

Global Aging and the Future of Emerging Markets



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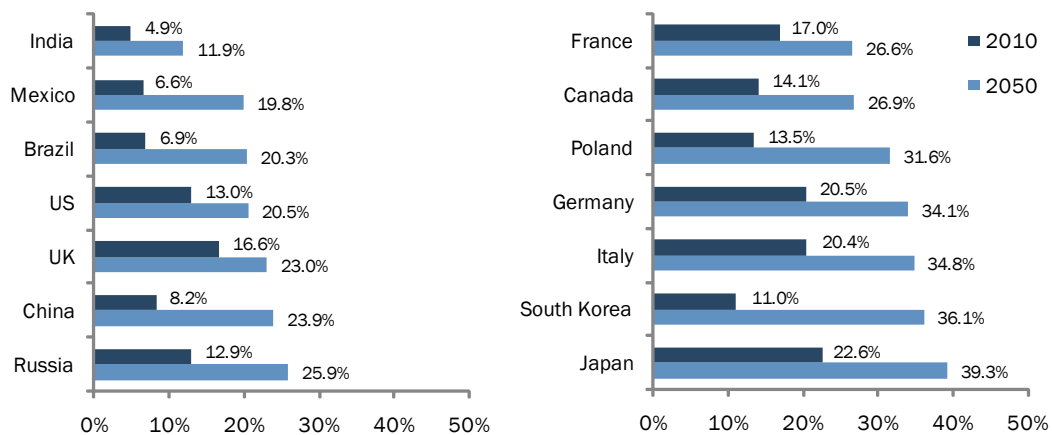
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Introduction

The world stands on the brink of a stunning demographic transformation brought about by declining fertility and rising life expectancy. The first trend is decreasing the relative number of young in society, while the second is increasing the relative number of old. Together, they are leading to a dramatic aging of populations worldwide. (See Figure 1.) The coming demographic transformation is popularly known as global aging, and over the next few decades it could have a profound impact on economic performance, social and political stability, and investment risks and opportunities worldwide.

The trend toward lower birthrates began in the rich world, but it has now overtaken most emerging markets as well.¹ Fertility has plunged beneath the 2.1 replacement rate needed to maintain a stable population from one generation to the next in all of emerging East Asia, and in the Tigers it has dropped to between 1.0 and 1.3, as low as anywhere in the developed world. Fertility is also far beneath replacement in Eastern Europe and the Russian sphere, and it is near, at, or beneath replacement in all of Latin America's leading economies. At the same time, life expectancy in many emerging markets is approaching or even attaining developed-world levels. People in China

Figure 1: Elderly (Aged 65 and Over), as a Percent of the Population, 2010–2050



Source: *World Population Prospects* (UN, 2009).

¹ See the Technical Appendix for an explanation of the country groupings and regions referred to in this report, as well as a discussion of the demographic projection scenario.

today can expect to live to 73 (up from 41 in 1950). In Mexico they can expect to live to 76 (up from 51 in 1950) and in South Korea to 79 (up from 48 in 1950).

Today's developed countries are leading the way into humanity's graying future.

It is today's developed countries, of course, that are leading the way into humanity's graying future. For most of history until well into the nineteenth century, the elderly—defined throughout this report as adults aged 65 and over—comprised only a tiny fraction of the population. In the developed countries today, they comprise 17 percent. By mid-century, the share is on track to reach 26 percent, and that is just the average. In the fastest-aging European countries, it will be approaching 35 percent and in Japan it will be approaching 40 percent. At the same time, working-age populations in almost every developed country will cease growing and in many cases begin to contract, the only major exception being the United States. By the mid-2020s, total populations in most developed countries will also peak and plateau or begin to decline.

Although the developing world as a whole is still much younger, it too is aging.

The developing world as a whole is still much younger, but it too is aging—with some emerging markets traversing the entire demographic distance from young and growing to old and stagnant or declining at a breathtaking pace. Societies that most people still think of as demographically youthful, with large families and large labor surpluses, will be utterly transformed. By the 2040s, Brazil and Mexico will be nearly as old as the United States—and China will be older. Meanwhile, South Korea, Taiwan, and Singapore will be vying with Germany, Italy, and Japan for the title of oldest country on earth.

Most experts agree that the economic impact of aging in the developed world is on balance likely to be negative. By the 2020s, many developed countries may be experiencing fiscal crisis, economic stagnation, and ugly political battles over old-age benefit reform. Rising pension and health-care costs will place intense pressure on government budgets, potentially crowding out spending on other priorities, from education and the environment to national defense. As working-age populations stagnate or contract, employers may face growing labor shortages. With median ages due to rise above 50 in Japan and many European countries, economic performance may suffer.

On balance, the economic impact of aging in the developed world is likely to be negative.

Graying workforces are likely to become less flexible, less mobile, and less innovative. As populations age, rates of savings and investment may also decline, current account balances may turn negative, and foreign indebtedness may rise.

The potential economic impact of aging in emerging markets is much more varied—and much less understood. To begin with, it depends on how far countries have progressed through the “demographic transition,” the shift from high fertility and high mortality to low fertility and low mortality that inevitably accompanies development and modernization and gives rise to global aging. In its early stages, the demographic transition tends to lean against economic growth. Since mortality rates, especially those for infants and children, decline steeply at the outset of the transition, but fertility rates fall only after a lag, countries initially experience large and destabilizing youth bulges. In its late stages, the transition also tends to lean against growth as the elderly share of the population increases rapidly and the old-age dependency burden rises. Midway through the transition, however, countries enjoy a long period of favorable demographics—often called the “demographic dividend”—in which society’s total dependency burden falls and the share of the population in the working years rises.

Much of the developing world, including all of South Asia, all of Latin America, and much of the Muslim world, now finds itself in this demographic sweet spot. East Asia, Eastern Europe, and the Russian sphere, on the other hand, are rapidly approaching the tipping point where the transition will begin to lean against growth. As in the developed world, the future will be one of rapidly aging and stagnant or contracting populations. Sub-Saharan Africa lies at the other extreme. With an average fertility rate of 5.2 and a median age of just 18, half that of most East Asian countries, the transition is barely under way. Here too demographics may lean against growth—not because countries are projected to grow old but because they are projected to remain so young.

Many emerging markets now find themselves at a demographic sweet spot where population trends favor economic growth.

Beyond the very different positions of emerging markets in the demographic transition, there are also enormous differences in the size and capacity of their public sectors, their level of market and human capital development, and their degree of social and political cohesiveness. This broader environment will play a critical role in determining how effective different countries are in leveraging their demographic dividends and boosting living-standard growth while they are still young—or in adjusting to higher old-age dependency burdens when they grow old. The broader environment will also help to determine how successfully they manage the social and economic stresses unleashed by rapid demographic change and development, from urbanization and rising income inequality to environmental degradation.

Although demography may not be destiny, it will shape the environment in which the

governments, businesses, and investors of the twenty-first century must operate in crucial ways. Trying to assess future risks and opportunities in emerging markets without considering the impact of demographic change is like setting sail without a map or a compass. It is our hope that this report, which grows out of a presentation delivered at Everest Capital's 2010 Emerging Markets Forum, will help those navigating tomorrow's turbulent economic waters steer a safer and surer course.

The first chapter looks in greater detail at the dynamics of the demographic transition in emerging markets and the implications for economic growth and social and political stability. The second chapter zeros in on the outlook in China and the Tigers, India, Latin America, and Russia. We focus on these regions and countries not only because of their obvious economic importance, but also because their very different demographic trajectories—and institutional, economic, and cultural environments—create very different risks and opportunities. The third chapter sums up the report's findings and places them in the broader context of the evolving global economy.

In any plausible scenario, the economic importance of emerging markets will continue to grow.

The message of the report is one of cautious optimism. In any plausible scenario, the economic importance of emerging markets will continue to grow as a share of global GDP, global consumption, and global market capitalization. Emerging markets are indeed where the most important growth opportunities lie. But the report also identifies real risks. The notion that the developing world, driven by the demographic transition and development, is heading linearly toward a new era of greater peace and prosperity is deeply flawed. For better or worse, the future will be more interesting than that.

Chapter 1

The Promise and Pitfalls of the Demographic Transition

The demographic transformation now sweeping emerging markets has its origins in the early post-World War II decades. Beginning in the 1950s and 1960s, improvements in public health and medical care led to dramatic reductions in mortality rates, especially among infants and children, and hence to dramatic increases in life expectancy. Then, beginning in the 1970s and 1980s, fertility rates also entered a steep decline, as effective family planning became widely available, societies began to urbanize and industrialize, and incomes and educational attainment rose. (See Table 1.) Demographers have a name for the shift from high mortality and high fertility (the traditional norm) to low mortality and low fertility (the modern norm). They call it the demographic transition. It is both a consequence and a cause of economic and social development, and it appears to be irreversible.

The demographic transformation now sweeping emerging markets is both a consequence and a cause of development.

When the developing world's demographic transition first got under way, the initial decline in mortality rates triggered a spectacular acceleration in global population growth. From 1950 to 1975, the world's population grew at an average annual rate of roughly 2 percent, faster than it ever had before for so long at any time in

Table 1: Total Fertility Rate and Life Expectancy at Birth, 1950–2010

	Total Fertility Rate				Life Expectancy at Birth			
	1950-55	1970-75	1990-95	2005-10	1950-55	1970-75	1990-95	2005-10
East Asia	6.0	4.7	2.0	1.7	41.3	63.2	69.0	73.2
Eastern Europe	3.1	2.4	1.7	1.4	62.3	70.0	71.3	74.9
Latin America	5.9	5.1	3.1	2.3	52.0	61.3	69.1	73.5
Muslim World	6.4	6.2	4.2	2.9	41.9	52.2	62.4	68.2
Russian Sphere	2.9	2.1	1.6	1.4	64.7	69.3	67.2	67.3
South Asia	6.0	5.4	3.8	2.7	39.3	51.4	60.3	64.9
Sub-Saharan Africa	6.6	6.7	6.1	5.2	37.9	45.5	49.9	51.7

Source: *World Population Prospects* (UN, 2009).

recorded history. The transition seemed to be pushing the world toward a Malthusian economic crisis—or at least so warned Paul Ehrlich and David Brower in their 1968 bestseller, *The Population Bomb*, and the Club of Rome in its 1972 report, *The Limits to Growth*.² Along the way, the large youth bulges that the transition spawned also became a driving force behind social and political upheaval, from China’s Cultural Revolution starting in the late 1960s to Iran’s Islamic Revolution starting in the late 1970s.

Two-fifths of the developing world’s population now lives in countries where fertility is beneath the 2.1 replacement level.

Yet as the demographic transition has progressed, it has entered a new phase in which the potential economic, social, and political impact is increasingly positive. Since 1975, the average fertility rate in the developing world has dropped from 5.1 to 2.7, the rate of population growth has decelerated from 2.2 to 1.3

percent per year, and the median age has risen from 21 to 28. Roughly two-fifths of the developing world’s population now lives in countries where the fertility rate is at or beneath the 2.1 replacement level. Over time, as population growth has slowed and youth bulges have matured into working-age bulges, the demographic transition has become a driving force behind the rise of some of today’s most successful emerging markets.

