

Demographic Trends In Northeast Asia: The Shape of Things To Come

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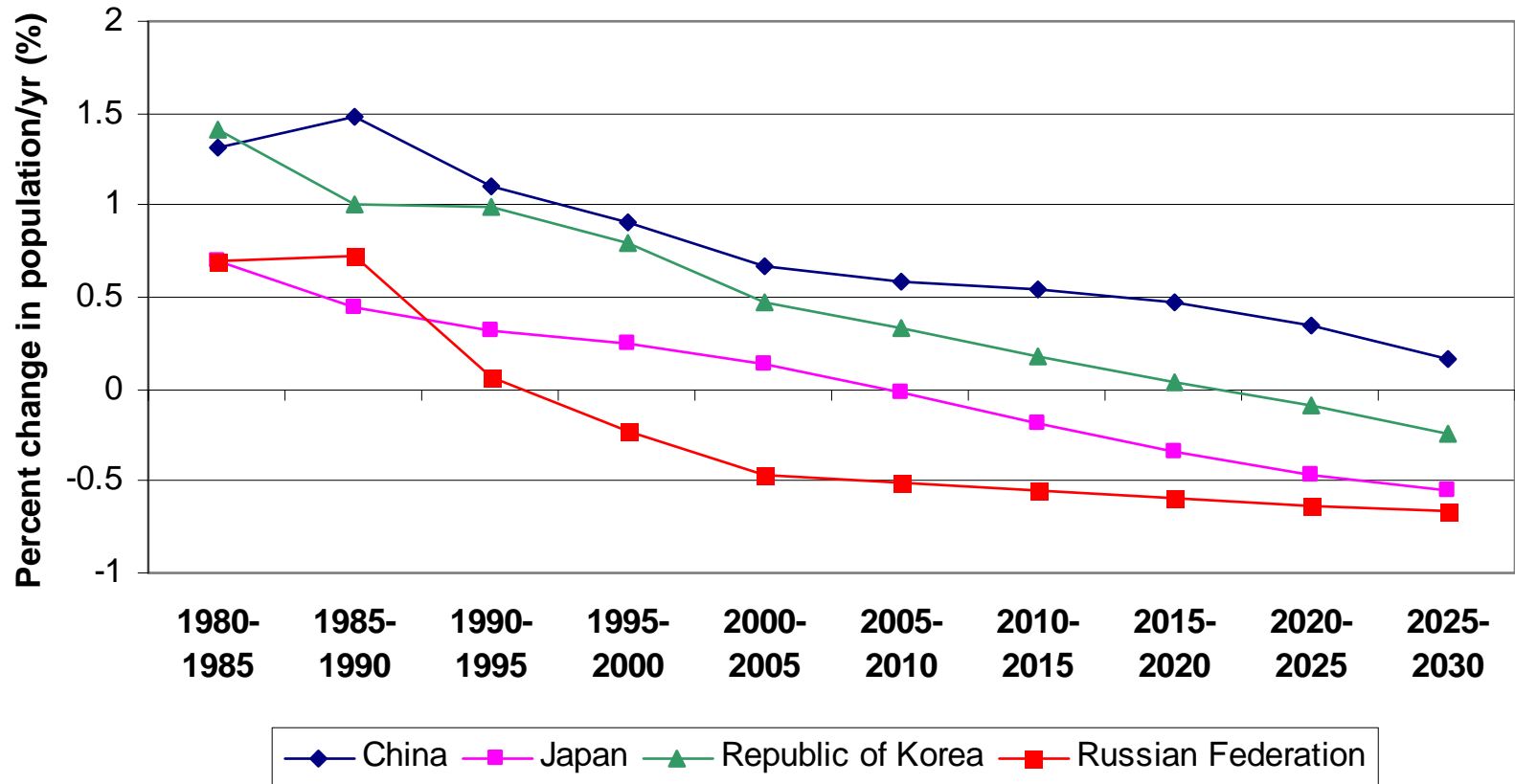
Basic Demographic Statistics: Selected Eurasian States

Country	Total Population, 2005 (millions)	Projected Total Fertility Rate, 2005-2010 (births per woman)	Projected Life Expectancy at Birth ⁽¹⁾ , 2005-2010 (years)	Projected Population Growth Rate, 2005-2010 (percent)
<i>Eastern Asia</i>	1,537.7	1.68	74.1	0.52
China	1,306.3	1.73⁽²⁾	73.0⁽²⁾	0.58⁽²⁾
China: Hong Kong SAR	6.9	0.97	82.2	1.00
China: Macao SAR	0.5	0.91	80.7	0.70
Taiwan (ROC) ⁽³⁾	22.7	1.11 ⁽⁴⁾	77.2 ⁽⁴⁾	0.34 ⁽⁴⁾
Japan	127.5	1.27	82.6	-0.02
Mongolia	2.9	1.87	66.8	0.96
North Korea (DPRK)	22.9	1.85	67.3	0.34
South Korea (ROK)	48.0	1.21	78.6	0.33
Russian Federation	142.8	1.34	65.5	-0.51

(1) Both sexes combined; (2) Includes Taiwan; (3) Source: U.S. Bureau of Census, International Database; (4) 2005

