the high-income group from all demographic categories since 1994 are listed in Table 7. The table confirms that, contrary to when China first arrived at its 'getting old before getting rich' fears in the 1980s, very few countries over the last quarter century were 'young' when they got 'rich'. The exceptions are mainly oil exporters, including

Contrary to when China first arrived at its 'getting old before getting rich' fears in the 1980s, very few countries over the last quarter century were 'young' when they got 'rich'

Equatorial Guinea and Oman. Having entered the high-income per capita group in 2007 – when young by all indicators – Equatorial Guinea fell out of the group in 2015 and has remained a middle-income country since then. Seychelles was the second African country to enter the high-income group in 2014, when it was 'young' by its old share, 'old' by its child share, and 'young' by the ratio of the two. As was South Korea when it entered the high-income group in 1995. In Seychelles' footsteps, Mauritius entered the high-income group in 2019, when it was 'old' by all three measures. As a result of diminished tourism flows, especially during the COVID-19 pandemic, however, Mauritius is a middle-income country once more.

TABLE 7 DEMOGRAPHIC PROFILE, COUNTRIES AT RECENT HIGH-INCOME GROUP ENTRANCE (1989–2020)

Year 'rich'	Country	Senior share (%)		Child share (%)		Ratio	
		Share	Category	Share	Category	Share	Category
1994	Macao SAR, China	7.2	Old	25.8	Old	27.9	Young
1994	Portugal	14.7	Old	18.2	Old	80.7	Old
1995	Korea, Rep.	5.9	Young	23	Old	25.7	Young
1996	Greece	15.1	Old	16.4	Old	95.5	Old
1997	Slovenia	13.1	Old	17.1	Old	76.3	Old
2002	Antigua & Barbuda	7	Old	28.8	Old	24.3	Young
2006	Czech Republic	14.2	Old	14.6	Old	96.9	Old
2006	Estonia	17	Old	15	Old	113.2	Old
2006	Trinidad & Tobago	7.4	Old	21.5	Old	34.6	Old
2007	Equatorial Guinea*	3.2	Young	40.7	Young	7.9	Young
2007	Hungary	16.1	Old	15.1	Old	106.4	Old
2007	Oman	2.7	Young	30.2	Young	8.9	Young
2007	Slovak Republic	11.9	Old	16	Old	74.4	Old
2009	Latvia	18.2	Old	14.1	Old	129	Old
2009	Poland	13.4	Old	15.1	Old	88.3	Old
2012	Chile	10.2	Old	21.1	Old	48.1	Old
2012	Lithuania	18.1	Old	14.5	Old	125.4	Old
2012	Russian Federation*	13.1	Old	15.4	Old	85	Old
2012	Uruguay	14.1	Old	22	Old	64.1	Old

Year 'rich'	Country	Senior share (%)		Child share (%)		Ratio	
		Share	Category	Share	Category	Share	Category
2014	Argentina*	10.8	Old	25.3	Old	42.6	Old
2014	Seychelles	6.8	Young	23.2	Old	29.4	Young
2014	Venezuela, RB*	6.1	Young	28.4	Old	21.5	Young
2017	Croatia	20	Old	14.4	Old	138.9	Old
2017	Panama	7.9	Old	27.3	Old	28.9	Young
2019	Mauritius	12	Old	17.3	Old	69.5	Old
2019	Romania	18.8	Old	15.574	Old	110.8	Old

Note: The senior share is the population share of persons of age ≥65; the child share is the population share of children of age <15; and the ratio is the ratio of the senior share to the child share. Palau also entered the high-income group, in 2018, but recent demographic data are not available in the source database.

* Countries with a volatile level of per capita income, with their income group classification fluctuating between upper income and upper-middle income. For example, Equatorial Guinea entered the high-income group in 2007, but dropped out in 2015 and has remained out since.

Source: Lauren A Johnston, "Understanding demographic challenges of transition through the China lens," in *The Palgrave Handbook of Comparative Economics*, pp. 661–69 (Palgrave Macmillan, Cham, 2021). Data source: *World Development Indicators*, World Bank (2020a), Neil Fantomand and Umar Serajuddin, 'The World Bank's Classification of Countries by Income' (Working Paper, Washington, D.C.: The World Bank, 2016)

For African countries, Tables 6 and 7 signal the importance of continuously accounting for the relative speed of economic and demographic transformation. Table 6, for example, reveals that, even rich-young countries are getting older on average, and many are getting old without a prospect of ever 'getting rich'. At least – contrary to China's fears in the 1980s – it is possible to 'get rich after getting old'. China, moreover, could offer African countries a valuable and unique tangential economic development reference example of how to adopt an economic demography transition approach to long-run national development.

