



# Russia's Demographic Disaster

By Nicholas Eberstadt and Apoorva Shah

Once again, Russia today finds itself beset by depopulation: that is, by an absolute decline in total numbers. Such a circumstance, unfortunately, is not exactly new for Russia. This current national population drop, in fact, is the fourth such episode witnessed in Russia over the past century.

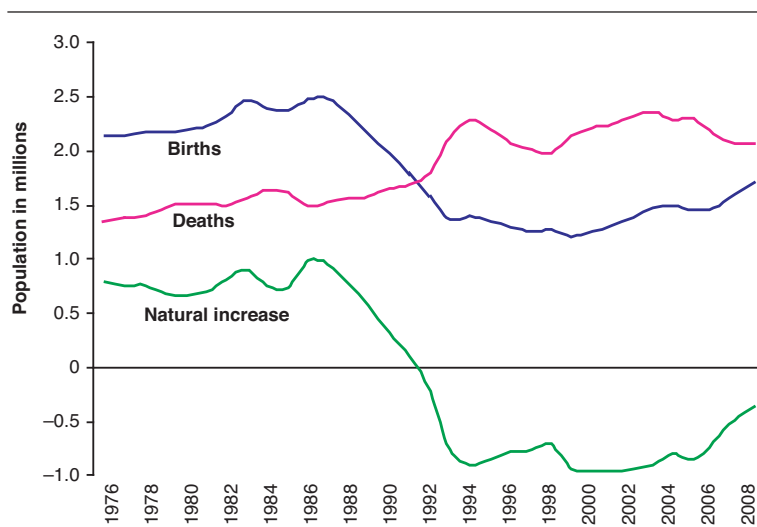
Between 1917 and 1923, population within Russia's present borders may have fallen by 2 million; then, between 1933 and 1934, Russia's population dropped again by another 2 million; and then again, between 1941 and 1946, the country's population plummeted once more, this time by a gruesome 13 million. Those first three depopulations, of course, were a consequence of the Bolshevik Revolution and founding of the Soviet state, Stalin's war against the kulaks, and World War II, respectively.

The current depopulation, which commenced in 1992 and is still ongoing, differs from Russia's earlier population declines in that it was precipitated by a largely bloodless event (the collapse of the Soviet Union). But the current depopulation has also been underway far longer than any previous population drop in Russian memory. It is not clear how this one is to be arrested or reversed. What is all too clear, however, are the adverse and very real consequences—humanitarian, social, and economic—of Russia's new demographic patterns.

**Figure 1:** Since the dissolution of the Soviet Union, Russia has suffered a steady and severe decline in population. Its current population is nearly 7 million below its level at the end of 1991. Russia's ongoing depopulation is being driven by a steep decline in births but also by a

FIGURE 1

BIRTHS, DEATHS, AND NATURAL INCREASE IN POPULATION IN RUSSIA, 1976–2008



SOURCES: 1976–2002 data: Goskomstat (Moscow), "Demographic Yearbook of Russia" (2004), table 2.25. 2004–2006 data: Goskomstat, "Demographic Yearbook of Russia" (2007), available at [www.gks.ru/bgd/regl/b07\\_16/Main.htm](http://www.gks.ru/bgd/regl/b07_16/Main.htm) (accessed April 30, 2009). 2007 data: Goskomstat, "Vital Statistics," table 5.4, available at [www.gks.ru/bgd/regl/b08\\_12/IssWWW.exe/stg/d01/05-04.htm](http://www.gks.ru/bgd/regl/b08_12/IssWWW.exe/stg/d01/05-04.htm) (accessed April 30, 2009). 2008 data: Svetlana Nikitina, Goskomstat, personal communication with the authors, March 27, 2009.

NOTE: 2008 numbers preliminary.

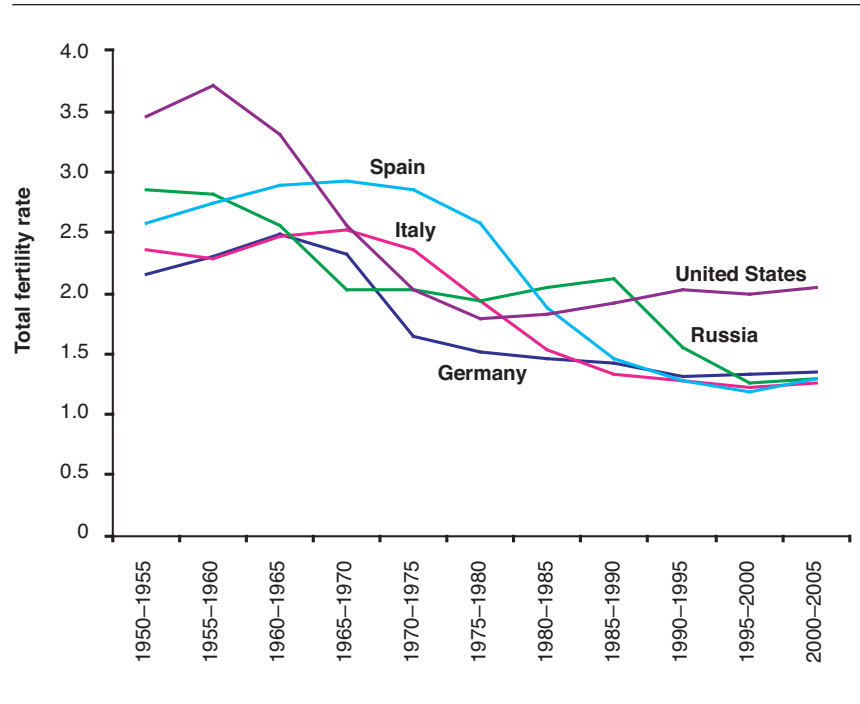
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shocking and tragic increase in deaths. From 1976 to 1991, the country recorded 36.0 million births and 24.6 million deaths. Over the following sixteen years, 1992–2007, there were 22.3 million births and 34.7 million deaths, an average of about three deaths for every two births. Only net migration kept Russia’s post-Communist population levels from dropping even more sharply.