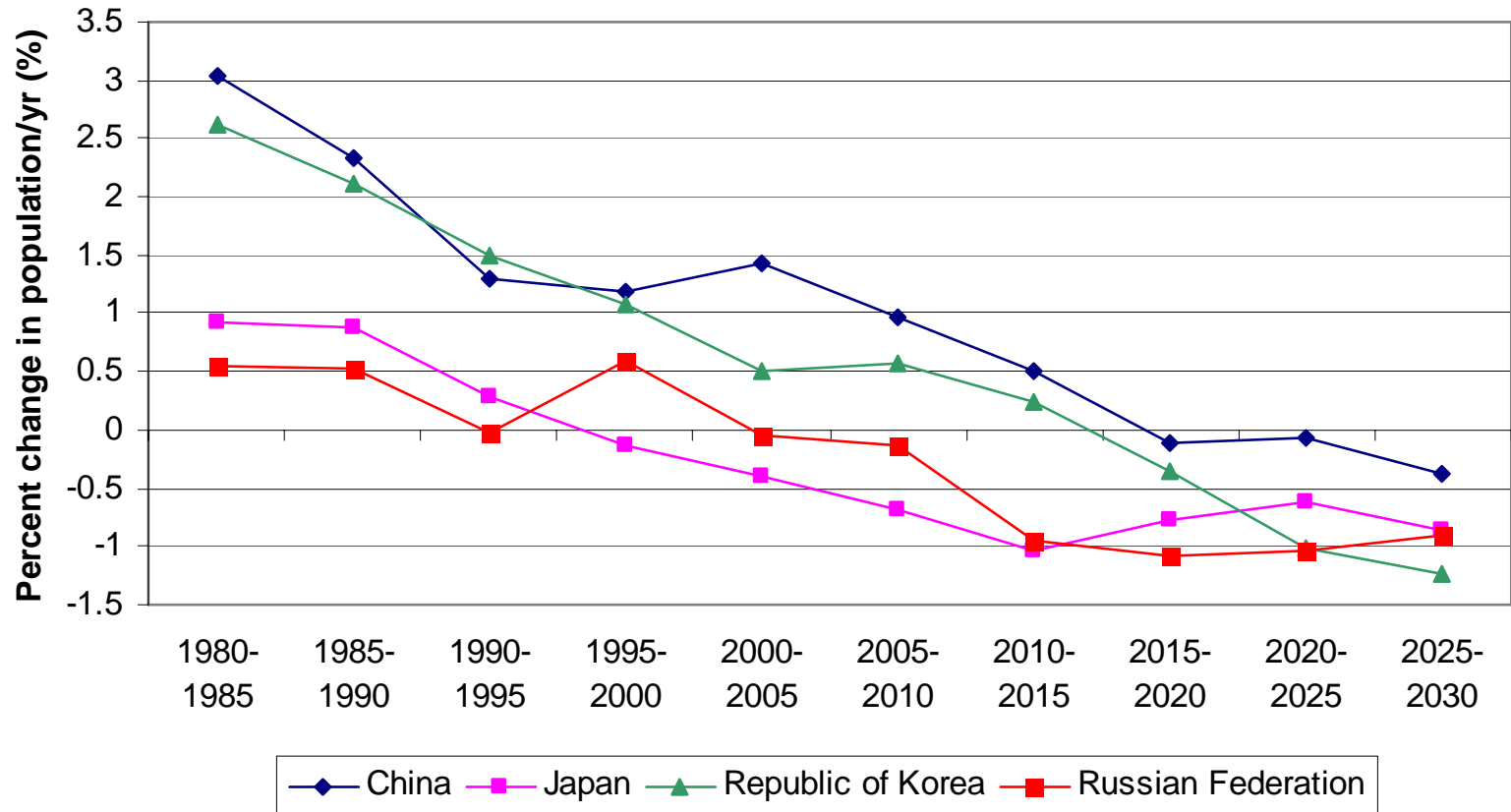
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision, <http://esa.un.org/unpp>, Friday, September 19, 2008; 4:56:13 PM.; U.S. Bureau of the Census, International Database, accessed 19 September 2008, available online at <http://www.census.gov/ipc/www/idbacc.html>.

**Estimated and Projected Population Change per year:
Selected Northeast Asian Countries, 1980-2030,
[UNPD 2006 medium variant]**

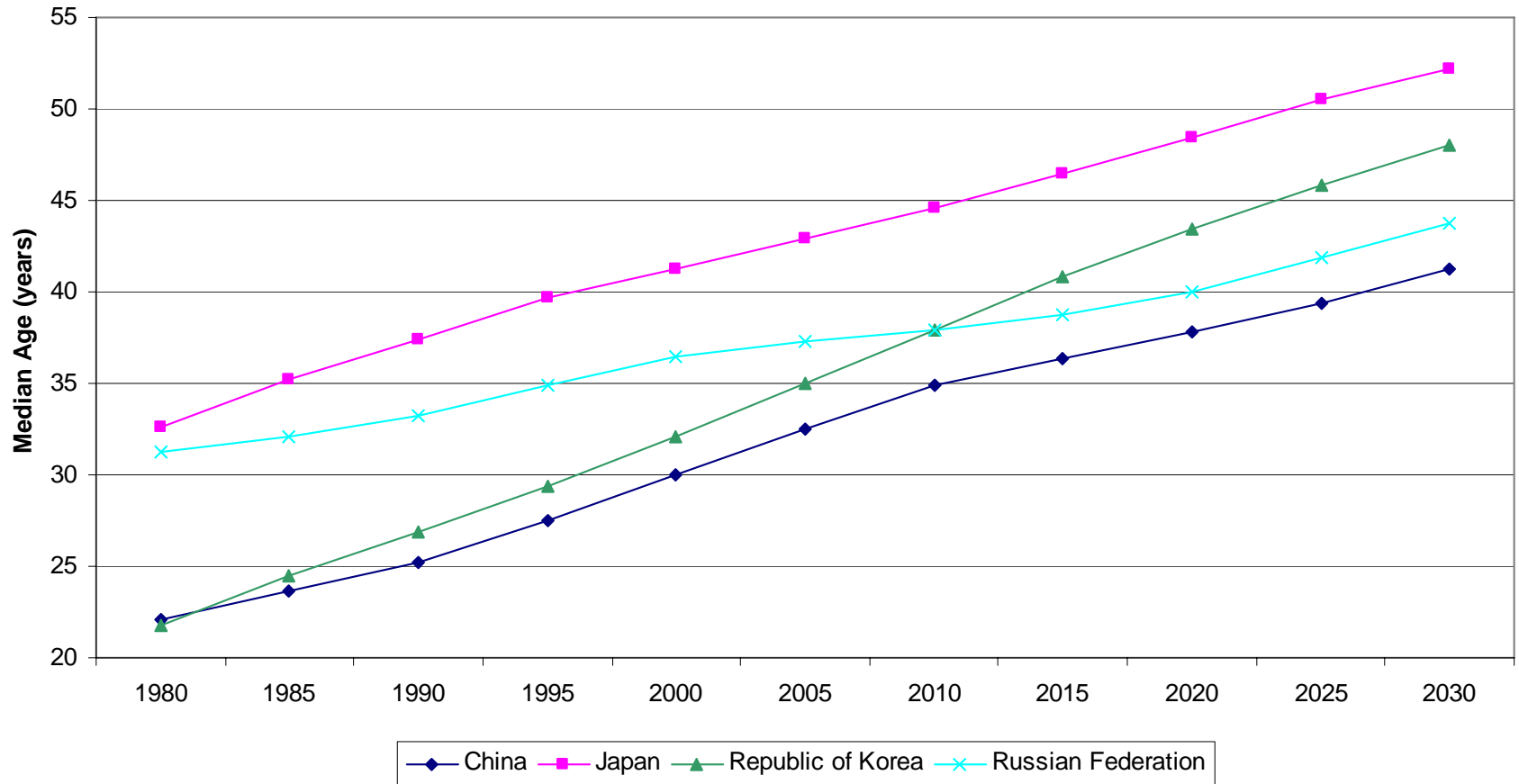


Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision, <http://esa.un.org/unpp>, Friday, January 23, 2009; 3:36:27 PM.

