

# **Population/Health/Aging: An Achilles Heel in Russian Economic Development**

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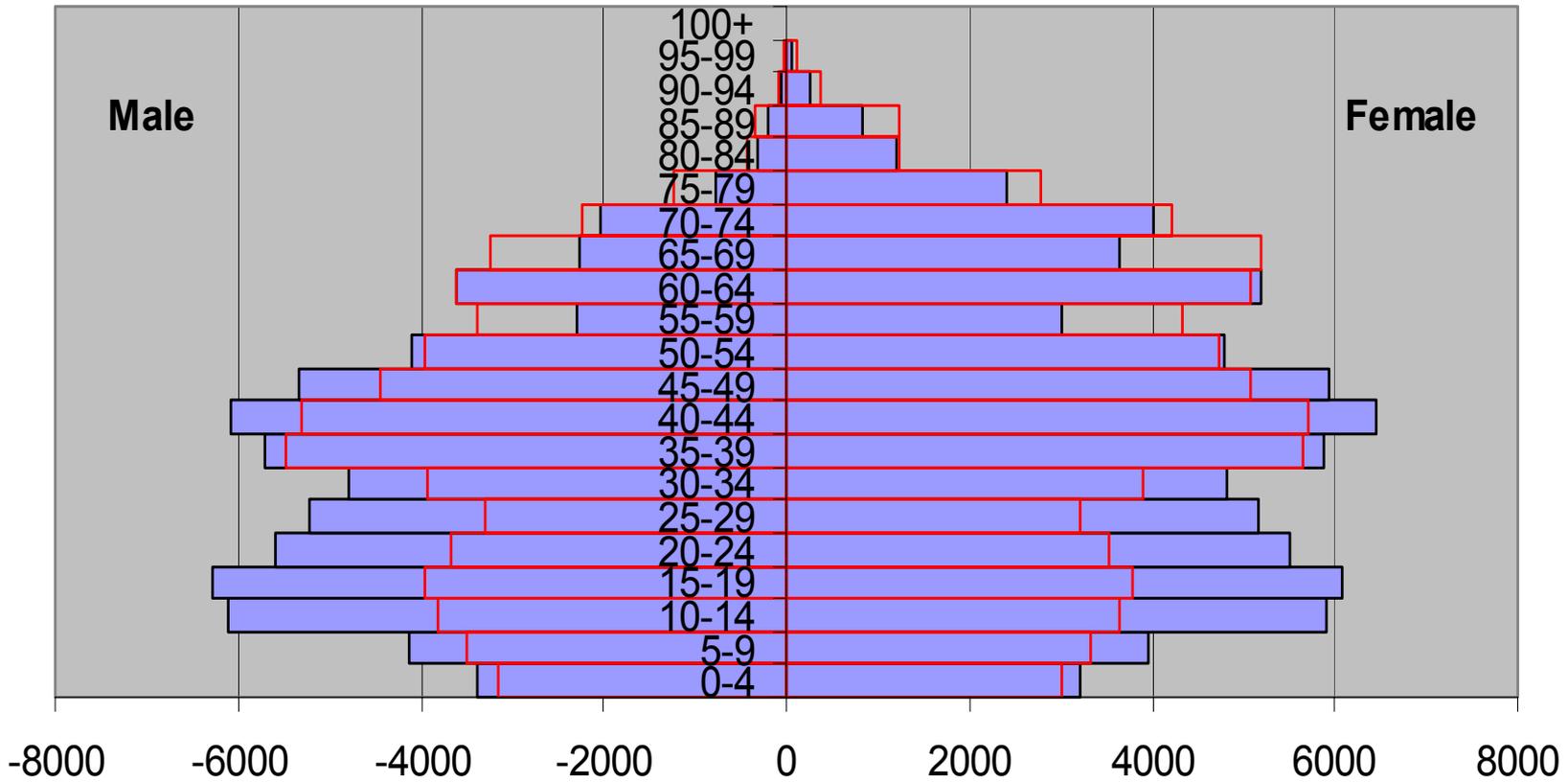
**[eberstadt@aei.org](mailto:eberstadt@aei.org)**

**CSIS Global Aging Initiative**

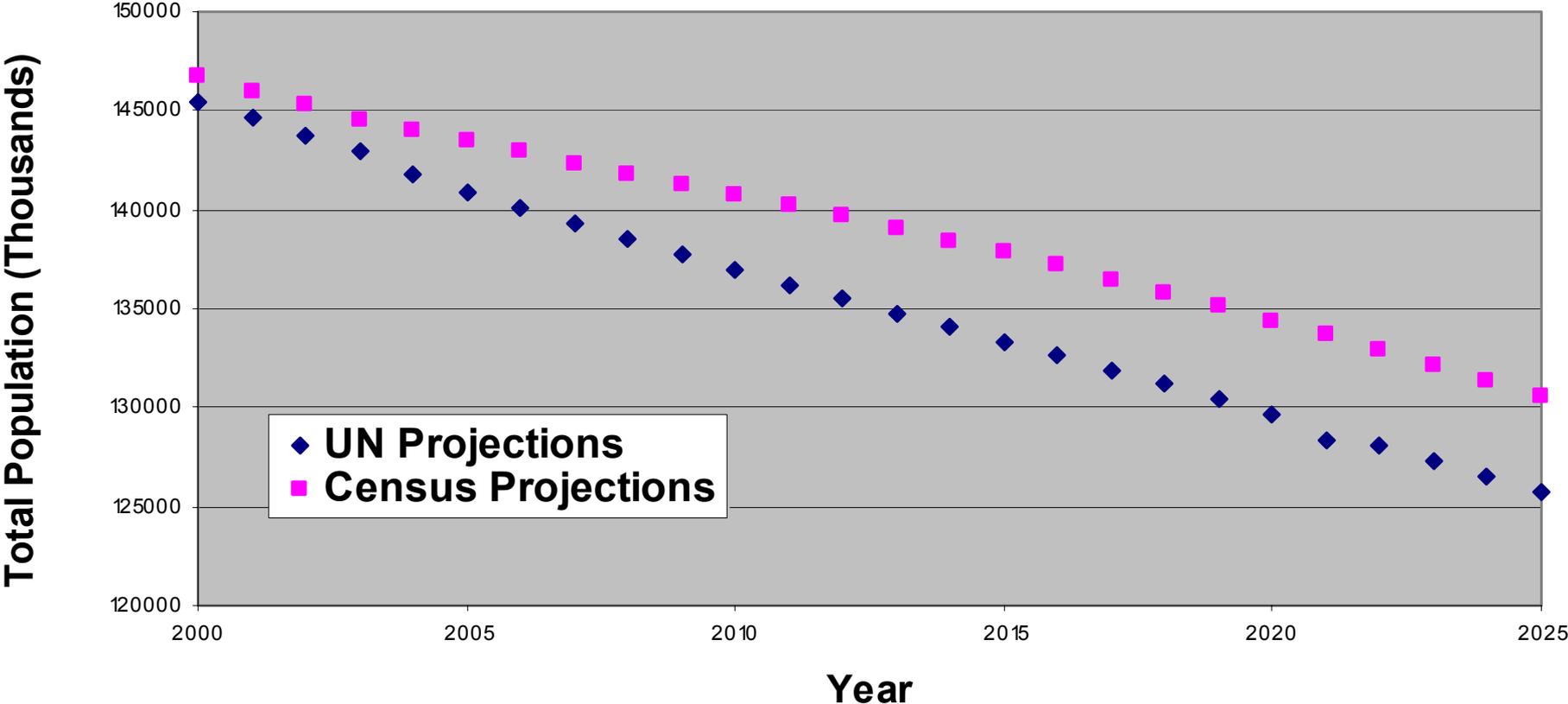
**Washington, DC**

**July 22, 2005**

# Russia: Population Sctructure 2000 vs. 2025 (medium variant projection)

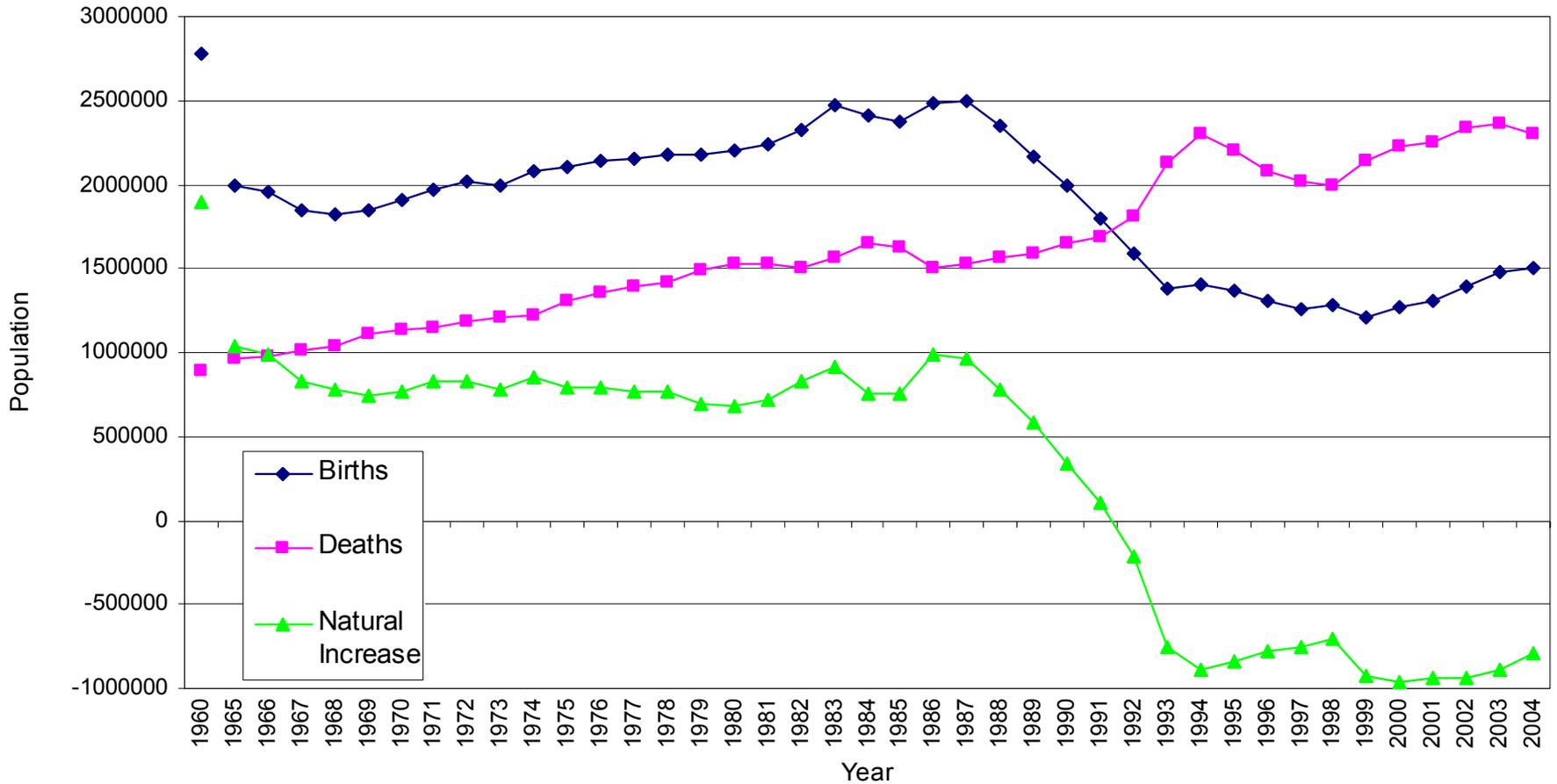


# Projected Total Population: Russia, 2000-2025



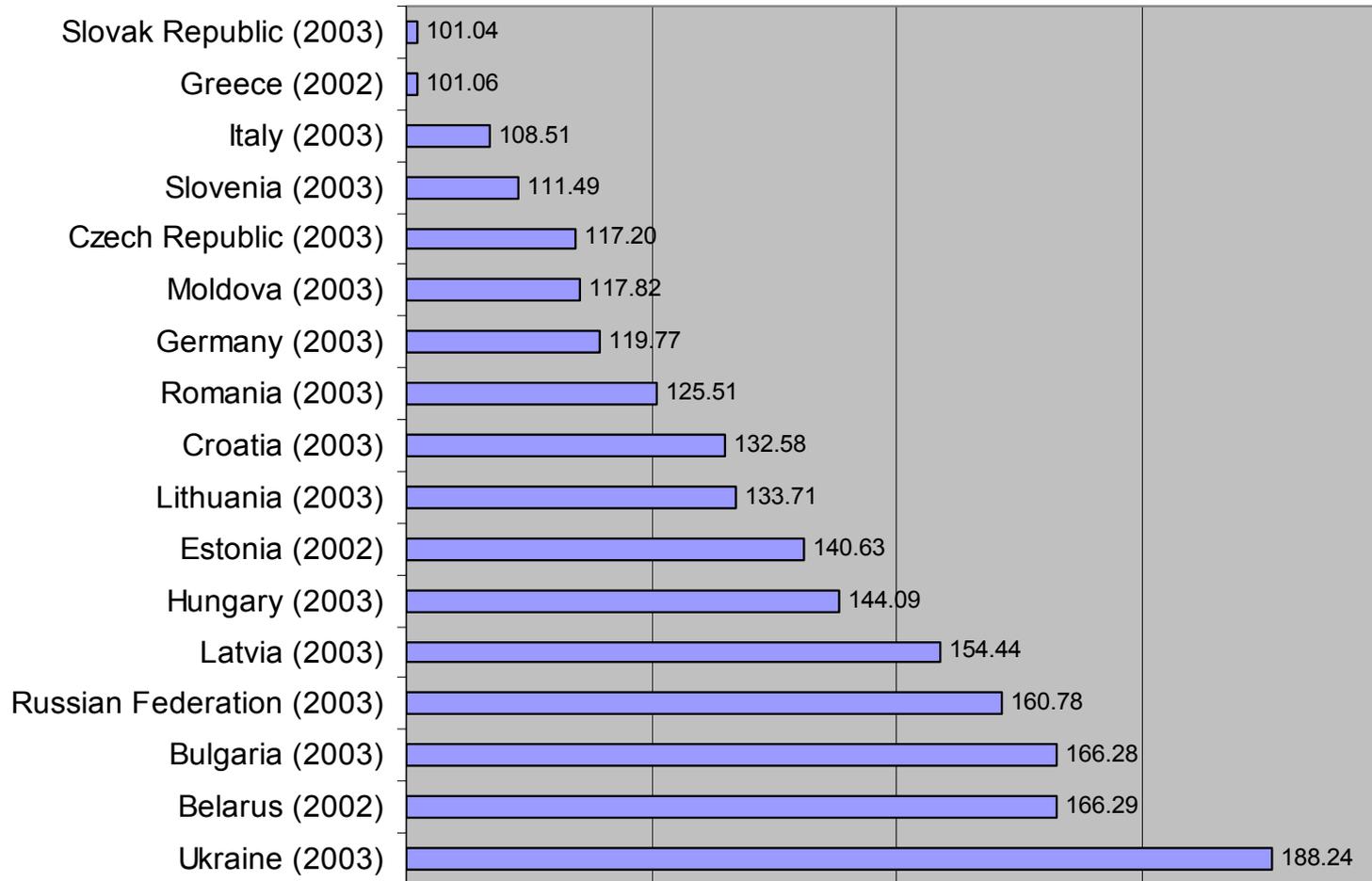
Sources: U.S. Bureau of the Census, International Data Base;  
United Nations Population Division, World Population Prospects: The 2004 Revision