**Figure 2:** As economic development unfolds in contemporary societies, fertility rates often decline to below replacement levels. The United States is one of the few exceptions to this modern tendency. But Russia’s current depopulation cannot be explained by fertility trends more or less similar to other European societies. While Italy, Germany, and Spain all had lower fertility than Russia for most of the latter part of the twentieth century, none of them has yet experienced anything close to the depopulation that Russia has witnessed in recent years.

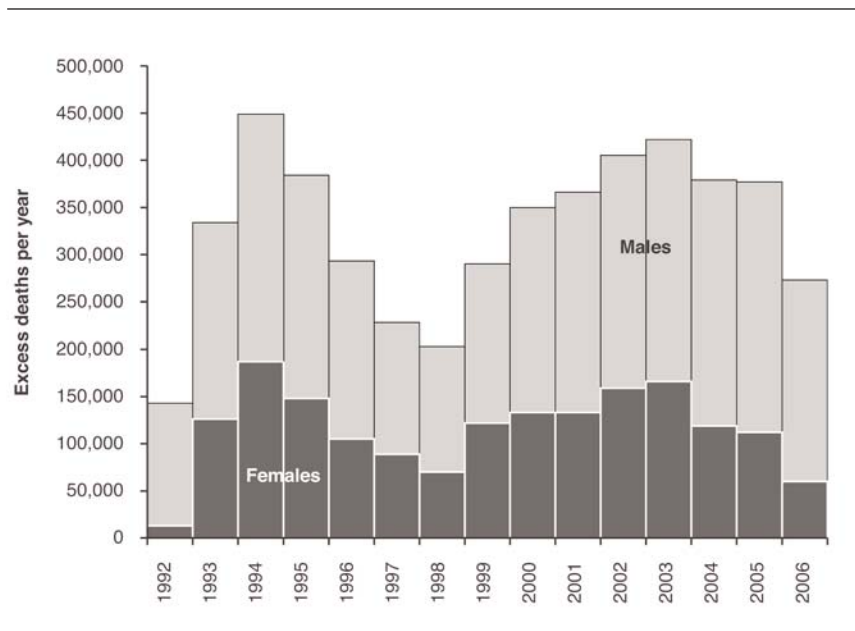
**Figure 3:** If we calculate *excess mortality* in Russia from 1992 to 2006, it becomes clear that the country’s precipitous population decline is rooted in deaths, not births. Using death rates from the benchmark year of 1986–87—the apex of Mikhail Gorbachev’s anti-alcoholism campaign and the “best” year for Soviet health standards—post-Communist Russia witnessed 6.6 million more deaths in this fifteen-year period than would have occurred if the country had merely sustained the mortality schedules from two decades before. And this is a generous estimate—if post-Communist Russia were compared instead to, say, France in 1986–87, its excess

FIGURE 2  
TOTAL FERTILITY RATES: RUSSIA VERSUS SELECTED WESTERN NATIONS, 1950–2005



SOURCE: Population Division, Department of Economic and Social Affairs, United Nations Secretariat, “World Population Prospects: The 2008 Revision,” available at <http://esa.un.org/unpp> (accessed April 28, 2009).

FIGURE 3  
EXCESS MORTALITY IN RUSSIA, 1992–2006



SOURCE: University of California, Berkeley, and Max Planck Institute for Demographic Research, “Human Mortality Database,” available at [www.mortality.org](http://www.mortality.org) (accessed November 7, 2008).

