

SESSION 706

# The Economics and Geopolitics of Population Aging



## Antitrust Policy

Professional societies, including the Conference of Consulting Actuaries (CCA), are subject to federal and state antitrust laws, and must constantly monitor their activities to ensure continued compliance with all antitrust regulations.

### Purpose of Antitrust Laws

The antitrust laws prohibit any concerted activity or combination of competitors from interfering with free competition. In other words, the primary thrust of the law is to control private economic power by protecting competition. Persons and organizations are prohibited from engaging in any action which unreasonably restrains commerce or trade (i.e., competition). Per se violations (practices presumed to be inherently wrong regardless of the motivating factors) include: agreements to fix or stabilize prices, to divide markets, to allocate production, or to impose boycotts. In essence, this means any concerted action that significantly diminishes rivalry among competing firms.



## Speakers



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President, Global Aging Institute  
Senior Advisor, The Terry Group

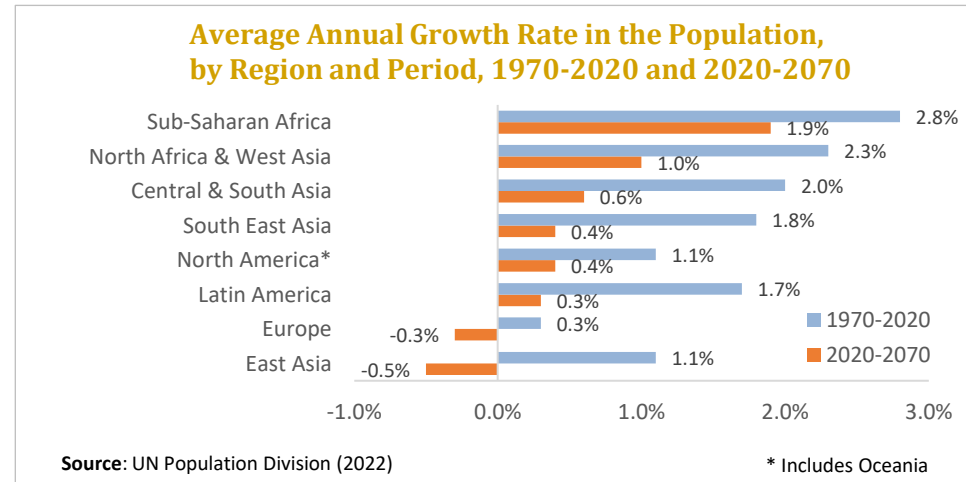
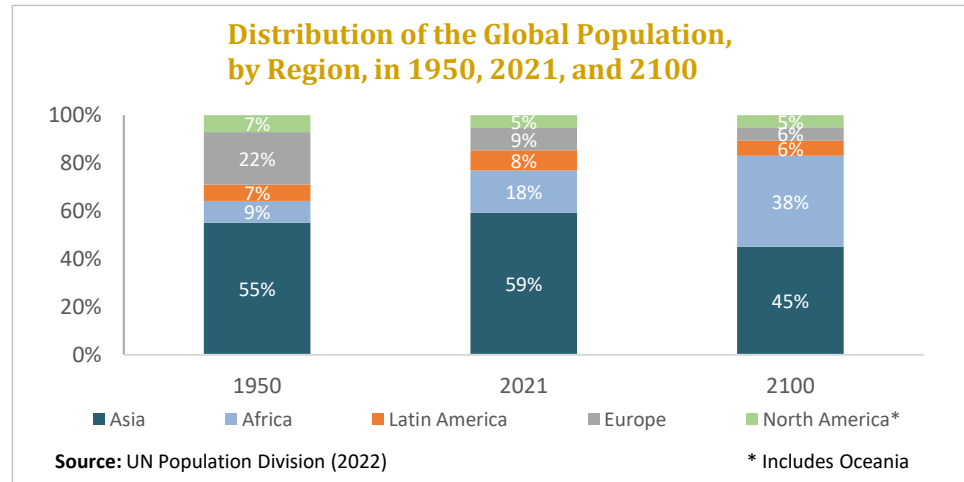
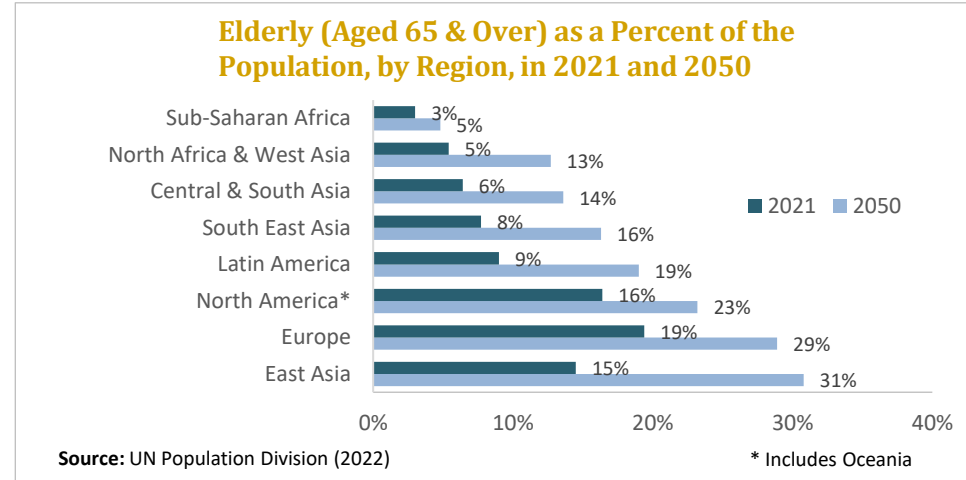


# The Demographic Transition



# Tomorrow's Demographic Landscape

- ❑ The population will age dramatically in most regions of the world, especially Europe and East Asia.
- ❑ The population will grow much more slowly or contract in most regions of the world, the major exceptions being Sub-Saharan Africa and the Greater Middle East.
- ❑ There will be a stunning shift in the distribution of the world's population by country and region.

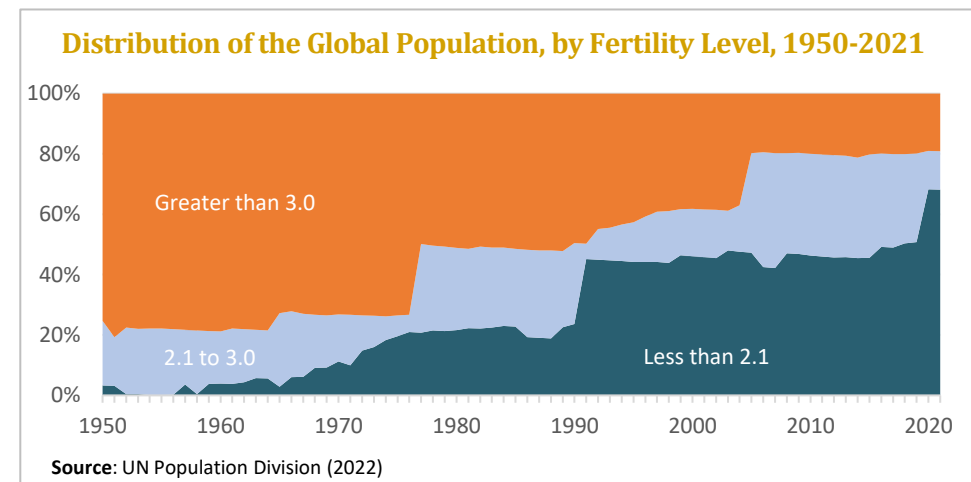


## The Forces Behind the Demographic Transition

- ❑ There are two forces behind the demographic transition that gives rise to population and population decline.
- ❑ The first force is rising life expectancy. People are living longer, and this increases the relative number of old in the population.
- ❑ The second force is falling fertility. People are having fewer babies, and this decreases the relative number of young in the population.
- ❑ While both forces are important, it is falling fertility that is the dominant driver of global population change.

