Observers of China’s rise, when assessing the implications for global peace and prosperity, have largely focused their attention on the country’s economy, on its energy and resource needs, on the environmental consequences of its rapid expansion, and on the nation’s military buildup and strategic ambitions. Yet, underlying all these dazzling changes and monumental concerns is a driving force that has been seriously underappreciated: China’s changing demography.

With 1.33 billion people, China today remains the world’s most populous country. In a little more than a decade, however, it will for the first time in its long history give up this title, to India. But, even more important, China’s demographic landscape has in recent decades been thoroughly redrawn by unprecedented population changes. These changes will in the future drive the country’s economic and social dynamics, and will redefine its position in the global economy and the society of nations. Taken together, the changes portend a gathering crisis.

One number best characterizes China’s demographics today: 160 million. First, the country has more than 160 million internal migrants who, in the process of seeking better lives, have supplied abundant labor for the nation’s booming economy. Second, more than 160 million Chinese are 60 years old or older. Third, more than 160 million Chinese families have only one child, a product in part of the country’s three-decade-old policy limiting couples to one child each. (The total populations of countries like Japan and Russia do not reach 160 million; Bangladesh’s population is roughly equal to that number.)

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But the relative size of these three Chinese population groups of 160 million will soon change. As a result of the country’s low fertility rates since the early 1990s, China has already begun experiencing what will become a sustained decline in new entrants into its labor force and in the number of young migrants. The era of uninterrupted supplies of young, cheap Chinese labor is over. The size of the country’s population aged 60 and above, on the other hand, will increase dramatically, growing by 100 million in just 15 years (from 200 million in 2015 to over 300 million by 2030). The number of families with only one child, which is also on a continued rise, only underscores the challenge of supporting the growing numbers of elderly Chinese.

Why should one care about these demographic changes, and why should the overused label “crisis” be attached to such slow-moving developments? The aging of China’s population represents a crisis because its arrival is imminent and inevitable, because its ramifications are huge and long-lasting, and because its effects will be hard to reverse.
Political legitimacy in China over the past three decades has been built around fast economic growth, which in turn has relied on a cheap and willing young labor force. An aging labor force will compel changes in this economic model and may make political rule more difficult. An aging population will force national reallocations of resources and priorities, as more funds flow to health care and pensions.

Indeed, increased spending obligations created by the aging of the population will not only shift resources away from investment and production; they will also test the government’s ability to meet rising demands for benefits and services. In combination, a declining labor supply and increased public and private spending obligations will result in an economic growth model and a society that have not been seen in China before. Japan’s economic stagnation, closely related to the aging of its population, serves as a ready reference.

China’s demographic changes will also have far-reaching implications for the world economy, which has relied on China as a global factory for the past two decades and more. The changes may also affect international peace and security. An aging population is likely to lead to a more peaceful society. But at the same time, the projected 20 to 30 million Chinese men who will not be able to find wives, due to the country’s decades-long imbalanced sex ratio at birth, may constitute a large group of unhappy, dissatisfied people. Claims that these future bachelors will harbor criminal intentions and a propensity to form invading forces against China’s neighbors are unsubstantiated and overblown. Still, the fact that such a large number of Chinese men will not be able to marry is clearly a serious social concern, and the issue should not be neglected.

What also makes China’s demographic future a looming crisis is that, so far, the changes have largely taken place under the radar. This is so in part because China still has the world’s largest population and its population is still growing. It is also due in part to a continued tendency in China and elsewhere to believe that overpopulation is the root cause of all problems. Hence China’s hesitation, even reluctance, to phase out its one child policy—an important cause of the country’s demographic challenges.

Something little understood by the outside world, and indeed to the Chinese government and public, is that today’s demographic changes mark only the beginning of a crisis that will be increasingly difficult to mitigate if action is not taken soon.

A new era

China has entered a new demographic era. Its mortality rate has dropped to a level not very different from that of the developed countries. It fertility has dropped to a level lower than that of many developed countries, including the United States, Britain, and France—indeed, it is among the lowest in the world. And China has witnessed the largest flow of internal migrants in world history, resulting in an urbanization process that is of comparable historical proportions. These forces combined have created a population that is rapidly aging and rapidly urbanizing.