**Estimated and Projected Annual Change:
Population Ages 15-64, Selected Northeast Asian Countries, 1980-2030**
[UNPD 2006 medium variant]

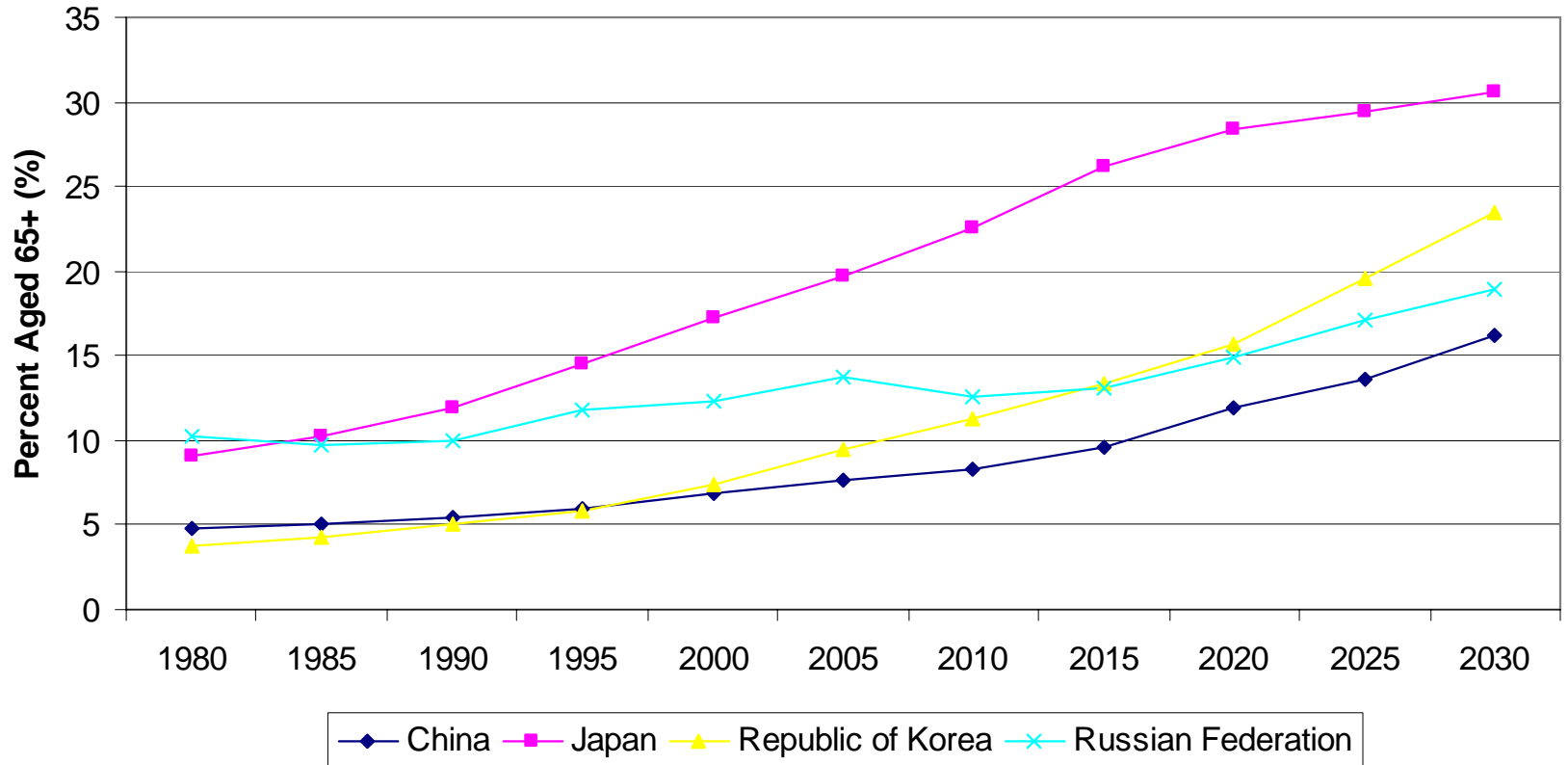


Estimated and Projected Median Age: Selected Northeast Asian Countries, 1980-2030 [UNPD 2006 medium variant]