	Life Expectancy at Birth				Total Fertility Rate			
	1950	1975	2000	2021	1950	1975	2000	2021
Europe	63	71	74	77	2.7	2.1	1.4	1.5
North America*	68	72	77	78	3.0	1.9	2.0	1.7
East Asia	43	63	73	79	5.5	3.3	1.6	1.2
South East Asia	42	55	68	70	5.8	5.0	2.6	2.1
Central & South Asia	41	52	63	68	5.9	5.5	3.5	2.3
North Africa & West Asia	42	56	69	72	6.6	6.0	3.4	2.8
Latin America	49	61	71	72	5.8	4.7	2.6	1.9
Sub-Saharan Africa	38	46	51	60	6.5	6.8	5.7	4.6

Source: UN Population Division (2022) \*Includes Oceania



## The Stages of the Demographic Transition

- ❑ **Stage 1:** Declining mortality rates lead to rising youth dependency burdens and rapid population growth. Demographic trends tend to lean against economic growth and social and political stability.
- ❑ **Stage 2:** Fertility rates fall with a lag. Declining dependency burdens and rising median ages open up a window of opportunity for rapid economic and social development known as the “demographic dividend.”
- ❑ **Stage 3:** The growth in the number of elderly overtakes the decline in the number of children. Dependency burdens rise again and populations stagnate or contract. Demographic trends again tend to lean against economic growth and may increase geopolitical risks.

	Median Age					
	1950	1975	2000	2021	2030	2050
Europe	28	31	37	42	44	47
North America*	29	27	34	37	39	43
East Asia	22	20	30	39	43	51
South East Asia	19	18	23	30	32	37
Central & South Asia	20	18	21	27	29	36
North Africa & West Asia	19	17	20	26	27	32
Latin America	18	18	23	30	34	40
Sub-Saharan Africa	18	16	16	18	19	23

Source: UN Population Division (2022) \* Includes Oceania

	Total Dependency Ratio**					
	1950	1975	2000	2021	2030	2050
Europe	75	77	65	68	75	90
North America*	74	84	69	71	75	80
East Asia	100	110	66	59	62	85
South East Asia	114	130	88	68	68	72
Central & South Asia	108	124	104	76	69	68
North Africa & West Asia	116	136	106	81	77	76
Latin America	120	127	92	69	66	72
Sub-Saharan Africa	124	137	141	126	115	90

Source: UN Population Division (2022) \*Includes Oceania  
\*\*Children (aged 0-19) plus elderly (aged 65 & over) per 100 working-age adults (aged 20-64).



# Developed World Outlook



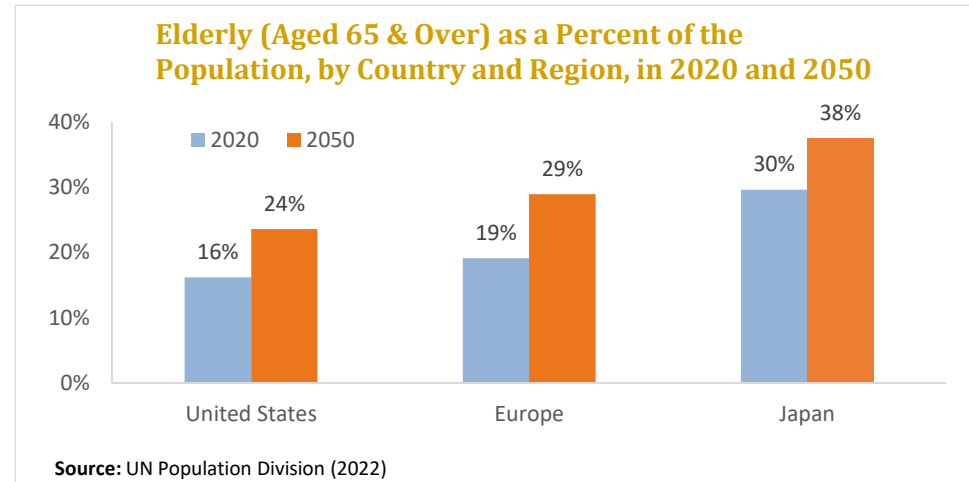
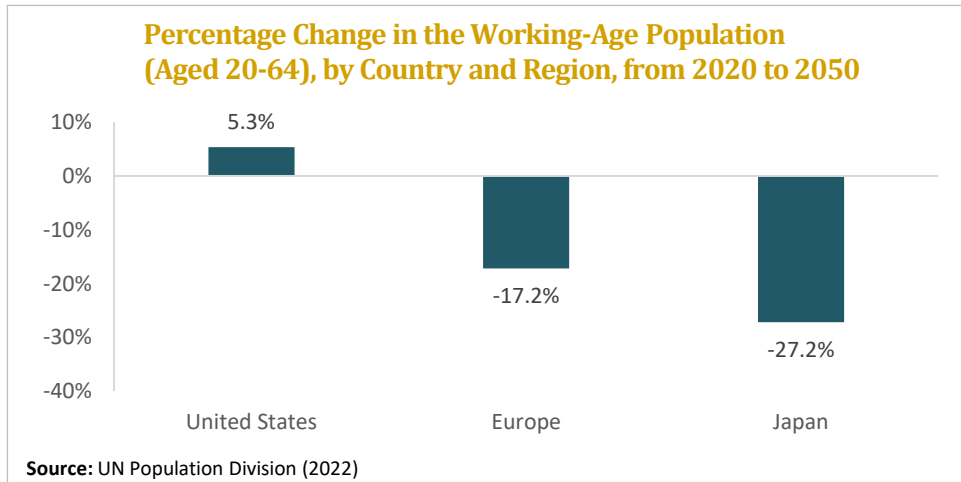


## Shades of Gray

- The extent of population aging varies greatly across the developed world, mainly because fertility rates have fallen much further in some countries than in others.
- Until recently, America’s relatively high fertility rate, together with substantial net immigration, seemed to ensure that it would remain the youngest of the major developed countries for the foreseeable future. Since the Great Recession, however, the U.S. fertility rate has fallen sharply, narrowing America’s demographic advantage.