China’s mortality over the past three decades has been on a path of continuous decline. Despite concerns over the collapse of the rural collective public health care system in the 1980s and increasing incidents and reports of air pollution, food poisoning, and public health crises (such as the SARS epidemic in 2003), the Chinese population’s overall health has continued to improve with the spread of affluence. The latest numbers based on nationally representative surveys put life expectancy at birth at 74.5 years for females and 70.7 for males, levels that approach those of the world’s more developed countries. Longer life expectancy means more old people in the population and an increasing demand for services and expenditures related to health care. But more important than increased life expectancy in defining China’s new demographic era—and determining...
China’s demographic future— is declining fertility. For nearly two decades, the average number of children a couple is expected to produce has been less than 2, recently falling as low as approximately 1.5. Such a number is below the replacement level (the level required for a population to maintain its size in the long run).

China’s low fertility, however, is a fact that has been established as real only relatively recently, in part because of problems associated with deterioration in the country’s birth registration and statistical data collection system, and in part because of the government’s reluctance to acknowledge declining fertility. The current period of fertility decline began quietly and remained unnoticed for almost a decade. When the first signs that fertility had dropped below the replacement level were reported in the early 1990s, they were quickly dismissed in the context of what was believed to be widespread underreporting of births.

By the turn of the twenty-first century, China’s demographic transition could no longer be doubted. Today the national fertility level is around 1.5 and possibly lower. In the country’s more developed regions, fertility has been even lower for more than a decade—barely above 1 child per couple, a level that rivals the lowest fertility rates in the world.

The ripple effects of fertility decline have begun to emerge everywhere in China these days. In 1995, primary schools nationwide enrolled 25.3 million new students. By 2008, that number had shrunk by one-third, to only 16.7 million. In 1990, China had over 750,000 primary schools. By 2008, due to the combined effects of fertility decline and educational reforms, the number of primary schools nationwide had fallen to about 300,000. In a country where getting into a university has always been a matter of intense competition and anxiety, the number of applicants to universities has begun to decline in the past couple of years.

The challenges posed by these demographic changes will be more daunting in China than in other countries that have experienced mortality and fertility declines. The reason for this does not lie in the size of China’s population, but in the speed with which the People’s Republic has completed its transition from high to low birth and death rates. China has achieved in 50 years—increasing life expectancy from the 40s to over 70—what it took many European countries a century to accomplish. In 2000, when the ratio of income levels in the United States and China was still about 10 to 1, female life expectancy in China was only about five years below that of the United States (75 versus 80). China, in other words, completed its mortality-decline transition while per capita income was still at a very low level.

Major fertility reduction in China took even less time. In just one decade, from 1970 to 1980, the total fertility rate (TFR) was more than halved, from 5.8 to 2.3, a record unmatched elsewhere. (TFR extrapolates an average woman’s fertility over her lifetime from a society’s fertility rate in a given year.) In contrast to Western European countries, where it took 75 years or longer to reduce TFR from around 5 to the replacement level, in China a similar decline took less than two decades. As a result, in 2008, China’s rate of population growth was only 5 per thousand, down from over 14 per thousand in 1990 and 25 per thousand in 1970. Such a compressed process of demographic transition means that, compared with other countries in the world, China will have far less time to prepare its social and economic infrastructure to deal with the effects of a rapidly aging population.

And for the People’s Republic the challenge is all the more difficult because the country is undergoing an economic upheaval at the same time that its population is rapidly changing. While China continues to transform itself from an agrarian to an industrial and post-industrial society and from a planned to a market-based economy, it not only will need, for example, to provide health care and pensions for a rapidly growing elderly population that has been covered under government-sponsored programs. It also will need to figure out how to expand the scope of coverage to those who were not covered under the old system.
Reversal of fortunes

China's astonishing economic expansion over the past two decades took place within a highly, almost uniquely favorable demographic context. But the country is at the end of reaping economic gains from a favorable population age structure.