## Births, Deaths, and Natural Increase in Population: 1960, 1965-2004



Sources: Source: The Russian Federation Ejeodnik: 2004 (State Committee of the Russian Federation on Statistics, Moscow, 2004), Table 2.25, Source for 2004 figures: U.S. Census Bureau, International Data Base, accessed April 15, 2005

## Deaths per Hundred Births for Negative Natural Increase Countries



# Projected Population Change, 2000-2025: Russia, Rest of Eastern Europe, and West. Europe

	<b>Russia</b>	<b>Rest E.Eur.</b>	<b>W.Eur</b>
<b>Total Population</b>	<b>-11.8%</b>	<b>-12.7%</b>	<b>+ 3.8%</b>
<b>Population 15-64</b>	<b>-15.4%</b>	<b>-15.1%</b>	<b>- 2.3%</b>
<b>(Population 15-24)</b>	<b>(-36.3%)</b>	<b>(-45.3%)</b>	<b>(-12.7%)</b>
<b>Population 65+</b>	<b>+25.7%</b>	<b>+30.4%</b>	<b>+44.0%</b>

**Source: UN Population Division, *World Population Prospects, 2004 Revisions*, [www.unpopulation.org](http://www.unpopulation.org).**

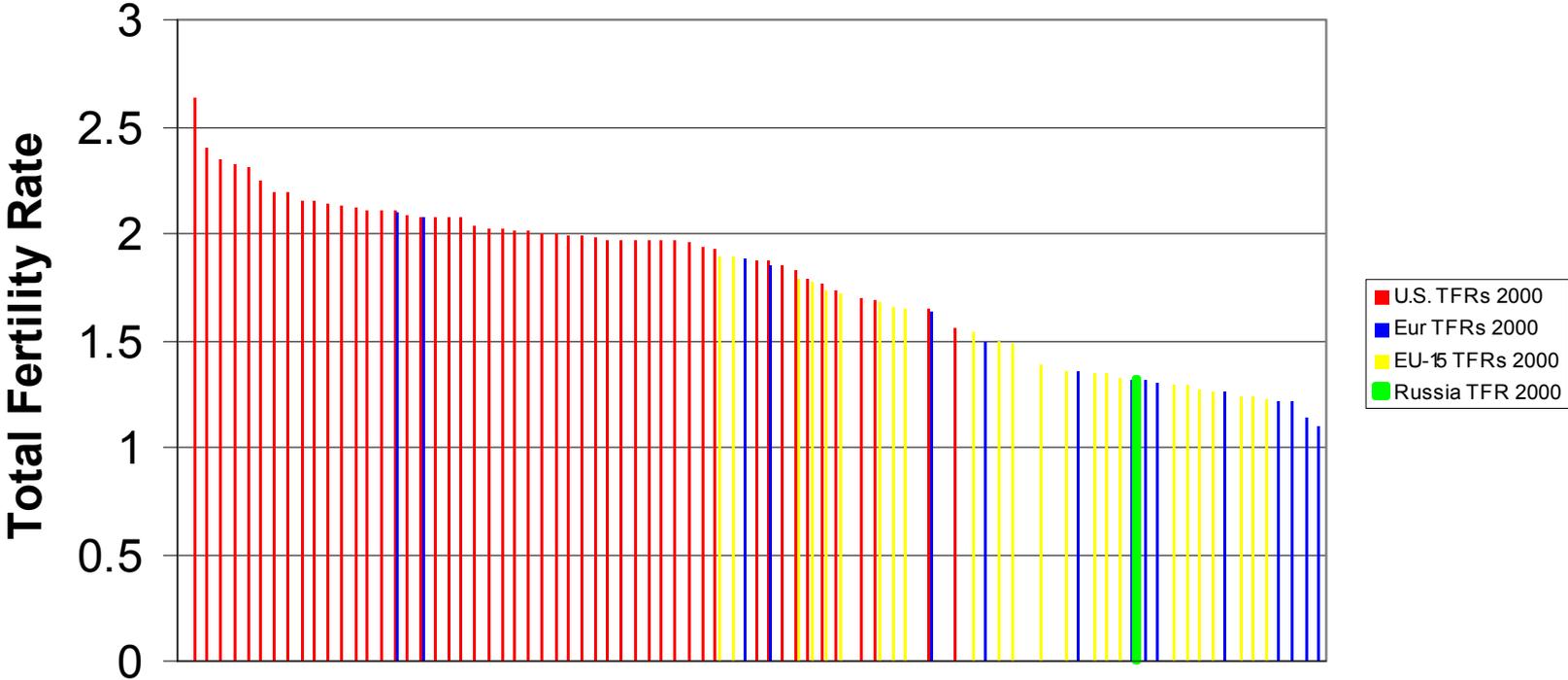
NOTE: UNDP's definition of "Eastern Europe" excludes the Baltic countries, Albania, and most of former Yugoslavia

# Basic Demographic Indicators For Europe By Region (UNPD Projections)

	<u>W.Europe</u>	<u>Russia</u>	<u>E.Europe (w/o Russia)</u>
<b>Population (million) 2005</b>	<b>431</b>	<b>145</b>	<b>143</b>
<b>Pop Growth %/yr 2000/2005</b>	<b>0.33</b>	<b>-0.46</b>	<b>-0.52</b>
<b>Net Reproduction Rate 2000/2005</b>	<b>0.72</b>	<b>0.62</b>	<b>0.58</b>
<b>Life Expectancy 2000/2005 (Years)</b>	<b>77.6</b>	<b>65.4</b>	<b>70.5</b>

NOTE: UNDP's definition of "Eastern Europe" excludes the Baltic countries, Albania, and most of former Yugoslavia

# Total Fertility Rate: U.S. (by state), Russia, and Europe, 2000

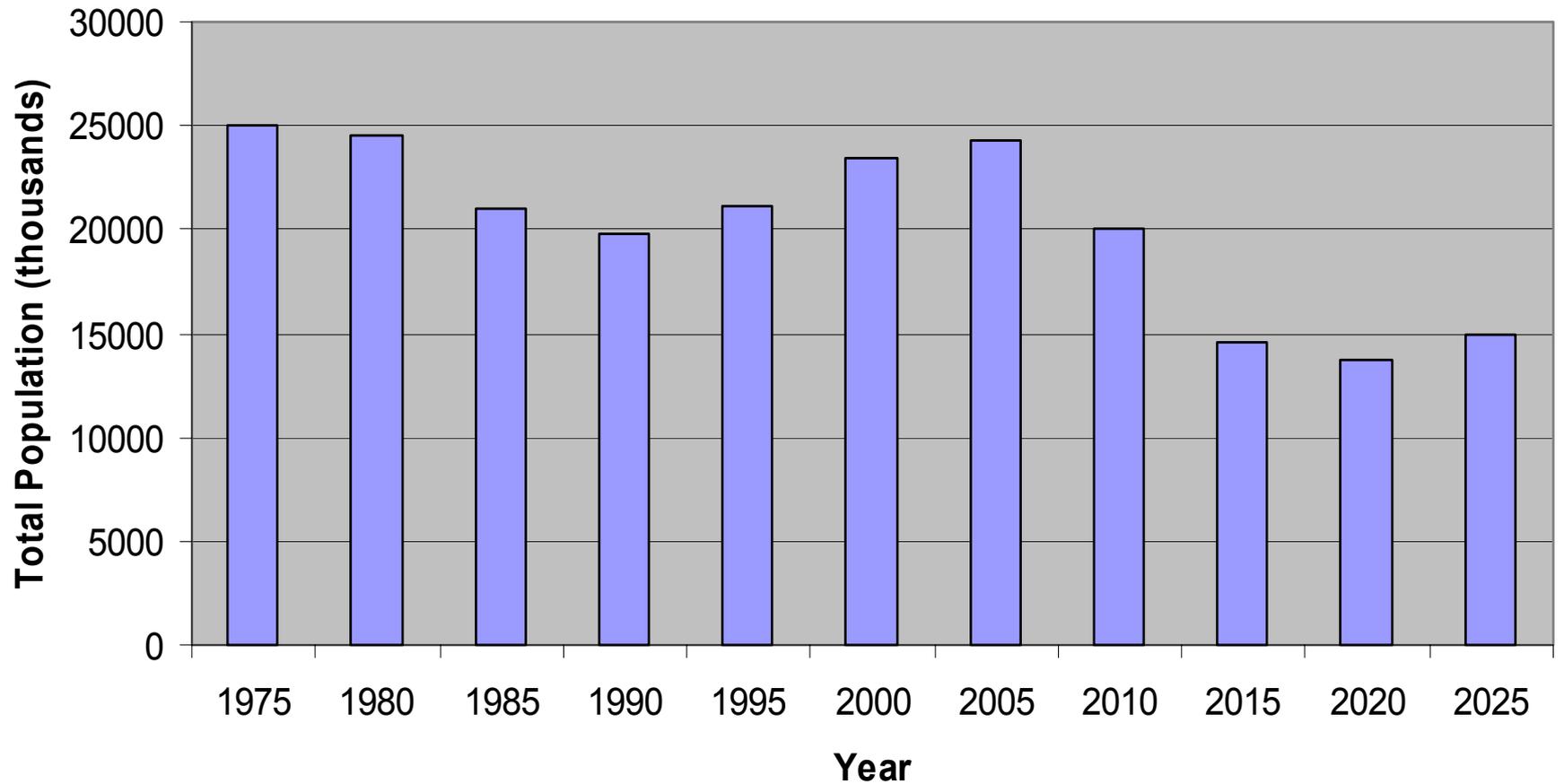


Notes: U.S. TFR includes the 50 and the District of Columbia; blue bars indicate TFRs for European countries outside of the EU-15.  
Sources: Institut National d'etudes demographiques, "Population en chiffres," available at <http://www.ined.fr/population-en-chiffres/pays-developpees/index.html> (accessed August 4, 2004); National Vital Statistics Report Vol 52, No. 19 (May 10, 2004).