The fading of youth bulges in and of itself can improve the prospects for growth and stability. Throughout history, people have observed that young men are responsible for most of the world’s mayhem. Since the mid-1990s, a large body of research has confirmed the close statistical correlation between the likelihood of instability and conflict, especially civil unrest and state failure, and the size of a society’s youth bulge, which is usually defined as the ratio of youth aged 15 to 24 to the entire adult population aged 15 and over.³ The good news is that youth bulges have peaked or will soon peak in most regions of the developing world, and are projected to decline steeply over the next few decades. (See Table 2.) As the overall age structure of

As youth bulges recede, societies may become more focused on wealth creation.

societies shifts upward, the hope is that they will become not only more stable, but also more focused on building institutions that facilitate the creation and protection of wealth.

² Paul R. Ehrlich and David Brower, *The Population Bomb* (New York: Ballantine Books, 1968); and Donella H. Meadows et al., *The Limits to Growth* (New York: Universe Books, 1972).

³ See, for example, Daniel C. Esty et al., *State Failure Task Force Report: Phase II Findings* (McLean, VA: Science Applications International Corporation, 1998); Richard P. Cincotta, Robert Engelman, and Daniele Anastasion, *The Security Demographic: Population and Civil Conflict after the Cold War* (Washington, DC: Population Action International, 2003); Henrik Urdal, “A Clash of Generations? Youth Bulges and Political Violence,” *International Studies Quarterly* 50, no. 3 (2006), 607–629; and Elizabeth Leahy et al., *The Shape of Things to Come: Why Age Structure Matters to a Safer, More Equitable World* (Washington, DC: Population Action International, 2007).

Table 2: Youth Bulge (Aged 15–24), as a Percent of the Adult Population (Aged 15 & Over), 1975–2050

	1975	1990	2000	2010	2020	2030	2040	2050
East Asia	31.6%	30.1%	20.9%	20.9%	15.4%	14.3%	13.1%	11.8%
Eastern Europe	23.1%	19.5%	19.2%	15.8%	12.1%	12.1%	10.8%	9.7%
Latin America	33.5%	30.9%	28.4%	24.8%	21.6%	18.9%	18.2%	16.9%
Muslim World	33.5%	33.3%	32.2%	28.5%	24.1%	22.6%	21.7%	19.7%
Russian Sphere	23.7%	17.5%	19.2%	17.1%	11.8%	13.4%	11.3%	10.4%
South Asia	33.5%	31.1%	29.6%	27.5%	23.9%	21.6%	20.7%	18.4%
Sub-Saharan Africa	33.9%	35.1%	35.8%	35.3%	33.7%	32.6%	30.6%	27.4%

Source: World Population Prospects (UN, 2009).

There is also another positive, and economically more important, dynamic set in motion when fertility begins to fall. It arises from the decline in what demographers call the “total dependency ratio”—that is, the ratio of children plus elderly to working-age adults. When the demographic transition begins, the explosive growth in the number of young dependents pushes up the total dependency ratio and puts downward pressure on per capita living standards. But once fertility falls the total dependency ratio declines, which tends to push per capita living standards up. To make the same point another way, when the transition enters its second phase, the share of the population in the traditional working years rises, often dramatically. (See Tables 3 and 4.)

Beyond this simple arithmetic, the decline in dependency burdens can also alter economic behavior in ways that further accelerate the pace of living-standard growth. Labor-force participation rates may increase because fewer children free up adult time, and especially the time of women, for participation in the market economy. Over time savings rates may increase as well, as more of the bulge in the working-age population enters the high-savings middle years. Declining family size, together with rising life expectancy, also increases incentives to invest more in the “quality” of children, and thus of the future workforce. The overall dynamic is called the demographic dividend—and it opens up a window of opportunity for countries to boost economic growth.

The fall in dependency burdens creates a demographic dividend that can boost economic growth.

Table 3: Total Dependency Ratio of Children (Aged 0–19) and Elderly (Aged 65 & Over) per 100 Working-Age Adults (Aged 20–64), 1975–2050

	1975	1990	2000	2010	2020	2030	2040	2050
East Asia	114	79	68	56	56	63	73	77
Eastern Europe	76	72	66	57	61	65	70	83
Latin America	128	106	91	78	72	75	77	81
Muslim World	135	122	104	84	78	78	76	79
Russian Sphere	73	68	65	52	57	64	63	75
South Asia	121	108	97	83	76	75	72	74
Sub-Saharan Africa	138	143	138	130	123	112	98	89

Note: Lowest ratio is highlighted.
Source: *World Population Prospects* (UN, 2009).

Table 4: Working-Age Population (Aged 20–64), as a Percent of the Total Population, 1975–2050

	1975	1990	2000	2010	2020	2030	2040	2050
East Asia	46.8%	55.7%	59.6%	64.1%	63.9%	61.5%	57.8%	56.5%
Eastern Europe	56.8%	58.3%	60.4%	6.8%	62.1%	60.5%	58.9%	54.6%
Latin America	43.8%	48.5%	52.3%	56.3%	58.0%	57.3%	56.5%	55.3%
Muslim World	42.6%	45.1%	49.1%	54.3%	56.1%	56.3%	56.8%	55.9%
Russian Sphere	57.7%	59.6%	60.8%	65.6%	63.5%	61.1%	61.3%	57.3%
South Asia	45.2%	48.1%	50.8%	54.8%	56.9%	57.2%	58.1%	57.6%
Sub-Saharan Africa	42.0%	41.1%	42.1%	43.5%	44.9%	47.2%	50.6%	53.0%

Note: Highest share is highlighted.
Source: *World Population Prospects* (UN, 2009).

Since 1975, the working-age share of China's population has risen from 47 to 64 percent.

The dynamic is not merely theoretical. Economists who have studied the demographic transition agree that it has given a powerful boost to economic growth in emerging East Asia, underpinning the stunning rise first of the Tigers and then, more recently, of China. Since 1975, the total dependency ratio of children and elderly per 100 working-age adults in emerging

East Asia has fallen from 114 to 56, the largest drop of any region in the world. Meanwhile, the share of the population in the working years has risen from 47 to 64 percent. Some studies have concluded that the shift in the age structure of East Asia's population accounts for between one-quarter and two-fifths of the growth in its per capita GDP since the mid-1970s.⁴

While demographic trends are now favorable in most emerging markets, this does not mean that the entire developing world is entering a new era of guaranteed prosperity. The basic story may be hopeful, but it comes with a number of important caveats.

To begin with, the pace and timing of the demographic transition varies tremendously, and in some parts of the developing world the transition is barely under way or else has stalled in its early stages. In today's sub-Saharan Africa, burdened by the world's highest fertility rates and ravaged by AIDS, the average youth bulge is 35 percent, more than twice the developed-world average, and is projected to remain at elevated levels for decades to come. The transition has also failed to gain traction in parts of the Muslim world, including such chronically unstable countries as Afghanistan, Iraq, the Palestinian Territories, Somalia, Sudan, and Yemen. In recent years, most of these nations have amply demonstrated the correlation between extreme youth and violence. If the correlation endures, chronic unrest could persist through the 2030s. The potential benefits of the demographic transition still lie well over the horizon—and may not materialize at all unless fertility falls more rapidly than projected.

Even where demographic trends are favorable to growth, moreover, not all countries will be successful in leveraging them. If demography were all that mattered, most emerging markets would be growing as fast, or nearly as fast, as East Asia. Dependency ratios have been falling and the working-age share of the population has been rising since the mid-1970s in every region of the developing world except sub-Saharan Africa. In Latin America, the total dependency ratio fell from 128 to 78 between 1975 and 2010, a decline that is three-quarters as large in percentage terms as the decline emerging East Asia experienced over the same period. Yet per capita GDP in Latin America has grown at just one-sixth of the rate in East Asia—1.2 percent per year since 1975 versus 6.9 percent per year. Many

Although the demographic dividend opens up a window of economic opportunity, it does not guarantee economic success.

⁴ See, for example, David E. Bloom and Jeffrey Williamson, "Demographic Transitions and Economic Miracles in Emerging Asia," *World Bank Economic Review* 12, no. 3 (September 1998), 419–455; David E. Bloom, David Canning, and Pia N. Malaney, "Demographic Change and Economic Growth in Asia," CID Working Paper no. 015 (Cambridge, MA: Center for International Development at Harvard University, May 1999); and Jeffrey Williamson, "Demographic Change, Economic Growth, and Inequality," in *Population Matters: Demographic Change, Economic Growth, and Poverty in the Developing World*, eds. Nancy Birdsall, Allen C. Kelley, and Steven Sinding (New York: Oxford University Press, 2001), 106–136.

countries in South Asia and the Muslim world have also registered large declines in their total dependency ratios since the mid-1970s, and dependency ratios in Eastern Europe and the Russian sphere, which were already low, have fallen even further. Yet no region has achieved sustained growth rates in living standards that approach East Asia's.

The lesson is that favorable demographics help only to the extent that societies can mobilize economic resources and efficiently allocate them to value-added activities. To varying degrees in different countries, East Asia's success in leveraging its demographic dividend has depended on sound macroeconomic policies, pro-business tax and regulatory regimes, public confidence in the rule of law, and massive government investments in infrastructure, R&D, and, above all, human capital. When South Korea's demographic transition got under way in the 1950s and 1960s, it was still a predominantly agrarian nation of peasant farmers. Today, it has the highest high school graduation rate and second highest college graduation rate in the world.⁵ Quite simply, many of the conditions that explain East Asia's success have not existed in large parts of the developing world.

As societies move from the traditional to the modern, they are buffeted by disorienting social, cultural, and economic crosswinds.

Many emerging markets are also discovering that the progression of the demographic transition—and the development that accompanies it—can give rise to new stresses that may be every bit as destabilizing as large youth bulges. Economists, sociologists, and historians who have studied the development process agree that

societies are buffeted by disorienting social, cultural, and economic crosswinds as they move from the traditional to the modern. As countries are integrated into the global marketplace and global culture, traditional economic and social structures are overturned and traditional value systems are challenged. Along with the economic benefits of rising living standards, development also brings the social costs of rapid urbanization, growing income inequality, and environmental degradation. When plotted against development, many of these stresses exhibit a hump-shaped or inverted-U pattern, meaning that they become most acute midway through the demographic transition.

Ironically, the countries that are undergoing the most rapid demographic transitions and most rapid development may be the most at risk. Rapid transitions, if they trigger rapid economic growth, may lift countries more quickly over the “development

⁵ OECD Education at a Glance 2009 (Paris: OECD, 2009).

hump” and out of the transition’s danger zone. But along the way, they also increase the stresses of development and modernization, since they give political systems, social institutions, and cultural attitudes less time to adapt. This is why many social scientists and political historians believe that gradualism is more likely to result in peaceful development. Think of the history of Great Britain, whose industrial revolution unfolded over two centuries, compared with that of Germany or Russia, whose compressed industrialization helped precipitate social revolution and world war. It is hard to gauge how great the risk of social and political crisis is in today’s fast-growing emerging markets, but some governments appear to be taking it seriously. It is no accident that China’s new emphasis on “balanced development” and building a “harmonious society” coincides with mounting popular discontent over the rural-urban income gap, the inadequate social safety net, and the deteriorating environment.

Finally, it is important to remember that the favorable demographics which many emerging markets now enjoy will not last indefinitely. The demographic dividend offers countries a one-time opportunity to boost living standards. As the transition continues to unfold, the growth in the relative number of elderly will eventually overtake the decline in the relative number of children, and the downward trend in the total dependency burden will reverse direction.