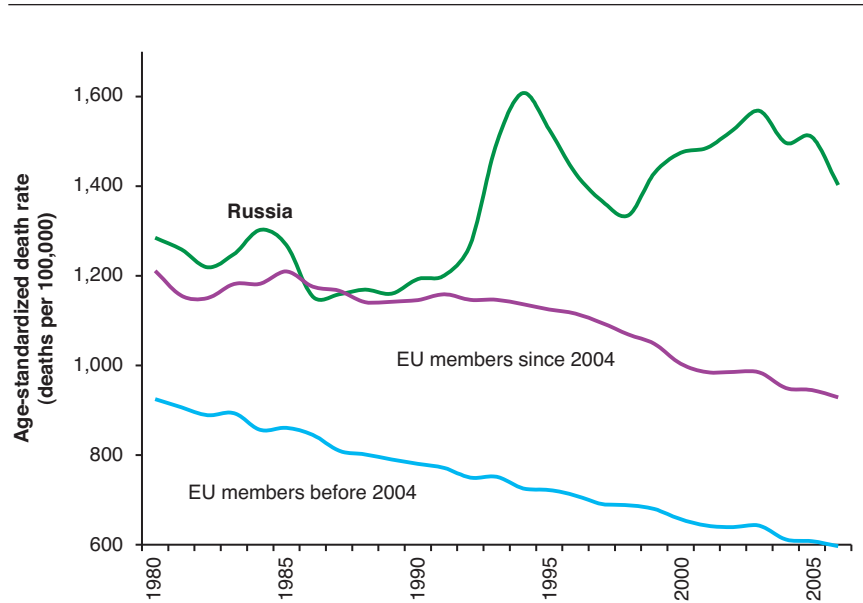
NOTE: Excess mortality is the difference between the actual number of deaths in a given year and the estimated number of deaths for that year that would have taken place if constant age-specific mortality rate schedules from 1986 to 1987—the benchmark period—had prevailed instead.

mortality count would have been closer to 18 million. Males have borne the brunt of this mortality scourge, accounting for more than 70 percent of the excess deaths.

**Figure 4:** Death rates in Russia are not only excessive; they are also erratic. While Russia and the new European Union (EU) members since 2004 (with few exceptions, these are countries of the former Soviet bloc) reported essentially the same death rates at the end of the Soviet era, the death rates of the new EU members have fallen steadily ever since. Russian rates, however, have followed a completely different trajectory. After standardizing for differences in age structure, Russia's death rates in 2006 were again half as high as those of the new EU members and over twice as high as those of the EU members from Western Europe.

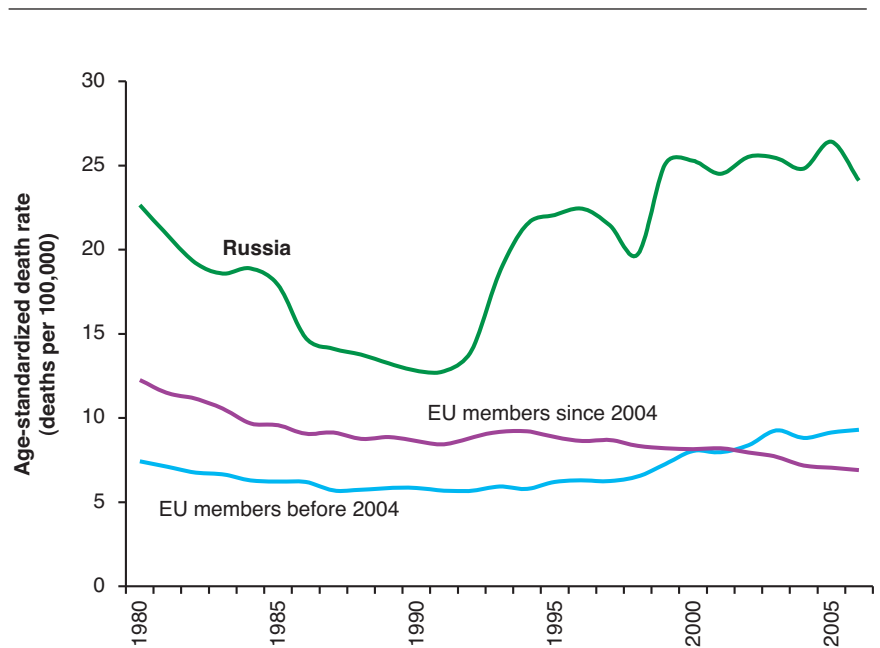
**Figure 5:** Russia suffers from higher prevalence of HIV/AIDS, drug-resistant tuberculosis, and other communicable diseases than most industrialized countries. Official statistics from Goskomstat, the government statistics agency, may underestimate the toll of these afflictions on the Russian population. Even so, infectious and parasitic diseases are not, at least to date, a major explanation of the health divide between Russia and the West. Death rates due to infectious and parasitic (communicable) diseases are much higher in Russia than in the largely Soviet-bloc, new EU countries. Yet this difference only accounts for about 2 percent of the overall mortality gap between Russia and Western Europe. Furthermore, when Russia is placed in broader international perspective, reported

FIGURE 4  
DEATH RATES FROM ALL CAUSES:  
RUSSIA VERSUS EUROPEAN UNION, 1980–2006



SOURCE: World Health Organization, "Europe Health for All Database," updated January 2009, available at [www.euro.who.int/HFADB](http://www.euro.who.int/HFADB) (accessed April 30, 2009).