The timing could not be riper. In one of Africa's richest per capita economies, South Africa, the senior population is growing at 2.9% per year, against the overall population growth rate of 0.6%.[62] By 2045 the share of South Africa's population that will be over age 60 (the qualifying age for social security) is expected to double from 8% to 16% (4.5 million to 10.6 million). There are already fears that direct preparations, such as in pensions and healthcare, are insufficient for this gradual intensifying of South Africa's population ageing. Indirectly, population ageing may well shift the labour-related comparative advantage and the productivity-per-worker requirements.

It is important here also to emphasise two points. First, a key point of emphasis is not explicitly in 'getting old before rich', or in realising a lower total fertility rate as did China's policy interventionism. Second, the conceptual logic of adopting an economic

62 Alanna Markle, 'Ageing: Another Barrier to South Africa's Economic Stability,' *Institute for Security Studies*, November 25, 2019, https://issafrica.org/iss-today/ageing-another-barrier-to-south-africas-economic-stability.

demography-weighted approach to development holds even in cases where a population structure stays young (or is already 'older' and richer than China today).

On the first point, in the case of 'getting old before getting rich' it is imperative that developing countries pay particular and continuous attention to maximise population structure for the socioeconomic development over time. For example, in the early phases of an initially youth-rich development process – in a low wage, labour rich, late-demographic dividend period – it is important to capture the elevated working-age population share for faster development. It is equally important to make the necessary education and health investments. Early investments in health do not only decrease childhood disease and mortality rates, but also contribute to affordable protection for older members of the population. Relevant measures include training a cluster of staff and building infrastructure, including direct senior-related medical care. As the population median age rises, focus should shift away from contagious disease and on to chronic illnesses, such as in rising cases of cardiac- and carcinoma-related health care issues. With timely investments, longer lifespans will also become healthier lifespans, fostering later-age productivity, and reducing risks that ageing derails development.

Similarly, there is a challenge with preparedness in education. 'Most investments in human capital both raise observed earnings at older ages, because returns are added to earnings then, and lower them at younger ages, because costs are deducted from earnings then.'[63] In the case of developing countries experiencing demographic transition at relatively low per capita incomes, there is currently a high opportunity cost for making the necessary educational investments. But these investments are crucial to ensure that there is sufficient human capital later, when population ageing intensifies. Through rising literacy, for example, they also position a country with sufficient earlier talent levels to reap a low-wage demographic dividend. Failure to make those early human capital investments may increase the risk that productivity falls or stagnates later, stalling the development process and fostering widespread late life poverty risks.[64]

On the second point, a country that is sustainably rich in young people must have a congruent long-run development strategy for accommodating youth-richness while achieving rising living standards. This also highlights the potential for both 'younger' and 'older' African countries to share relevant lessons with one another. A generic summary of the overall conceptual policy framework through each demographic dividend phase is set out in Table 8.

63 Gary Becker, 'Investment in Human Capital: A Theoretical Analysis,' *Journal of Political Economy* 70, no. 5, (Part 2 1962): 9–49.

64 A late-phase of the Malthusian Theory of Population is known as the Malthusian Trap.

TABLE 8 POLICY LESSONS ACROSS PHASES OF THE ECONOMIC DEMOGRAPHIC TRANSITION			
Demographic dividend threshold proximity	**Empirical threshold (% Population, 2020)**		**Potential policy priorities**
Post-dividend	**Indicator**	**Population share threshold**	**Adapting to ageing**
	Child-share	15,7	Maintaining and improving welfare in the context of declining work-force population share and a growing old-age share. At this stage, it is fundamental to maintain a positive attitude to the elderly and their productive engagement in the economy, and ensure that the 'weight' of the old does not dampen the next generations' productivity.
	Adult-share	64,3	
	Senior-share	20,0	
Late dividend			*Sustaining productivity growth*
	Child-share	18,7	Creating conditions necessary to reap the second demographic dividend and beginning to prepare for ageing. Countries typically need to begin re-shaping retirement policies and concurrently ensure that the smaller share of youth are not disadvantaged, but are rather extremely productive given the need to provide for the old. Incentives to direct the savings of the elderly into the most productive areas must be crafted.
	Adult-share	68,8	
	Senior-share	12,5	
Early dividend			*Accelerate job creation*
	Child-share	28,1	Creating increasingly productive jobs for growing share of the population in working ages to reap the demographic dividend. This requires appropriate macro-fiscal and labour framework, including making it easier for parents to work formally.
	Adult-share	65,6	
	Senior-share	6,3	
Pre-dividend			*Sparking the demographic transition*
	Child-share	43,3	Improving human development, health and education outcomes to accelerate the fertility decline and create a population age structure with less child dependents and a larger working-age share of the population.
	Adult-share	53,9	
	Senior-share	2,8	