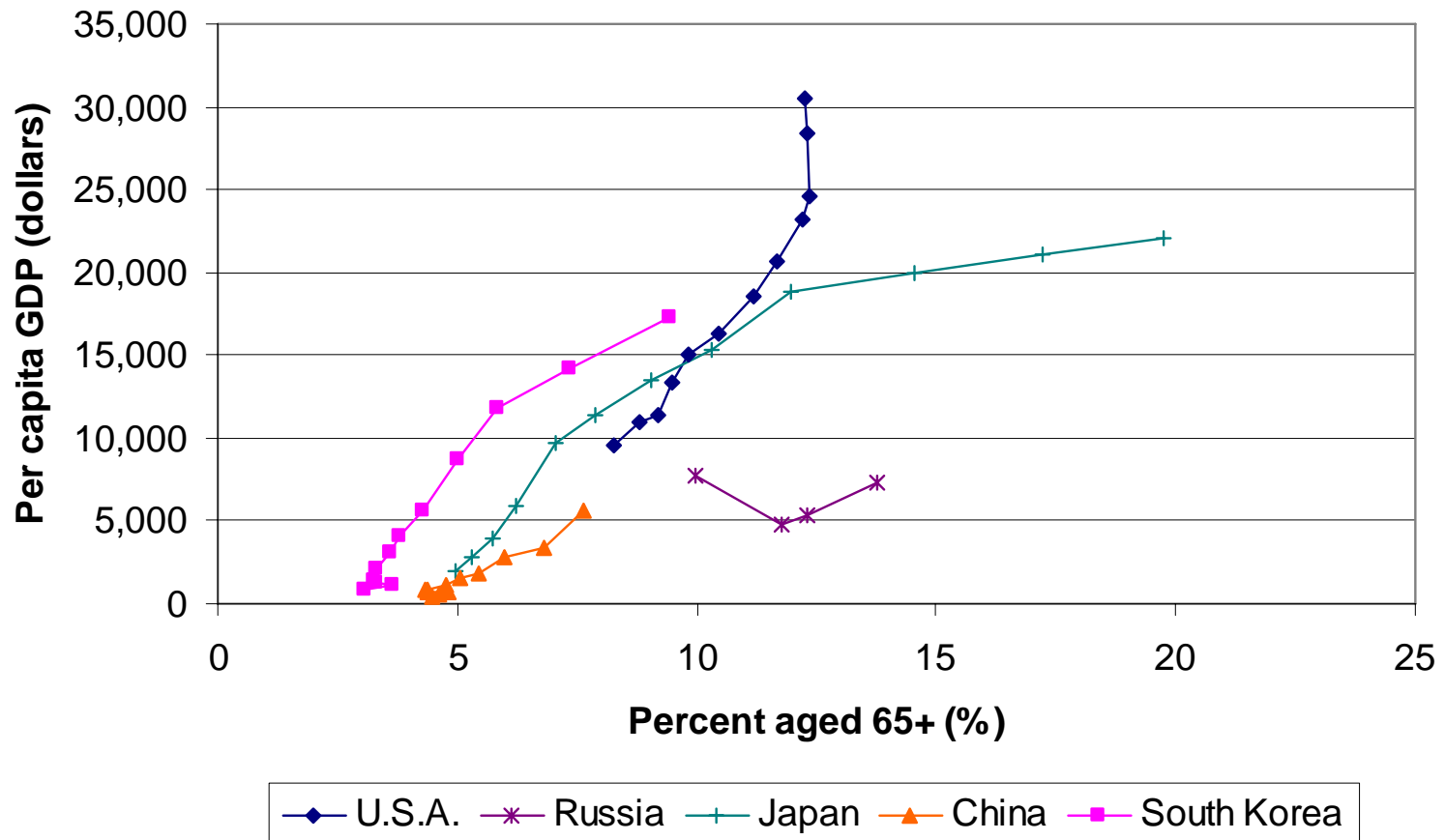
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision, <http://esa.un.org/unpp>, Friday, January 23, 2009; 3:36:27 PM.

Estimated and Projected Percentage Population Aged 65+: Selected Northeast Asian Countries, 1980-2030 [UNPD 2006 medium variant]



Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision, <http://esa.un.org/unpp>, Friday, January 23, 2009; 3:36:27 PM.

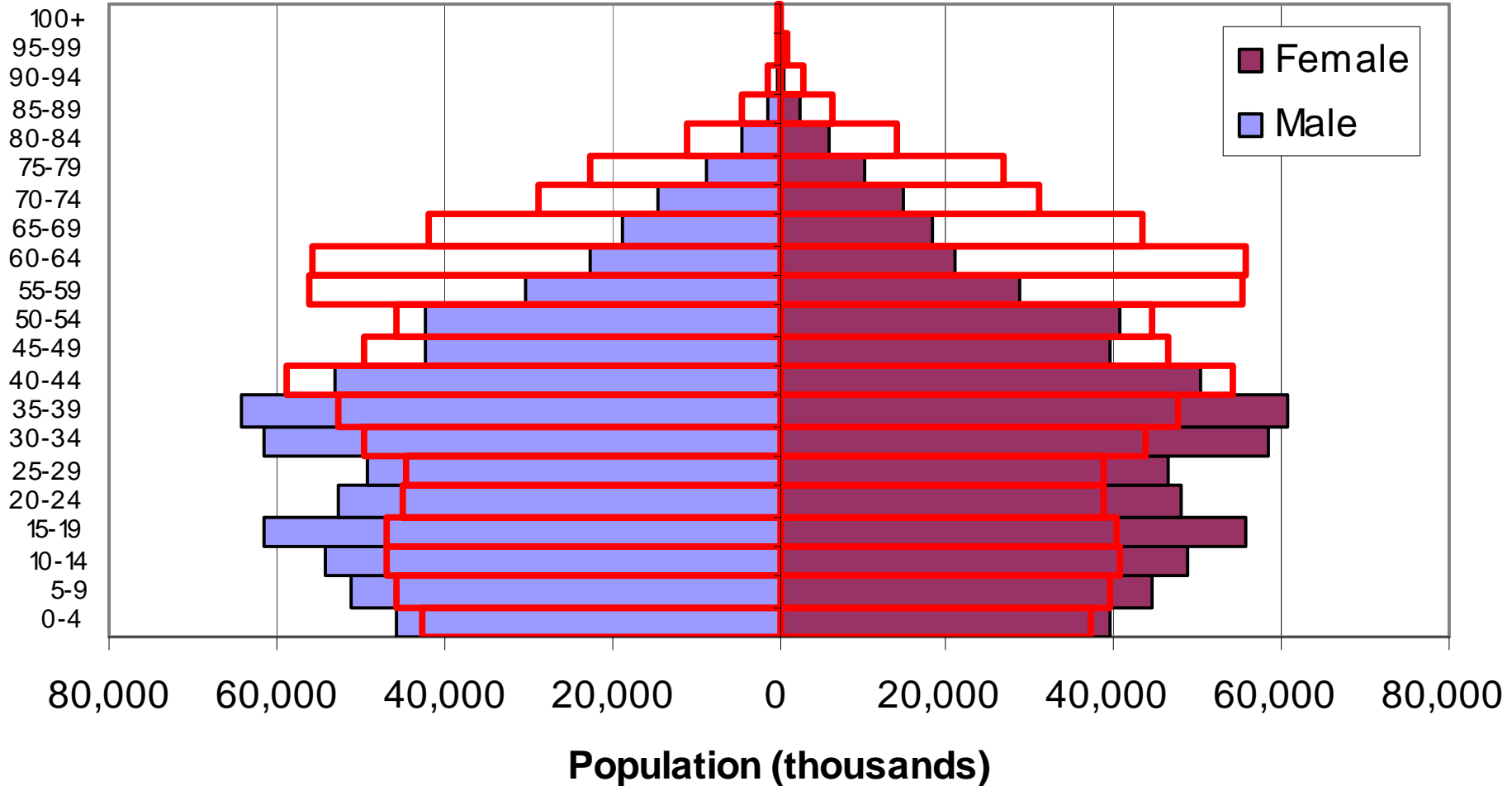
Percent of population 65+ vs. Per capita GDP: Selected Countries, 1950-2005



Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision, <http://esa.un.org/unpp>, Monday, January 26, 2009; 3:31:49 PM; Angus Maddison, "Per Capita GDP," *Historical Statistics for the World Economy: 1-2006 AD*, table 3, <http://www.ggdc.net/maddison/> (accessed January 27, 2009).