FIGURE 5  
DEATH RATES FROM INFECTIOUS AND PARASITIC DISEASES:  
RUSSIA VERSUS EUROPEAN UNION, 1980–2006



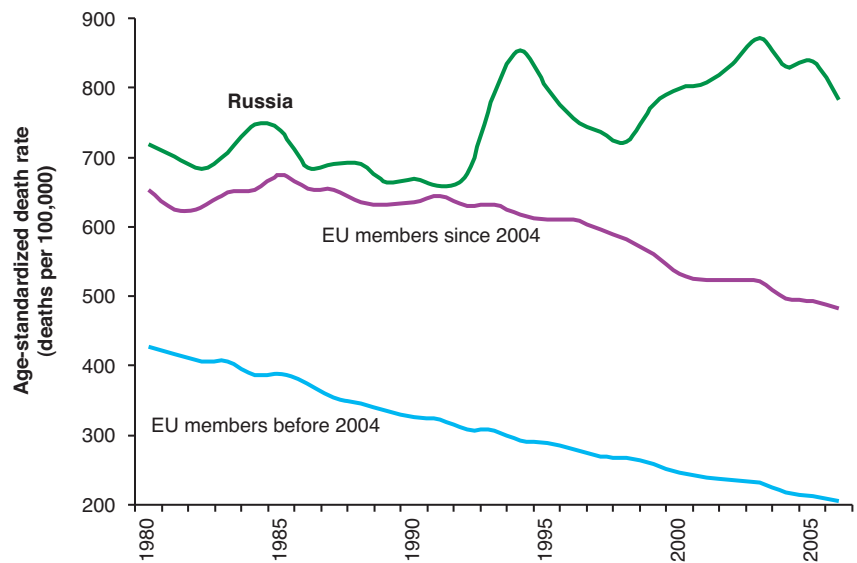
SOURCE: World Health Organization, "Europe Health for All Database," updated January 2009, available at [www.euro.who.int/HFADB](http://www.euro.who.int/HFADB) (accessed April 30, 2009).

death rates from infectious and parasitic diseases appear to correspond fairly closely with its income level.

**Figures 6 and 7:** It is in mortality from cardiovascular disease (CVD) that Russia's health patterns begin to look eerily distinctive. Like its overall death rates, CVD mortality in post-Communist Russia has veered erratically upward. By 2005, reported Russian CVD levels were almost *four times* as high as those in the original EU countries. Traditionally, CVD is a "disease of affluence." Very poor societies have low mortality levels from CVD. As countries become richer, these rates go up, but as income continues to increase, personal and social investments in health care and prevention bring these rates down again. Russia, however, is totally off the charts: its CVD mortality levels are twice as high as would be predicted by its income level. Indeed, scarcely any human population has ever reached the levels of CVD mortality reported by modern-day Russia. It is a bona fide outlier.

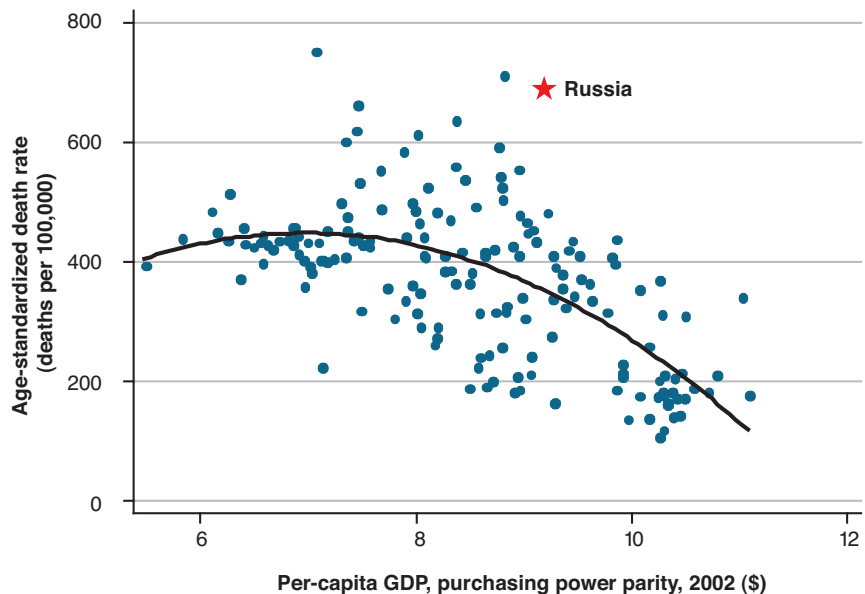
**Figure 8:** And the news gets worse. Russians are not only dying from excessive levels of chronic disease; they also have catastrophically high levels of mortality due to "external causes" such as injury or poisoning. The Russians' long and troubled romance with the vodka bottle figures directly in this toll. In 2006, Russian death rates from external causes were almost three times higher than those of former Soviet bloc states that joined the EU in 2004. The discrepancy is truly alarming when put into broader international perspective. In 2002, according to the World Health Organization, only six countries had

FIGURE 6  
DEATH RATES FROM CARDIOVASCULAR DISEASE:  
RUSSIA VERSUS EUROPEAN UNION, 1980–2006



SOURCE: World Health Organization, "Europe Health for All Database," updated January 2009, available at [www.euro.who.int/HFADB](http://www.euro.who.int/HFADB) (accessed April 30, 2009).

