

CHAPTER 4

THE HEALTH AND FUTURE OF RUSSIA'S POPULATION

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Demographic Trends.

The dynamics of Russian demographic trends will reduce the number of persons born. They will also increase the death rate because of the deteriorating health of the population stemming from major increases in unhealthy children born and subsequent illness and mortality patterns. They portend a decline in the new labor supply. They portend a decline in the number of 18-year-olds available for the draft, and of this declining number, they portend a greater proportion who are poorer and thus unhealthier. Finally, they will affect family formation and dissolution, bringing about declines in total fertility rates through a reduced number of women in the prime fertile ages, which in turn will lessen the potential numbers of births now and into the future. By the year 2050, these dynamics will result in the decline of perhaps one-third (or more) in the population of 144.8 million persons existing at the beginning of 2001.

Sometimes even more apocalyptic projections are found in Russian government and legislative reports or speeches. Russian Labor Minister Aleksandr Pochinok, Russia's current Prime Minister Mikhail Kasyanov, and others speak of sharp declines in the labor supply in the immediate future or several years from now. These trends, combined

with the poor health of newborns, will adversely affect future productivity gains and other economic possibilities. Huge impending increases in mortality from Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) or associated opportunistic illnesses (including tuberculosis [TB], on its own or as a cofactor with HIV/AIDS and others) likely will make for major shifts in the prevailing causes of death. They will also increase mortality while concomitantly lowering average life span. Russian President Vladimir Putin's hope for the immigration to Russia of 500,000 persons per year will not fulfill the requirement of at least 750,000 new births per year simply to sustain the population, let alone provide for growth.

Moreover, cultural impediments to assimilation encountered even by Russians returning from the near abroad (i.e., the former Soviet territories plus the Baltic states) as well as by emigrants from other nationality populations, will be difficult to resolve because of, among other issues, the lack of facilitative funding by federal and local authorities. Such impediments further reduce the potential for a solution through immigration. My projection of 100 million people in Russia by the year 2050 may well be optimistic.

Putin, in his first State of the Union message in June 2000, listed 16 major problems facing the country. Remarkably, and without precedent for a national leader, he cited the demographic problem first. He underscored the net decline in the population (births minus deaths plus or minus net migration) of some 750,000 per year as the basis for his anticipation of the problem. However, he stipulated that economic growth depended on an increase in the number of people. Of importance is not only the gross number, but also the numbers surviving for future fertility (which affect future labor force numbers and the future recruit pool for the military) and the morbidity and mortality patterns existing currently and in the future. My projection of some 100 million by the year 2050 is eclipsed in

terms of apocalyptic magnitude by Nikolay Gerasimenko, the head of the Duma Committee on Health and Physical Fitness, who projects a population of 50 to 75 million by the year 2075. (It is a bit heroic to go out this far into the future.) Russian demographer Sergey Yermakov and a colleague have projected a figure of 70 to 90 million for the year 2050, and the higher figure may be quite reasonable. Projecting the bare numbers, however, is not truly to the point. What is to the point are the implications of these projections for the society, the economy, the military, social stability, and the like.

Official Russian governmental projections for the 20- to 29-year-old female population indicate that the demographic echoes of the decline in the number of births which had begun in 1987 will continue to be felt. This decline will have a dramatic impact on the numbers of women at the prime fertile ages beginning in 2007. The numbers are expected to decline from 12.7 million women at these ages to 7.2 million by the year 2022, and decline even further by 2050 to 6.4 million. Unless fertility increases dramatically, by these numbers alone the likelihood of an increase in population is very, very small. Moreover, as we shall see from the health of the population in general and of females in particular, the negative health trends will clearly affect future fertility in a manner depressing potential growth even further.