Eastern Europe and the Russian sphere, where the transition began much earlier than in the rest of the developing world, along with China and the Tigers, where it has progressed much faster, are already approaching the tipping point where demographics will again begin to lean against economic growth.

As emerging markets enter the final stage of the demographic transition, they will encounter many of the same challenges now confronting today’s developed economies, from rising old-age dependency burdens to graying workforces and declining rates of savings and investment. There is, however, one important difference. The emerging markets’ age waves will be arriving in societies that are not only less affluent, but that in many cases have not yet had time to put in place the social protections of a modern welfare state. While the fiscal pressures of aging in most emerging markets will be less than in the developed world, the social stresses may be even greater. In many emerging markets, only a small fraction of the workforce is earning a benefit

East Asia, Eastern Europe, and Russia are fast approaching the tipping point where aging populations will begin to lean against economic growth.

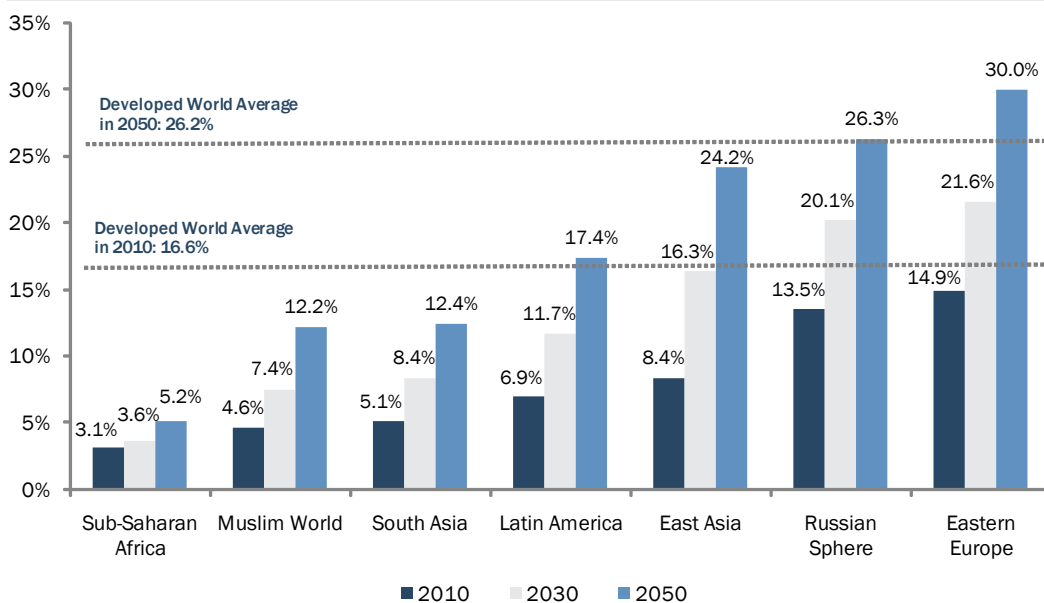
An aging crisis of potentially immense proportions looms in the future of some emerging markets.

under any pension system, public or private. The majority of elders in countries like China, India, and Mexico still depend heavily on the extended family for support in old age. Yet traditional family support networks are already showing strains as countries urbanize and modernize—and will soon come under intense new pressure as populations age and family size declines. An aging crisis of potentially immense dimensions looms in the future of some emerging markets unless they rush to construct old-age safety nets.

These caveats notwithstanding, the demographic outlook in much of the developing world is on balance favorable to economic growth, especially compared with the outlook in most of the developed world. While the countries of East Asia, Eastern Europe, and the Russian sphere are on the cusp of a new era of rapid population aging and population decline, in other emerging markets the period of demographic dividend is far from over. The total dependency ratio is not due to bottom out and begin rising again in Latin America until the mid-2020s. In South Asia and the Muslim world, it is not due to bottom out until the 2030s or 2040s. The age waves that these regions will ultimately confront, moreover, will be much smaller than those that are about to roll over the faster-transitioning emerging markets. The demographic transition not only differs in its timing across the developing world, but also, because fertility rates have fallen much further in some regions than in others, in its ultimate impact on population age structures and population growth rates. On their current demographic trajectory, the countries of Latin America, South Asia, and the Muslim world will never grow as old as those of East Asia, Eastern Europe, and the Russian sphere. Nor will they face the prospect of a gathering population decline. (See Figures 2 and 3.)

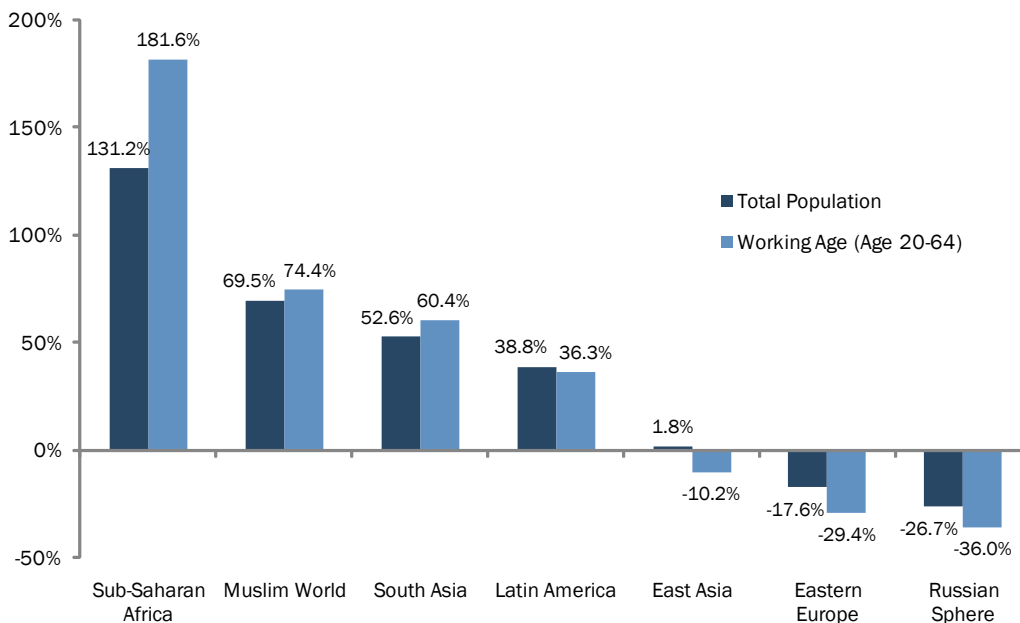
There are also encouraging signs that many countries which have lagged in leveraging their demographic dividends may finally be getting it right. The economic performance of most emerging markets has improved markedly since the mid-1990s, thanks to sounder macroeconomic policies, pro-growth reform of labor markets and capital markets, and new and more effective investments in infrastructure and human capital. A record number of countries have experienced at least modest growth in real per capita incomes over the past 10 to 15 years, and in most of South Asia, Eastern Europe, and the Russian sphere, real per capita incomes have grown rapidly. (See Figure 4.) Until recently, East Asia was the only region of the developing world that was actually closing the income gap with the developed world. Now South Asia, Eastern Europe, and the Russian sphere are also gaining ground. (See Table 5.)

Figure 2: Elderly (Aged 65 & Over), as a Percent of the Population, 2010–2050



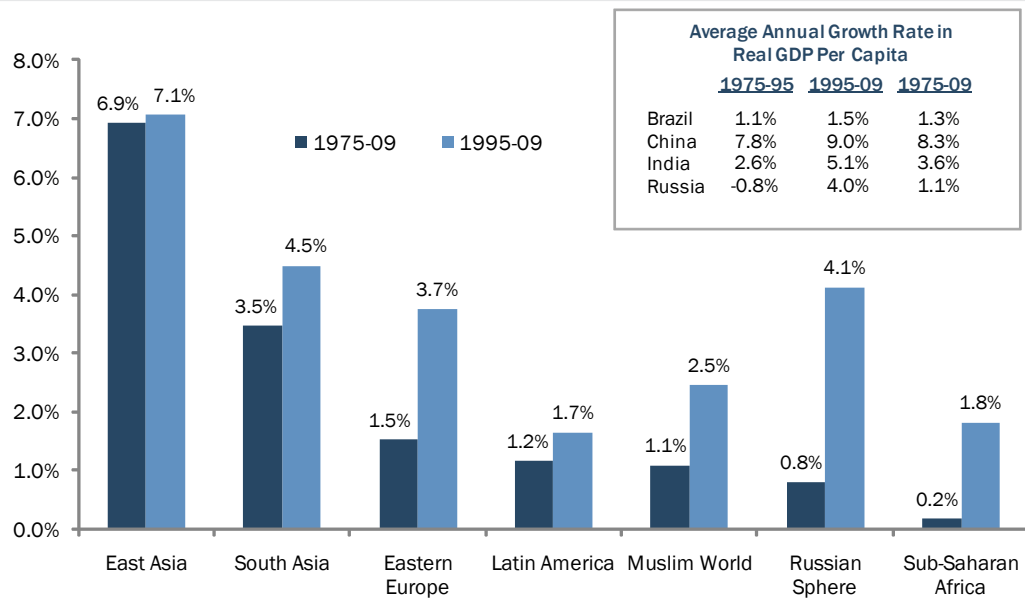
Source: World Population Prospects (UN, 2009).

Figure 3: Cumulative Percentage Change in the Population: 2010–2050



Source: World Population Prospects (UN, 2009).

Figure 4: Average Annual Growth Rate in Real GDP Per Capita (in 2005 PPP Dollars) by Period, 1975–2009



Source: World Development Indicators, World Bank, 2010, <http://databank.worldbank.org/>; Angus Maddison, Historical Statistics of the World Economy: 1-2008 A.D., Groningen Growth and Development Center, February 2010, <http://www.ggdcenter.net/maddison/>; and World Population Prospects (UN, 2009).

Table 5: Real GDP Per Capita (in 2005 PPP Dollars), as a Percent of the Developed-World Average, 1975–2009

	1975	1980	1985	1990	1995	2000	2005	2009
East Asia	4.1%	4.7%	6.0%	7.1%	9.9%	11.6%	15.4%	21.5%
Eastern Europe	50.4%	48.1%	45.6%	37.9%	32.5%	34.0%	39.7%	45.2%
Latin America	35.0%	35.4%	30.2%	26.3%	26.6%	25.2%	25.4%	27.8%
Muslim World	20.4%	19.8%	16.8%	13.9%	13.6%	13.0%	14.1%	15.8%
Russian Sphere	46.3%	42.8%	41.1%	40.1%	22.4%	21.5%	28.4%	32.7%
South Asia	5.2%	5.0%	5.0%	5.2%	5.8%	6.0%	7.2%	8.9%
Sub-Saharan Africa	9.8%	8.5%	7.0%	6.0%	5.2%	4.8%	5.0%	5.6%

Source: World Development Indicators, World Bank, 2010, <http://databank.worldbank.org/>; Angus Maddison, Historical Statistics of the World Economy: 1-2008 A.D., Groningen Growth and Development Center, February 2010, <http://www.ggdcenter.net/maddison/>; and World Population Prospects (UN, 2009).