Illustrative Percentages of Population 65+:  
 Stable Populations, Coale-Demeny “West Model”,  
 Under Alternative Fertility and Mortality Schedules

	GRR 0.8	GRR 1.0	GRR 1.5	GRR 2.0	GRR 2.5	GRR 3.0
Female LE 20	<b>16.62</b>	<b>13.36</b>	<b>8.51</b>	5.81	4.24	3.21
Female LE 30	<b>17.85</b>	<b>14.25</b>	<b>8.73</b>	5.86	4.16	3.08
Female LE 40	<b>18.87</b>	<b>14.88</b>	<b>8.96</b>	5.89	4.13	3.02
Female LE 50	<b>19.74</b>	<b>15.45</b>	<b>9.27</b>	5.94	4.11	2.97
Female LE 60	<b>20.13</b>	<b>15.67</b>	<b>9.16</b>	5.87	4.03	2.91
Female LE 70	<b>21.24</b>	<b>16.48</b>	<b>9.56</b>	6.10	4.15	2.98

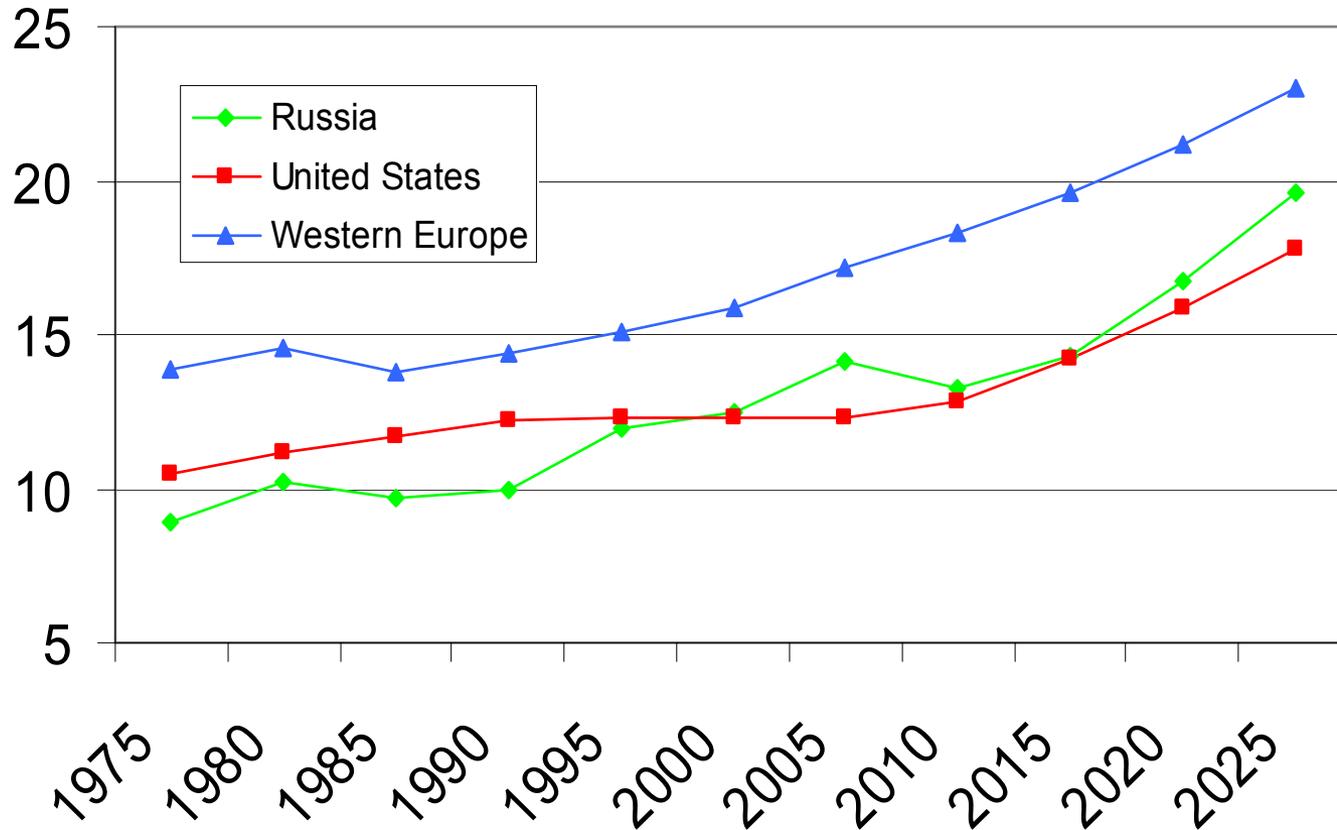
## Total Population Age 15-24, Russia, 1975-2025, (medium variant projection)



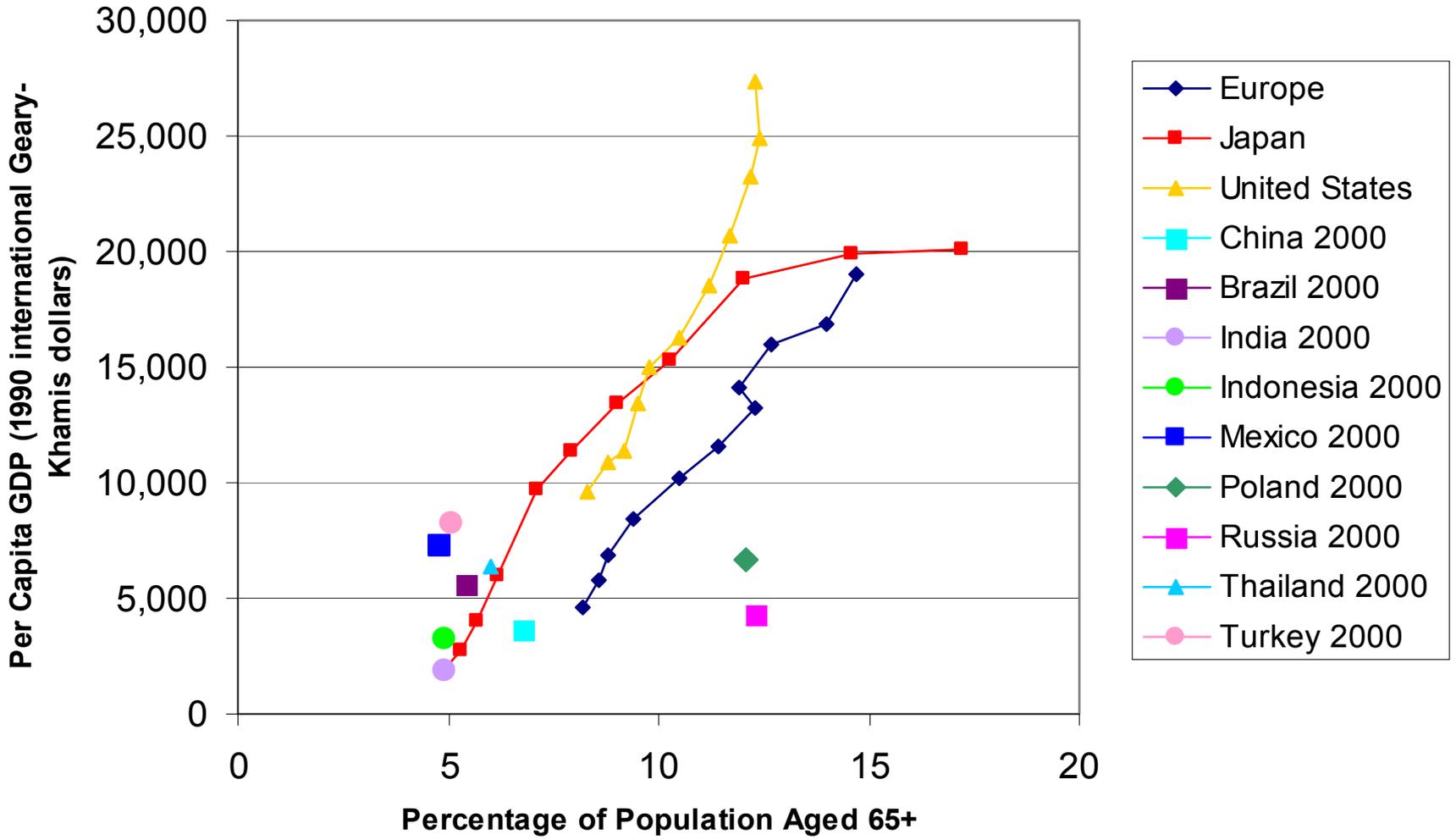
**Changes in 65+ Population**  
**As Percentage of Total Population: 2000 vs. 2025**  
**(US Census Bureau Projections)**

	<u>2000</u>	<u>2025</u>	<u>Difference</u>
<b>Western Europe</b>	<b>16.3</b>	<b>22.7</b>	<b>+ 6.4</b>
<b>Bulgaria</b>	<b>16.6</b>	<b>23.2</b>	<b>+ 6.6</b>
<b>Czech Republic</b>	<b>13.8</b>	<b>22.9</b>	<b>+ 9.1</b>
<b>Estonia</b>	<b>15.0</b>	<b>22.7</b>	<b>+ 7.7</b>
<b>Hungary</b>	<b>14.6</b>	<b>21.3</b>	<b>+ 6.7</b>
<b>Latvia</b>	<b>14.7</b>	<b>20.7</b>	<b>+ 6.0</b>
<b>Lithuania</b>	<b>13.7</b>	<b>21.0</b>	<b>+ 7.3</b>
<b>Poland</b>	<b>12.3</b>	<b>21.6</b>	<b>+ 9.3</b>
<b>Romania</b>	<b>13.3</b>	<b>19.0</b>	<b>+ 5.7</b>
<b>Russian Federation</b>	<b>12.5</b>	<b>19.8</b>	<b>+ 7.3</b>
<b>Slovakia</b>	<b>11.4</b>	<b>19.3</b>	<b>+ 7.9</b>
<b>Ukraine</b>	<b>14.1</b>	<b>20.6</b>	<b>+ 6.5</b>

# Estimated and Projected Population 65+: Russia, United States, and Western Europe, 1975-2025 (percent of total)

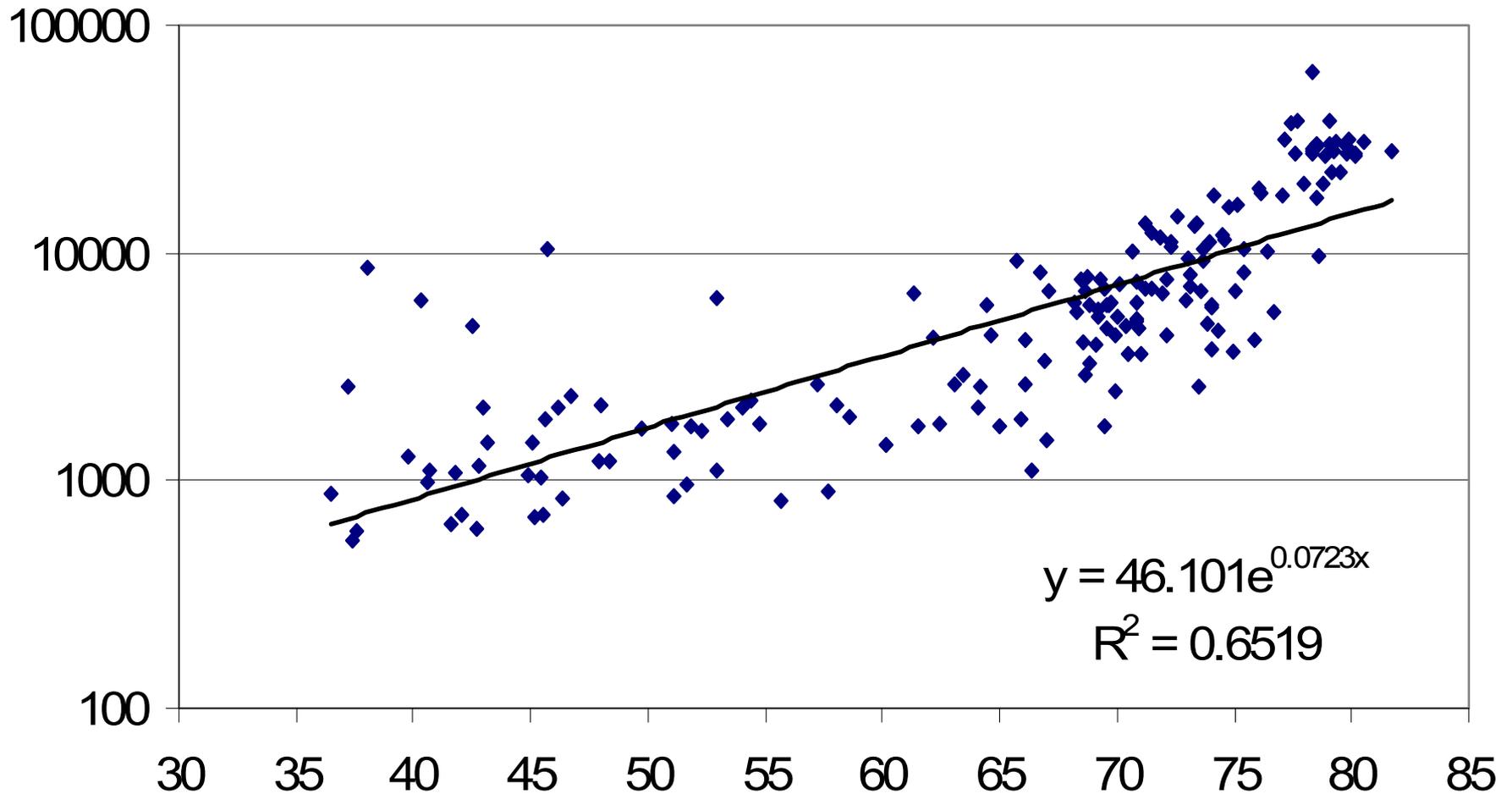


# Percentage of the Population Aged 65+ vs. GDP per Capita: Developed Countries 1950-2000 vs. Emerging Economies 2000



Sources: Maddison (2003); UNDP (2004)