FIGURE 7  
DEATH RATES FROM CARDIOVASCULAR DISEASE VERSUS  
PURCHASING POWER PARITY—ADJUSTED PER-CAPITA GDP:  
RUSSIA AND 174 OTHER COUNTRIES, 2002



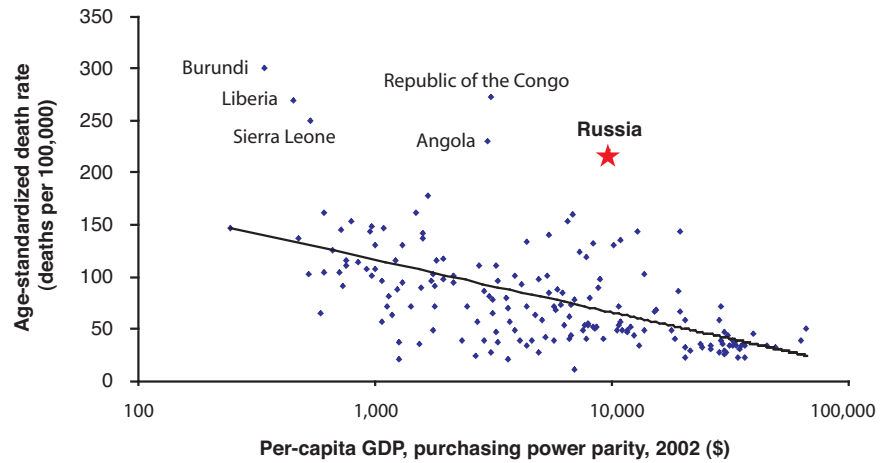
SOURCES: Mortality rates: World Health Organization (WHO), WHO Statistical Information System, available at [www.who.int/whosis/en/](http://www.who.int/whosis/en/) (accessed April 30, 2009). GDP data: World Bank, 2008 World Development Indicators CD-ROM.

death rates from external causes higher than 200 deaths per 100,000 people. One of them, of course, was Russia. It is the company that Russia keeps that makes this statistic all the more startling. As shown in figure 8, the other five countries were either conflict or postconflict sub-Saharan African societies—Burundi, Liberia, Republic of the Congo, Sierra Leone, and Angola. It may be unfair at times to call Russia’s health situation “third-world”—unfair, that is, to third-world countries. To go by its death toll from unnatural violent causes, Russia today looks decidedly more “fourth-world” than third-world.

**Figure 9:** How can Russia’s catastrophically bad health performance be explained? One obvious question, of course, relates to health care—or the lack of it—in Russia today. Perhaps surprisingly, available data seem to suggest that Russia does not necessarily underspend on health care. As figure 9 shows, put into perspective with other Organisation for Economic Co-operation and Development (OECD) and European countries, Russia’s health care expenditures seem to correspond roughly with amounts that would be expected for a European or OECD country at Russia’s current per-capita income levels. In other words, Russia seems to be making ordinary investments in health but is purchasing extraordinarily poor results for the rubles spent.

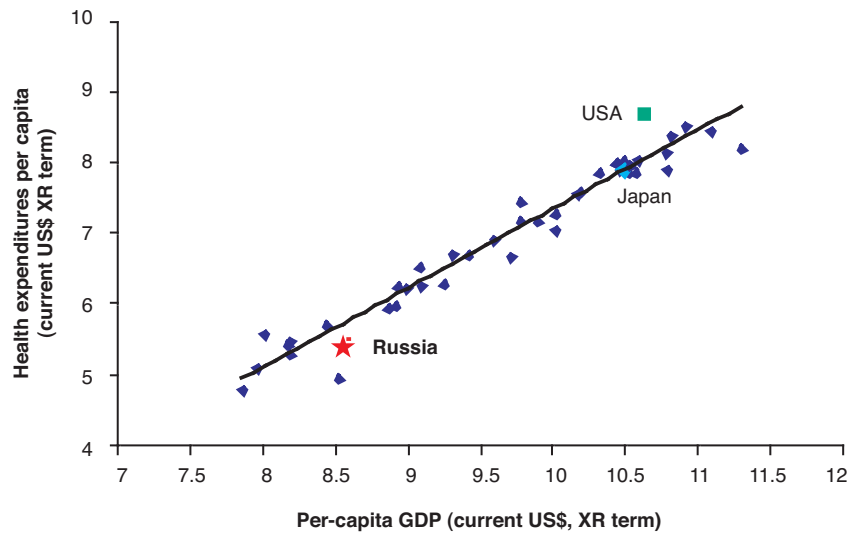
If Russia’s level of health expenditures looks to be unexceptional, self-reported subjective well-being (happiness) does not. In an international perspective, Russia is once again an outlier, in company with none other than Zimbabwe, even though Zimbabwe’s GDP is much lower than Russia’s. Wealth may

FIGURE 8  
DEATH MORTALITY RATES FROM INJURY/EXTERNAL CAUSES  
VERSUS PURCHASING POWER PARITY-ADJUSTED PER-CAPITA GDP:  
RUSSIA AND 174 OTHER COUNTRIES, 2002



SOURCES: Mortality rates: World Health Organization (WHO), WHO Statistical Information System, available at [www.who.int/whosis/en/](http://www.who.int/whosis/en/) (accessed April 30, 2009). GDP data: World Bank, 2008 World Development Indicators CD-ROM.