The resilience of most emerging markets in the face of the global economic crisis that began in 2008 attests to how much progress they have made. Contrary to what conventional wisdom predicted, the crisis wreaked far more damage on the developed economies than it did on the emerging markets. Indeed, emerging markets account for a much larger share of global growth coming out of the crisis than they did going into it. As columnist Fareed Zakaria sums it up, “People in the West were quick to write off the developing nations after the crash, sure that they could not survive a recession in the centers of the global economy. But the strongest of the emerging markets have actually emerged. They have become large, mature, and connected enough that while affected by the West, their fortunes are not entirely dependent on it.”⁶

The resilience of most emerging markets in the face of the economic crisis attests to how much progress they have made.

⁶ Fareed Zakaria, “The Secrets of Stability,” *Newsweek*, December 12, 2009.

Chapter 2

The Outlook in Key Emerging Markets

The emerging markets are far too numerous and diverse to survey, even superficially, in such a short report. We therefore focus in greater detail on a few countries and regions whose future performance most observers would agree will be of critical importance to the global economy: China and the Tigers, India, Latin America, and Russia. Our goal is to explain how the very different demographic trajectories—and institutional, economic, and cultural environments—of these key emerging markets may help or hurt their long-term growth prospects.

China and the Tigers

The demographic transition has proceeded with breathtaking speed in emerging East Asia. In the late 1960s, the region's fertility rate weighed in at 5.8, slightly higher than the developing-world average at the time. But by the early 1990s, just 25 years later, it had already dropped beneath the 2.1 replacement rate. Fertility in the region now averages just 1.7, and in the Tigers it has sunk far lower—to 1.3 in Singapore, 1.2 in South Korea, 1.1 in Taiwan, and 1.0 in Hong Kong. Median ages have already risen to around 35 in China and to around 40 in the Tigers. Meanwhile, the youth bulges that helped fuel social and political upheaval in China during the late 1960s and early 1970s and in South Korea and Taiwan during the early 1980s have faded.

For the past three decades, emerging East Asia's unusually favorable demographics, with low dependency ratios and large shares of the population in the working years, have helped to propel a spectacular rise in living standards. Since 1975, per capita income in the Tigers has risen from 38 to 86 percent of the developed-world average. The growth in per capita income in China has if anything been more spectacular, rising from 2 to 18 percent of the developed-world average over the same period.

Over the next few years, however, East Asia's favorable demographics will be thrown into reverse. The region's exceptionally steep decline in fertility generated enormous demographic dividends, but will also generate enormous age waves. With the elderly share of their population due to rise from 11 percent today to 24 percent in 2030 and 36 percent in 2050, the Tigers face a demographic future as daunting as that of any developed country. Even China, though its aging trend is less severe, will be an older country than the United States within 25 years. (See Figure 5.) At the

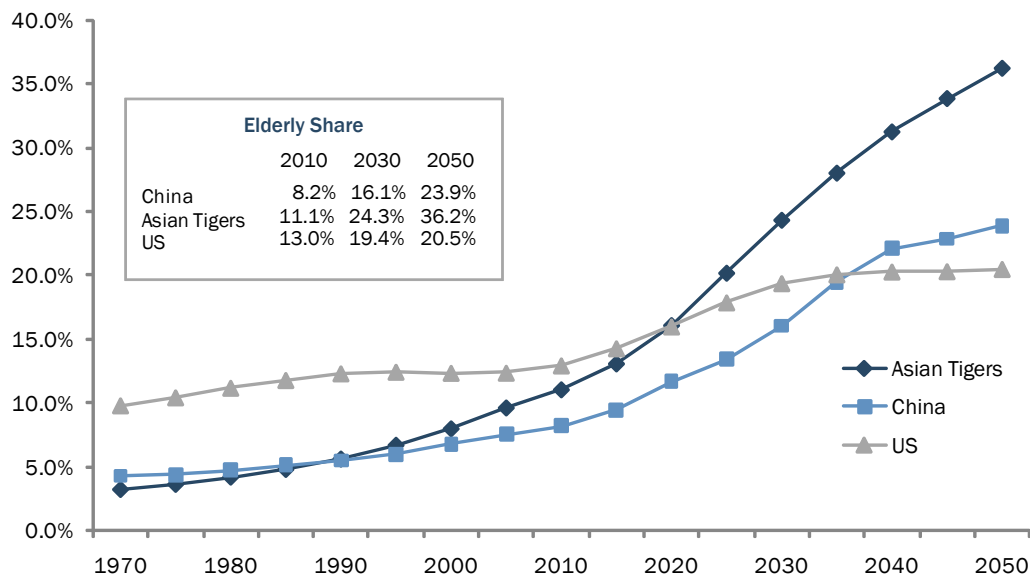
East Asia's steep decline in fertility rates has generated enormous demographic dividends, but will also generate enormous age waves.

same time, working-age populations in all of the major economies of the region, including China, will peak and begin to decline. By 2050, there will be 10 percent fewer working-age Chinese than today and 33 percent fewer working-age South Koreans.

The potential negative economic and social impact of East Asia's age waves is beginning to alarm governments throughout the region and prompt eleventh-hour efforts to arrest the deteriorating demographics. After decades of discouraging births, South Korea and Singapore have reversed course and are now actively encouraging them with pronatal tax breaks, baby bonuses, and, in the case of Singapore, even a government-sponsored dating service. Ethnically homogeneous South Korea is also cracking open its door to immigration. Meanwhile, China is considering relaxing the one-child policy. Even if birthrates were to rise sharply, however, the aging trend would not slow appreciably for decades. One way or the other, the countries of East Asia will have to confront the consequences of demographic transitions that have proceeded too fast and too far.

While the Tigers face a steeper aging trend, the challenge in China is in some ways more daunting. The Tigers, after all, are already high-income societies. China's age

Figure 5: Elderly (Aged 65 & Over), as a Percent of the Population, 1970-2050



Source: *World Population Prospects* (UN, 2009); and *Population Projections for Taiwan: 2010-2060*, Council for Economic Planning and Development, Taiwan, September 6, 2010, <http://www.cepd.gov.tw/>.

wave is arriving in a society that is at a much earlier stage of development and still requires decades of rapid growth before living standards approach developed-world levels. More is at stake for China—and, because of its size, for the world economy.

Although China's deteriorating demographics are unlikely to halt its economic rise, they will almost certainly slow it. To begin with, there is the negative impact on labor-force and employment growth. Over the three decades of the reform era, China's working-age population has expanded at the average annual rate of 2.0 percent per year. By the 2030s, its working-age population will be contracting by 0.7 percent per year, a swing of 2.7 percentage points. Unless productivity or labor-force participation increase dramatically, GDP growth will inevitably slow.

China's deteriorating demographics may slow its economic rise.

Contrary to what some suppose, the scope for internal migration to make up this gap is limited. Until recently, China was able to enjoy a huge boost to GDP growth by shifting millions of underemployed workers each year from nonmarket rural sectors into full-time, low-skilled manufacturing jobs that are integrated with the global economy. But migration cannot continue indefinitely as a major source of workforce and productivity growth, since China is rapidly losing its competitive advantage in low-skilled manufacturing. As its industries begin to move up the global value-added scale, a mismatch is emerging between the skills of its remaining surplus rural labor and the demands of the jobs being created in the growth sectors of its economy.

The aging of China's population may also pull down rates of savings and investment. With China now awash in excess savings, running huge current account surpluses, and accumulating massive foreign exchange reserves, this prospect may seem remote. Yet numerous studies have confirmed that the classic life-cycle motivation for savings—accumulating assets during the working years to be drawn down during the retirement years—functions far more powerfully in China than in the developed countries, in part because the social insurance system is not yet well developed and in part because the Confucian ethic that traditionally allowed elders to rely on their children for support in old age is weakening. What this means is that household savings rates, which have risen dramatically in recent decades as youth dependency has declined, could fall just as dramatically once elder dependency begins to climb.⁷

Increasingly, economic growth in China will depend on allocating domestic savings

⁷ For a summary of the literature on demographics and savings, see Richard Jackson and Neil Howe, *The Graying of the Great Powers: Demography and Geopolitics in the 21st Century* (Washington, DC: Center for Strategic and International Studies, 2008), 97–108.

to the most productive investments—not only because domestic savings may be less plentiful, but also because foreign direct investment may decline as the developed countries and the Tigers age. Yet this is China’s greatest economic weakness. Although China’s labor markets and product markets are now more liberal than those of many capitalist economies, reform of its capital markets has lagged. Most of the capital in China today is still allocated by the government through the state-owned banks. The result is that many large favored enterprises are showered with investment funds despite poor expected returns and prospects, while many small unnoticed enterprises are starved for funding despite excellent expected returns and prospects.

Today there are 7.8 working-age adults to support each Chinese elder, but by 2030 there will be just 3.8 and by 2050 just 2.4.

Even as China’s economy grows more slowly, a rising share of total economic resources will have to be transferred from working-age adults to nonworking elders. In 2010, there were 7.8 working-age adults in China available to support each elder. That ratio is due to fall to 3.8 by 2030 and to just 2.4 by 2050,

which means that the average burden that must be shouldered by each worker will more than triple. Much of this burden falls on families today. But in a rapidly aging and developing China, a rising share is bound to show up in public budgets and higher tax rates.

In the end, however, what is most worrisome is not the prospect of slower growth itself, but its potential for triggering a social and political crisis. By the 2020s, demographic trends may be weakening the two principal pillars of the government’s political legitimacy: rapidly rising living standards and social stability. The social stresses of breakneck development have so far been bearable in a youthful China in which incomes have been rising rapidly. They may become less tolerable in an aging China in which economic growth is slowing. This will be especially true if China fails to shore up its tattered social safety net, which leaves hundreds of millions of workers on track to reach old age without pensions and without health care.

None of this is to say that China’s rags-to-riches story is fated to end badly. Although its demographics are beginning to lean against growth, its age wave will not arrive in full force until the mid-2020s, by which point China’s economy will almost certainly have overtaken the U.S. economy in size, at least measured in purchasing power parity dollars that take into account differences in living standards. What the demographic trends do suggest is that, even in the near term, expectations of continued double-

digit growth may be disappointed—and that, in the longer term, there are far greater risks to growth and stability than is generally appreciated.