Economic growth relies on a number of basic factors. Aside from institutional arrangements, these include capital, technology, markets, and labor. In China's case, foreign direct investment, especially from overseas Chinese, brought not only capital but also technology and management know-how. Foreign consumer demand, especially in the United States (fueled first by the dot-com boom and then by the housing and stock market boom), supplied a ready market for China's export industries. But capital, technology, and overseas markets alone would not have made China a global factory in the last two decades of the twentieth century. The country's economic boom relied on another crucial factor: a young and productive labor force.

Such a labor force, a non-repeatable historical phenomenon resulting from a rapid demographic transition, was fortuitously present as the Chinese economy was about to take off. The large birth cohorts of the 1960s and 1970s were at their peak productive ages when the boom began. This good fortune, measured as a demographic dividend, is estimated to have accounted for 15 to 25 percent of China's economic growth between 1980 and 2000.

The term “demographic dividend” refers to gains (or losses) in per capita income brought about by changes in a population's age structure. It is expressed as the ratio of the growth rate of effective producers to the growth rate of effective consumers. It resembles but is not the same as the commonly used “dependency ratio,” which is the ratio of the dependent-age population (such as 0–14 years old and 60 and above) to the productive-age population (such as 15–59 or 20–59). The demographic dividend, unlike the dependency ratio, takes into account people in the productive age cohort who are not contributing to income generation (for example, because they are unemployed) as well as those within the dependent age range who generate income (such as from after-retirement earnings).

For the most part, China has exhausted its demographic fortune as measured by the demographic dividend—that is, by the changing support ratio between effective producers and effective consumers. Between 1982 and 2000, China enjoyed an average annual rate of growth in the support ratio of 1.28 percent. Using the World Bank’s figure of per capita annual income growth during this same period, 8.4 percent, we find that the demographic dividend accounted for 15 percent of China's economic growth. Today, the net gain due to favorable demographic conditions has been reduced to only one-fifth of the average level maintained from 1982 to 2000.

By 2013 China's demographic dividend growth rate will turn negative: That is, the growth rate of net consumers will exceed the growth rate of net producers. Starting in 2013, such a negative growth rate will reduce the country's economic growth rate by at least half a percentage point per year. Between 2013 and 2050, China will not fare demographically much better than Japan or Taiwan, and will fare much worse than the United States and France.

As a result of China's very low fertility over the past two decades, the abundance of young, inexpensive labor is soon to be history. The number of workers aged 20 to 29 will stay about the same for the next few years, but a precipitous drop will begin in the middle of the coming decade. Over a 10-year period, between 2016 and 2026, the size of the population in this age range will be reduced by about one-quarter, to 150 million from 200 million. For Chinese aged 20 to 24, that decline will come sooner and will be more drastic: Over the next decade, their number will be reduced by nearly 50 percent, to 68 million from 125 million.
Such a drastic decline in the young labor force will usher in, for the first time in recent Chinese history, successive shrinking cohorts of labor force entrants. It will also have profound consequences for labor productivity, since the youngest workers are the most recently educated and the most innovative.

As the young population declines, domestic demand for consumption may weaken as well, since young people are also the most active consumers of everything from wedding banquets to new cars and housing units. And because China is a major player in the global economy, the impact of the country’s demographic changes will not be limited by its borders.

Fragile families, fragile society

So far, observers of China’s demographic changes have focused most of their attention on consequences at the aggregate or societal level: the size of the labor force, of the elderly population, and of the number of men who will not be able to marry. Worries at this level of analysis generally relate to the country’s future economic growth and social stability. But the challenges that China will face as a result of its changing demographics go far beyond economic growth and other aggregate concerns.

China’s unprecedented population control policy, the one-child policy, turned 30 this year. It has forcefully altered the family and kin structure of hundreds of millions of Chinese families. And families, in addition to their other functions, are first and foremost the primary source of support for dependents, the young and the elderly.

Because the population control policy has been in place for so long, many Chinese couples, especially in the more affluent urban areas, have had only one child. Current government policy still requires nearly two-thirds of all families to have no more than one child per couple. Although policy implementation has varied over time and across different regions, almost all urban Chinese couples have observed the one-child rule for the past three decades. With the current birth control policy in place amid continued low levels of fertility, by the middle of the current century, half of Chinese women aged 60 are projected to have had only one child. This is a development unprecedented in both China’s and the world’s history.