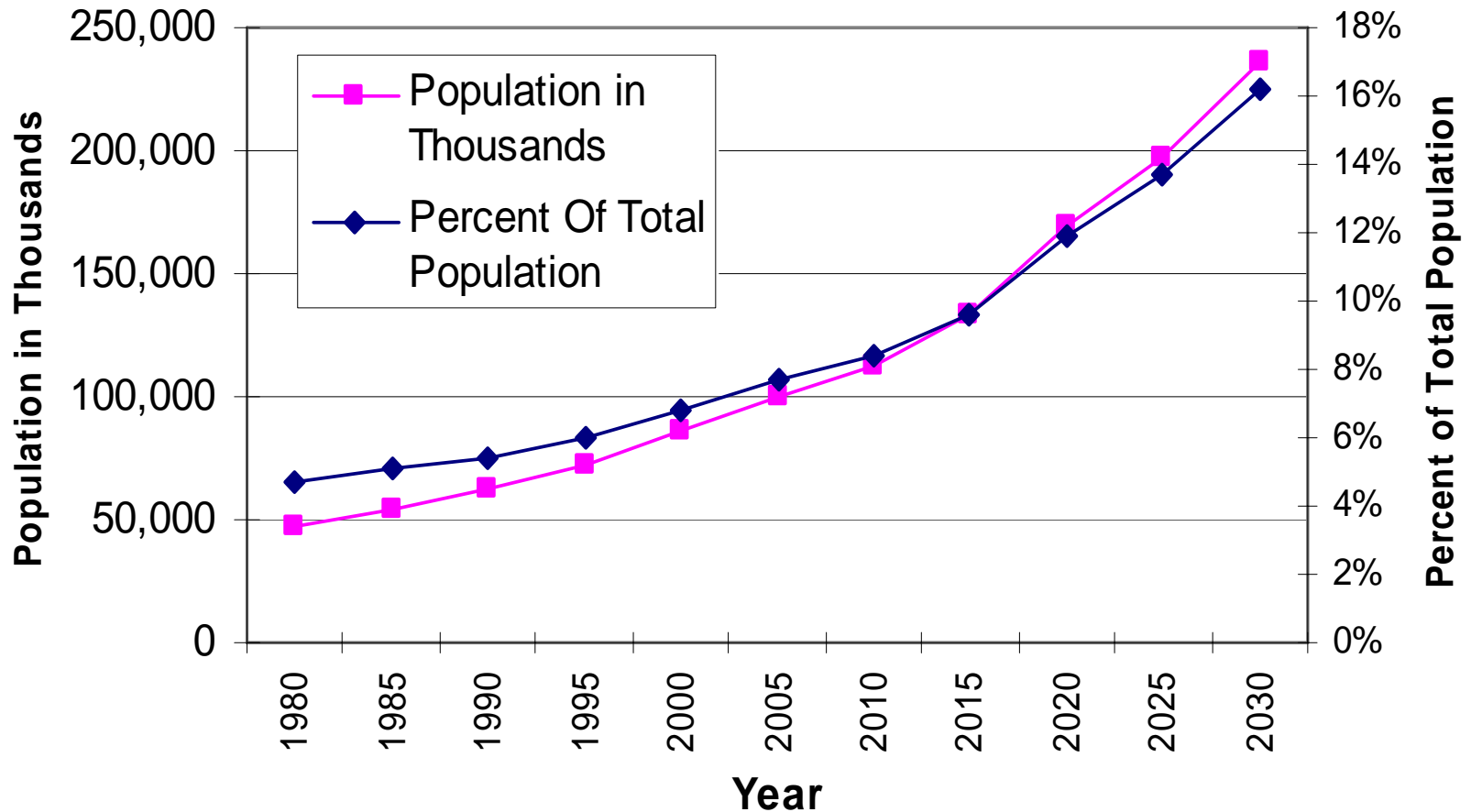
Estimated and Projected Population Structure: China, 2005 vs. 2030

[UNPD 2006 medium variant]



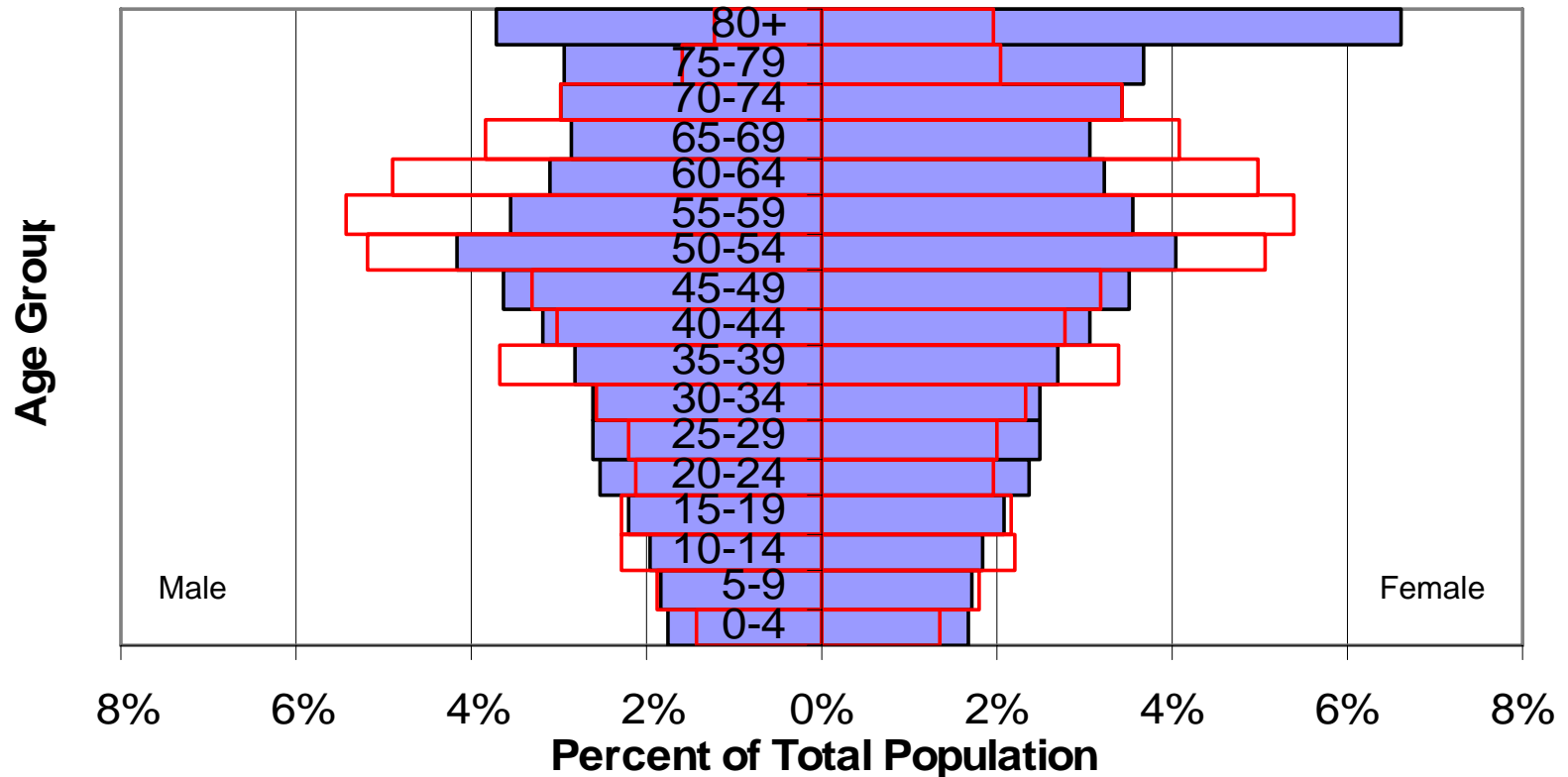
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision, <http://esa.un.org/unpp>, Tuesday, December 4, 2007; 4:00 PM.