India

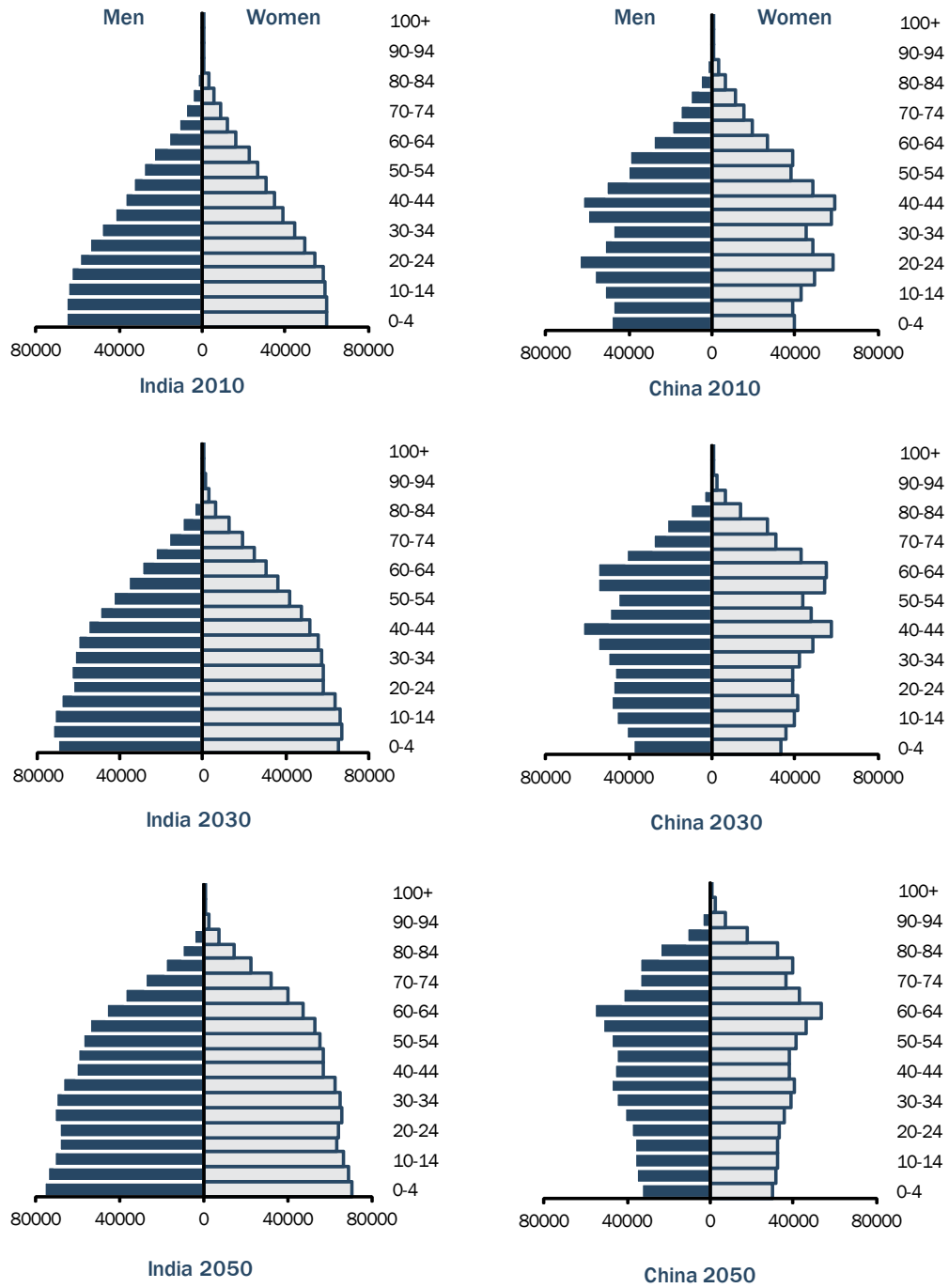
While China's period of most rapid economic growth likely lies behind it, India's may well lie ahead. The demographic transition in South Asia, though well under way, has not progressed as fast as in East Asia—and it may never progress as far. Fertility has fallen substantially in most countries, including India, where it has dropped from just over 5.0 in 1970 to just under 3.0 today. But it remains at or above the replacement level everywhere except Thailand, where it appears to have stabilized around 1.8. Although youth bulges are still larger than in East Asia, they are falling in all of the region's major economies. South Asia's age waves, meanwhile, will arrive much later than East Asia's and will not be as large. In short, the region is moving toward age structures that are neither extremely young nor extremely old—and this may confer significant advantages.

While China's period of most rapid economic growth likely lies behind it, India's may well lie ahead.

The world's two most populous nations thus face very different demographic futures and very different long-term growth prospects. While China's period of demographic dividend is now ending, India's total dependency ratio will continue to decline through at least the 2030s. The elderly already make up 8 percent of China's population, a share that is projected to double to 16 percent in 2030 and triple to 24 percent in 2050. In India, the elderly share of the population is projected to rise gradually from 5 percent today to 8 percent in 2030 and to 12 percent in 2050. And while China's working-age population will soon begin contracting, India's will continue to expand at a steady pace for decades to come. A glance at the current and projected population pyramids of the two countries reveals just how dramatic the contrast is. (See Figure 6.) It is true that because fertility in India has not fallen as fast or as far as in China, its demographic dividend is smaller. On the other hand, the favorable demographics will last longer in India and the ultimate aging challenge will not be as severe. India's more gradual transition also means that the stresses of development may be more manageable.

To be sure, China has leapt so far ahead of India in economic development over the past few decades that India will find it difficult to catch up. India has not only enjoyed a smaller demographic dividend than China, but has also been less successful in leveraging it. In 1975, per capita GDP in India was twice that in China. Today, per

Figure 6: Population Pyramids of China and India in 2010, 2030, and 2050



Source: World Population Prospects (UN, 2009).

capita GDP in China is twice that in India—precisely the reverse.

The good news is that economic and living-standard growth in India have accelerated since the early 1990s and the dismantling of the License Raj, the system of business permits and regulations that hobbled India's economy in the early post-independence decades. Between 1975 and 1995, real per capita GDP grew at the rate of 2.6 percent per year, just one-third of the 7.8 percent pace achieved by China. But between 1995 and 2009, it grew at the rate of 5.1 percent per year, still less than China's 9.0 percent over the same period, but nonetheless a vast improvement.

Despite the turnaround, India continues to labor under a number of serious handicaps. Its public educational system, long acknowledged to be dismal, has become a competitive disadvantage. Less than half of young Indian adults in their twenties have completed any secondary education, while 37 percent of all adults are illiterate, compared with just 6 percent in China.⁸ As China moves up the global value-added scale, it too is confronting an emerging gap between the skills of its workforce and the demands of the new jobs that its economy is creating. But the mismatch is even more acute in India, whose “leapfrog” development strategy has largely bypassed basic manufacturing. India's dismal educational system is part of a broader deficiency: the state's failure to provide the basic public goods and modern infrastructure that a world-class economy requires. And where the state is not needed, it often gets in the way by overprotecting the labor market and heaping excessive regulation on business.

India must overcome serious handicaps to catch up with China.

India must overcome other obstacles as well. There are the huge inequalities in its caste system, which stubbornly persist despite government affirmative action. There are the simmering tensions between its Hindu majority and Muslim minority. And there is the dangerous standoff with Pakistan, which continues to threaten the long-term stability of the subcontinent. Large regional differences in the pace of the demographic transition also complicate the picture. Fertility rates have fallen much further in India's more-developed southern states, which means that a disproportionate share of the future growth in the country's workforce will come from the relatively backward north.

Yet India also has a number of notable advantages. Despite the notorious failings of its public educational system, India is nonetheless home to an enormous, highly

⁸ World Development Indicators 2010, World Bank, 2010, <http://databank.worldbank.org/>.

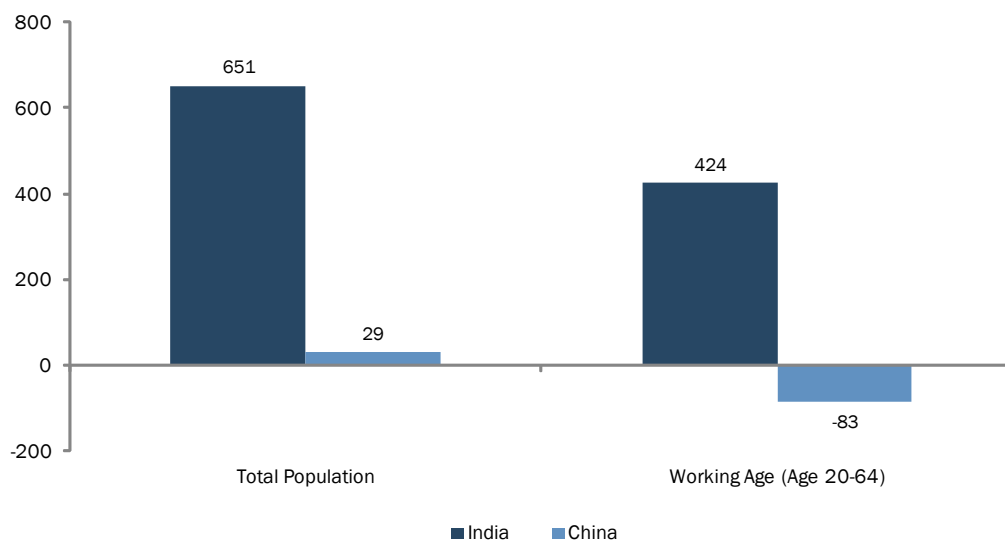
While India's state is sometimes dysfunctional, its business sector is dynamic.

educated, English-speaking middle class. And while India's state is sometimes dysfunctional, its business sector is dynamic. Highly entrepreneurial, innovative, and less dependent on state patronage than China's, it may be better positioned to compete globally in the emerging information-age economy. At the same time, India's deeply embedded democratic tradition, though at times responsible for gridlocked policy reform, may help guarantee a measure of long-term political stability. One can easily imagine a scenario in which the social and economic stresses of rapid development and rapid aging push China toward chaotic collapse—or, to avert the danger, a new authoritarian clampdown. It is more difficult to imagine India coming to such a pass.

By 2050, India's working-age population will be nearly 40 percent larger than China's.

It is too soon to know whether India's new higher growth path is sustainable. What is clear is that its long-term economic potential is enormous. Although India's economy is now just 42 percent as large as China's in purchasing power parity dollars, its population is 90 percent as large. In 2022, India is due to overtake China as the world's most populous nation, a position that China has held for most of human history. By 2030, India's working-age population is also projected to overtake China's, and by 2050 it will be nearly

Figure 7: Change in the Population of India and China, in Millions: 2010–2050



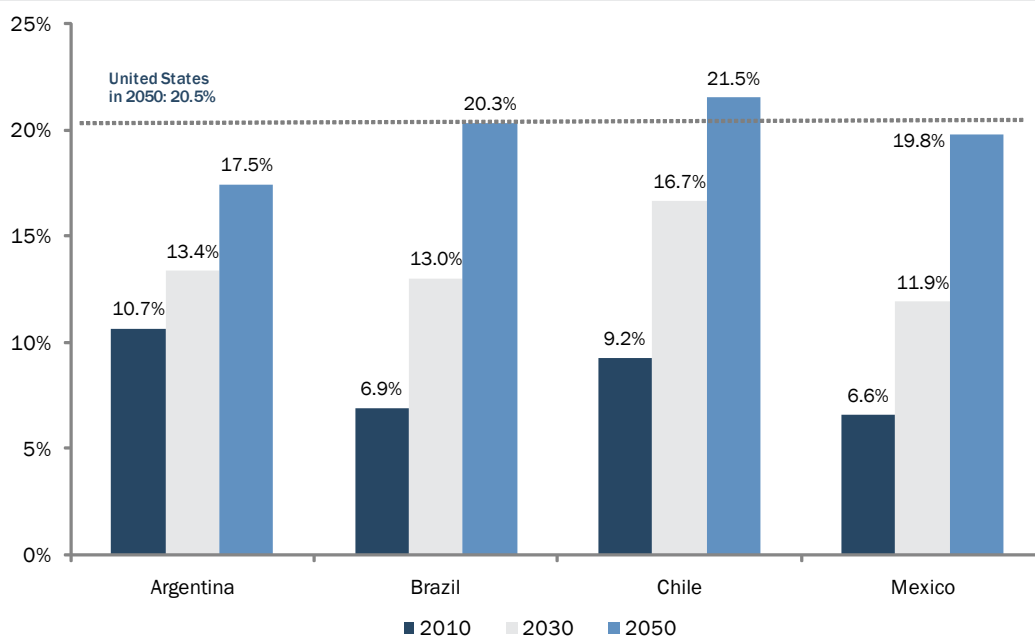
Source: *World Population Prospects* (UN, 2009).