# Health Equals Wealth: Worldwide LE vs. PPP Per Capita GDP, 2003

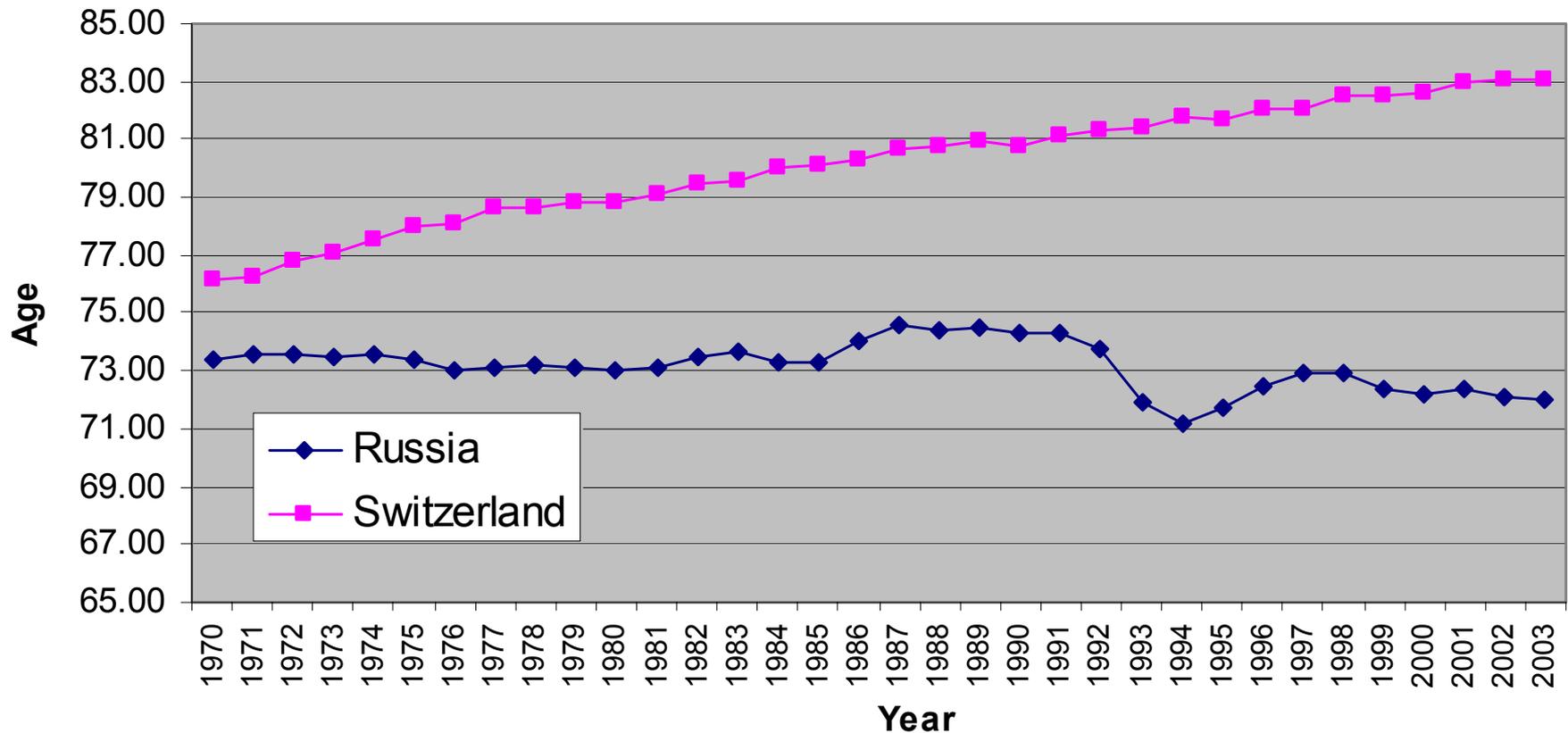


## Estimated Changes in Life Expectancy at Birth in Europe, by Region: 1960/65 to 2000/2005 (years)

	Overall LE	Male LE
<b>Western Europe</b>	<b>+7.3</b>	<b>+6.8</b>
<b>Eastern Europe (without Russia)</b>	<b>+1.1</b>	<b>-0.8</b>
<b>Russian Federation</b>	<b>-2.5</b>	<b>-4.2</b>

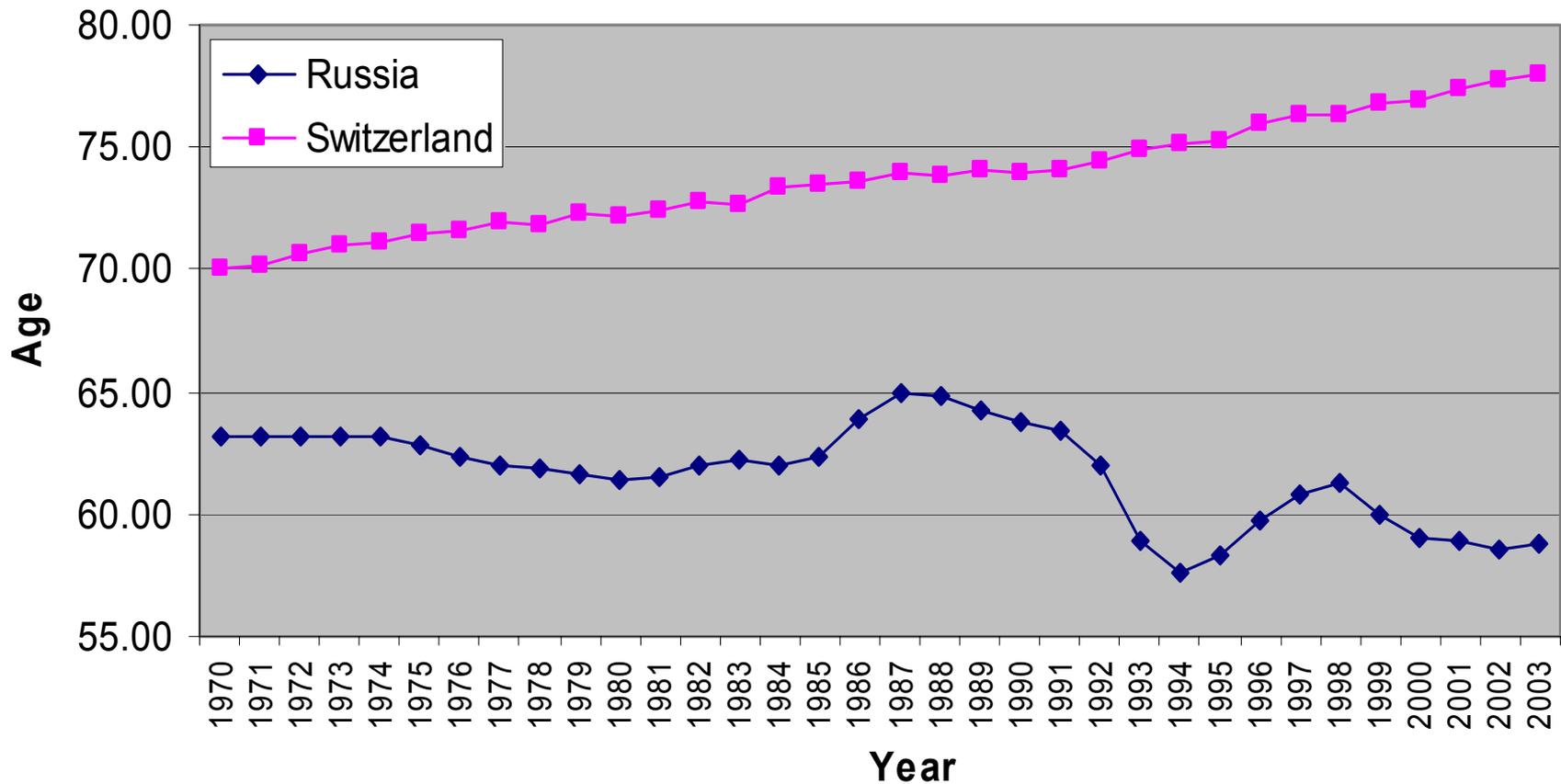
Note: UN definition of "Eastern Europe" excludes the Baltic countries, Albania, and most of the former Yugoslavia.  
Source: Derived from UN Population Division, *World Population Prospects: The 2004 Revision*, available electronically at <<http://www.unpopulation.org>>.

# Female Life Expectancy at Birth, Switzerland vs. Russia, 1970-2003



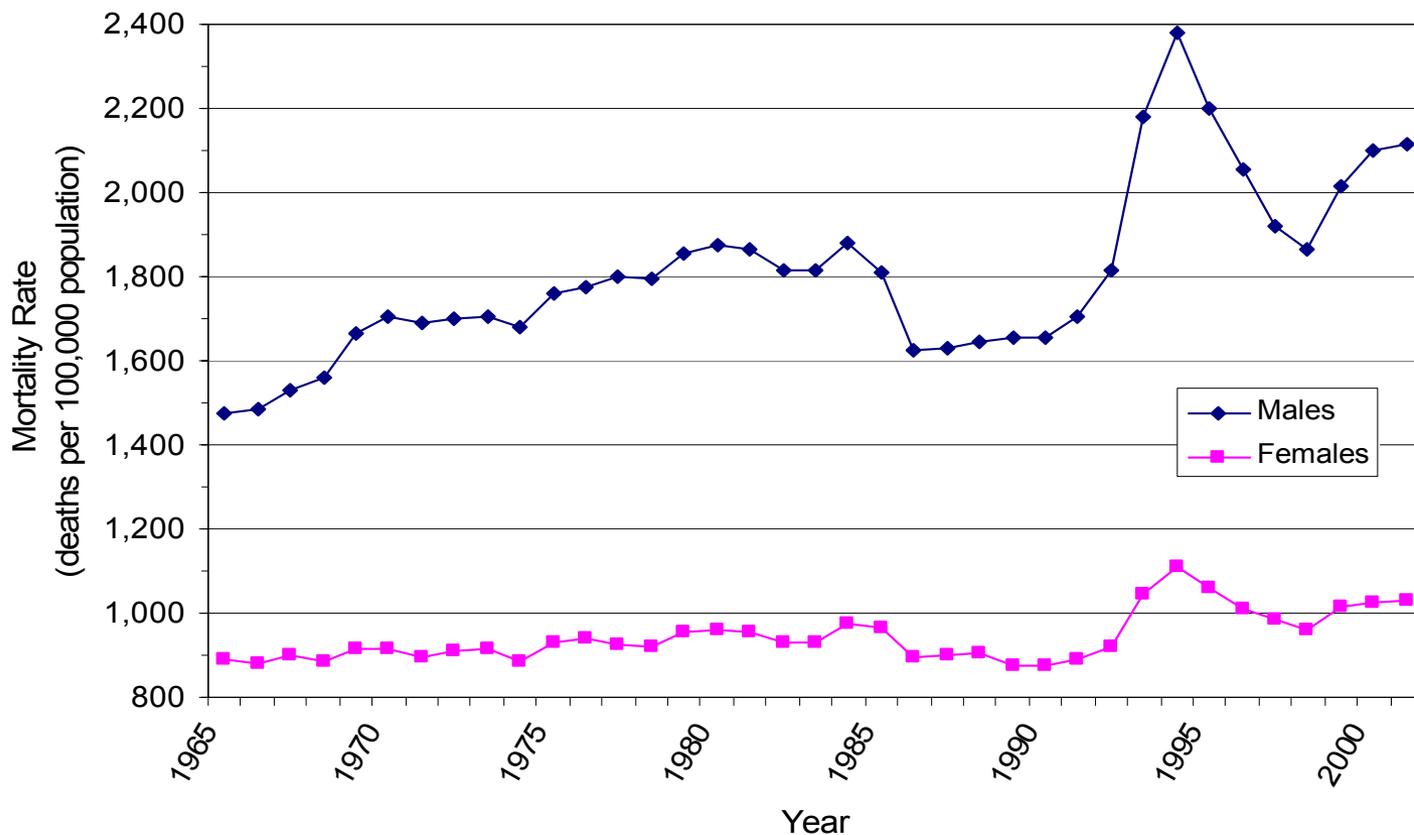
Sources: The Demographic Yearbook of Russia: 1993 (State Committee of the Russian Federation on Statistics, Moscow, 1993), Table 2.5; The Demographic Yearbook of Russia: 2004 (State Committee of the Russian Federation on Statistics, Moscow, 2004), Table 2.6; Human Mortality Database, available online at [www.mortality.org](http://www.mortality.org), accessed January 20, 2005.

## Male Life Expectancy at Birth, Switzerland vs Russia, 1970-2003



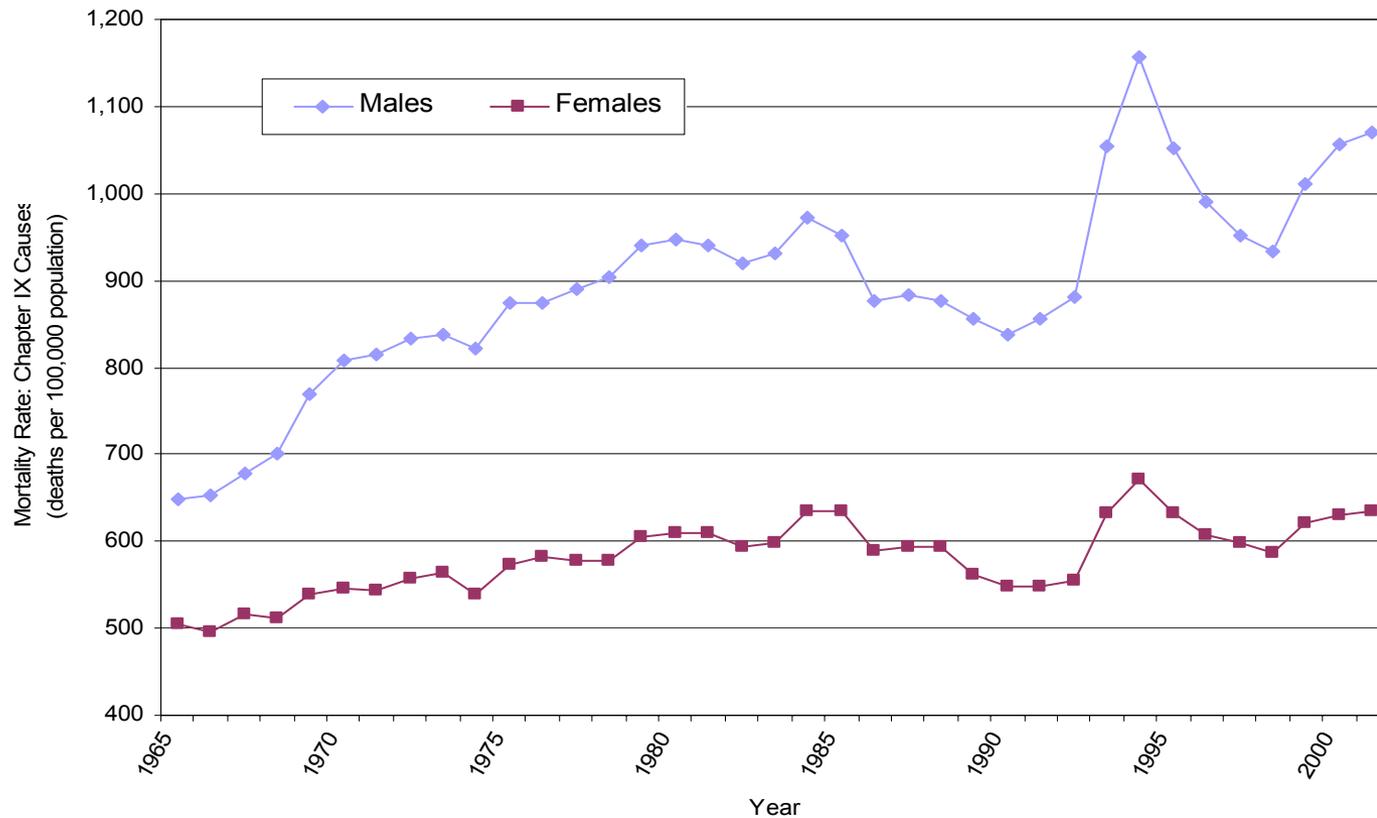
Sources: The Demographic Yearbook of Russia: 1993 (State Committee of the Russian Federation on Statistics, Moscow, 1993), Table 2.5; The Demographic Yearbook of Russia: 2004 (State Committee of the Russian Federation on Statistics, Moscow, 2004), Table 2.6; Human Mortality Database, available online at [www.mortality.org](http://www.mortality.org), accessed January 20, 2005.