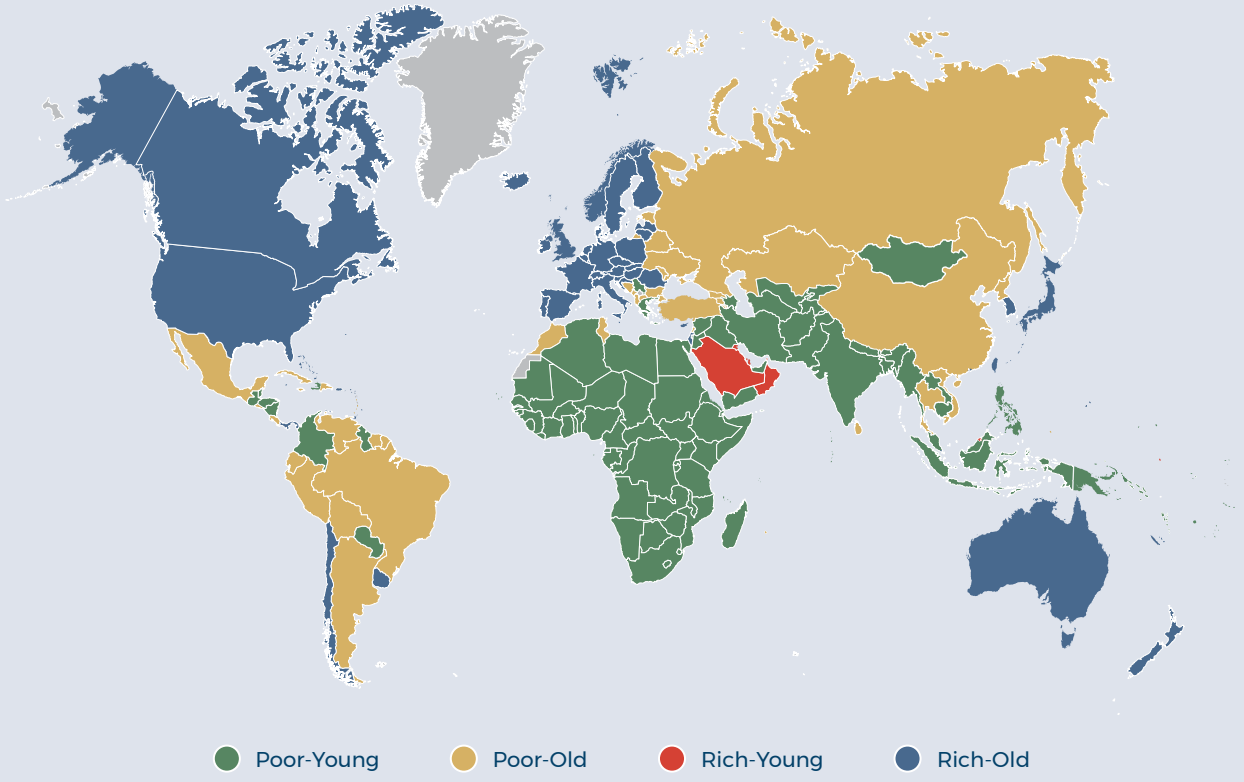
Source: Adapted from Lauren A Johnston, "Understanding demographic challenges of transition through the China lens," in *The Palgrave Handbook of Comparative Economics*, pp. 661–691 (Palgrave Macmillan, Cham, 2021)

Reviewing China's economic demography transition policy chronology in the context of the basic framework in Table 8, highlights that this was not just a domestic policy. In the earlier youth-rich development phase, China sought extensive labour-intensive and capital-intensive foreign investment and targeted the ensuing low-cost manufactured exports at relevant high-income markets. Today, China is a net outbound investor and targets its infrastructure and investor-based manufacturing in today's poorer and younger countries,

mainly along the Belt and Road (see Figures 14 and 15).[65] China has captured a dominant position in manufacturing coffins for export to the world's 'oldest' country, Japan. For African countries – whether already or not yet 'old' (see Table 1) – a similar internationally-attuned economic demography-weighted approach makes sense.