Although the full extent of the one-child policy’s societal consequences will not be known until later, it is safe to predict that the social costs that China will need to pay, especially in terms of family support for aging parents, will be exceedingly high. In no small part due to implementation of the one-child policy, China by 2005 had accumulated nearly 160 million only children aged 0 to 30. That number has further grown in the past five years. These figures imply that over 40 percent of Chinese households have only one child.

That such a huge share of Chinese families have only one child, despite the fact that many parents would have liked to have more, presents serious economic and social risks for individuals, and for the whole society. Fragile families mean a fragile society. The tragic deaths of thousands of only children in the earthquake of May 2008 in Sichuan province highlighted the potential for extreme misfortune.

More generally, ever more Chinese parents in the future will not be able to count on their children in their old age. And many parents will face a most unfortunate reality: outliving their children and therefore dying alone. Given the current mortality schedule, the likelihood that an 80-year-old Chinese man will see his 55-year-old son die before he does is 6 percent. Because women live longer, the likelihood that an 80-year-old woman will outlive her 55-year-old son is 17
Due to these odds, and the large numbers of Chinese parents who have only one child, the sheer number of elderly people living without any children is significant and growing. This creates grim prospects for many Chinese who hope in old age to rely on their children for emotional and physical if not financial support.

Prospects and policy options

Because of China’s continued mortality decline, and especially its sustained fertility decline to below replacement levels, the country has effectively entered an era of population decline. China’s current TFR of 1.5 implies that, in the long run, each future generation will be 25 percent smaller than the one preceding it. China’s population is still growing, albeit very slowly, because the country still has a relatively young age structure, which produces more births than deaths, even though on average each couple has fewer than two children. Had it not been for China’s relatively young age structure, the population would have begun declining in the early 1990s, almost two decades ago. The current growth, in other words, is a result of population momentum.

The same force of momentum will work in the opposite direction soon. Given current mortality and fertility rates, and with a population age structure that is growing increasingly older, the number of deaths will soon exceed the number of births. China’s population is likely to peak less than 15 years from now, below a maximum of 1.4 billion. After that will come a prolonged, even indefinite, population decline and a period of accelerated aging.

Even if China can restore fertility to replacement level within 10 years after the country reaches its population peak, population will still exhibit a decline nearly half a century long, with a net population loss of over 200 million, if not more. The median age of the Chinese population, at its peak, could be as high as 50 years.

China is by no means unique in experiencing below-replacement fertility. In the past decade, below-replacement fertility has become a new global reality. Whereas in some parts of the world high fertility rates continue to pose severe challenges to women and children’s health, for more than half of the world’s population, below replacement fertility is now the norm.

In Europe, North America, and East Asia, prolonged below-replacement fertility has already set in motion a negative population growth momentum. In the most extreme cases, such as Italy and Japan, population could be reduced by half in as few as 40 years or so if current rates of reproduction persist. A gradual but substantial reduction in population, especially with a concomitant aging of populations in the world’s richest countries, constitutes an unprecedented shift that is redefining the global demographic, economic, and political landscape.

What makes China unique, however, is that it still has a state policy, unique in human history, that restricts the majority of Chinese families to one child per couple. At the time the policy was announced 30 years ago, it provoked great controversy both within and outside China; over the years it has extracted great sacrifices from Chinese families and individuals, especially from women. And although the policy was designed as an emergency measure to slow down China’s population growth, and was intended to last for only one generation, the government has not yet shown the willingness, or courage, to phase it out.

China’s slow recognition and inaction in the face of its impending demographic crisis—inaction that persists despite appeals by almost all the country’s population experts to phase out the one child policy quickly—reflect policy makers’ lack of understanding of the changing demographic reality. Inertia also results from the resistance of the
country's birth-control bureaucracy, which formally employs half a million people.

This exemplifies a characteristic feature of China’s regime—relegating difficult, long-term, structural challenges to the back burner, while giving priority to short-term crisis management and concerns about stability. The looming demographic crisis will largely define China in the twenty-first century. Given that demographic changes take time to develop, and that their ramifications are not only massive but also long-lasting, China’s inaction has already proved costly—and will only grow more so the longer it persists.