# Age-Standardized Mortality, 1965-2001: Deaths from All Causes



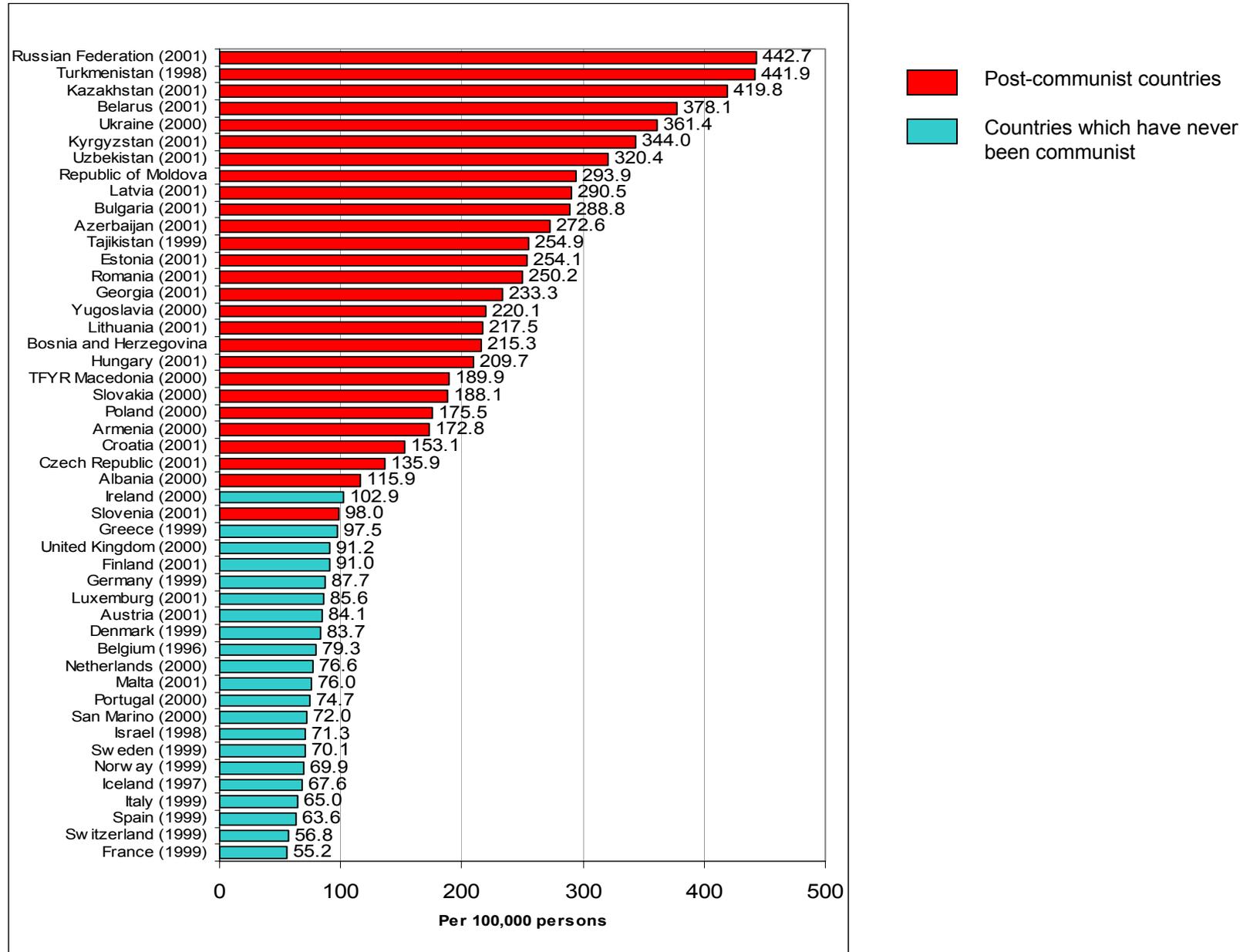
Source: The Demographic Yearbook of Russia: 2002 Statistical Handbook, State Committee of the Russian Federation on Statistics (Goskomstat of Russia), Moscow, 2002, Table 6.4.

# Age Standardized Mortality, Deaths from Cardiovascular Diseases: Russia, 1965-2001

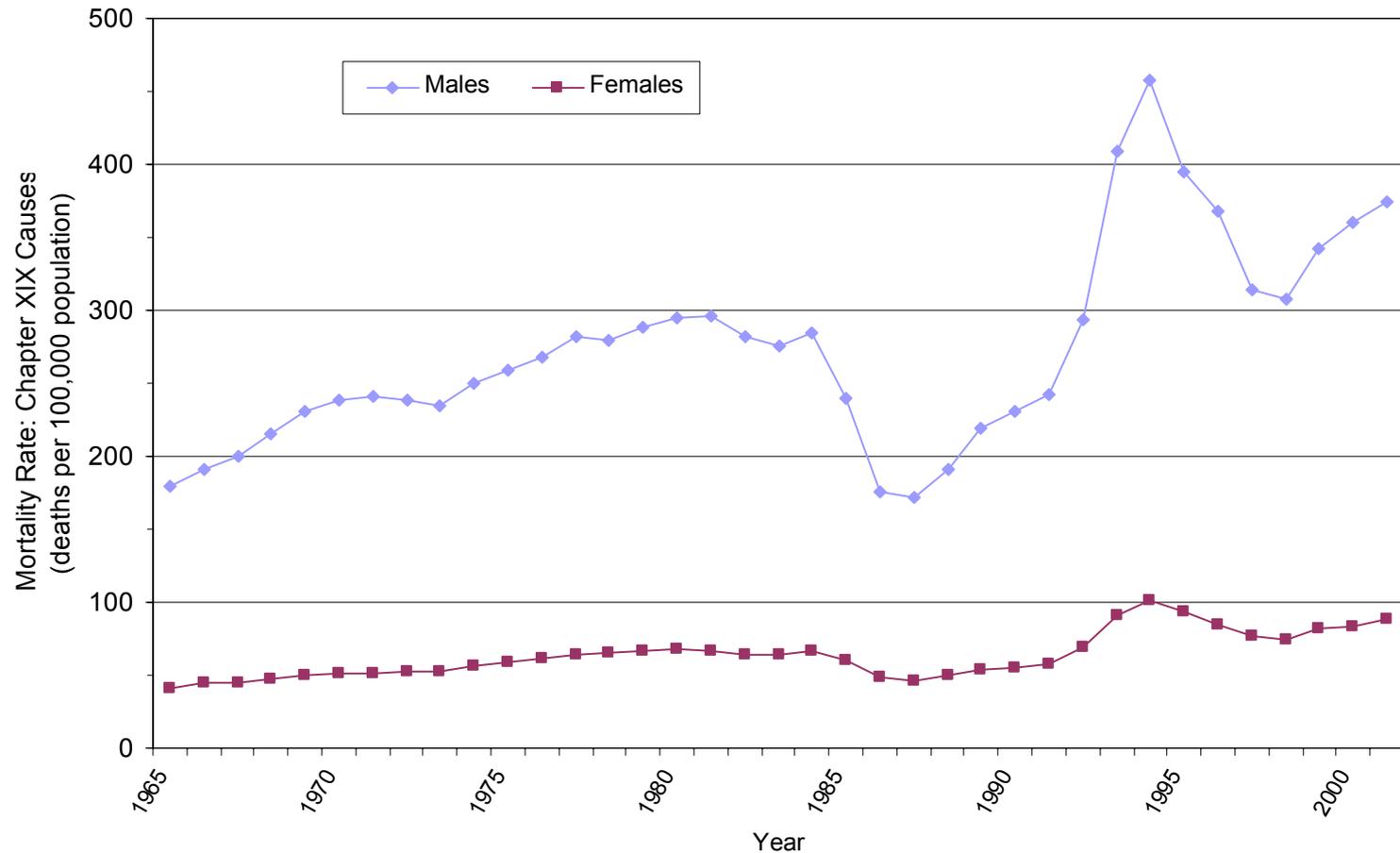


Source: The Demographic Yearbook of Russia: 2002 Statistical Handbook, State Committee of the Russian Federation on Statistics (Goskomstat of Russia), Moscow, 2002, Table 6.4.