Mortality will increase markedly without a doubt as the impact of HIV/AIDS and TB hit in full force beginning in about 2005 and continuing **until** major breakthroughs occur in prevention and treatment, and the necessary funding becomes available. These conditions are not easily met. The numbers of TB deaths alone have increased by 33 and 30 percent in 1999 and 2000, respectively, and promise to increase even more as the amnesty of prisoners with TB, especially multidrug-resistant TB (MDR-TB), continues apace. In this instance, the authorities are damned if they do—for releasing pathogenic individuals—and damned if they don't—by the human rights community because of

incredibly bad conditions in Russian detention centers and prisons. If people were not sick before they entered in jail, it is almost guaranteed they will be sick with TB or other diseases upon release.

The leadership, as one possible solution to the population problem, is currently considering migration possibilities, which also have important military implications for the long run. With net in-migration having peaked at some 800,000 plus in the early 1990s, the net in-migration totaled only about 140,000 in 1999. The first 11 months of 2000 saw a total of 338,000 in-migrants (excluding out-migration), which is one-third of the 1994 figure of 1,140,000. Putin and others have expressed the hope and desire that the number will increase to some 500,000 (on a net basis) from the near abroad. On one hand, a major influx is very unlikely to occur at the desired level in the near term without the push of major economic, ethnic, ecological, or other disasters in these areas. While the Taliban threat to the southern tier is a consideration for these policymakers, it may not come quite to the level of actual war. Emigrants from Afghanistan number about 150,000, but only 500 have formal refugee status.¹ An Armenian earthquake or another Chernobyl event in Ukraine might lead to a large number of migrants, but would likely be only one-time events.

Of greater help would be the improvement in conditions for legal, let alone illegal, migrants already in Russia. Many of these legal migrants have not been supported in the manner promised, nor is it likely that sufficient monies will be forthcoming from the federal or local governments to handle a large increase. Nor will the indigenous populations be so welcoming, given their own problems of resource availability for housing, health care, and jobs. The lebensraum of southern Siberia and the Far East might be a draw for large numbers of Chinese. Currently, estimates of the number migrants there, including Chinese, vary from 700,000 to 1.5 million legals and from 500,000 to 4-5 million illegals.

While China could spare several hundred million (out of a current total population of 1.3 billion), it is doubtful that numbers of this magnitude are realistic. A large number, say 50 million, undoubtedly would be seen as a threat to the national security of the Russian state. Moreover, on the assumption that even a smaller number (perhaps tens of thousands) of young Chinese move into Russia under legal regulation and passports to become permanent residents, would they be subject to conscription? Would they serve? Would they be in sufficient numbers to worry the General Staff about their loyalty? Would they be assigned to sensitive strategic combat arms? Would a professional army (if the government can afford it) obviate large numbers of such citizens for a conscriptee pool? These are all relevant questions, albeit not yet much talked about in the public domain.

While China expert Steven Mosher points out that there are some 5 million permanent Chinese workers and their families resident in the area, it would appear from other evidence that this number is too high.² In January 2001, experts from several Russian government agencies, including the Federal Border Guard Service, estimated that the number of illegal migrants in the previous 5 years from all countries had increased by 10 times. According to their figures, the total number of illegal Chinese migrants approached 750,000, while some 250,000 additional Chinese citizens were officially registered.³ These figures are much lower than Mosher and some others estimate. But the military input continued to warn of the potential for large numbers of “residents” (read the Chinese in particular) to eventually demand “establishment of national autonomies.” Nothing is said in the agency experts’ report about what might be done about it, but the warning is clear.

Such concerns are valid. Valentina Matviyenko, a Deputy Prime Minister for Social Issues, noted the Chinese emigration problem in a speech in the Far East, declaring it a national security threat. Mosher quotes former Russian

Defense Minister Pavel Grachev, who warned as long ago as 1995 that “the Chinese are in the process of making a peaceful conquest of the Russian Far East.”⁴ So have others since, but the recent rapprochement with China may lead to further regularized influxes of aid to the regional economy and perhaps limit the Chinese to this area. Whether it will lead in the future to territorial claims is unclear, but such is not impossible. Will this be another Chechnya? National patriots and various strategic policymakers worry about the loss of territory in Chechnya and its precedent for other regions of the Federation. James Billington, the Librarian of Congress and a renowned Russian historian, in a speech given at the U.S. Institute of Peace in May 1999, is quoted by Mosher as predicting a likely Chinese intervention in “Siberia in the next 10 to 15 years.” The potential is high for this to ensue, but as yet still uncertain.