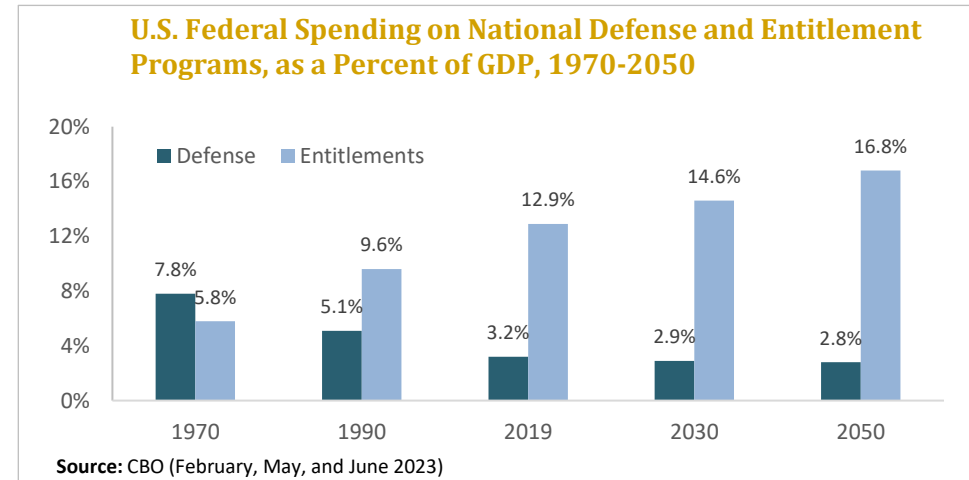
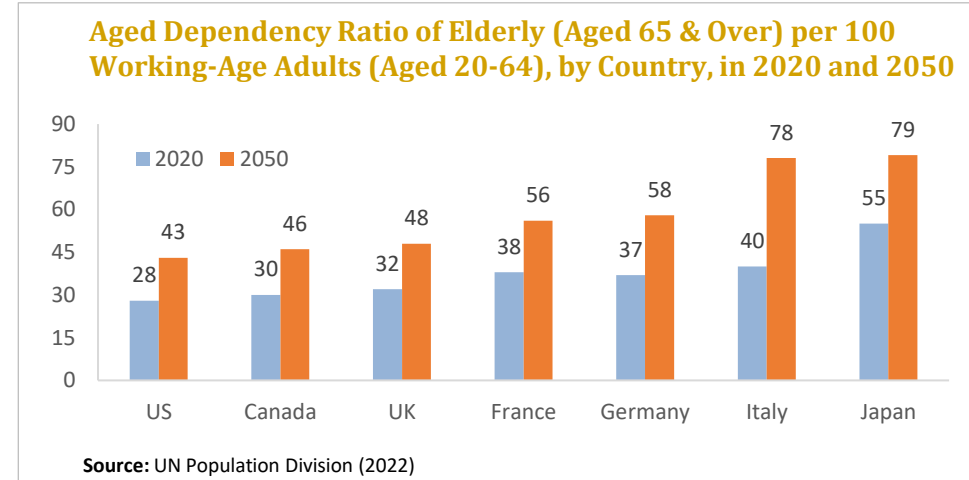
	Life Expectancy at Birth				Total Fertility Rate			
	1960	1980	2000	2021	1960	1980	2000	2021
Canada	71	75	79	83	3.9	1.7	1.5	1.5
France	70	74	79	82	2.7	2.0	1.9	1.8
Germany	69	73	78	81	2.4	1.5	1.4	1.5
Italy	69	74	80	83	2.4	1.6	1.3	1.3
Japan	68	76	81	85	2.0	1.7	1.4	1.3
UK	71	74	78	81	2.7	1.9	1.6	1.6
US*	70	74	77	76	3.6	1.8	2.0	1.7

Source: UN Population Division (2022) \* U.S. data for 2021 are from CDC



## Rising Dependency Burdens

- Over time, lower fertility and higher life expectancy translate into a higher aged dependency ratio, which in turn pushes up the cost of government retirement and health-care programs like Social Security and Medicare.
- Growing spending on old-age benefits in turn crowds out other spending from government budgets on everything from the national parks to national defense.
- Higher old-age dependency costs may be partially offset by lower youth dependency costs. However, the youth dependency ratio is projected to fall much less than the aged dependency ratio is projected to rise, the old consume more per capita than the young, and most developed countries have socialized the cost of being old to a much greater extent than the cost of being young.

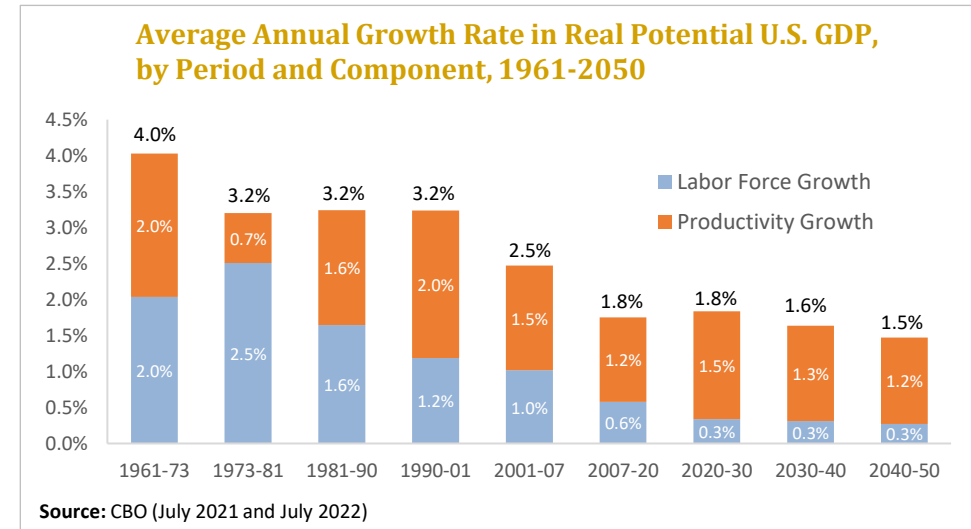


## Slower Economic Growth

- ❑ Over time, lower fertility translates into slower growth in the working-age population, which in turn translates into slower growth in employment and GDP.
- ❑ Productivity growth may also decline in aging societies, further dragging down economic growth:
  - More slowly growing workforces mean less investment demand and a slower turnover in the capital stock.
  - Rising fiscal deficits may crowd public investment out of government budgets and private investment out of capital markets.
  - Aging workforces may be less flexible, less mobile, and less entrepreneurial.
  - Economies will be increasingly dominated by service industries resistant to productivity improvements.
- ❑ Real GDP growth in the United States could fall to less than half of its postwar average. Japan and some European countries may face “secular stagnation”—that is, zero growth in real GDP across the business cycle.

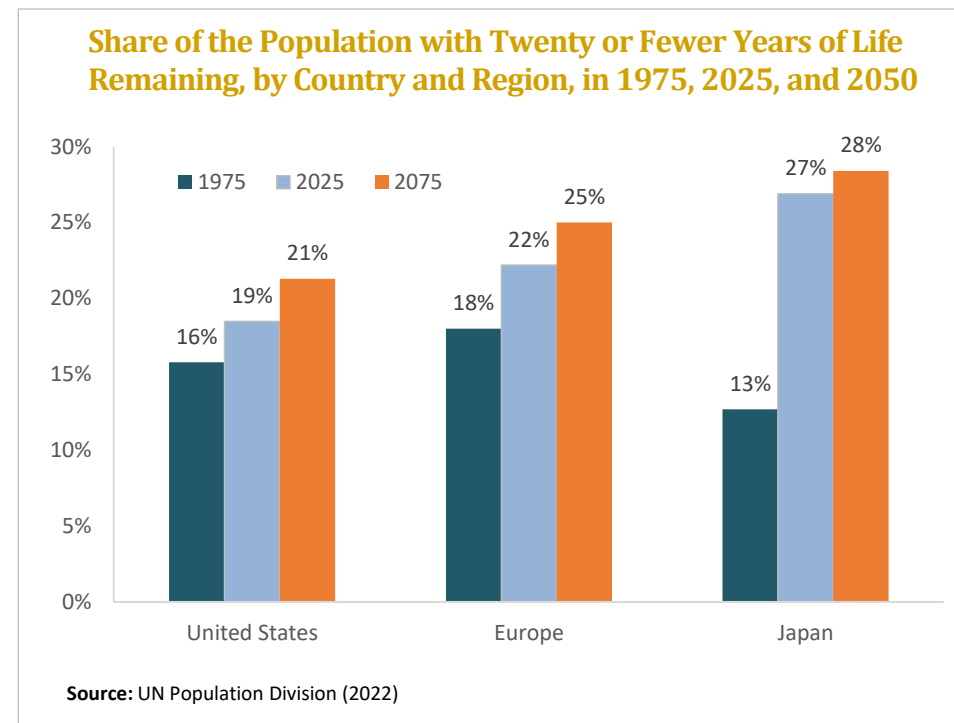
	Average Annual Growth Rate in the Working-Age Population (Aged 20-64), by Decade, 1980s-2040s						
	1980s	1990s	2000s	2010s	2020s	2030s	2040s
Canada	1.7%	1.1%	1.3%	0.7%	0.2%	0.5%	0.3%
France	1.0%	0.4%	0.6%	-0.3%	-0.2%	-0.2%	-0.3%
Germany	1.1%	0.3%	-0.5%	0.1%	-0.9%	-0.6%	-0.4%
Italy	0.9%	0.2%	0.2%	-0.3%	-0.8%	-1.4%	-1.1%
Japan	0.7%	0.4%	-0.4%	-1.0%	-0.6%	-1.3%	-1.2%
UK	0.7%	0.4%	0.7%	0.4%	0.0%	0.1%	-0.1%
US	1.3%	1.2%	1.1%	0.6%	0.2%	0.2%	0.1%