China has captured a dominant position in manufacturing coffins for export to the world's 'oldest' country, Japan. For African countries – whether already or not yet 'old' – a similar internationally-attuned economic demography-weighted approach makes sense

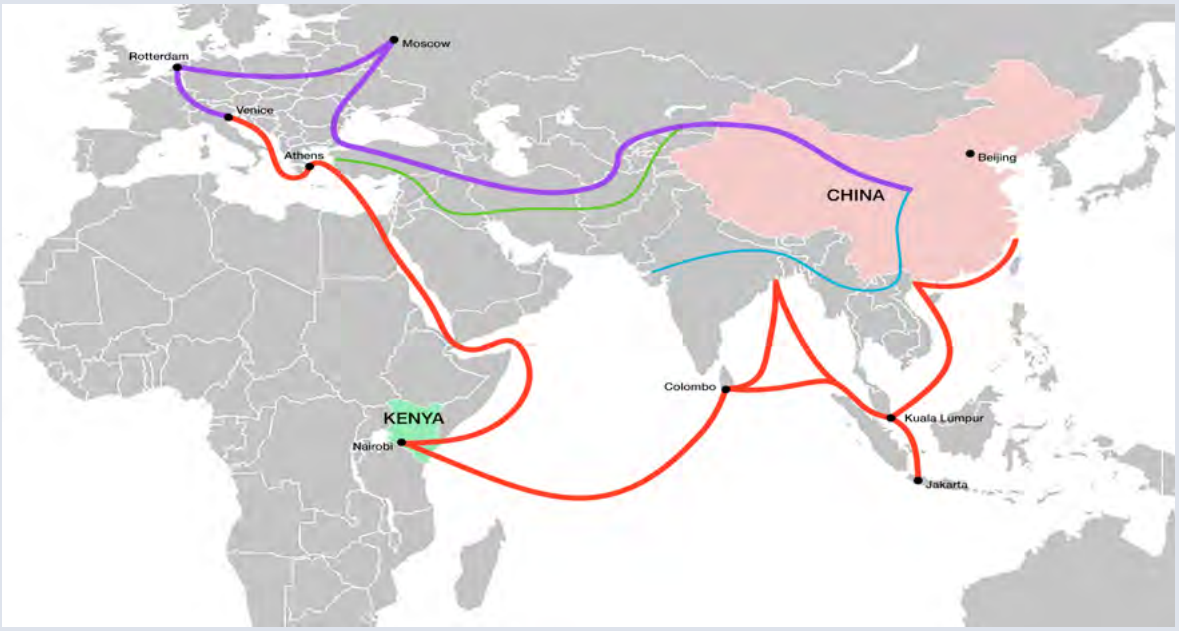
Figure 14 World map by economic demography matrix category



Source: Lauren A Johnston, 'Harvesting from "Poor Old" China to Harness "Poor Young" Africa's Demographic Dividend?' (Updated), *Bridges Africa*, 7(5)

65 Lauren A Johnston and Joseph Onjala, 'The Belt and Road Initiative's Eastern Africa Node: Survey of Economic, Demographic and Security Motivations,' *Demographic and Security Motivations* (January 4, 2022); Lauren A Johnston, "The Belt and Road Initiative: what is in it for China?" *Asia & the Pacific Policy Studies* 6, no. 1 (2019): 40–58.

Figure 15 Map of initial geographies of focus of the BRI



Note: Land-based routes are part of the concept of a 'Silk Road economic belt' as launched in Kazakhstan. Ocean-based routes are part of the 'Maritime Silk Road', as launched in Indonesia

Source: Adapted from Lauren A Johnston, "The Belt and Road Initiative: what is in it for China?," *Asia & the Pacific Policy Studies* 6, no. 1 (2019): 40–58

to transform 'mega-threats' into 'mega-opportunities'

Roubini wrote of ten (global) 'mega-threats', including the potential population ageing to stagnate 85% of world GDP that is presently generated in fast-ageing high-income economies.[66] For African countries today, this presents different structural challenges and opportunities than in recent decades. For example, where in the past demand for children's nappies was high in rich countries, today, demand is higher for senior's nappies. When competing in today's rich-country export markets, the current structure of demand matters more than the precedent set by China in earlier decades.

In the same vein, rich African countries may also need to address labour-related constraints at home by tapping their youth-rich labour force (both local and migrant). Countries that have optimally invested in their labour force and successful migration strategies will be those that benefit. African countries should devise and adopt economic demography

66 Roubini, *MegaThreats*.

transition-weighted development trajectories in line with today's external economic demands.