Russian policy seems to be one of trying to head off a large influx at least. Putin has ordered the formation of a working group to prepare proposals on the regulation of immigration. Their report was due on March 20, 2001. The report’s actual contents are not yet known, but likely will pay much attention (even if not spelled out in any public announcement) to the “Yellow Peril,” to cite a historical and cultural expression of the Russian fear of the Chinese. The potential influx does not appear to have been factored into the migration projections of the State Statistical Agency. In its official report, it projected a figure of 132,000 net in-migrants in 2000 and only 60,600 in 2015.⁵ This figure is very different from the desired figure, according to the Putin policy initiative. Within the regions the Chinese are expected to “occupy,” the Goskomstat projects a decline of 20,600 net in-migrants in the West Siberian Region, 26,900 in the East Siberian Region, and 33,900 in the Far East Region—a decline totaling 81,400, rather than the millions being anticipated. Interesting. One awaits the next year’s Statistical Bulletin on population projections to see if this issue has impacted the technical authorities rather than

simply those political and military operatives concerned with the future of the region.

Health Trends.

Perhaps the most important factor that will affect Russian national security will be the impact of the numbers of deaths projected by Russia's leading epidemiologist on HIV/AIDS. Vadim Pokrovskiy, head of the Federal HIV/AIDS Prevention and Treatment Center of the Russian Ministry of Health, predicts that 10 million or so predominantly 15- to 29-year-old males will begin to die by 2005, definitely by 2010. I fully anticipate that this eventuality, in combination with the deaths and illnesses from other causes, will seriously affect not only the overall demographic trends, but future labor supply and quality, the armed forces' combat capability, family formation, family stability, international status, and on and on. When combined with the very major increases in deaths from TB mentioned previously, the numbers of people affected and concomitant economic costs become staggering. Such costs, when added to other costs to the economy from illness due to poor water, solid particulates in the air, past overuse of pesticides, and chromosomal aberrations causing spontaneous abortions/miscarriages in the so-called military chemical cities such as Dzerzhinsk and Chapayevsk, may become well-nigh intolerable. The growth of drug abuse, the spread of syphilis both in itself and as a precursor to the transition to HIV/AIDS, and the spread of hepatitis C as a cause of death and as another precursor to HIV/AIDS, add even more detriments to the declining health of the population.

The global infectious disease threat emanating from Russia and the region is part and parcel of the strategic implications for other countries, with TB, syphilis (due to the export of women for the sex trade), HIV/AIDS, and possibly malaria affecting near and far distant countries in the future, if not already. Sweden has seen a large,

unexpected growth in syphilis, for example, and a strain of TB is spreading to other countries like that found in Russia, especially MDR-TB. The U.S. National Intelligence Council's report titled *Global Infectious Disease Threats and Their Implications for the United States* issued in 2000, reveals the tip of the likely large iceberg of threats to other countries posed by Russia unless the Russian (and Ukrainian, one can add) health situation improves dramatically. It may be too late to head off these threats, but much can be done to mitigate the regrettable impact.

Where to begin? How will Russian health authorities deal with the simultaneous increases in drug and substance abuse plus the spectacular increase in sexually transmitted diseases, especially syphilis, HIV/AIDS, TB, hepatitis C, and hepatitis B? How will they deal with the low survival rate of 16-year-old males (only two-thirds of the rate of 16-year-old males in the United States who reach age 60), and the increasing proportion of children born unhealthy, who have chronic conditions leaving them impaired for the rest of their lives, especially at age 18, the draft age? Another alarming trend is the declining reproductive health of women and the consequent adverse impact on the health of newborn children. If the leading pediatricians (Tabolin and Baranov, as well as other public health authorities) are correct, only 10 or perhaps 15 percent of children under age 15 are healthy.