Source: UN Population Division (2022)



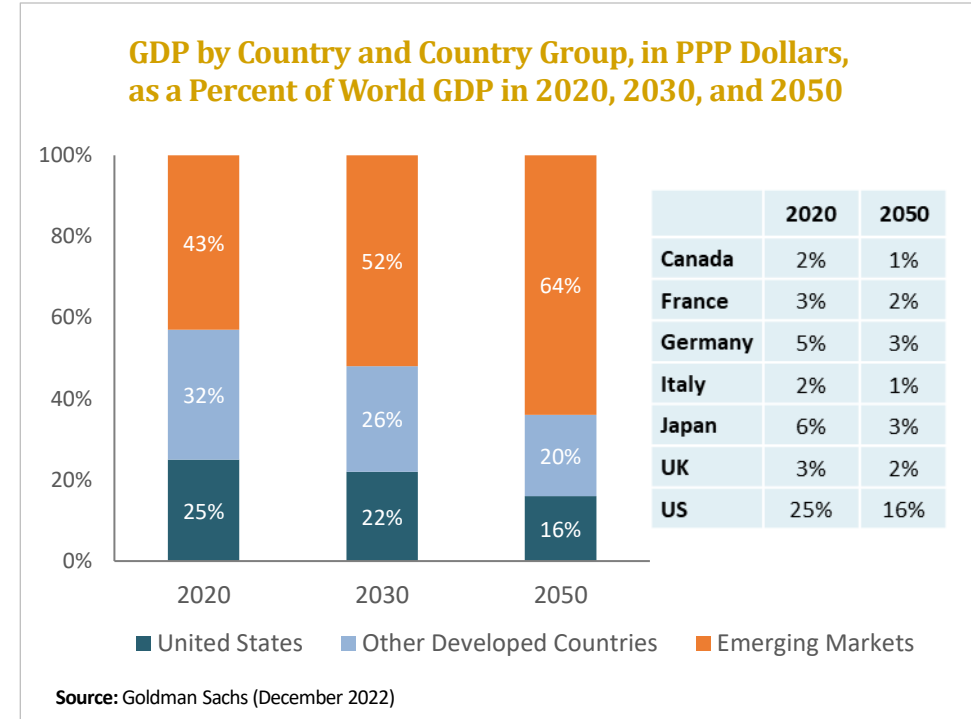
## A More Risk-Averse Social Mood

- ❑ There may also be psychological dynamics to population aging that further undermine economic growth and complicate the challenge of ensuring national and global security.
- ❑ With the size of domestic markets growing more slowly or even contracting, we may see more cartel behavior to protect market share and more restrictive rules on hiring and firing to protect jobs. We may also see increasing pressure on governments to block foreign competition.
- ❑ Shifts in business psychology could be mirrored by a broader shift in social mood. Slow-growth, aging societies may become more risk averse, have shorter time horizons, and be less willing to make investments with long-term payoffs.
- ❑ A robust statistical literature establishes that extremely youthful societies are often dysfunctional. Extremely aged societies may also prove dysfunctional in some ways, favoring consumption over investment, the past over the future, and the old over the young.



## Population and Power

- Although population size alone does not determine geopolitical stature, population size and economic size together are potent twin engines of national power. They underpin the hard power of national defense and the semi-hard power of foreign assistance. They even influence the soft power of business and cultural dominance.
- Over the next few decades, the United States and its developed world allies will be shrinking steadily in demographic and economic size relative to a faster-growing emerging world.
- While history has many examples of small powers that exercised outsized geopolitical sway, it has few if any examples of geopolitically rising powers that were at the same time contracting demographically and economically relative to their neighbors and the rest of the world.



# Emerging World Outlook



## The Promise of the Demographic Dividend

- ❑ Most of the emerging world is now traversing the sweet spot of the demographic transition in which fading youth bulges, rising median ages, falling dependency burdens, and slowing population growth open up a window of opportunity for economic and social development.
- ❑ Some experts argue that these favorable demographic trends are inexorably pushing the emerging world toward greater prosperity and stability. As evidence, they point to the unprecedented decline in extreme poverty and emergence of a growing middle class in many emerging markets over the past few decades.
- ❑ Although this argument has some merit, it needs to be qualified with a couple of important caveats.

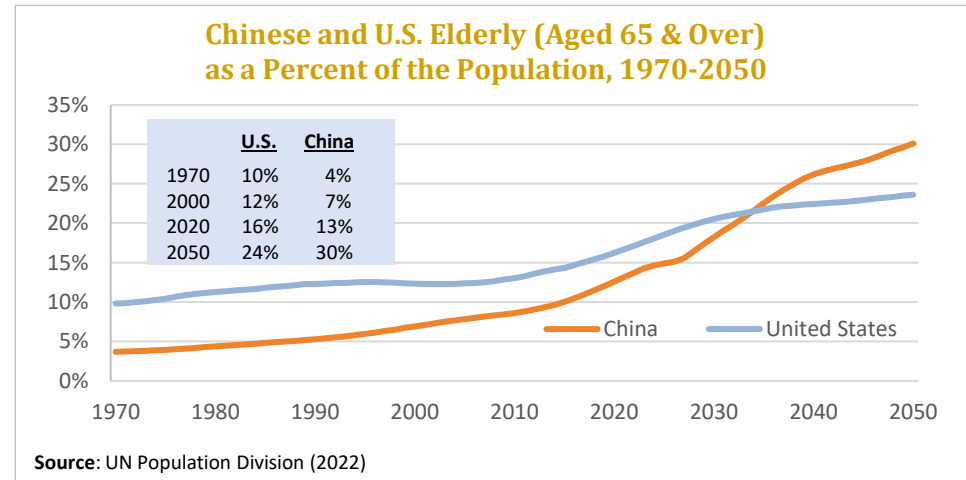
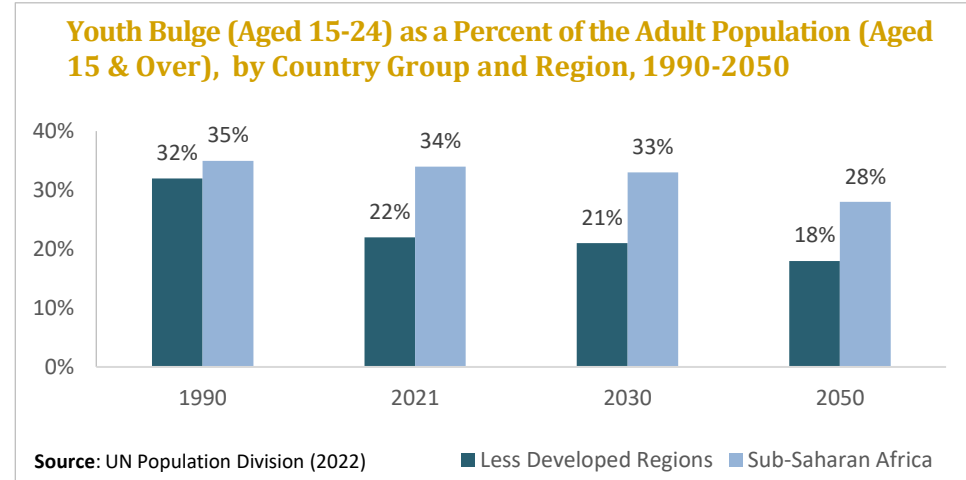
	Demographic Indicators: UN Less Developed Regions					
	1970	1980	1990	2000	2010	2021
<b>Total Fertility Rate</b>	5.9	4.4	3.7	2.9	2.7	2.4
<b>Youth Bulge*</b>	32%	33%	32%	28%	26%	22%
<b>Median Age</b>	18	19	21	23	25	28
<b>Total Dependency Ratio**</b>	128	119	104	93	80	76
<b>Population Growth Rate***</b>	2.4%	2.3%	2.2%	1.8%	1.5%	1.3%