40 percent larger. In absolute numbers, India will add 424 million working-age adults over the next 40 years, while China will lose 83 million. (See Figure 7.) If India manages to build on its recent economic progress, by the mid-2020s it might not merely replace China as the world's most populous nation, but also as the new engine of global growth.

Latin America

Although the demographic transition has progressed more rapidly in Latin America than in South Asia, the region's demographics are still leaning with economic growth and will continue to do so over the next few decades. Fertility rates have fallen sharply in all of the region's major economies—to 2.3 in Argentina, 2.2 in Mexico, and 1.9 in Brazil and Chile. As a consequence, total dependency ratios have also been falling sharply throughout the region, and in Brazil and Mexico, where the drop in fertility has been especially steep, they will continue falling through the 2020s. The age waves in Latin America's faster-aging countries will be considerably larger than India's. By 2050, the elderly share of the population is projected to reach 17 percent in Argentina, 20 percent in Brazil and Mexico, and 22 percent in Chile, which will make them about as old as the United States will then be. But as in India, the

Figure 8: Elderly (Aged 65 & Over), as a Percent of the Population, 2010–2050



Source: *World Population Prospects* (UN, 2009).

period of rapid growth in old-age dependency costs still lies well over the horizon. (See Figure 8.)

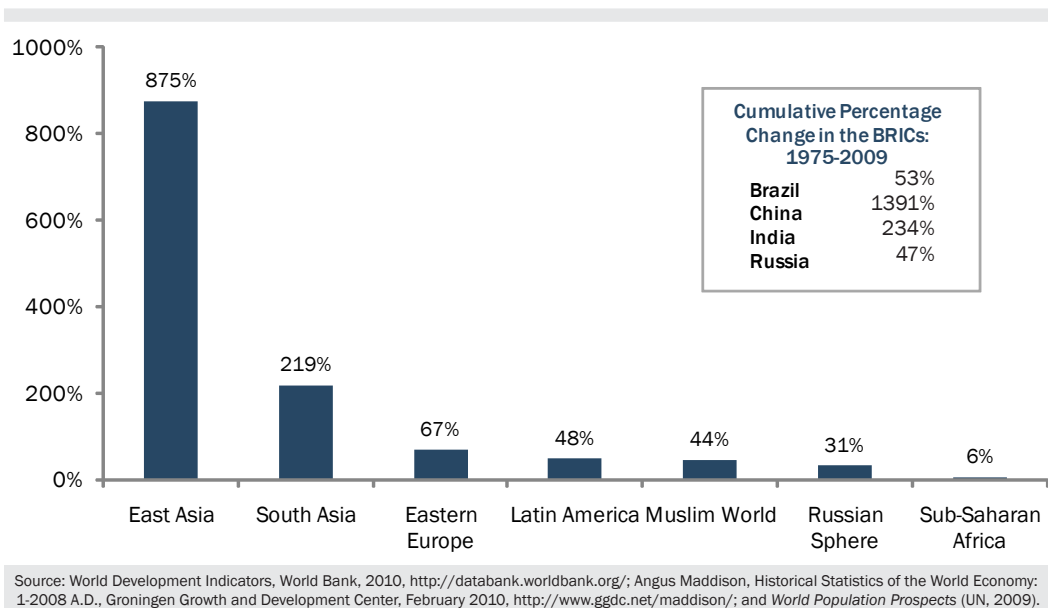
Since 1975, living standards have risen by 875 percent in emerging East Asia, compared with just 44 percent in Latin America.

Unfortunately, Latin America so far has little to show for its favorable demographics. It is often said that China risks growing old before it grows rich. The same can be said of Latin America. The reason, however, is not that the region's populations are aging so rapidly, but that its economies are growing so slowly. Since 1975, living standards in emerging East Asia have risen by 875 percent. In South

Asia, they have risen by 219 percent. In Latin America, meanwhile, they have risen by just 48 percent. (See Figure 9.) While East Asia and South Asia are closing the living-standard gap with the developed world, most of Latin America is not. Indeed, with the single exception of Chile, per capita GDP in every major Latin American economy is actually lower as a percent of the developed-world average today than it was in 1975.

There are some encouraging signs that Latin America may be breaking out of its low-growth trap. Between 2002 and 2007, the five years leading up to the global economic crisis, per capita GDP in the region grew at 3.5 percent per year. Although

Figure 9: Cumulative Percentage Change in Real GDP Per Capita (in 2005 PPP Dollars): 1975–2009



that growth rate is still anemic by Asian standards, it nonetheless represents the best performance over any five-year period since the early 1970s.

Much of the credit goes to better macroeconomic management and market liberalization. Latin America has repudiated the import-substitution policies of the 1960s and 1970s that precipitated hyperinflation and debt crises, leading to the “lost decade” of the 1980s. Chile was the first to chart a new course in the 1980s, but others followed suit in the 1990s and 2000s, including Brazil and Mexico, the region’s two largest economies. Budget deficits were reduced, inefficient state-owned businesses were privatized, import tariffs were lowered, and economies were opened to foreign trade. To be sure, some countries have bucked the broad regional trends, most notably Bolivia and Venezuela. The progress has also been punctuated by severe financial crises in Mexico (1994–95) and Argentina (2001–02). But despite the setbacks, Latin America’s improved macroeconomic outlook is undeniable, as attested by the investment-grade status accorded by Standard & Poor’s to the sovereign debt of Chile, Mexico, Brazil, and Peru. At the same time, Latin America’s democratic consolidation is pushing the region toward greater stability. In 1975, only 15 percent of Latin America’s population lived in countries that Freedom House characterized as fully “free”; today, 74 percent does.⁹

There are encouraging signs that Latin America may be breaking out of its low-growth trap.

Yet despite the progress, Latin America’s economies continue to suffer from deep-seated structural problems that will make it difficult for them to leverage their demographic dividends. While the macroeconomic environment has improved, burdensome business regulations, punitive tax policies, widespread corruption, chronically low savings rates, and two-tiered labor markets, with privileged and overprotected formal sectors and large low-wage informal sectors, continue to hobble growth in much of the region. Not surprisingly, Latin American countries score poorly on most measures of international competitiveness. In the World Economic Forum’s *Global Competitiveness Index*, which takes into account everything from labor-market flexibility and technological readiness to infrastructure and governance, only Chile, with a ranking of 30 out of 139, scores in the top 50 countries worldwide.¹⁰

Despite the recent progress, Latin America’s economies continue to suffer from deep-seated structural problems.

⁹ *Freedom in the World* (Washington, DC: Freedom House, various years).

¹⁰ *The Global Competitiveness Report 2010–2011* (Geneva: World Economic Forum, 2010).

Most experts agree that Latin America's underinvestment—and misinvestment—in human capital is also damaging its long-term growth prospects. Most Latin American governments spend far more per student on university education, which benefits a privileged elite, than on secondary education, which development economists stress is the key to international competitiveness for middle-income countries. In Mexico, the per student ratio of government spending on university education to secondary education is 2.8 to 1. In South Korea, the ratio is precisely the reverse: It spends 2.5 times more per student on secondary than on university education.¹¹ The tilt in Latin America's educational budgets not only hurts its competitiveness, but also helps to lock in the highest levels of income inequality in the world.

The best growth prospect in the region is undoubtedly Brazil, which has been enshrined by Goldman Sachs as the “B” in its BRICs tetrarchy of rising global economic powers, the others being Russia, India, and China. Brazil clearly enjoys some enviable advantages. Its large population and continental size alone seem to destine it to be a major economic power. It is fiscally well managed and politically stable, it has become a magnet for foreign investment, and it is enjoying a large and long-lasting demographic dividend.

The cost of old-age benefits in Brazil is projected to grow to 20 percent of GDP by 2040, the largest burden of any emerging market.

Yet Brazil's long-term success is far from certain. Its recent growth looks strong compared with its own past performance, but not with the performance of other large emerging markets. Between 2002 and 2007, Brazil's period of fastest growth since the 1970s, its per capita GDP increased at roughly one-half the rate

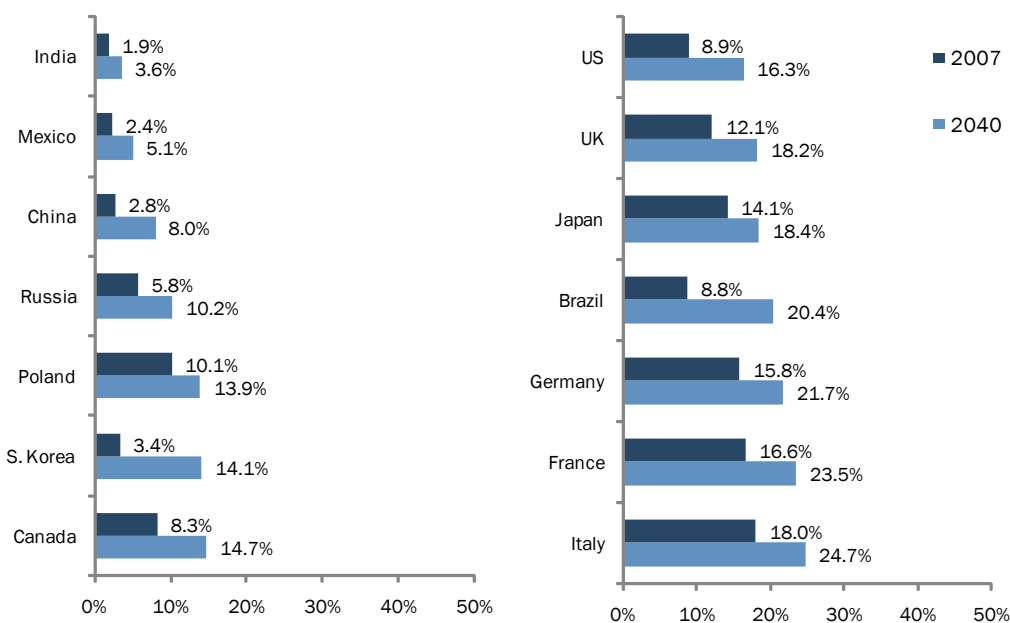
of India's and one-third the rate of China's. Brazil's economy labors under most of the same handicaps as other economies in the region, from burdensome business regulation to inadequate savings. In addition, it has an outsized public sector and an old-age benefit system that is extraordinarily generous even by developed-world standards. In most developing countries, the aging challenge is mainly about the growing income vulnerability of the old. In Brazil, it is mainly about the growing fiscal burden on the young. According to CSIS projections, total public benefits to the elderly, already 9 percent of GDP in 2007, are on track to grow to 20 percent by 2040, by far the largest burden of any emerging market. (See Figure 10.)

Most of the world's dominant economic powers—and many of its emerging ones as well—are due to age much sooner and much more than Latin America will. As much

¹¹ World Development Indicators 2010, World Bank, 2010, <http://databank.worldbank.org/>.

of the world enters an era of demographic decline and slower economic growth, there will be immense opportunities for younger and faster-growing societies. Whether Latin America can rise to the challenge still remains to be seen.

Figure 10: Total Public Benefits to the Elderly (Aged 60 and over), as a Percent of GDP, 2007–2040



Source: *The Global Aging Preparedness Index* (CSIS, 2010).