## Deaths from diseases of the circulatory system, 25-64 years: Russia and Selected European Countries

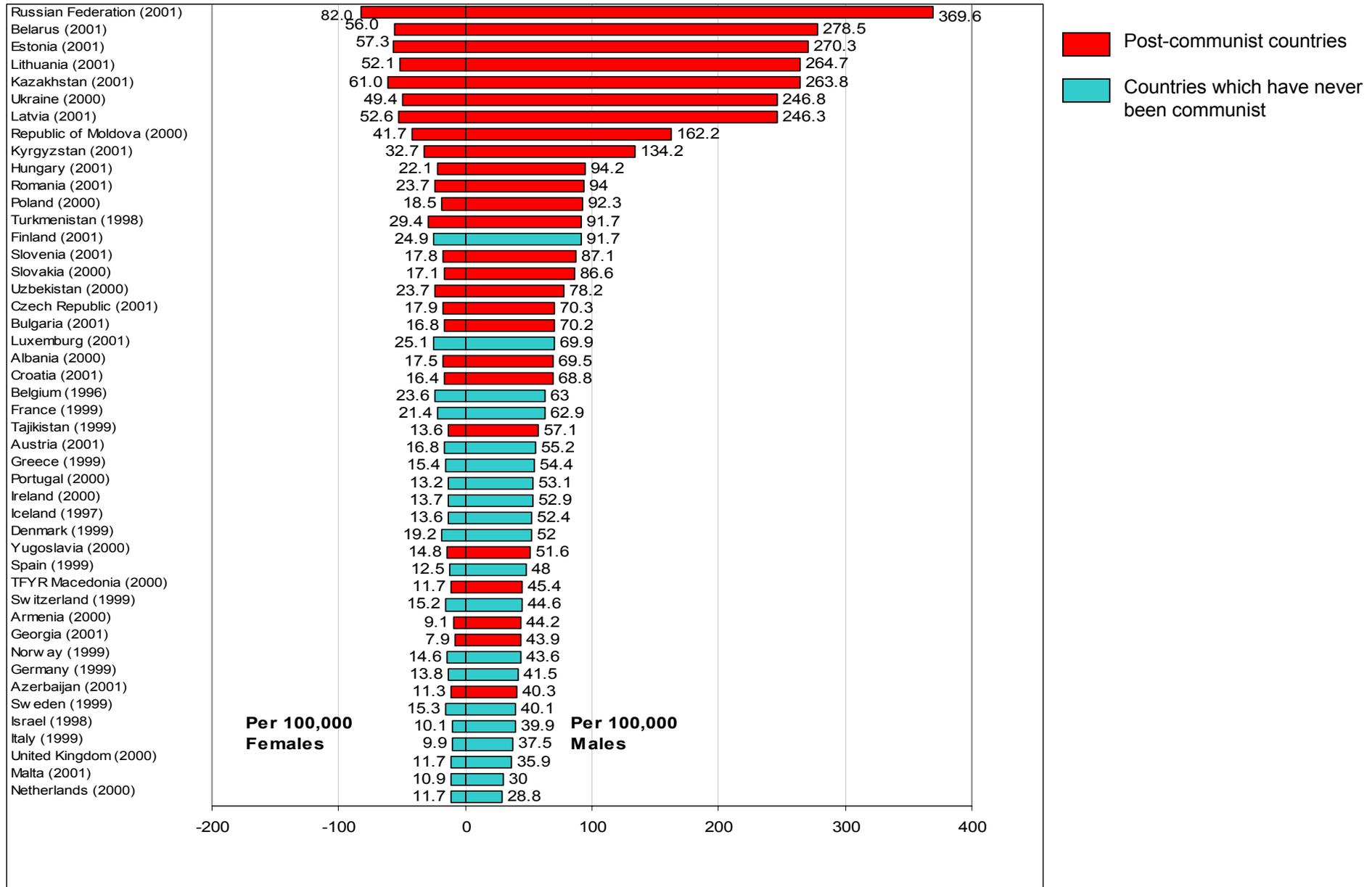


# Age Standardized Mortality, Deaths from Accidents & Injuries: Russia, 1965-2001

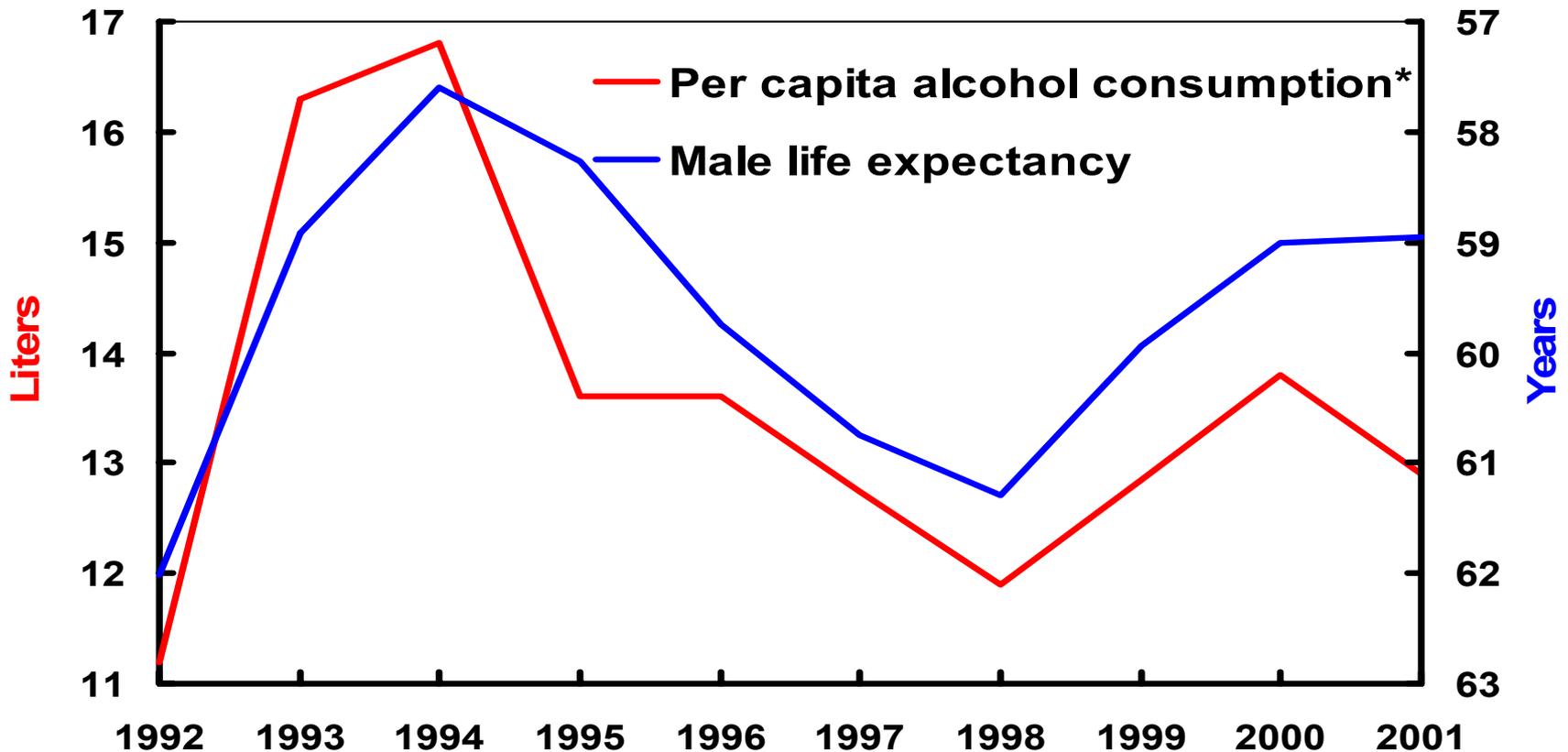


Source: The Demographic Yearbook of Russia: 2002 Statistical Handbook, State Committee of the Russian Federation on Statistics (Goskomstat of Russia), Moscow, 2002, Table 6.4.

# Deaths from external causes of injury and poisoning, 0-64 years: Russia and Selected European Countries



# Total Alcohol Consumption and Russian Male Life Expectancy, 1992-2001

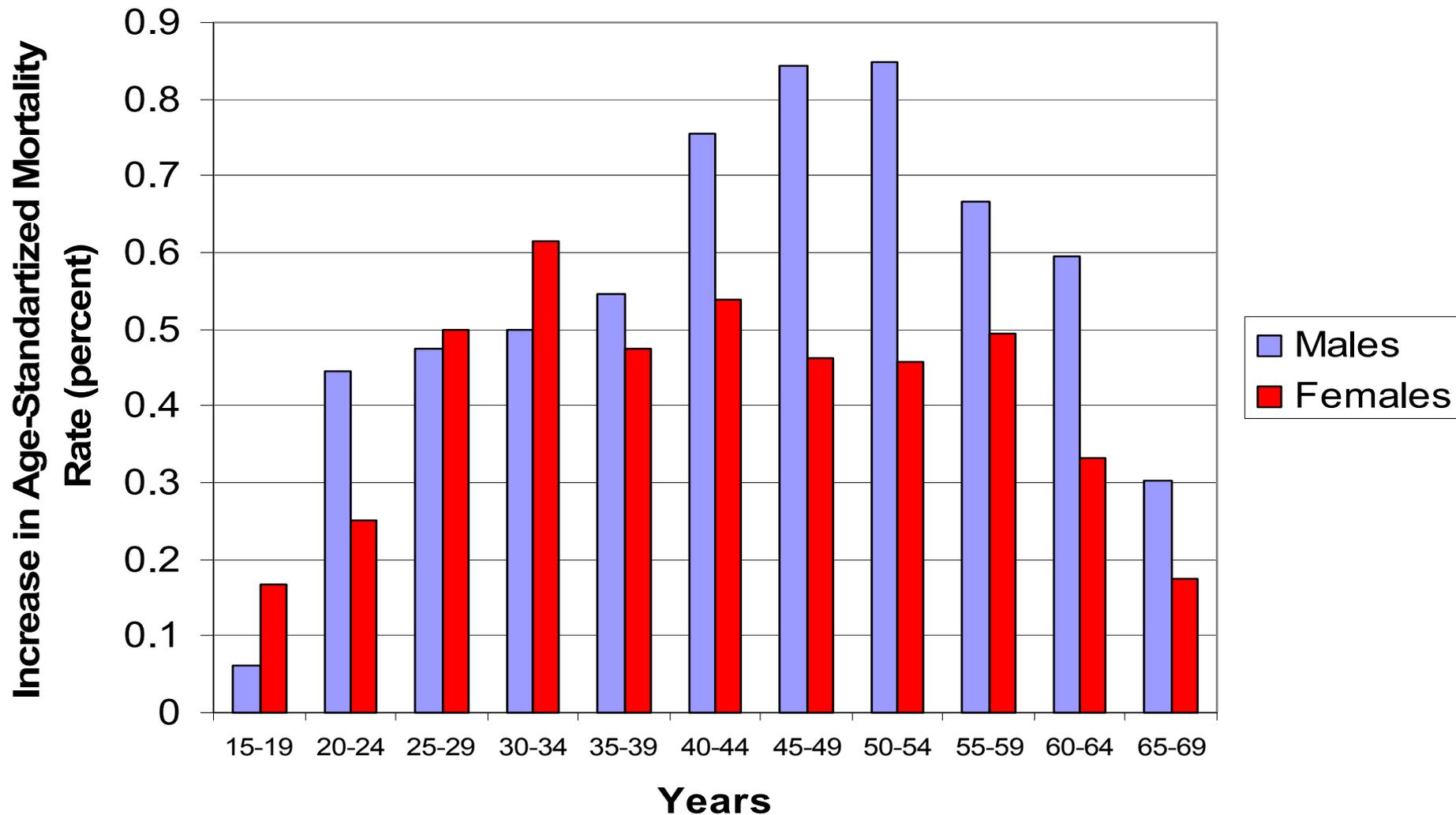


Note: inverted to scale for life expectancy

Sources: Julie DaVanzo and Clifford Grammich, Dire Demographics: Population Trends in the Russian Federation. RAND, 2001;

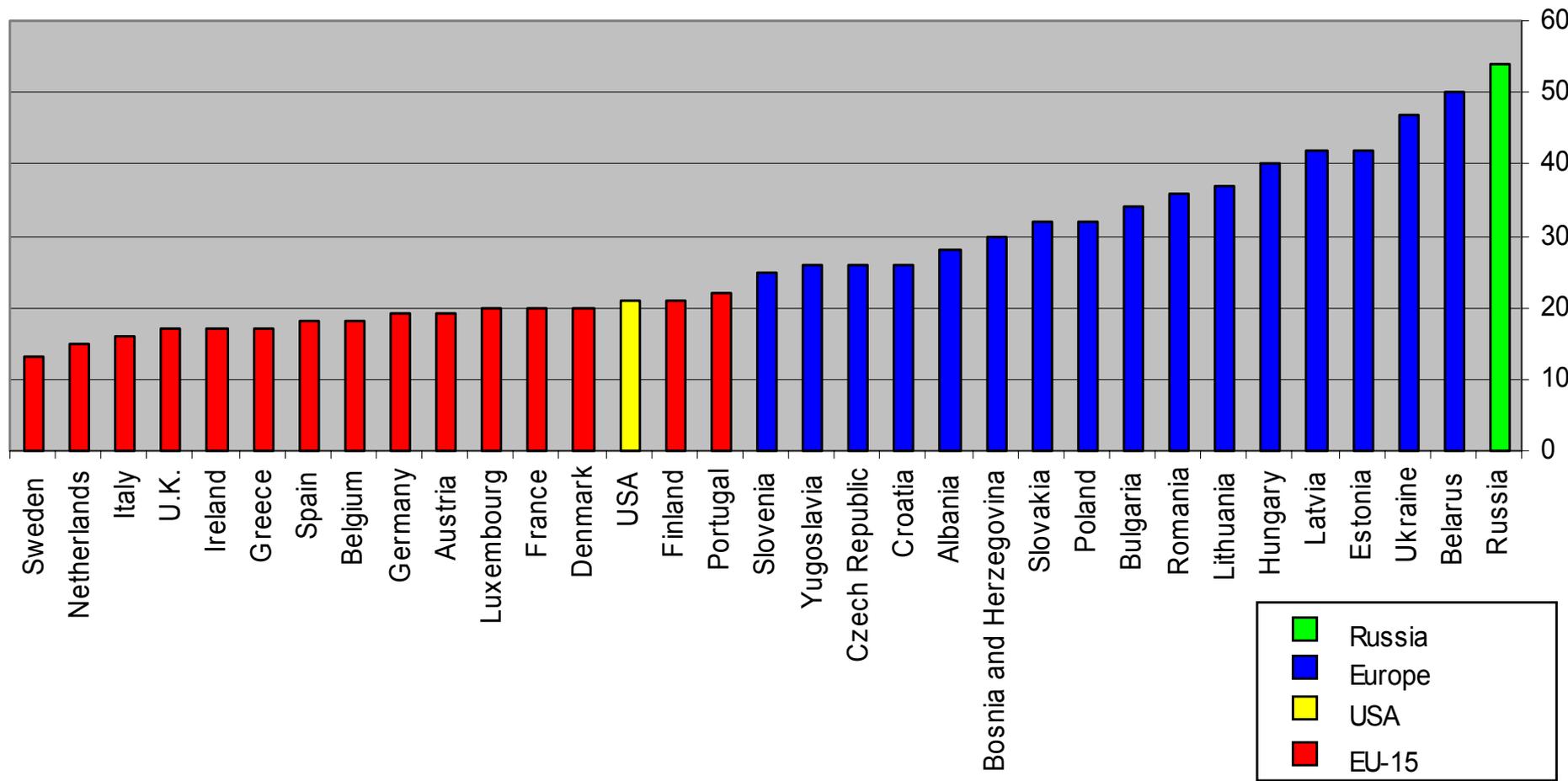
Clifford Grammich updates provided to Nick Eberstadt, 2004

## Rise in Mortality, Russia: 1970/71-2003



Source: The Russian Federation Ejeodnik: 2004, State Committee of the Russian Federation on Statistics (Goskomstat of Russia), Moscow, 2004; US Census Bureau, International Data Base website at <http://www.census.gov/ipc/www/idbprint.html>, accessed on April 12, 2005