Source: UN Population Division (2022) \*Youth Bulge = Population Aged 15-24 as a percent of population aged 15 & over. \*\*Total Dependency Ratio = Children (aged 0-19) plus elderly (aged 65 & over) per 100 working-age adults (aged 20-64). \*\*\* Population Growth Rate = Average annual rate over previous decade.



## Caveat 1: Averages Can Be Deceiving

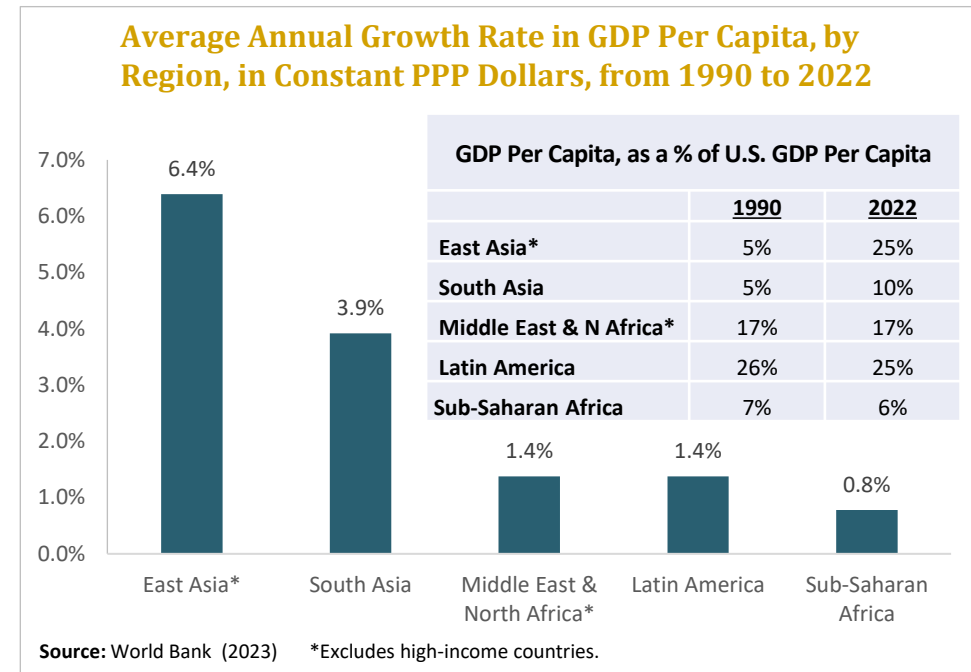
- In some regions of the emerging world, including Sub-Saharan Africa and parts of the Greater Middle East, the demographic transition has stalled in its early stages. Here lingering youth bulges, high dependency burdens, and rapid population growth may continue to undermine development prospects for decades to come.
- In other regions, especially East and Southeast Asia, the demographic transition is proceeding so rapidly that some countries are growing old before they grow rich. While today's developed countries were affluent societies with mature welfare states before they became aging societies, China is aging while it is still in the midst of development.





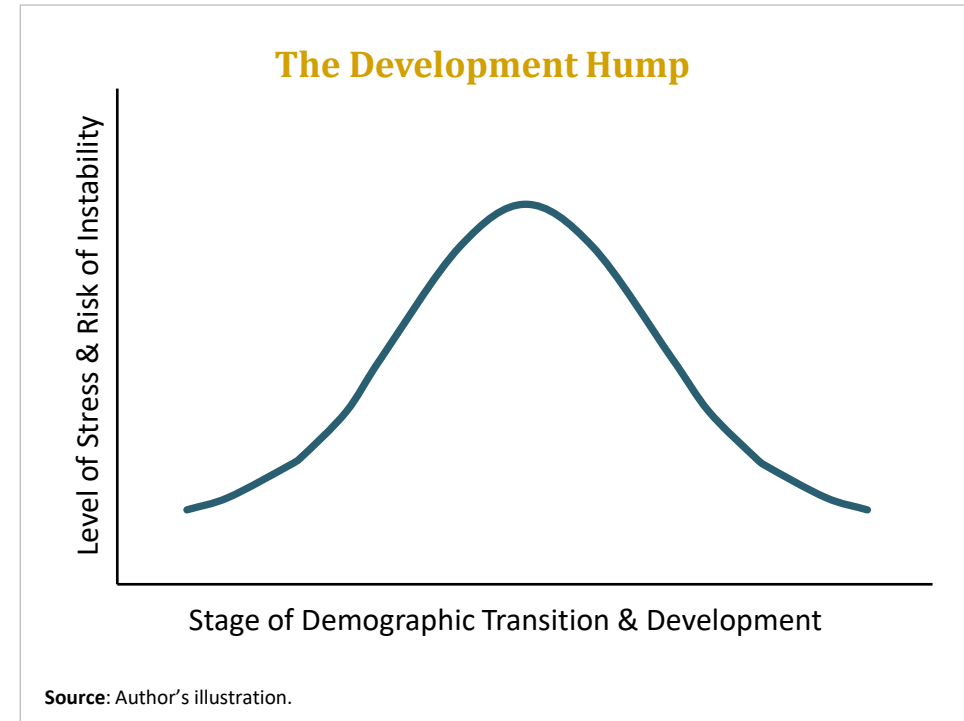
## Caveat 2: Policy Matters

- ❑ The demographic dividend may open up a window of opportunity for development, but it does not guarantee economic success. From Latin America to the Greater Middle East, there are many emerging markets that have been enjoying favorable demographics over the past few decades with little to show for it economically.
- ❑ Successfully leveraging the demographic dividend requires sound macroeconomic policies, good governance, an export-led growth strategy, and massive investments in infrastructure and, above all, human capital.
- ❑ To date, only East Asia has been fully successful in leveraging the demographic dividend, though South Asia is following close behind. The rest of the emerging world is failing to catch up with developed world living standards, and some countries are actually falling further behind.