Estimated and Projected Population Aged 65+: China, 1980-2030



Source: United Nations World Population Prospects: The 2006 Revision, <http://esa.un.org/unpp/> (accessed April 1, 2008), "medium variant" projections.

Projected Population Structure: Japan (in blue) vs. Heilongjiang, 2025



Source: U.S. Census Bureau, International Data Base, <http://www.census.gov/cgi-bin/ipc/idbagg> (accessed March 31, 2008), And U.S. Census Bureau, International Programs Center, unpublished projections.

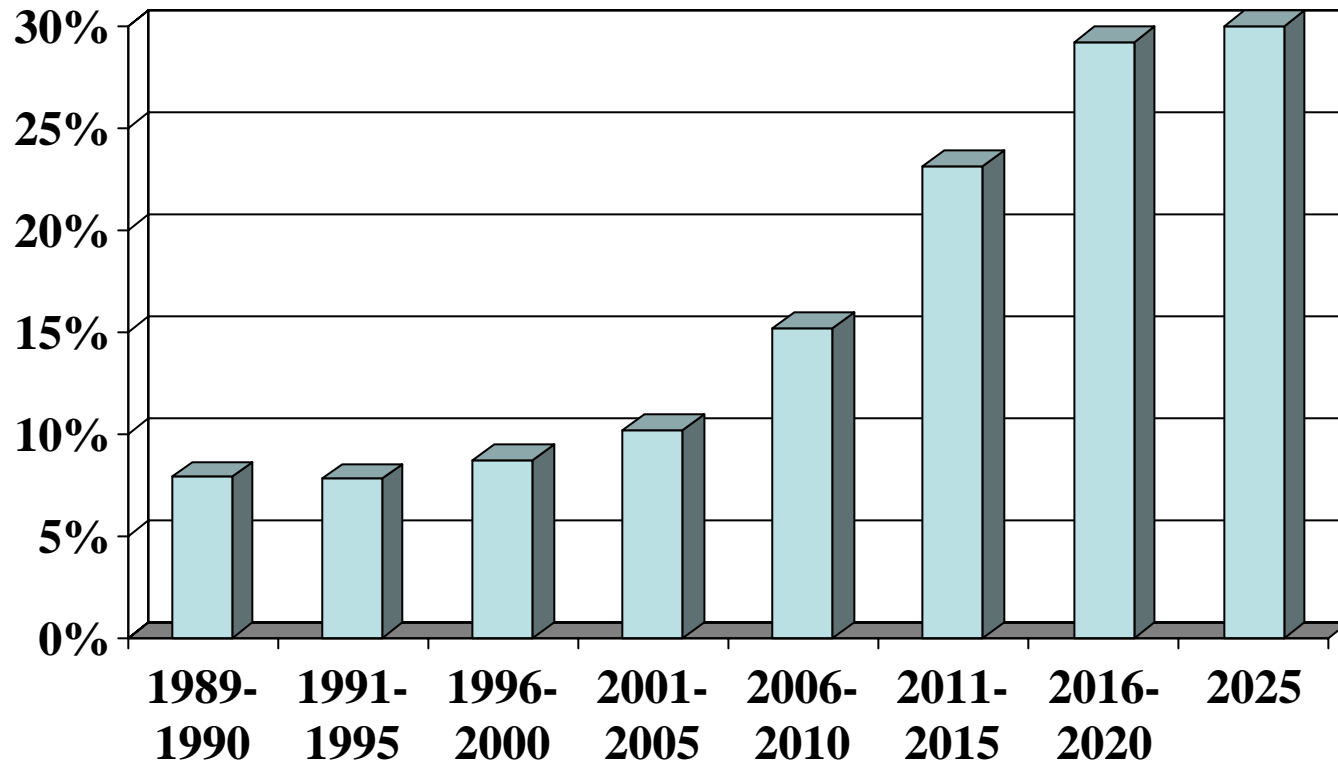
Coverage and Actuarial Balances of Public Pension System: USA, Japan, China (percent)

	Coverage	Net Present Value Unfunded /GDP
USA 2004	87 ¹	32
Japan 2001	c. 100 ²	60-70 ³
China 2003	c.16	125-150

Notes: 1. Proportion of fully insured persons 20+ in OASDI, 2003. 2. Mandatory participation of persons 20+ in basic plan. 3. Estimates for burden post-2000 round of reforms.