Today's trade-offs and opportunities will differ from those of the recent past, including those faced by China. For example, modern digital technology offers affordable, inclusive, and innovative means of both receiving and providing education and health services. This kind of technology was not available to East Asian or Western countries in their earlier development. This also opens opportunities for trade that were not available in the past, in terms of technology and the new global economic demography. African countries must be proactive in responding to these opportunities and formulating their economic demography-weighted development path within, across, and outside African countries. In China's context, proactively shaping China's new Hunan pilot for mutual ties also is likely to deliver fruitful results.

The 2020s will mark a historic demographic divergence between China and Africa. How the respective parties respond to this turning point will determine whether it marks a contrasting point of inflexion – one of per capita economic development convergence between China and Africa. Factoring economic demography change within and across countries will help to bring about such an outcome. In conclusion, this paper offers six policy recommendations for Africa, based in part on China's experiences and on insight gained from study of Africa's current circumstances.

Recommendations

1 **Digest China's demographic point of downward inflection may not be an economic one. China's population has recently peaked**. Over the 2020s, it will begin to age far more intensively thanks to the retirement of cohorts born in the 1950s and 1960s. In the 1980s, after implementing outlier family planning policies – namely the One Child Policy – policymakers realised that China would inevitably be demographically 'old' before it could ever become economically 'rich'. Thereafter, China adopted a long-run development agenda to attempt to account for its fate of experiencing population ageing at that early-to-mid development phase. It is not yet known if China's preparations are sufficient to ensure that demographic peak does not induce an adverse economic transition point, nor clearly what will be the structural implications for its economy. These need to be studied over time. Moreover, for example, while today China is growing slower than it was two decades ago, its economy is much larger. For African countries, the absolute size of the economic growth increment and the size of the Chinese market remains a sizeable opportunity.

2 **Understand China's recent economic demography-weighted approach to socioeconomic development and adopt an updated and locally-relevant equivalent**. China's demographic dividend began in the 1970s and lasted until around 2010. As early as the 1980s it had been forecast that China would not, by the end of its favourable demographic tailwinds period, be a rich country per capita. The ensuing long-run policy response to 'getting old before getting rich' had two parallel objectives during the demographic dividend era. First, to capture the low-wage demographic dividend potential for development. Second, to steadily build the socioeconomic foundations in advance for after the demographic dividend. This was when China, as a middle-income country, needed to switch from labour quantity to labour quality, to drive its economy while managing to care for hundreds of millions of aged citizens.

3 **Find opportunity for Africa in China's proactive response to population ageing.** In this rapidly intensifying population ageing, China seeks to foster new related economic growth sectors. A more mature pensions-related financial market is one, and China is opening the pensions sector to foreign investment accordingly. It also seeks to develop a sophisticated but affordable aged-care services and products market. For Africa, this presents opportunities to, for example, offer high-growth investment destinations for China's pension funds. It also may offer African countries the chance to grow plants or livestock as inputs for China's healthcare sector. On the other hand, this may also open risks. China's rising demand for donkey hides and gelatine as an input for *ejiao* has adversely disrupted Africa's own market for donkeys. A nuanced and proactive response to population ageing-related structural change is required for capturing new opportunity and side-stepping related risks.

4 **Prepare early for population ageing in Africa.** Even with China's long-term preparations for population ageing and its capacity scale, it has yet to prepare perfectly for its domestic 'old before rich' era of rapid ageing. For example, there are concerns around the low incomes of older citizens in poor rural areas, and there are insufficient aged care nurses. Concurrently, the traditional family aged care arrangement is under strain – thanks to expensive urban housing and the high demands on Chinese couples to take care of their parents and children. With foresight and planning, African countries should continuously and proactively determine workable arrangements for their own economic demography trajectories – in advance of emerging challenges and risks.

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5 **Invest in demographic data.** The UN offers updated population estimates for the world, sovereign nations, and selective sub-regions every few years. The quality of these estimates relies upon data provided by national authorities. These also support the capacity of nations to plan for the education of youth and the health needs of a population, including a rising number and population share of seniors as life expectancy increases. China is among Africa's bilateral partners willing to invest in such demographic data training and systems. Becoming cognisant of economic and demographic change in major partner countries may, for example, also prove helpful for fostering elevated trade and investment ties with China and others.

6 **Proactively utilise China's Hunan province pilot for upgrading ties with Africa.** China has set up a pilot to take its ties with Africa into a maturity phase. The pilot is experimental but has some broad goals around advanced manufacturing, trade, and currency exchange especially. Co-shaping its evolution offers a proactive window to the future of China–Africa economic relations.

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Cover image

A busy street produce market in Hong Kong, China (RichLegg via Getty Images)

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