FIGURE 9  
HEALTH EXPENDITURES VERSUS PER-CAPITA GDP:  
RUSSIA VERSUS OECD AND SELECTED EUROPEAN COUNTRIES, 2005



SOURCE: World Bank, International Comparison Program, 2005, available at [www.worldbank.org/data/icp](http://www.worldbank.org/data/icp) (accessed May 1, 2009).

make for health in our modern era, but in Russia, wealth has bought neither health nor happiness. Is Russia’s strikingly poor reading on

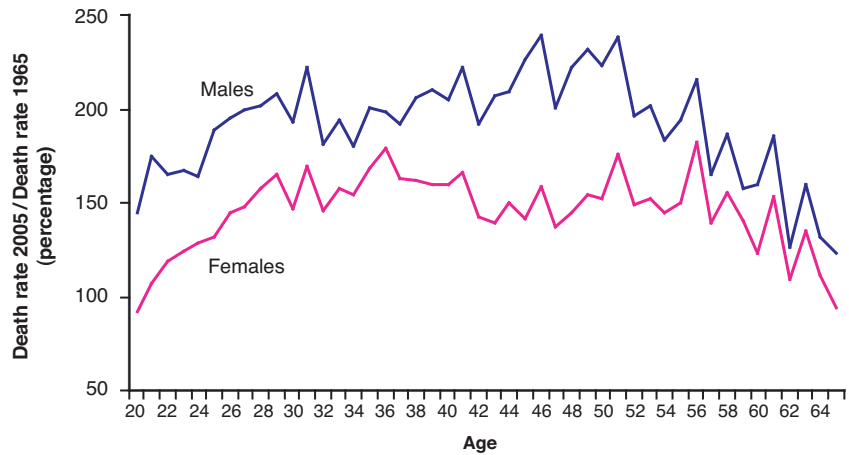
the happiness indicator somehow related to Russia’s public health situation? More research is needed to explore—and test—that proposition.

**Figure 10:** Over the past forty years, Russian health standards have actually regressed—and the retrogression has been most acute among persons of working age. Figure 10 shows the ratio of age-specific death rates for males and females age twenty to sixty-five in 2005 compared to those from 1965. For almost all adult ages, death rates in 2005 were higher than those four decades earlier. At many ages, 2005 male death rates were actually more than twice as high as those of their 1965 counterparts. Russia’s women fared only slightly better. The age-standardized death rates of women age thirty to sixty were often 50 percent higher in 2005 than in 1965. Russia’s current health profile does not look awful only by contemporary international benchmarks; it fails its own historical benchmarks.

Just how bad is Russia’s male mortality today? According to 2004 data, thirty-year-old East German males had death rates similar to Dutch men at age thirty-three—not a bad showing. Thirty-year-old Lithuanian males, on the other hand, faced the same mortality rates as fifty-one-year-old Dutch men. Even this is not as bad as it gets. Russian males at age thirty had the same death rates as Dutch men at age fifty-seven. We might say that in Russia today, thirty is the new fifty-seven.

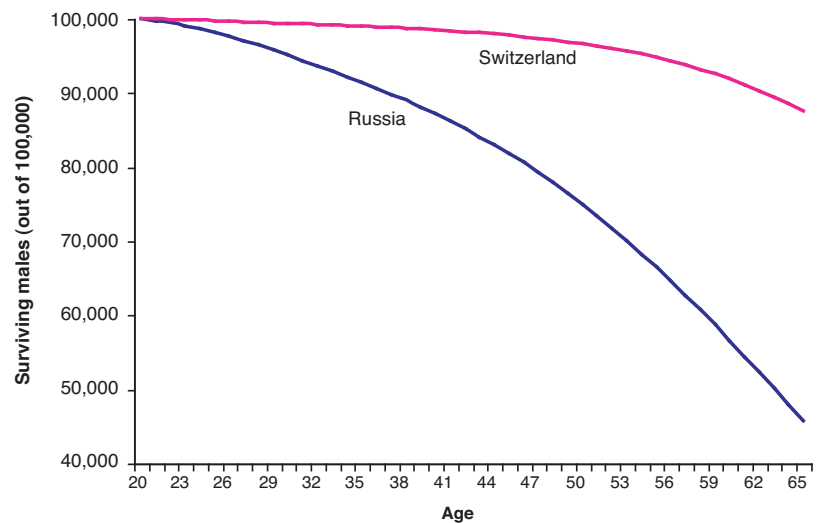
**Figure 11:** Considering the evidence presented to this point, it may seem unfair to compare Russia against Switzerland, but if we use Switzerland as a European health success story, Russia’s health performance can be put into a European perspective. On current (2006) survival schedules, seven out of eight Swiss men who are now

FIGURE 10  
DEATH RATE RATIO AGES TWENTY TO SIXTY-FIVE:  
RUSSIA, 2005 VERSUS 1965



SOURCE: University of California, Berkeley, and Max Planck Institute for Demographic Research, “Human Mortality Database,” available at [www.mortality.org](http://www.mortality.org) (accessed October 17, 2006).