Russia

The demographic outlook in Russia is probably worse than in any of the world's major economies, developed or developing. Russia, where the demographic transition began earlier than in most emerging markets, is already as old as the United States—and with a fertility rate that has sunk to 1.4, it faces a future of dramatic population aging and population decline. What makes the demographic outlook even more daunting is that the collapse in birthrates has been accompanied by deteriorating health and falling life expectancy. Russia, along with Belarus and Ukraine, has the dubious distinction of being an aging society in which people are living shorter lives.

The demographic outlook in Russia is probably worse than in any of the world's major economies.

The decline in Russian life expectancy, which has been steepest among men, is attributable to risky lifestyles, high rates of alcohol consumption, and a crumbling health-care system. Incredibly, life expectancy for Russian men has fallen well beneath what it was for their grandfathers in the 1950s and 1960s. Men in Russia today can only expect to live to age 60, 19 years less than Japanese men, 17 years less than American men, and 5 years less than Bangladeshi men. Yet even with survival rates typical of a low-income country, Russia faces a developed-world age wave. The elderly share of its population, already 13 percent, is on track to double to 26 percent by mid-century. Russia's median age today is 38, which makes it marginally younger than the developed world. But by 2050, with a median age of 48, it will be marginally older.

Deteriorating health and falling life expectancy are slowly eroding Russia's human capital.

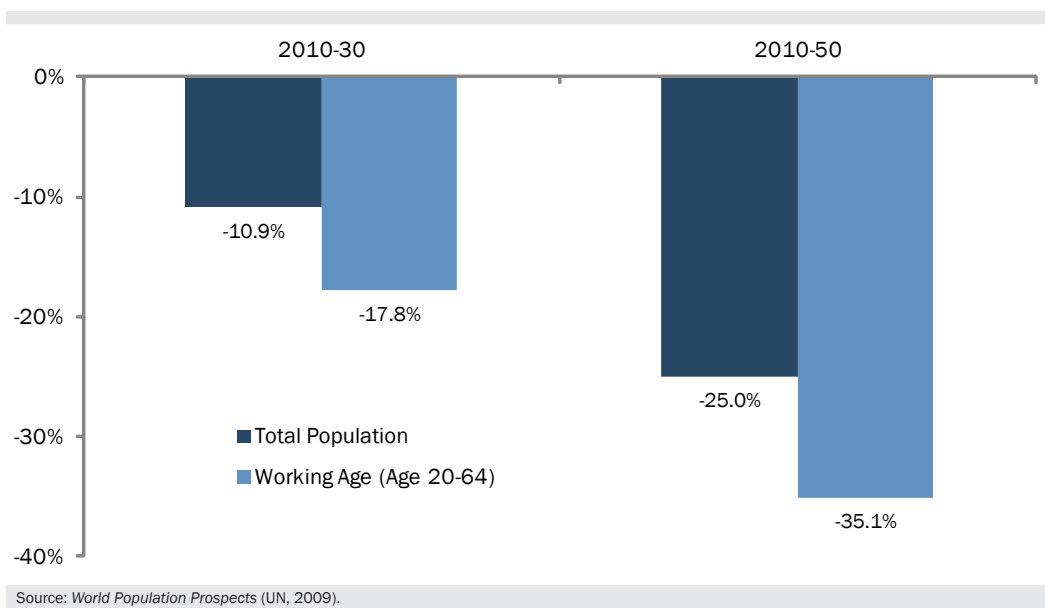
The Russian economy grew rapidly over the decade leading up to the economic crisis and has more than recovered the ground it lost during the disastrous 1990s. But Russia is still much less affluent than the developed world (it has just two-fifths of the per capita income) and its long-term economic potential is being steadily weakened by ruinous demographic trends. Deteriorating health and falling life expectancy slowly erode a nation's human capital, thereby undermining the foundations of growth and stability, from economic performance and government strength to social and familial cohesion. The economic impact is clear enough: Lower life expectancy lowers savings rates and discourages investment in education, unhealthy workers are less productive, and foreign companies are reluctant to invest in regions with a high mortality burden. As demographer Nicholas Eberstadt observes, "In the modern era, the wealth of nations is represented, increasingly, in human rather than natural resources."¹²

Russia's world population ranking is due to fall from fourth place in 1950 to sixteenth place in 2050.

Meanwhile, Russia is in the early stages of what threatens to be a steep and protracted population decline. Russia's total population of 140 million is already falling by more than 500,000 per year. By 2030, it is projected to drop to 125 million and by 2050 to 105 million, about one-quarter of what the U.S. population will then be. This would constitute a spectacular decline in Russia's world population ranking, from fourth place in 1950 to sixteenth place in 2050. In percentage terms, the projected population decline—25 percent between 2010 and 2050—exceeds that of any other major economy. (See Figure 11.) According to some experts, even these projections may be optimistic, since

¹² Nicholas Eberstadt, "Russia's Demographic Straightjacket," *SAIS Review* 24, no. 2 (Summer/Fall 2004), 20.

**Figure 11: Cumulative Percentage Change in the Russian Population by Period:
2010–2050**



they assume a steady improvement in mortality rates. Projections by demographer Murray Feshbach indicate that without this rebound Russia's population could sink to as low as 77 million by 2050, barely half of today's size.¹³

Its ruinous demographics are not the only factor dimming Russia's long-term growth prospects. Incomes may have grown rapidly over the past decade, but that was because Russia was riding high on a flood of commodity profits. Russia could have taken advantage of the boom years to begin building a modern, diversified, and globally competitive economy. Instead, it finds itself even more dependent on natural resources today than it was a decade ago. One problem with this dependence is that commodity prices can go down as well as up, as Russia learned painfully during the global economic crisis, in which it fared much worse than most of the other large emerging markets. But there is also a more fundamental problem—namely, that economies based on resource extraction often devote considerably more energy to rent-seeking than to wealth creation. The dynamic is sometimes called the “resource curse,” and it has left

Russia's economy remains dependent on natural resources and hostage to commodity prices.

¹³ “Scholar Predicts Serious Population Decline in Russia,” Woodrow Wilson International Center for Scholars, January 29, 2004, <http://www.wilsoncenter.org/>.

Russia with huge deficits in public infrastructure, business technology, and human capital.

The good news is that Russia's leaders appear to understand that its demographic and economic trajectory is unsustainable.

The good news is that Russia's leaders appear to understand that its demographic and economic trajectory is unsustainable. Vladimir Putin, citing the nation's future economic and security needs, has flatly declared Russia's birth dearth to be "the most acute problem facing our nation today."¹⁴ The government

is responding by offering financial inducements for ethnic Russians living abroad to repatriate. It is also introducing new and sometimes creative pronatal incentives. Ulyanovsk, a region on the Volga east of Moscow, has declared September 12 a "Day of Conception" and given couples time off from work to procreate. Women who give birth to "a patriot" nine months later on June 12, Russia's national holiday, receive cash and prizes.¹⁵ Dmitry Medvedev, meanwhile, is warning of the dire consequences if Russia fails to modernize. "Should we drag a primitive economy based on raw materials and endemic corruption into the future?" he asks rhetorically.¹⁶ As part of its modernization campaign, his government recently announced plans for building a Russian "Silicon Valley" near Moscow.

The bad news is that it is far from clear that the new initiatives will work. The hoped for demographic turnaround will require more than baby bonuses. What is needed are reforms that make it easier for women to balance jobs and babies and that help young people establish independent households and launch careers. Even if birthrates do rise, moreover, the economic benefits will not be felt for decades. As for modernization, it is doubtful that Medvedev can impose it from above. What is needed here are greater competition, greater transparency, and the rule of law.

¹⁴ "Vladimir Putin on Raising Russia's Birth Rate," *Population and Development Review* 32, no. 2 (June 2006), 386.

¹⁵ Liza Kuznetsova, "Russian Governor Sponsors Conception Day," Associated Press, August 14, 2007.

¹⁶ Cited in "Another Great Leap Forward?" *The Economist*, March 11, 2010.

Chapter 3

Global Aging and the Global Economy

Demographic change shapes economic and political power like water shapes rock. Up close the force looks trivial, but over the course of decades it can move mountains. In our own time, demographic change is accelerating the relative decline of today's developed economies and helping to spur the rise of today's emerging markets.

During the era of the Industrial Revolution, the population of what we now call the developed world grew faster than the rest of the world's population, peaking at 25 percent in 1930.¹⁷ Since then, its share has declined. By 2010 it stood at just 13 percent, and it is projected to decline still further to 10 percent by 2050. (See Table 6.) As a share of the world's economy, the collective GDP of the developed countries will also decline—and much more steeply. According to new projections by the Carnegie Endowment for International Peace, the G-7's share of total G-20 GDP will fall from 72 percent in 2009 to 40 percent in 2050.¹⁸ (See Figure 12.) Driving this decline will be not just the slower growth of the developed world, as workforces age and stagnate or contract, but also the surging expansion of large, newly market-oriented economies, especially in East and South Asia.

The population and GDP of today's developed countries will decline as a share of the world totals.

There is only one large country in the developed world that does not face a future of stunning relative demographic and economic decline: the United States. Thanks to its relatively high fertility rate and substantial net immigration, its current global population share will remain virtually unchanged in the coming decades. The United States was the third most populous country in the world in 1950, it is the third most populous today, and it will still be the third most populous in 2050. According to the Carnegie projections, the U.S. share of total G-20 GDP will drop significantly, from 34 percent in 2009 to 24 percent in 2050. The combined share of Canada, France, Germany, Italy, Japan, and the UK, however, will plunge from 38 to 16 percent. By the middle of the twenty-first century,

The relative economic dominance of the United States within the developed world will rise.

¹⁷ Data for population prior to 1950 are from Angus Maddison, *Historical Statistics of the World Economy: 1–2008 A.D.*, Groningen Growth and Development Center, February 2010, <http://www.ggdcc.net/maddison/>.

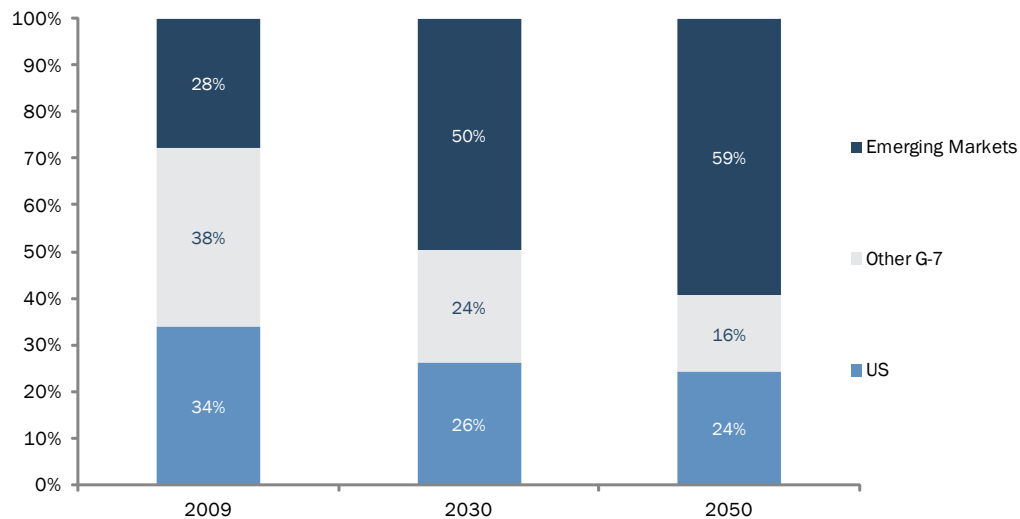
¹⁸ Uri Dadush and Bennett Stancil, *The World Order in 2050* (Washington, DC: Carnegie Endowment for International Peace, April 2010).