Stunting (that is, lower height by age, based on world health standards) and wasting (lower weight by age) are increasing among the young, which of course also leads to ineligibility of 18-year-old males for the draft. The national health indicator averages projected by Tabolin and Baranov need to be supplemented by information on regional health status differentials, with particular attention to the regional sources of recruits for the military. Efforts can then be targeted to improve the overall health status of young persons in the least healthy regions.

The need to improve health conditions is certainly manifest when the head of the Moscow Military District, Mikhail Sorokin, can declare that only one in ten Muscovite males will be available for the spring 2001 draft in his district, a main reason being that 40 percent cannot be drafted because they are too ill and 10-20 percent are draft dodgers (many of whom have “acquired” a certificate affirming mental problems). At the same time, he notes that a whole army company stationed in the Caucasus, 80 persons in all, “really do have mental and psychiatric problems.” Of those actually drafted, many are drug addicts and HIV-carriers, which does not bode well for their active duty performance.

The problem of conscript health can be readily demonstrated by tracking the pattern of syphilis rates, drug abuse, and substance abuse in the last decade. From 1989 to 1998, for example, the rate per 100,000 population of new incidence of syphilis has increased by over thirtyfold, drug abuse by over tenfold, and substance abuse by over 20 percent. Due to changes in legislation which made new syphilis sufferers subject to legal penalties beginning in 1998, the actual number of new syphilis incidence is undoubtedly higher among the conscript age cohort. Especially given the putative major reduction in conscription for the armed forces by 2010, why then does the military not press the Putin government to do more? Given the military’s opposition to a nonconscript force, is the military’s expressed concern strictly for the record? Putin asserted on March 21, 2001, that (as quoted by *ITAR-TASS* the next day) “the navy, air force, missile forces, and some other arms and branches of service are 80 to 90 percent staffed by professionals.” These figures seem high compared to other information and surprising, given demographic and health constraints. Where the funding to pay for an entirely voluntary military would come from is far from clear.

The Educational System.

Disarray in the educational system continues in Russia. Though educational reforms have been implemented, the results are quite uncertain and could negatively affect human capital formation in the future.⁶ This threat to training of current and future generations is due not only to the professional fields that students individually decide to study or not to study, but also the debatable quality of many so-called private schools and college-level institutions. In addition, the health of students as a reflection of society in general and of the youth culture in drug abuse and other socially aberrant behavior, has led to many discussions about the impact on the student population and students' participation in society, if and when they graduate. For example, several reports indicate that St. Petersburg's Education Department, as of March 2001, was worried about the further worsening of school children's health over the previous 3 years, and noted that this generation's health was becoming "significantly worse." In addition, they found that only one of every ten children 10 years of age and under was healthy, and only one in 20 above age 10 was healthy.⁷ If this situation continues, and it likely will, then what does this do to the students' ability to study as well as function in society? Not to be outdone, in a regrettable kind of competition, Leonid Ivanov on the same date indicated that in Tyumen city (located in West Siberia) the city's medical community held a special session to discuss the significant rise in tuberculosis among students of higher educational institutions.⁸ The report asserts that the main reasons for such increases in TB are the "socially aberrant behavior" cited above, as well as "poor nutrition, a poor epidemiological situation, and a genetic predisposition to illness." I do not know how the latter point could be proved, but the other possible underlying causes are widespread and germane to such situations.