FIGURE 11  
MALE SURVIVAL SCHEDULES AGES TWENTY TO SIXTY-FIVE:  
RUSSIA VERSUS SWITZERLAND, 2006



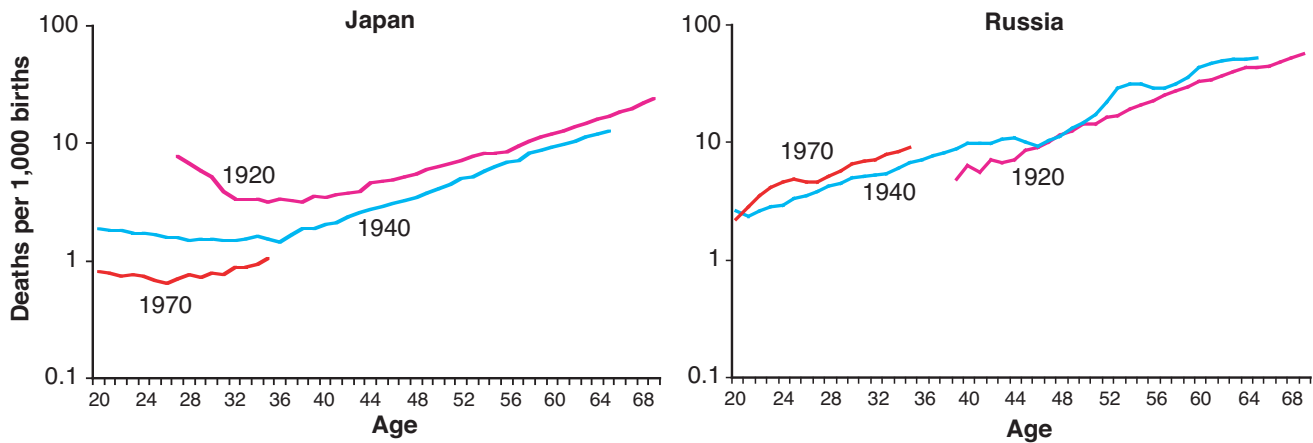
SOURCE: University of California, Berkeley, and Max Planck Institute for Demographic Research, “Human Mortality Database,” available at [www.mortality.org](http://www.mortality.org) (accessed November 7, 2008).

twenty years old can expect to celebrate their sixty-fifth birthday. Their Russian counterparts, by contrast, face less than even odds in this regard: only about 45 percent of Russia’s twenty-year-old men can expect to make it to age sixty-five. Among other things, Russia’s

drastic rate of premature mortality has direct and unforgiving implications for investments in higher education and training. (Some looking at figure 11 might be tempted to ask: who needs a pension system if there are going to be no pensioners?)

FIGURE 12

MALE MORTALITY IN JAPAN AND RUSSIA BY BIRTH COHORT, 1920, 1940, AND 1970



SOURCE: University of California, Berkeley, and Max Planck Institute for Demographic Research, “Human Mortality Database,” available at [www.mortality.org](http://www.mortality.org) (accessed November 7, 2008).

**Figure 12:** In “normal” industrializing countries during peacetime, each subsequent generation can expect to live longer than the previous generation. In other words, the overall expectations are that younger brothers live longer than older brothers, who live longer than their fathers, who in turn live longer than their grandfathers. Figure 12 shows male death rates by age for three birth cohorts in Japan and Russia. In Japan, as expected, a thirty-year-old male born in 1970 would face better survival odds across a lifetime than his sixty-year-old father or his eighty-year-old grandfather. In Russia, exactly the opposite is the case. At almost every comparable age, Russian men born in 1940 suffered higher death rates than those born in 1920—two decades earlier. But survival trajectories for men born in 1970 look even worse than for those born in 1940: at almost every point in their adult life, their death rates have been higher than those of the men

born thirty years before them. Russia, in short, seems to have accumulated an enormous amount of negative health momentum in recent decades. As a practical matter, this means that even getting the current generation of Russian men back to their fathers’ survival schedules would count as a very significant achievement.

In the modern world, we can say that “health equals wealth”: as life expectancy increases, so does income. (The relationship is deep and complex, of course—it is not unidirectional—but health levels turn out to be robustly related to per-capita productivity, both across countries at any point in time and in given countries over time.) In Russia, per-capita income has increased dramatically over the past decade, yet life expectancy over those same years has stagnated and even regressed. Indeed, Russia’s male life expectancy is at least a decade less than might be expected today, given its income level.