# A 20-year old Man's Odds of Dying Before Age 65: Europe, U.S., Russia, 2000

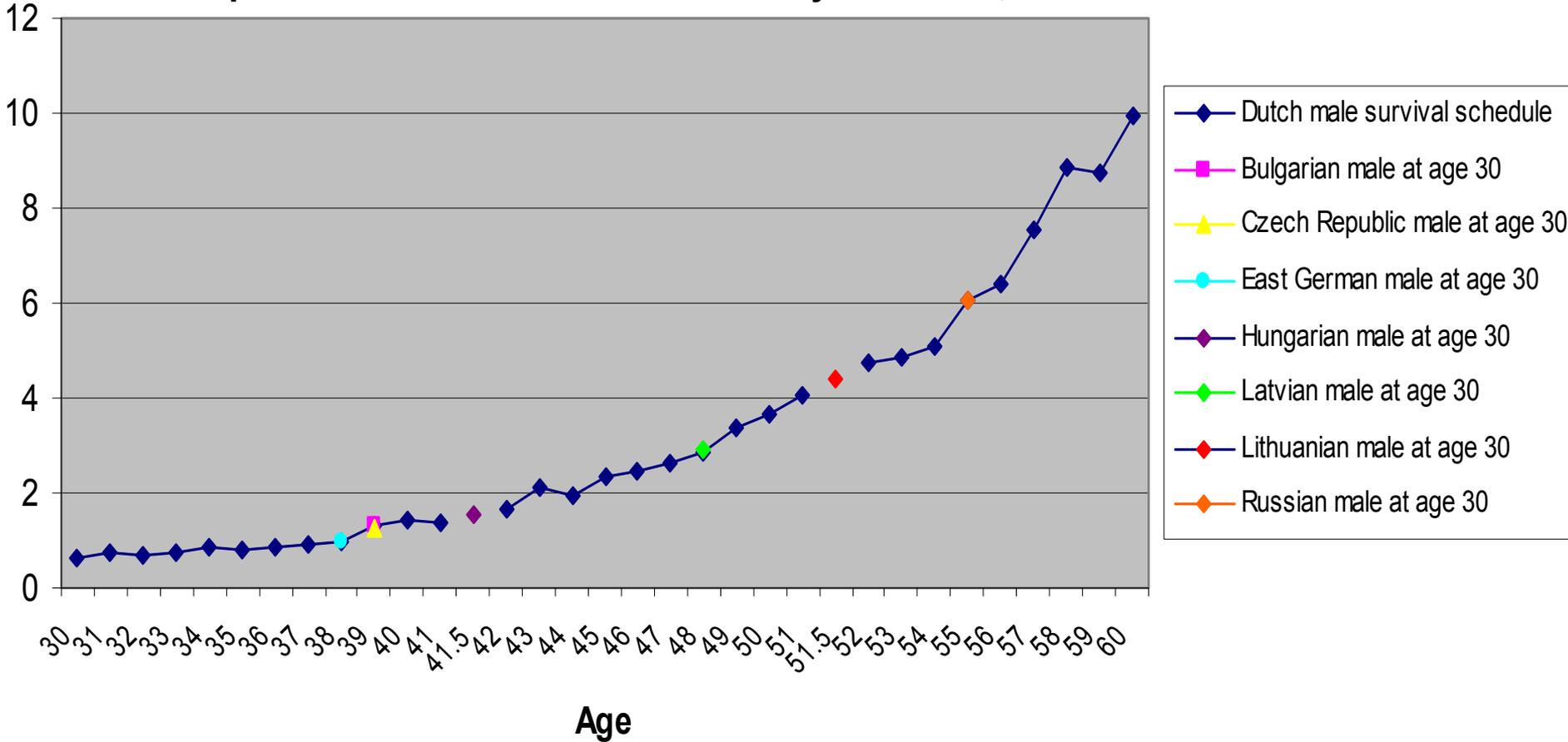


Note: Calculations based upon current "life tables" for the year 2000. "Europe" includes countries outside of the EU-15.

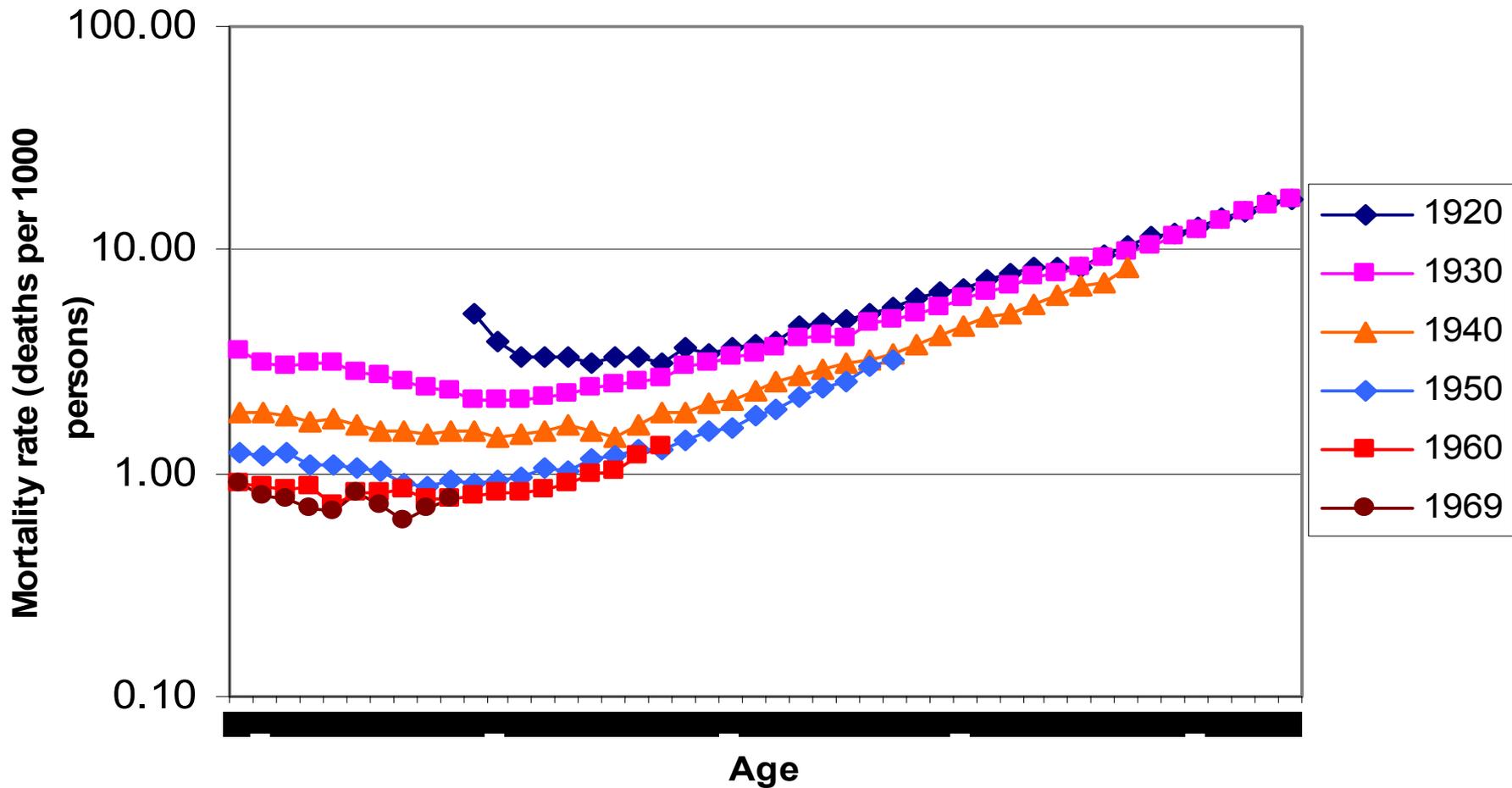
Source: World Health Organization Life Tables, 2000, available at

[http://www3.who.int/whosis/life\\_tables/life\\_tables.cfm?path=evidence,life\\_tables&language=english](http://www3.who.int/whosis/life_tables/life_tables.cfm?path=evidence,life_tables&language=english) (accessed on September 20, 2004).

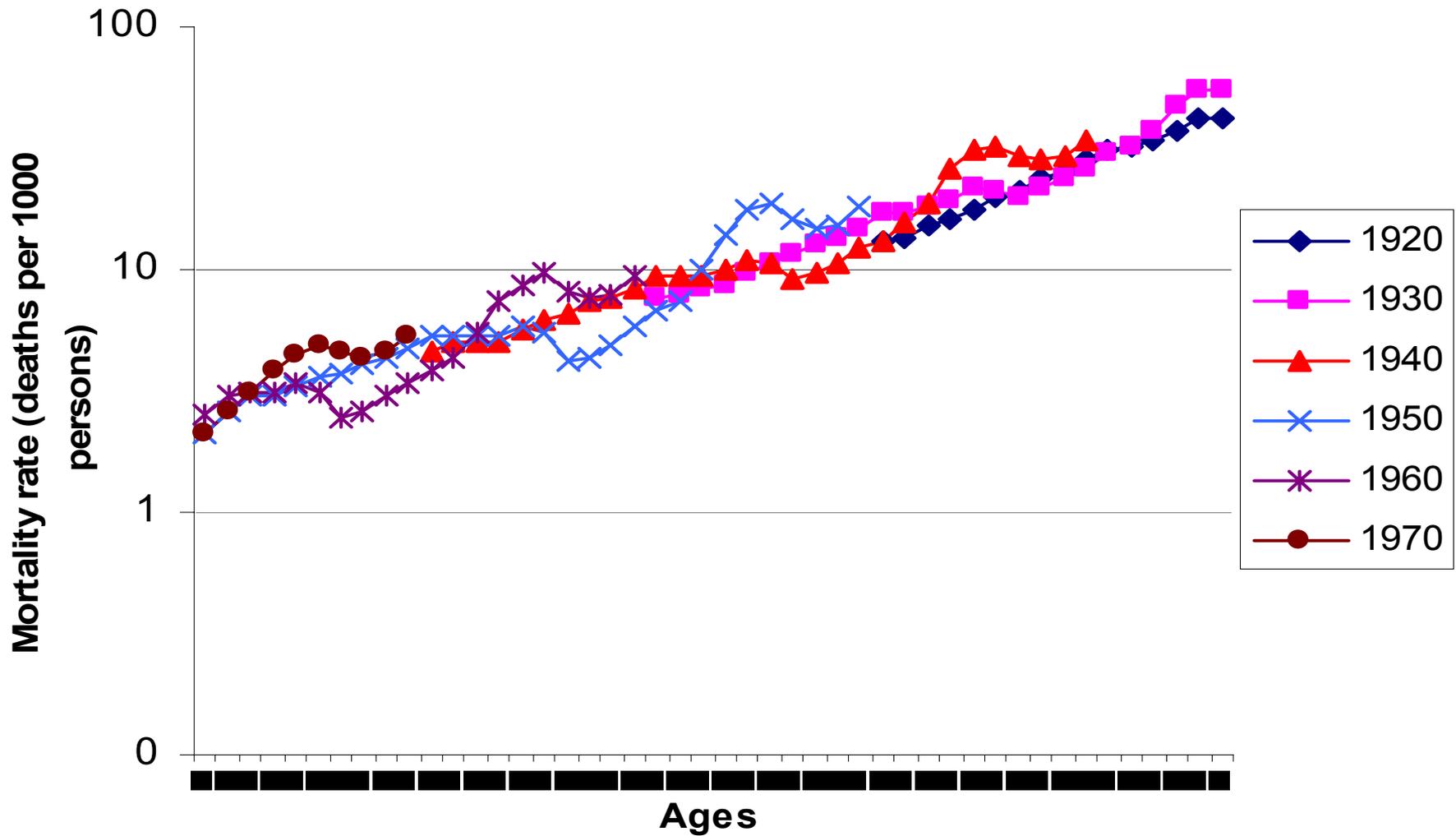
## "More Aged Than Their Years": Mortality At Age 30 for Men In Selected Post-Socialist Countries Compared With The Dutch Male Mortality Schedule, c. 2003



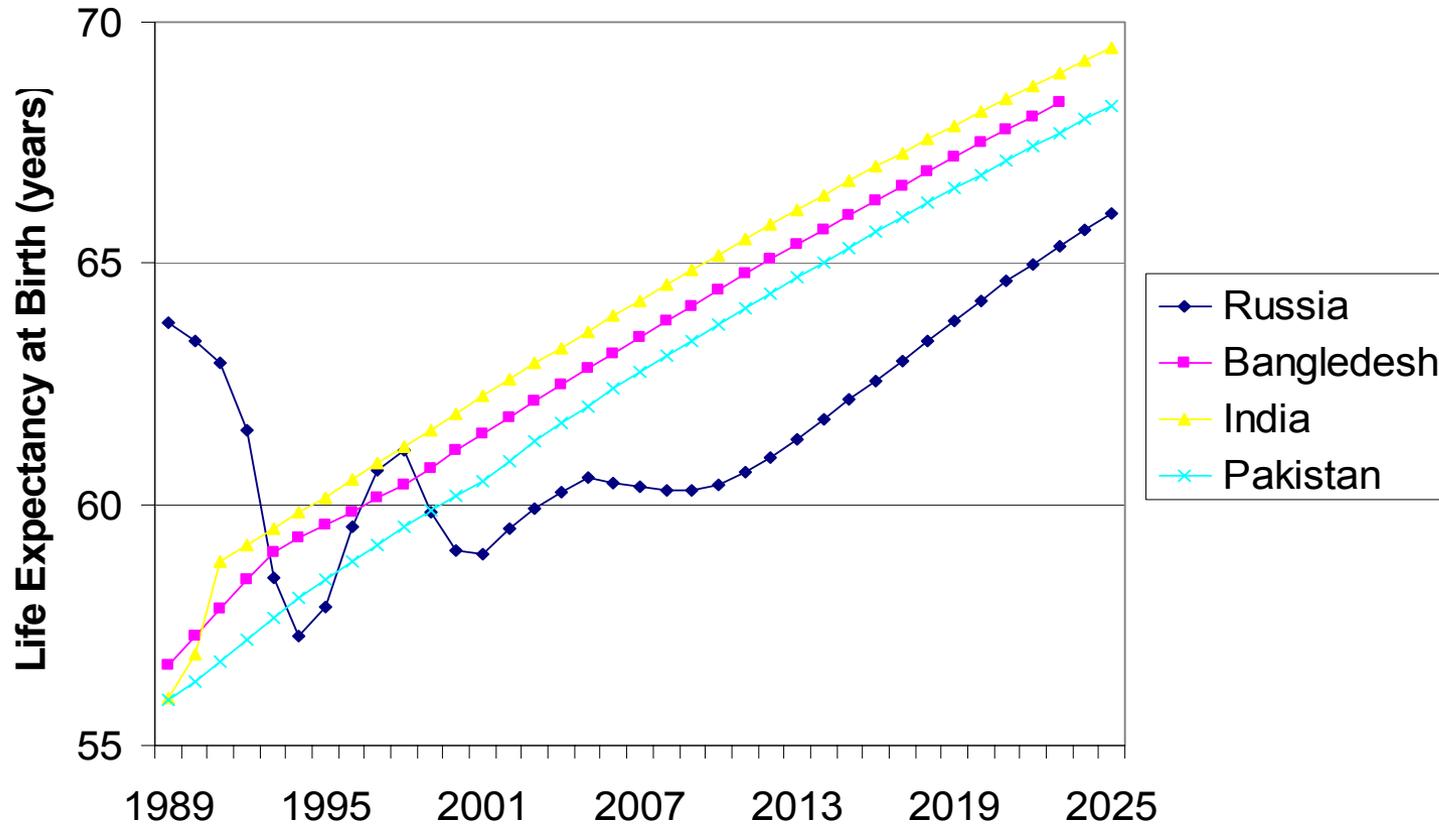
## "Positive Health Momentum": Male Mortality in Japan by birth cohort 1920-1969