Table 6: Population by Region as a Percent of the World Total, 1950–2050

	1950	1970	1990	2010	2030	2050
Developing World	77.8%	81.2%	85.0%	86.9%	88.6%	89.9%
East Asia	22.8%	23.6%	23.0%	20.9%	18.0%	14.8%
Eastern Europe	4.0%	3.4%	2.7%	2.0%	1.5%	1.1%
Latin America	6.6%	7.8%	8.4%	8.5%	8.4%	8.2%
Muslim World	12.4%	13.7%	16.0%	17.8%	19.5%	20.9%
Russian Sphere	6.1%	5.4%	4.2%	3.0%	2.1%	1.5%
South Asia	19.1%	19.9%	21.7%	23.2%	24.1%	24.6%
Sub-Saharan Africa	6.8%	7.5%	9.1%	11.7%	15.0%	18.8%
Developed World	22.2%	18.8%	15.0%	13.1%	11.4%	10.1%
United States	6.2%	5.7%	4.8%	4.6%	4.4%	4.3%
Western Europe	11.7%	9.3%	6.9%	5.8%	4.8%	4.0%
Japan	3.3%	2.8%	2.3%	1.8%	1.4%	1.0%
Rest of Developed World	0.9%	1.0%	0.9%	0.9%	0.8%	0.8%

Source: *World Population Prospects* (UN, 2009).

Figure 12: GDP (in 2005 U.S. Dollars) by Country or Country Group, as a Percent of the G-20 Total, 2009-2050



Source: Uri Dadush and Bennett Stancil, *The World Order in 2050* (Washington, DC: Carnegie Endowment for International Peace, April 2010).

the dominant strength of the U.S. economy within the developed world will have only one historical parallel: the immediate aftermath of World War II, exactly 100 years earlier at the birth of the “Pax Americana.”

As we have seen, there is far more diversity in the demographic and economic outlook in the developing world. Although demographic trends will continue to favor growth in many countries, they are now turning negative in some of the most successful emerging markets. Emerging East Asia, and especially China, may continue to register rapid economic growth over the next few decades, but demographic trends will be leaning against this outcome rather than with it. Meanwhile, the countries of Eastern Europe and the Russian sphere face an unprecedented population implosion that threatens to undermine their long-term prosperity. All but two of the 24 countries in the two regions are projected to experience at least some population decline between 2010 and 2040, and in 12 of the countries the projected decline is greater than 20 percent. At the other extreme, sub-Saharan Africa will continue to have very young and rapidly growing populations—and this too may lean against growth.

Nor are all of the emerging markets that now enjoy favorable demographics destined to launch themselves into the economic stratosphere. The long-term outlook in India and most other South Asian economies looks promising. But unless economic growth picks up dramatically in Latin America and the Muslim world, many countries will never close the income gap with the developed world, something that the East Asian Tigers have already done and that China, if it successfully manages its coming age wave, may do sometime after the middle of the century.

As the term global aging correctly implies, nearly every country in the world is projected to experience some shift toward an older age structure and slower population growth. This does not mean, however, that the world is converging demographically. Most of today’s youngest countries (such as those in sub-Saharan Africa) are projected to experience the least aging, while most of today’s oldest countries (such as those in Europe) are projected to experience the most aging. As a result, the world will see an increasing divergence, or “spread,” of demographic outcomes over the next several decades. During the 1960s, 99 percent

Although the overall economic importance of the developing world will increase dramatically, the outlook varies enormously across today’s emerging markets.

The uneven pace of the demographic transition means that population growth rates and age structures are diverging across the different regions of the world.

of the world's population lived in nations that were growing at a rate of between +0.5 percent and +3.5 percent annually. By the 2030s, that 99 percent range will widen to between -1.0 percent and +3.5 percent annually. By then, most nations will be growing more slowly, and indeed many will be shrinking—but some will still be growing at the blistering pace of 3 percent or more per year. In the 1960s, 99 percent of the world's population also lived in nations with a median age of between 15 and 36. By the 2030s, that 99 percent range will widen to between 18 and 54. Here again, the trend is toward increasing demographic diversity.

In a world of diverging demographic outcomes, globalization will become even more important to growth and prosperity than it is today.

In a world of diverging demographic outcomes, the economic success of nations, businesses, and investors will depend increasingly on their ability to leverage differentials in population age structures and growth rates across different countries and regions. The greater the demographic divergence, the more there is to be gained from allowing immigration and outsourcing to match

workers in younger and faster-growing countries with jobs in older and more slowly growing countries; from allowing financial markets to match savers with investment opportunities; and from allowing trade to increase productivity by enhancing the global division of labor. In short, globalization will become even more important to growth and prosperity than it is today.

The danger is that aging societies with stagnant or contracting domestic markets may face increasing political pressure to roll back globalization. Over time, the stagnation of both product and labor markets is likely to push businesses, unions, and political leaders to lobby for anticompetitive changes in the economy. We may see growing cartel behavior (on the product side) to protect market share and more restrictive rules on hiring and firing (on the labor side) to protect jobs. We may also see increasing pressure on governments to block foreign competition. Most of today's liberal democracies have long been wed to free-trade principles. Yet if the market psychology of aging economies comes to be marked by aversion to any loss of sales or loss of jobs at the firm, industry, or sectoral level, it could easily fan the flames

The danger is that aging societies will be tempted to shut the door on free trade and free markets.

of protectionism. Historically, eras of stagnant population and market growth have been characterized by rising tariff barriers, autarky, corporatism, market management, and other anticompetitive policies that tend to shut the door on free trade and free markets.

In the end, the greatest risk posed by global aging may not be the negative impact on economic growth, but the self-defeating policy responses it could induce. Global aging is a global challenge, and so requires global solutions. Policymakers in developed countries and emerging markets alike would do well to remember this in years to come.

Technical Appendix

This technical appendix includes brief notes on the demographic definitions, country groupings and regions, and demographic projection scenario referred to in the report.

Demographic Definitions

- Children, working-age adults, and elderly are defined, respectively, as the population aged 0 to 19, aged 20 to 64, and aged 65 and over.
- The total dependency ratio is defined as the number of children and elderly per 100 working-age adults.
- A youth bulge is defined as the population aged 15 to 24 as a share of the total adult population aged 15 and over.
- Fertility rates and life expectancy are five-year averages; “today’s” numbers refer to the averages for 2005–2010.

Country Groupings and Regions

The country groupings and regions referred to in the report reflect our understanding of relevant economic, cultural, and geopolitical ties among nations. They therefore differ (in some cases significantly) from the purely geographical classifications used by the UN. The following table lists the countries in each of the CSIS-defined regions.

Regions of the Developed and Developing Worlds

DEVELOPED WORLD:

United States

Western Europe

Austria	France	Luxembourg	Spain
Belgium	Germany	Malta	Sweden
Channel Islands	Iceland	Netherlands	Switzerland
Denmark	Ireland	Norway	United Kingdom
Finland	Italy	Portugal	

Japan

Other Developed Countries

Australia	Canada	New Zealand
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DEVELOPING WORLD:*Sub-Saharan Africa*

Angola	D.R. Congo	Madagascar	Senegal
Benin	Equatorial Guinea	Malawi	Sierra Leone
Botswana	Eritea	Mali	South Africa
Burkina Faso	Ethiopia	Mauritius	Swaziland
Burundi	Gabon	Mayotte	Tanzania
Cameroon	Gambia	Mozambique	Togo
Cape Verde	Ghana	Namibia	Uganda
Central African Rep.	Guinea	Niger	Zambia
Chad	Guinea-Bissau	Nigeria	Zimbabwe
Comoros	Kenya	Réunion	
Congo	Lesotho	Rwanda	
Côte d'Ivoire	Liberia	Sao Tome & Principe	

Muslim World

Afghanistan	Iraq	Mauritania	Tajikistan
Algeria	Israel	Morocco	Tunisia
Azerbaijan	Jordan	Palestinian Territories	Turkey
Bahrain	Kazakhstan	Oman	Turkmenistan
Bangladesh	Kuwait	Pakistan	U.A.E
Brunei Darussalam	Kyrgyzstan	Qatar	Uzbekistan
Djibouti	Lebanon	Saudi Arabia	Western Sahara
Egypt	Libya	Somalia	Yemen
Indonesia	Malaysia	Sudan	
Iran	Maldives	Syria	

East Asia

China	Macao SAR	North Korea	South Korea
Hong Kong	Mongolia	Singapore	Taiwan

South Asia

Bhutan	Melanesia	Philippines	Timor-Leste
Cambodia	Micronesia	Polynesia	Viet Nam
India	Myanmar	Sri Lanka	
Laos	Nepal	Thailand	

Latin America

Argentina	Cuba	Haiti	Peru
Belize	Dominican Republic	Honduras	Puerto Rico
Bolivia	Ecuador	Jamaica	Suriname
Brazil	El Salvador	Mexico	Uruguay
Chile	French Guiana	Nicaragua	Venezuela
Colombia	Guatemala	Panama	Rest of Caribbean
Costa Rica	Guyana	Paraguay	

Russian Sphere

Armenia	Georgja	Russian Federation	
Belarus	Moldova	Ukraine	

Eastern Europe

Albania	Czech Republic	Lithuania	Serbia
Bosnia & Herzegovina	Estonia	Macedonia	Slovakia
Bulgaria	Greece	Montenegro	Slovenia
Croatia	Hungary	Poland	
Cyprus	Latvia	Romania	

Note: Countries with populations of less than 100,000 are not listed.

Demographic Projection Scenario

For the developed countries, we use the UN's (2008 Revision) constant-fertility projection. For the developing countries, we use either the UN's constant-fertility or high-variant projection. We use the high variant for those countries whose current (2005–2010 average) fertility rate is above 2.35, the high variant's ultimate fertility assumption. This includes nearly all of sub-Saharan Africa, as well as most of the Muslim world and South Asia and much of Latin America. For countries whose current fertility rate is already lower than 2.35, we use the UN's constant-fertility projection, just as we do for the developed countries. This includes all of East Asia, Eastern Europe, and the Russian sphere, as well as a scattering of countries in other regions. The following table provides a key to the developing-world projection scenario.

Key to Developing-World Projection Scenario

CONSTANT FERTILITY:

East Asia – all countries

Russian Sphere – all countries

Eastern Europe – all countries

Muslim World

Azerbaijan	Kazakhstan	Turkey
Bahrain	Kuwait	United Arab Emirates
Brunei Darussalam	Lebanon	Uzbekistan
Indonesia	Maldives	
Iran	Tunisia	

Latin America

Argentina	Cuba	Mexico
Brazil	El Salvador	Puerto Rico
Chile	Falkland Islands	Uruguay
Costa Rica	Guyana	Rest of Caribbean

South Asia

Myanmar	Thailand
Sri Lanka	Viet Nam

Sub-Saharan Africa

Mauritius

HIGH VARIANT:

All other countries

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