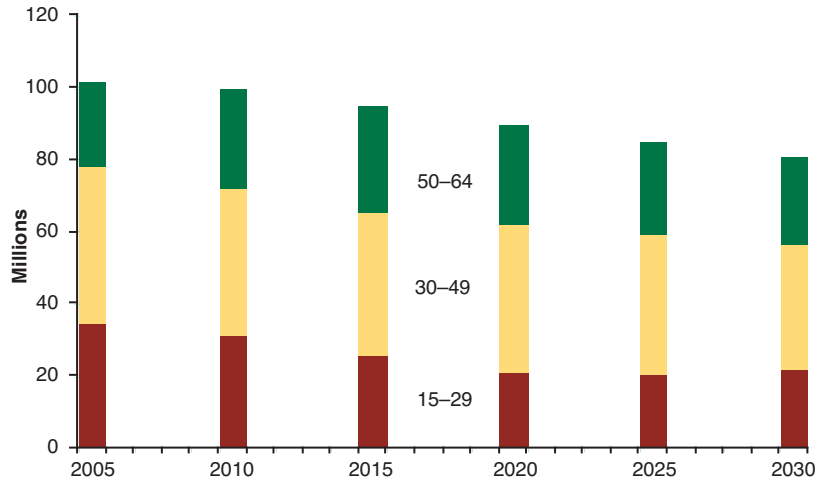
**Figure 13:** From one perspective, we might describe Russia today as “disinvesting in people.” The shrinking of Russia’s population through brutally high mortality and steep subreplacement fertility will make for inescapable repercussions for Russia’s political economy that will become evident in the next ten to twenty years. Figure 13 shows the estimated and projected population of adults age fifteen to sixty-four from 2005 to 2030. During this time, Russia is slated to see its working-age population drop by perhaps one-fifth, or about 20 million, with the sharpest decrease occurring amongst the youngest Russians—fifteen- to twenty-nine-year-olds (the group that would ordinarily be expected to exhibit the highest levels of educational attainment and to possess the latest training).

Russia, in short, appears to be on a path toward a broader human resources crisis. To make matters worse, a polity that relies excessively on extractive resources such as oil

and gas, at the expense of investments in its people, can quickly become hostage to fluctuations in commodity prices. Thus, the “resource curse” reinforces the human resources crisis. Russia, alas, risks getting trapped into just such a downward spiral.

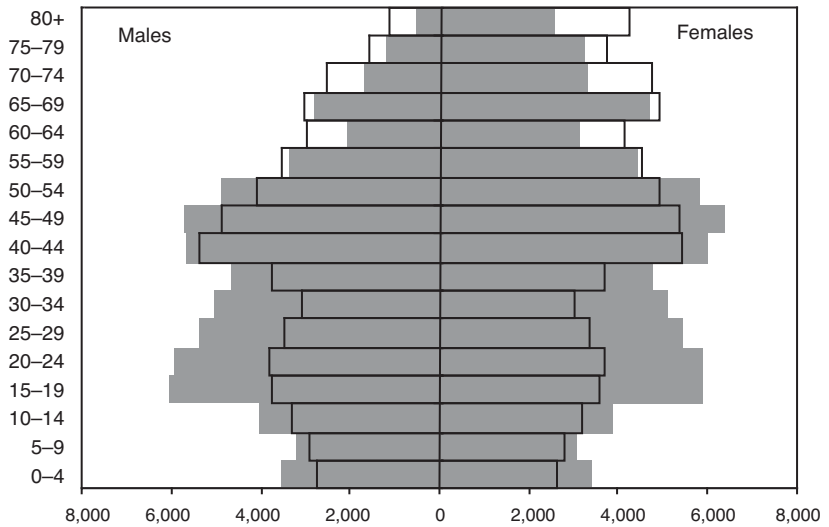
**Figure 14:** According to the projections of the United Nations, the U.S. Census Bureau, and Goskomstat, Russia will not only have a much smaller population by 2030; it will also have an older population. In all these projections, the only age groups that are expected to increase in population between 2005 and 2030 are the cohorts sixty years of age and older. The future Russia is set to be smaller than today, but also decidedly “grayer.” The median age of Russia’s working-age population, for example, is projected to rise by about four years to around forty-two—not a reassuring thought, considering the current health status of Russian forty-somethings. Senior citizens—the sixty-five-plus population—are projected to account for one-fifth or more of Russia’s population by 2030, nearly half again as large a fraction as today. Russia’s senior citizens will almost certainly be much more infirm and less fit for gainful employment than their counterparts in the West. The unanswered question, then, is, “Who will support Russia’s seniors a generation hence?”

FIGURE 13  
ADULT POPULATION AGES FIFTEEN TO SIXTY-FOUR BY AGE GROUP:  
RUSSIA, 2005–2030 (ESTIMATED AND PROJECTED, MILLIONS)



SOURCE: U.S. Census Bureau, “International Data Base,” available at [www.census.gov/ipc/www/idbacc.html](http://www.census.gov/ipc/www/idbacc.html) (accessed March 5, 2009).

FIGURE 14  
ESTIMATED AND PROJECTED POPULATION STRUCTURE:  
RUSSIA, 2005 (SHADED) VERSUS 2030



SOURCE: U.S. Census Bureau, “International Database,” available at [www.census.gov/ipc/www/idbnew.html](http://www.census.gov/ipc/www/idbnew.html) (accessed March 2, 2009).