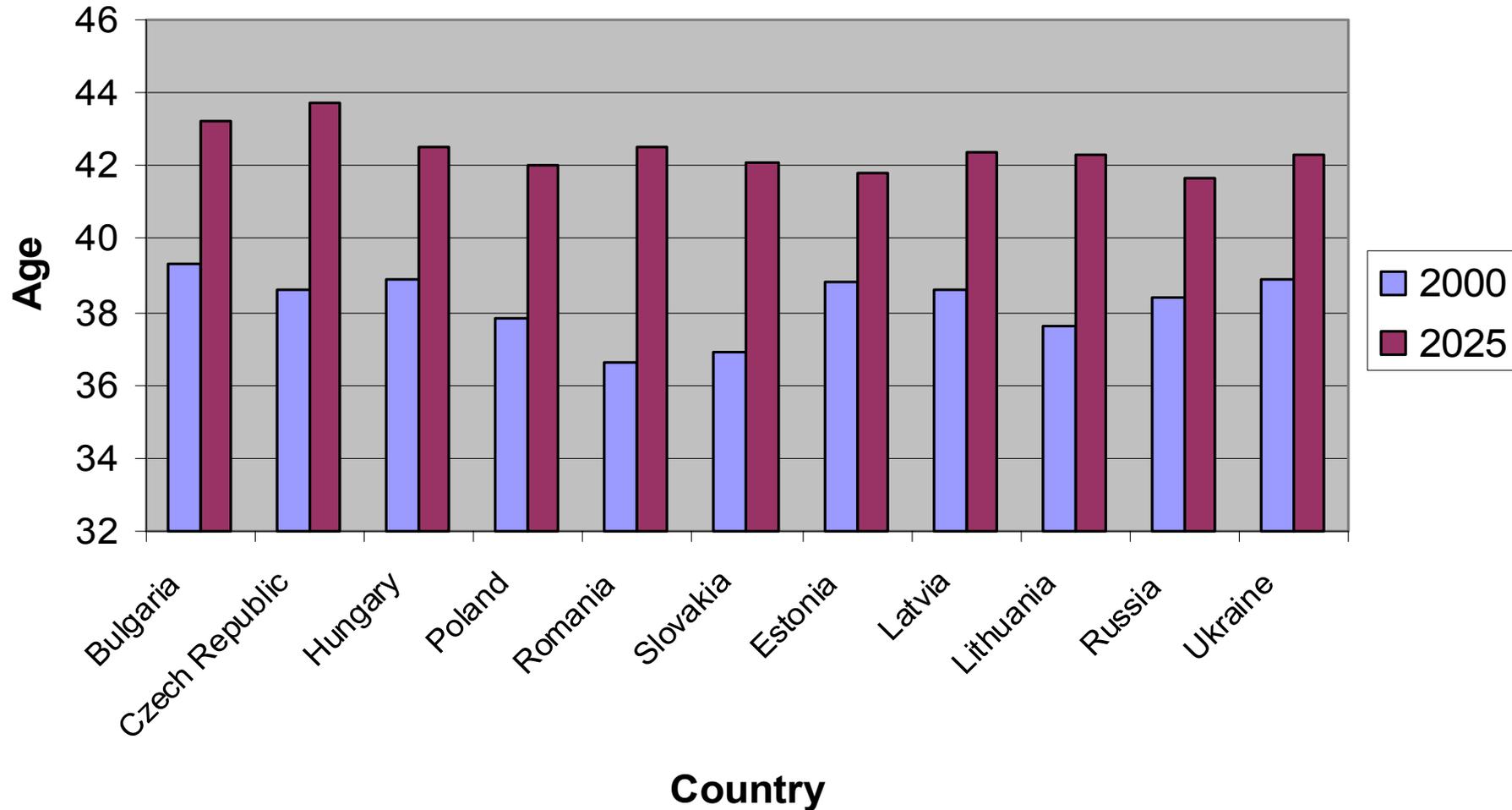
# "Negative Health Momentum": Male Mortality in Russia by birth cohorts 1920-1970



# Male Life Expectancy at Birth: Russia vs. Indian Subcontinent, 1989-2025



# Median Age for Persons 15-65 in Select Countries, 2000 and 2025



# Intercensal Population Change: January 1989-October 2002

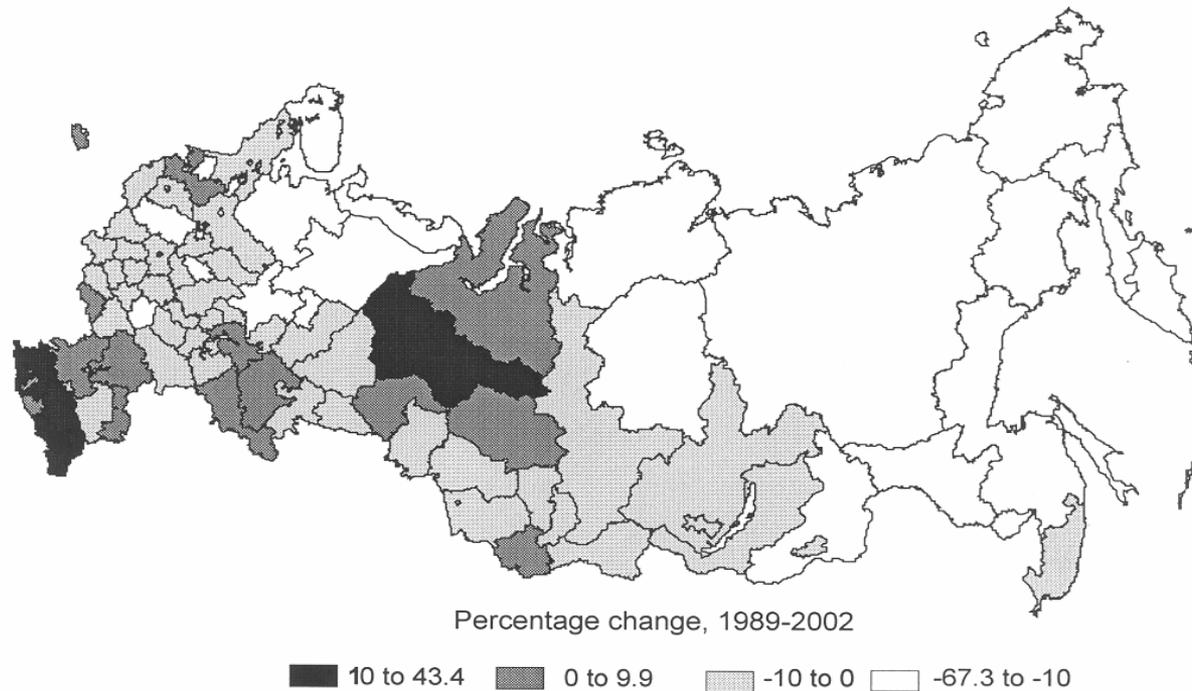


Fig. 1. Intercensal population change, January 12, 1989 to October 9, 2002.

Source: "The 2002 Census in Russia: Preliminary Results" by Timothy Heleniak, Eurasian Geography and Economics, 2003, 44, No. 1, pp. 432-444

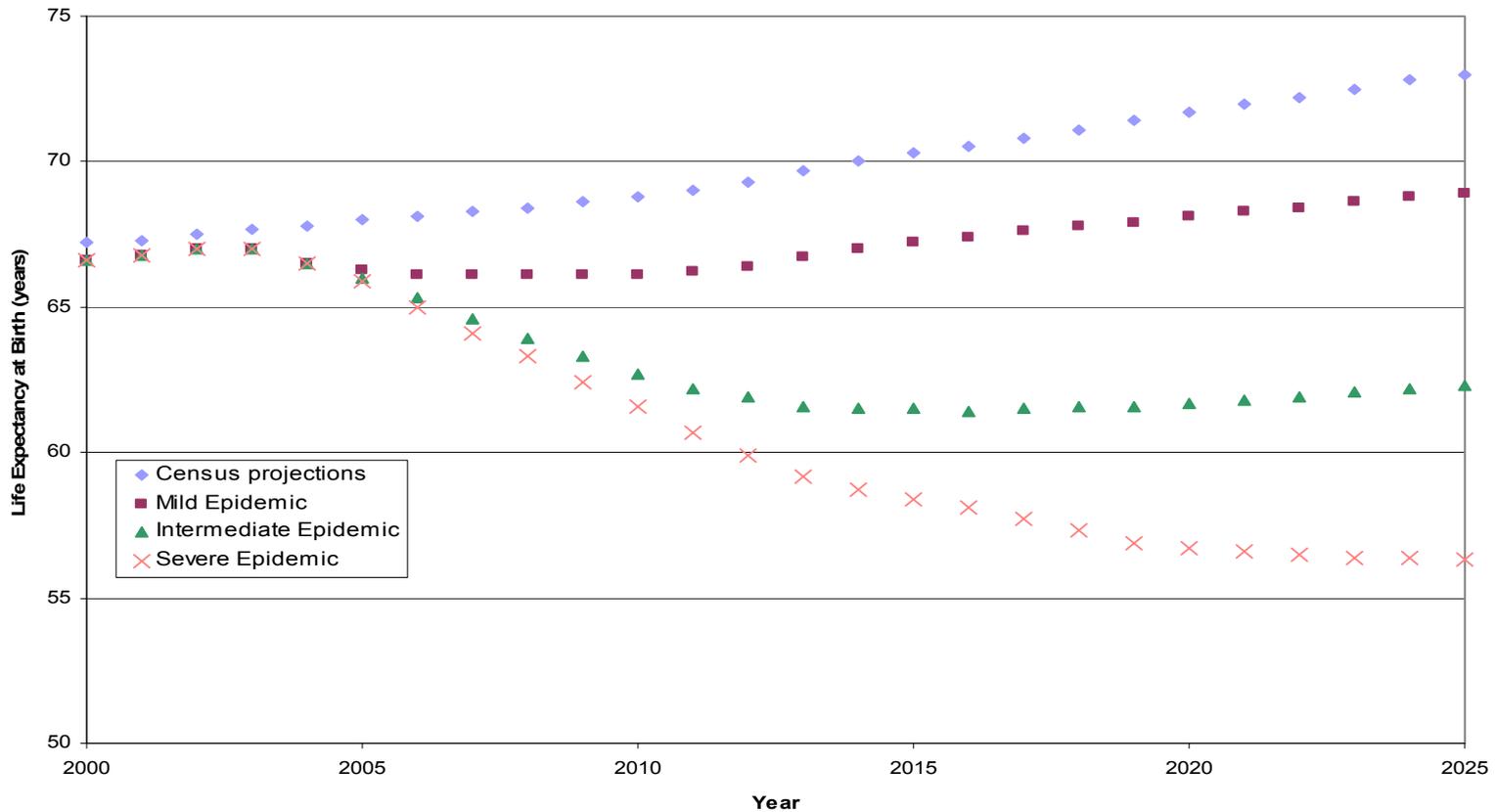
# HIV/AIDS Prevalence in Russia: Selected Estimates

Source	Total	% Adult Population (15-49)
Russia Ministry of Health	286,642	0.4%
UNAIDS Yearend 2003, Central Estimate	860,000	1.1%
Dr. V. Pokrovsky Nov. 2004, Low Estimate	1,000,000	1.3%
UNAIDS Yearend 2003, Upper Estimate	1,400,000	1.8%
Dr. V. Pokrovsky Nov. 2004, High Estimate	1,500,000	1.9%
U.S. National Intelligence Council Oct. 2002, Upper Estimate	2,000,000	2.5%

Note RMOH Prevalence taken as cumulative HIV registrations minus cumulative HIV/AIDS Deaths.

Sources: U.S. National Intelligence Council; UNAids; "AIDS in Russia: An Analysis of Statistics" (Dr. Murray Feshbach and Cristina M. Galvin, January 2005).

# Projected Life Expectancy: Russia, 2000-2025



Source: Nicholas Eberstadt, "Projecting HIV in Eurasia: Our Methodology (Charts)," available online at [http://www.aei.org/docLib/20021222\\_pseber021112a.pdf](http://www.aei.org/docLib/20021222_pseber021112a.pdf).