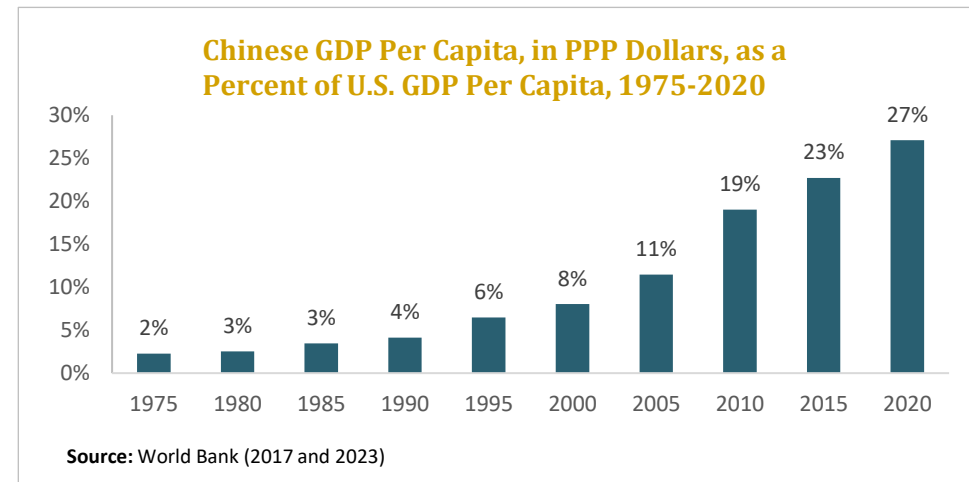
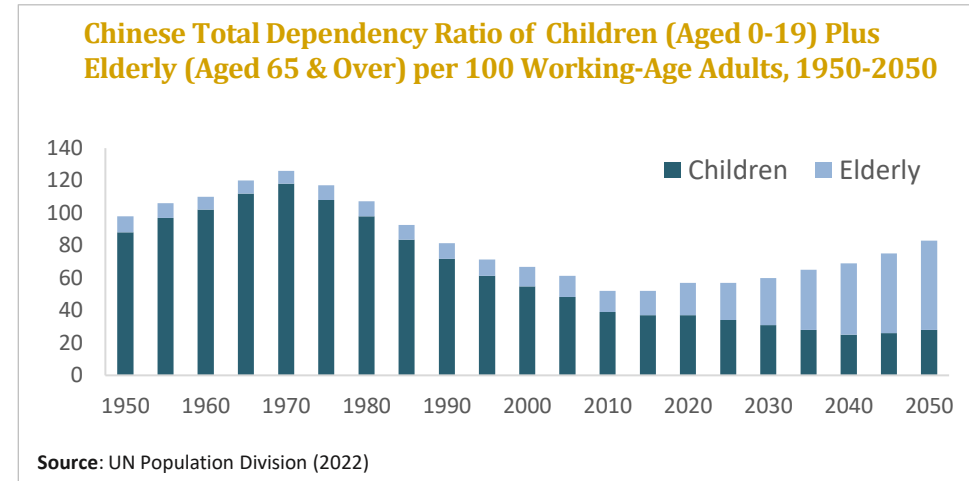
## Caveat 3: The Development Hump

- ❑ Societies undergo tremendous stress as they move from the traditional to the modern. When plotted against development, most of the stressors follow a hump-shaped curve, meaning that they become most dangerous midway through the demographic transition and the development process.
- ❑ Among the most important stressors are:
  - Rapid urbanization
  - Environmental degradation
  - Growing income inequality
  - Growing ethnic competition
  - Religious extremism
- ❑ The appeal of China's neo-authoritarian model to many governments in the emerging world lies in its proven ability to leverage the upside of development (economic growth) while managing the downside (social instability).



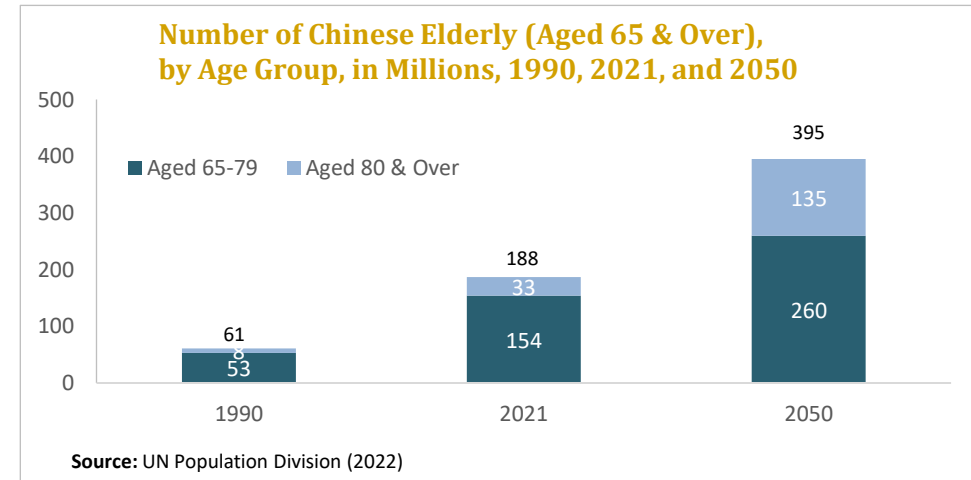
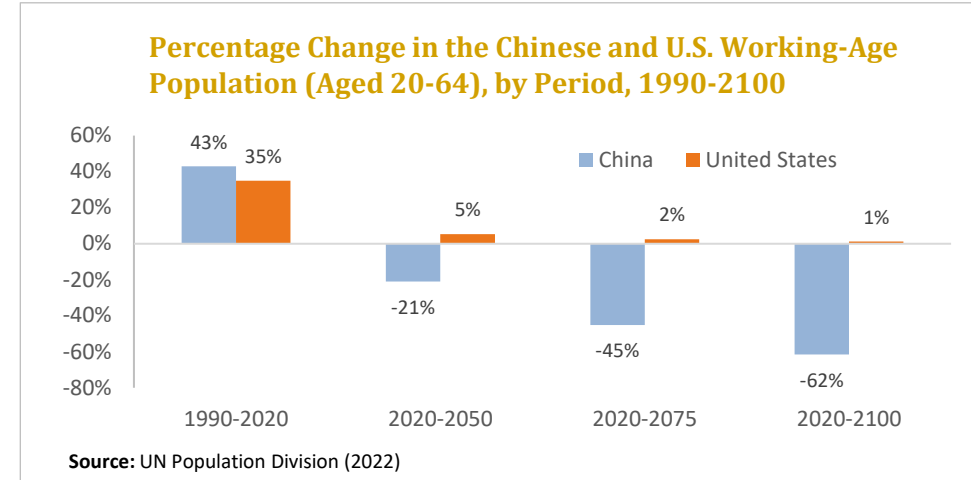
## CHINA: Yesterday's Demographic Tailwinds

- ❑ For the past three decades, China's unusually favorable demographics, with a record low dependency burden and a record high share of the population in the working years, have helped to propel its economic rise.
- ❑ Like Japan and the "East Asian Tigers" before it, China leveraged its demographic dividend with an export-led growth strategy that allowed it to shift unskilled rural laborers into low-end manufacturing jobs, where they could be instantly plugged into the global economy.
- ❑ At the same time, China invested heavily in human capital, and especially quality secondary education, to ensure that the next generation of workers would have the necessary skills as it moved up the global value-added scale.
- ❑ Since 1990, China's GDP has grown sixteenfold in real terms, while the gap in living standards between China and the United States has narrowed dramatically.