Sources: China: Loraine A. West and Daniel Goodkind, "Population Aging and Social Safety Nets in China: Factors and Trends Affecting Policy Trade-Offs." U.S. Census Bureau, International Programs Center, April 2003 (unpublished paper); Japan: Hamid Faruqee and Martin Muehleiser, "Population Aging in Japan: Demographic and Fiscal Sustainability," IMF Working Paper WP/01/40, April 2001, <http://www.imf.org/external/pubs/ft/wp/2001/wp0140.pdf> USA: Derived from U.S. Social Security Administration, Annual Statistical Supplement 2003 (March 2004), Table 4.c5, <http://www.ssa.gov/policy/docs/statcomps/supplement/2003/4c.pdf> 2004 OASDI Trustees Report (March 24, 2004), Table VI.F5 and Chapter II.D, <http://www.ssa.gov/OACT/TR/TR04/>

Percentage of Age-60 Chinese Women with No Born Sons by Year of Her 60th Birthday: Illustrative Calculation

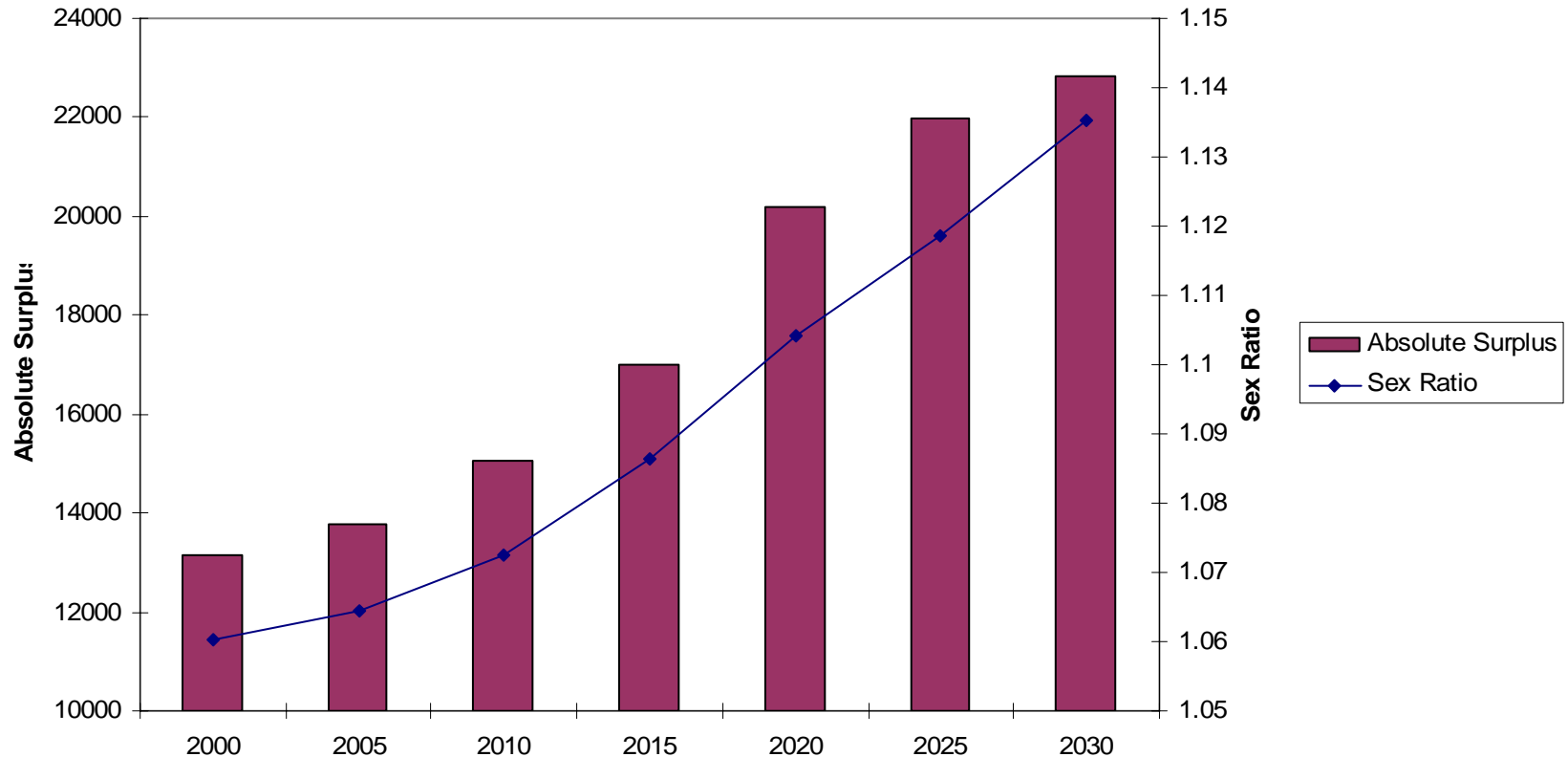


Notes: Calculations are illustrative, based upon simplifying assumptions: 1. Reported parity distributions in 1990 census are accurate; 2. SRB as in previous graphic; 3. SRB not parity-specific; 4. Childbearing completed by age 35 for the 2025 cohort of 60-year old women; 5) Posits the following distribution of childbearing for the 2025 cohort of 60-year-old women: no children, 3%; one child, 25%; two children, 65%; three or more children, 7%.

Sources: Derived from Feeney et. al. 1993, op cit; China National Bureau of Statistics 2002, op cit.