Shortages of funding for salaries, for computerization, and the like, which led to strikes by about 300,000 teachers

in 39 regions of the country on February 27, 2001, could well lead to further deterioration of this sector and adversely affect the economy as well.⁹ The potential for economic discrimination is being realized as the shortage of money for education has led not only to the growth of private higher educational institutions, but also to high tuition, leaving behind many who are at the lower end of the economic ladder. Moreover, the share of tuition-paying students has increased markedly since 1995. In 1995, one of every 5 rubles (20 percent) for the sector was paid by so-called “commercial” students; in the 2000-01 school year, 56 percent is derived from private payments. Will talented students be excluded?

Much has been accurately written on the growth of educational achievement by the Russian population, but the future is more tenuous because of the recent volatile and uncertain educational climate. The demographic downturn in the number of births by 50 percent over the past 13 years (1987 to 2000) will provide a much smaller college population beginning in 2015 as students reach 18 years of age. The number of graduates could be too small for the needs of the country, both in absolute terms and in numbers of high-quality students.¹⁰ The past is thus no longer prologue in terms of quantity, and perhaps even in quality, as the confusion in the educational system continues to grow. Attempting to make projections of the number of future scientists in all sectors of the economy is frustrated not only by the declining numbers of potential students, but also by the unknown pattern of fields of study they will choose; ignorance of whether they will join the public or the growing private sector; and lack of certainty as to whether they will reside in Russia, given the alarming trends in the permanent and temporary brain drain. In addition, one would need to know whether graduates will actually do the work they trained for or work in other job slots (for example, many engineers now work in business or finance); what the relative shares of civilian versus military employment will be; and whether students will be subsidized with adequate

stipends in their training (e.g., with college or university fellowships). Such uncertainties make any projection very tentative and likely wrong.

During a talk given by a former Russian Minister of Science, Boris Saltykov, at Georgetown University in 1997—well before much had changed in population numbers, enrollment, expansion of the private educational sector, and announcement of major reforms in the Russian military—he asserted that only about 100,000 scientists were actually active in their science specialties. As reported by Dr. Harley Balzer, head of the Center for Eurasian, Russian, and East European Studies at Georgetown University, Saltykov stated that roughly half of the scientists were employed in civilian research and half in military-related work.

At the same time, the number of researchers among scientific workers (*nauchnyye rabotniki*) was reported by the State Statistical Agency as having dropped sharply over the period 1992-98 (from 804,000 in 1992 to 417,000 in 1998).¹¹ At the same time, the number of admissions to graduate studies and enrollment in their physical-mathematical, chemical, biological, and technical studies programs increased from 6,606 students in 1992 to 14,350 in 1998.¹² This rise in science enrollments is quite contrary to the trend of the overall number of scientists. Graduations over the same period, however, declined from 8,102 to 7,798.¹³ All disciplinary fields cited above declined, except for those students who finished graduate schooling in the biological sciences. This is an interesting development, but too imprecise to indicate anything about where they ended up working.

In sum, then, I do not consider it possible to prepare any serious projections related to science graduates until the educational, employment, military reforms, and/or budget allocations become realistic. This is especially true when these factors are combined with the future demographic and health dynamics. In addition, the difference to date between

words and reality leave too large a gap to hazard anything more than completely untenable estimates and projections.

What is reappearing from the past is a growing “demand” for a return to the system of obligatory assignment upon graduation from a higher educational institution. Putin noted in a speech at Novosibirsk State University in November 2000 that he did not believe in such obligatory assignments because “people have to learn to be self-sufficient.” However, he went on to explicitly exempt state-owned defense enterprises. Since there is a system of government contracts, and it includes a specific table of organization and types of specialists needed to perform the work, free choice allowed since the early 1990s will change. Within 12 to 18 months, the former personnel distribution system for training engineers for the defense industry throughout Russia will be restored.¹⁴ This action would appear to be closely linked to the discussion at a conference held in the Kremlin Palace on December 14, 2000, under the rubric “Professional Engineering-Technical Education and Military Education in the Twenty-First Century.” The title of an article appearing in the military newspaper *Krasnaya Zvezda* on February 16, 2001, is “Engineers Are the Golden Reserve of Russia.” Clearly, the military sector has had trouble retaining young engineer lieutenants and/or recruiting the quantity, and likely the quality, of engineers it needs to fill its national security role. Thus, freedom of choice for college and university engineering graduates will be restricted. The pre-1990 rule for a 3-year period of obligatory time in the assigned job is not specified in the source, but likely will be at least that amount of time when the details emerge from this initiative.