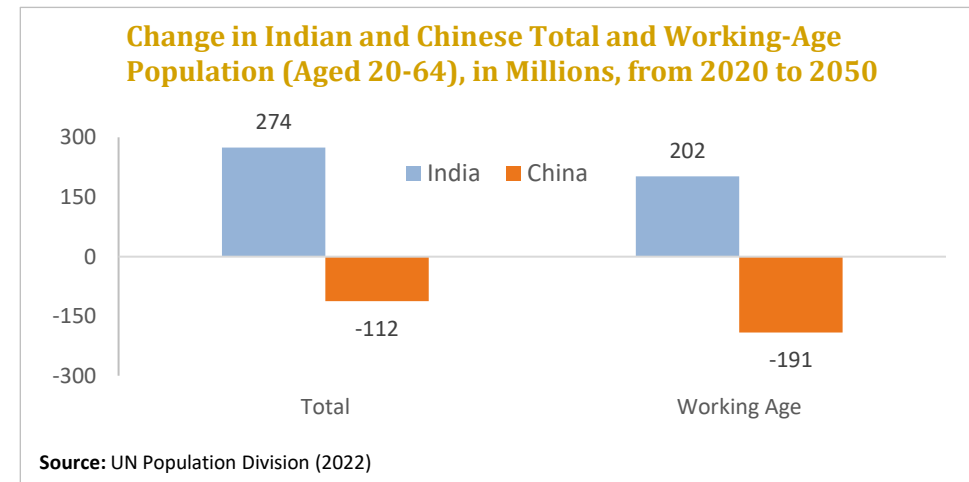
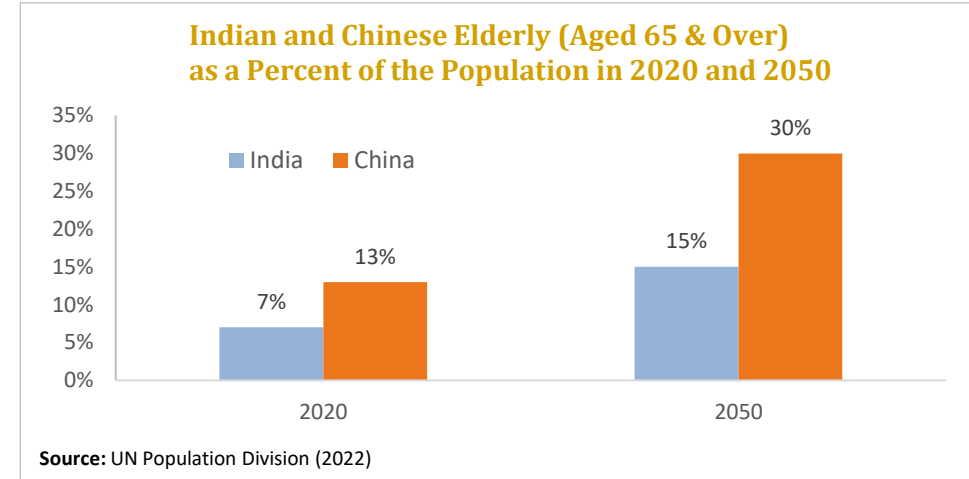
## CHINA: Tomorrow's Demographic Headwinds

- ❑ The demographic tailwinds that helped to propel China's economic rise have now become headwinds that could leave it mired in a "middle income trap."
- ❑ In coming decades, a shrinking working-age population will slow economic growth, even as a rising share of national income must be transferred to the nonworking elderly.
- ❑ The growth slowdown could be exacerbated by China's huge debt overhang, its rigid household registration system, and the government's increasingly heavy-handed interference in the private sector.
- ❑ Until recently, it seemed inevitable that China would soon eclipse the United States as the world's largest economy. Today, it seems more likely that it will peak in size just before it achieves GDP parity, then enter a long relative decline.
- ❑ China's growing demographic and economic challenges greatly increase the risk of great power conflict.



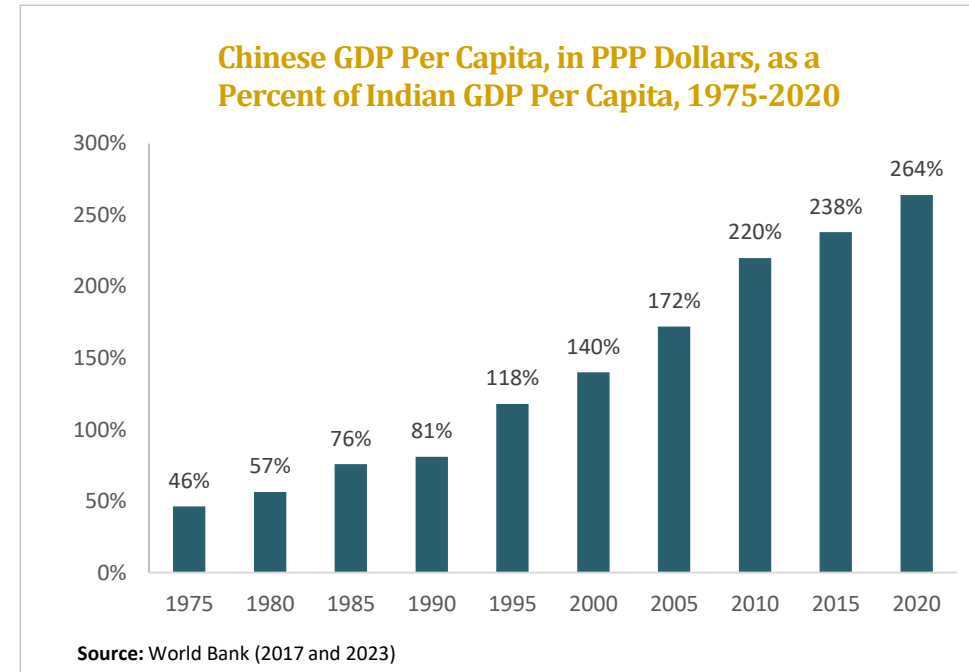
## INDIA: Important Demographic Advantages

- India is progressing through the demographic transition, but is doing so more gradually than China, where birthrates have fallen much faster and further.
- While China has now entered the final stage of the transition in which population trends will lean against economic growth, India is enjoying a large demographic dividend and will continue to do so for decades to come.
- The contrast in demographic outlook could hardly be more stunning. While India is on track to gain roughly 200 million working-age adults between now and 2050, China is on track to lose roughly 200 million.
- India's favorable demographics could greatly enhance its future economic and geopolitical stature, both absolutely and relative to China. However, India will have to overcome a number of serious obstacles if it is to fully leverage its demographic dividend.