Implications for the Future: A Brief Summary.

The relation between demography and health trends is not very positive for productivity gains leading to economic growth or for enhanced national security of the state because the limits engendered by an unhealthy and much

smaller population impact the following generations. Denial by some members of the establishment in Russia continues to this day. Coming out of a meeting of the Board of Directors of the Ministry of Health of the Russian Federation on March 20, 2001, Minister of Health Shevchenko is reported to have affirmed that the health concept adopted 3 years earlier had been “basically realized.” Yet, contradictorily, he is then said to have added, “But the health situation has worsened.” I would have thought these two statements are at odds with one another—but he apparently did not. However, according to the same report, during an unscheduled visit, Vice Minister for Social Affairs Valentina Matviyenko issued a “short unplanned statement” to the effect that the “budget allocation for the health sector is declining, and this affects the situation as a whole.”¹⁵ Moreover, she went on to say that “tuberculosis is growing as a threat, and HIV-infections are threatening to grow out of control.” How then could Shevchenko affirm that the “health component is insignificantly small in the demographic problem.” He suggested that only “war, repression, and prisons” are affected by the “demographic crisis.” Prisons are crucial, obviously, but certainly TB, HIV and its trends, and reproductive and child health remain vital considerations in any discussion of the demographic crisis, to use his term.

As to which of the two trends—demographic or economic—will become ascendant, it is impossible to predict with certainty, but I expect the demographic (read health and educational problems, as well) to nullify any potential economic progress.

I have not addressed the casualty threats from remaining nuclear, biological, and chemical weapons, or from terrorism, or from thefts of associated materials for use by individuals internally or externally, by organizations, and/or by governments, because they are beyond the scope of the present chapter. However, they should not be omitted from a full analysis of health hazards as well as security issues facing Russia.

ENDNOTES - CHAPTER 4

1. *Parliamentskaya Gazeta*, August 23, 2000, p. 7, from *Lexis-Nexis.com*, "What the Papers Say," August 23, 2000.
2. Steven Mosher, *Hegemon: China's Plan to Dominate Asia and the World*, San Francisco: Encounter Books, 2000, pp. 106-109.
3. See the Military News Agency internet site, <http://www.militarynews.ru>.
4. Mosher, p. 108.
5. *Predpolozhitel'naya Chislennost' Naseleniya Rossiyskoy Federatsii do 2016 Goda (Statisticheskii Byulleten')* (Hypothetical Size of the Population of the Russian Federation Until 2016: Statistical Bulletin), Moscow, 1999, p. 144.
6. *Osnovnyye Polozheniya Kontseptsii Ocherednogo Etapa Reformirovaniya Sistemy Obrazovaniya Rossiyskoy Federatsii* (Basic Directive on the Concept for Step by Step Stage of Reforming the Educational System of the Russian Federation), Moscow, 1997.
7. *SPB Vedomosti*, March 13, 2001, p. 2.
8. Leonid Ivanov, *Trud*, March 13, 2001, p.3.
9. *Segodnya*, February 28, 2001, p. 2.
10. Assuming a lognormal distribution.
11. *Goskomstat Rossii, Rossiyskiy Statisticheskii Yezhegodnik* (Russian Statistical Yearbook), Moscow, 1999, p. 471.
12. *Ibid.*, p. 473.
13. *Ibid.*, p. 474.
14. *Vremya Novostey*, February 12, 2001, p. 3.
15. *Kommersant-Daily*, March 21, 2001, p. 9.