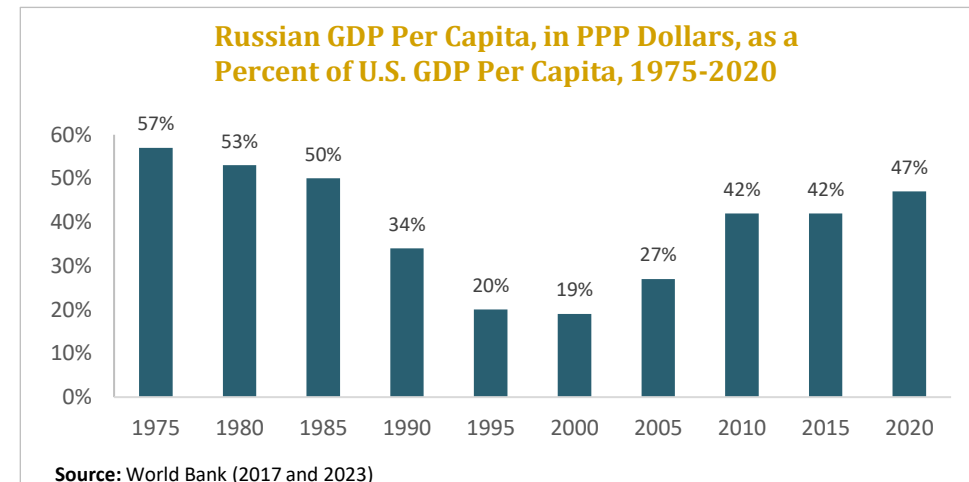
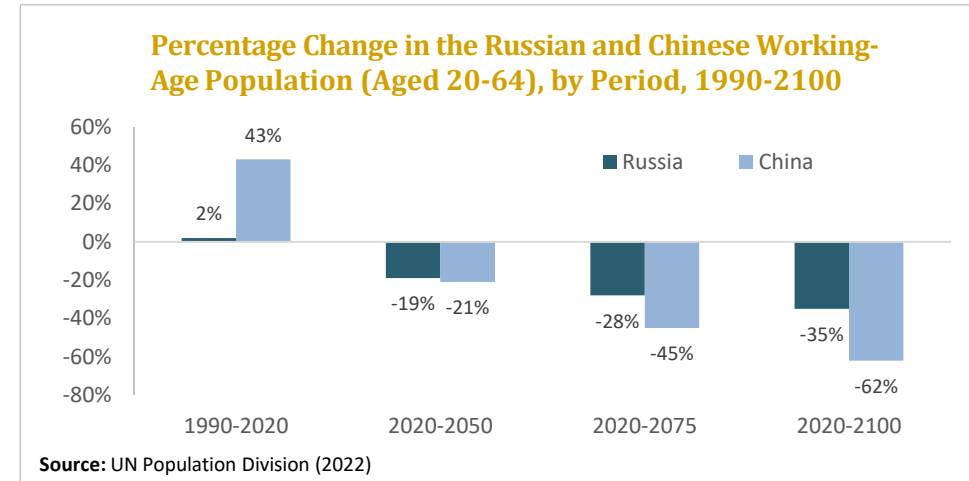
## INDIA: Serious Social and Economic Challenges

- ❑ Along with its favorable demographics, India enjoys some enviable economic advantages, including a large English-speaking middle class and globally competitive high-tech industries.
- ❑ But India also faces serious obstacles to long-term economic and geopolitical success, including large infrastructure and human capital deficits and deep-seated ethnic and religious divisions.
- ❑ Its “leap-frog development strategy,” moreover, provides no clear path for integrating its huge reservoir of unskilled rural labor into the growth sectors of the economy.
- ❑ Over the past few decades, China’s economic and living standard growth has vastly outpaced India’s. While India’s more favorable demographics may give it a long-term advantage, its ultimate success is far from assured.



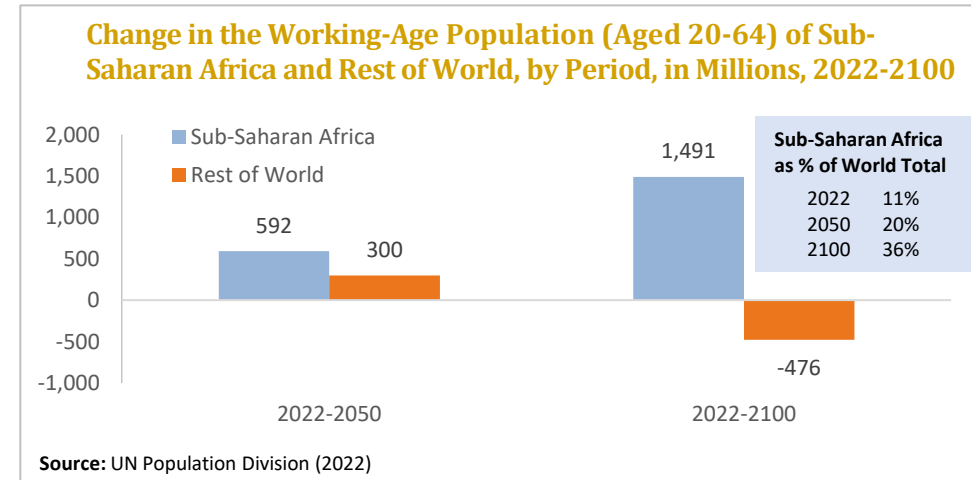
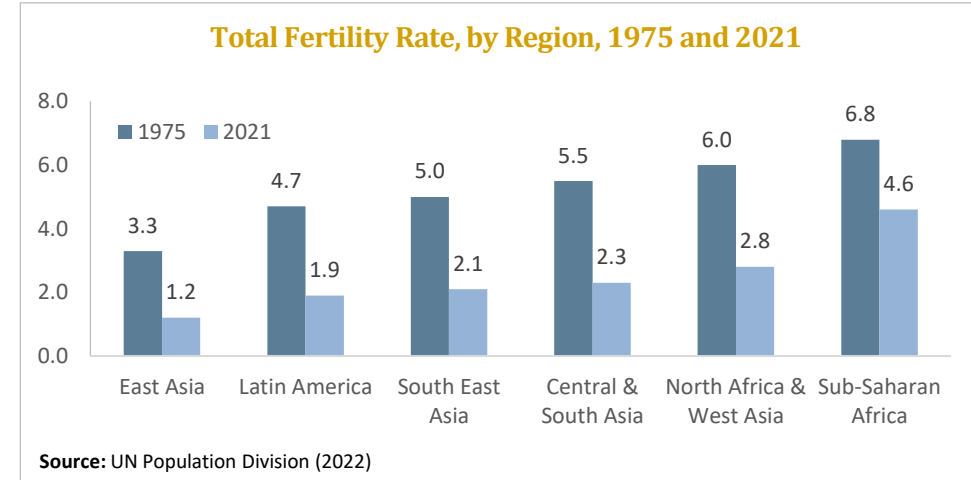
## RUSSIA: A Cornered Bear

- ❑ Like China, Russia faces a future of population decline. The decline will not be as steep, because its fertility rate has not fallen as far as China's has. Yet in many ways, the challenges Russia faces are even more daunting.
- ❑ Russia, after all, has none of China's compensating advantages. It is failing to invest adequately in human capital, health expectancy and life expectancy have deteriorated, the economy remains dependent on resource extraction, and living standard growth has stagnated.
- ❑ In none of today's great powers are the ruling regime's geopolitical aspirations so out of line with long-term demographic and economic fundamentals as they are in Russia.
- ❑ In *The Graying of the Great Powers*, published in 2008, Neil Howe and I asked : "Will Russia meekly accept its demographic fate, or will the cornered bear lash out in revanchist fury?" We now know the answer.



## SUB-SAHARAN AFRICA: Waiting for the Demographic Dividend

- ❑ The demographic transition came late to Sub-Saharan Africa, and its progress has been fitful and slow.
- ❑ On the hopeful side, there are signs that fertility rates are beginning to fall more rapidly. On the worrisome side, leveraging its demographic dividend, if one appears, will require Sub-Saharan Africa to overcome formidable obstacles, including inadequate infrastructure, substandard schools, and widespread political instability.
- ❑ With Sub-Saharan Africa set to account for two-thirds of the growth in the world's working-age population between now and 2050, and more than all of it between now and 2100, its development success or failure will have profound implications for the health of the global economy.





# Conclusion



## Three Developed World Imperatives

- ❑ **Limit the Extent of Population Aging.** Policies that help young adults, and especially women, balance job and family responsibilities can increase birthrates and limit the extent of population aging. Higher immigration can also help aging societies maintain economic growth and manage rising old-age dependency costs.
- ❑ **More Fully Utilize Society's Human Capital.** Aging societies will need to unlock the productive potential of all of their citizens, and especially the elderly, who are not only society's most underutilized human resource, but also the fastest growing segment of the population.
- ❑ **Resist Protectionist Pressures.** If an aging world is to be a prosperous world, it needs to be a globalizing world. Open global capital markets can match savers with investment opportunities, while open global labor markets can similarly match workers with job opportunities. If today's aging developed countries turn inward, the world will be both a poorer and a more dangerous place.