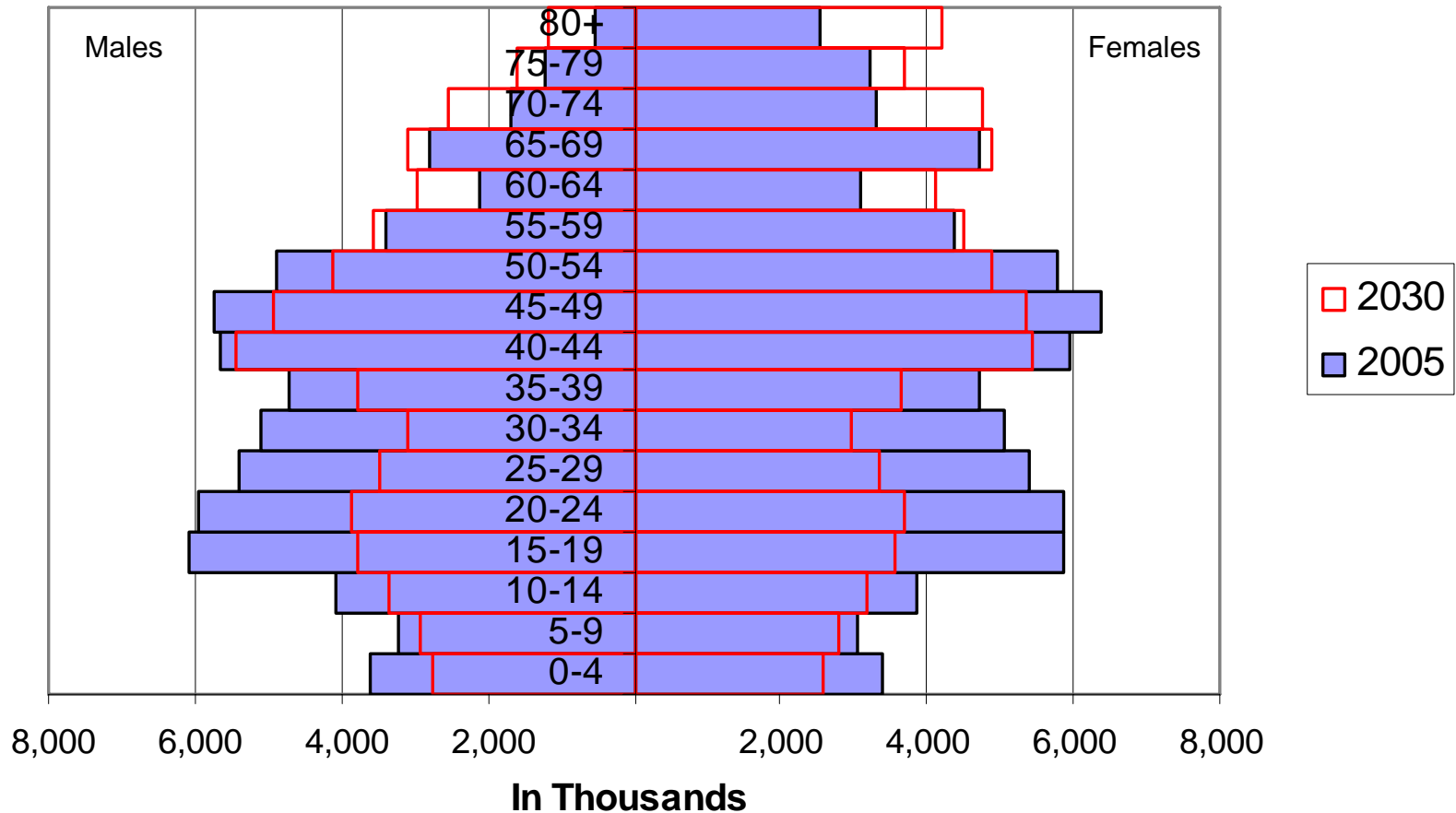
The Coming Bride Shortage:

Estimated And Projected Sex Ratio Ages 20-39 And Absolute Surplus of Males Ages 20-39: China, 2000-2030



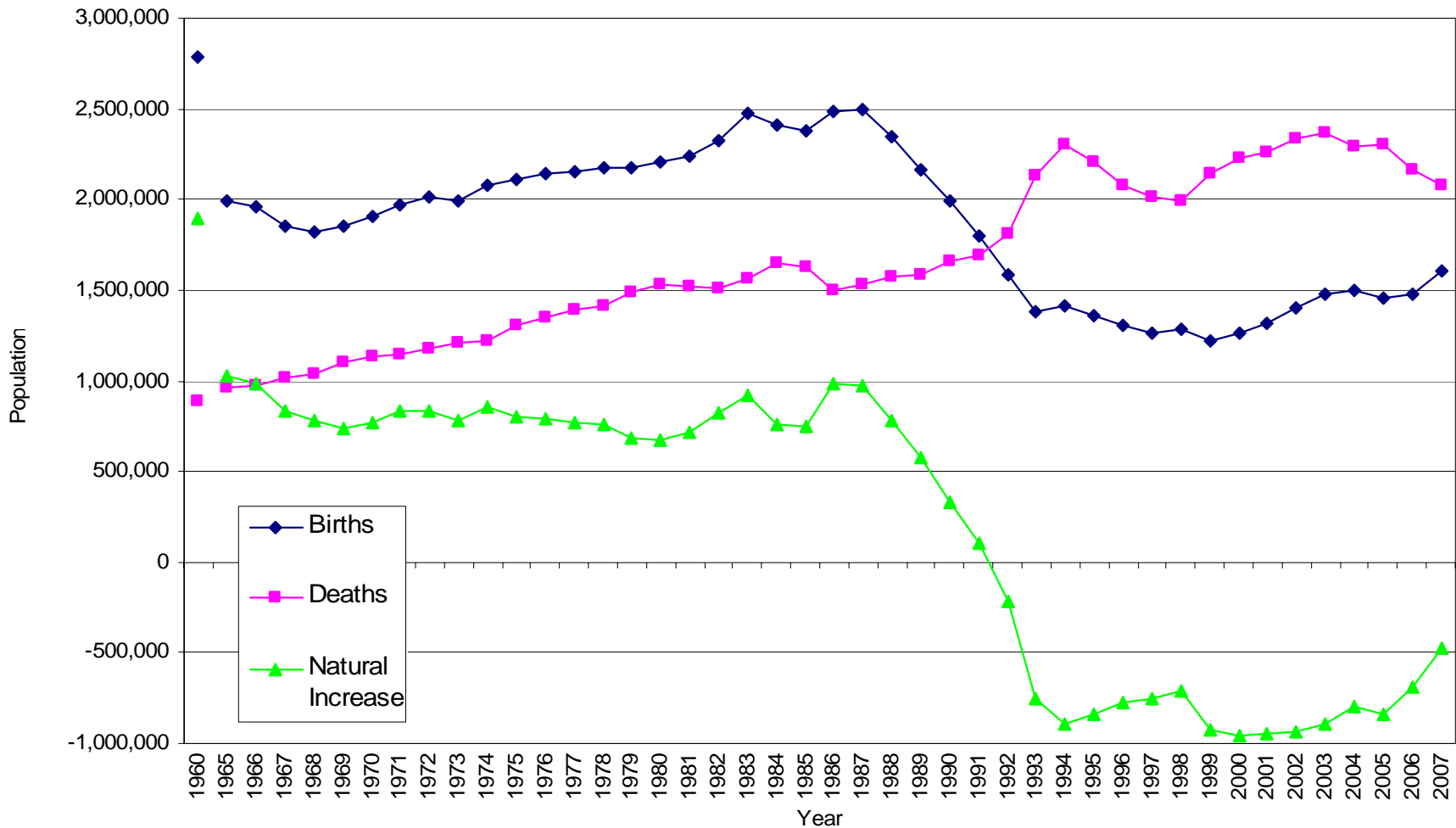
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision, <http://esa.un.org/unpp>, Friday, June 29, 2007; “medium variant” projections.

Estimated and Projected Population Structure: Russian Federation, 2005 vs. 2030



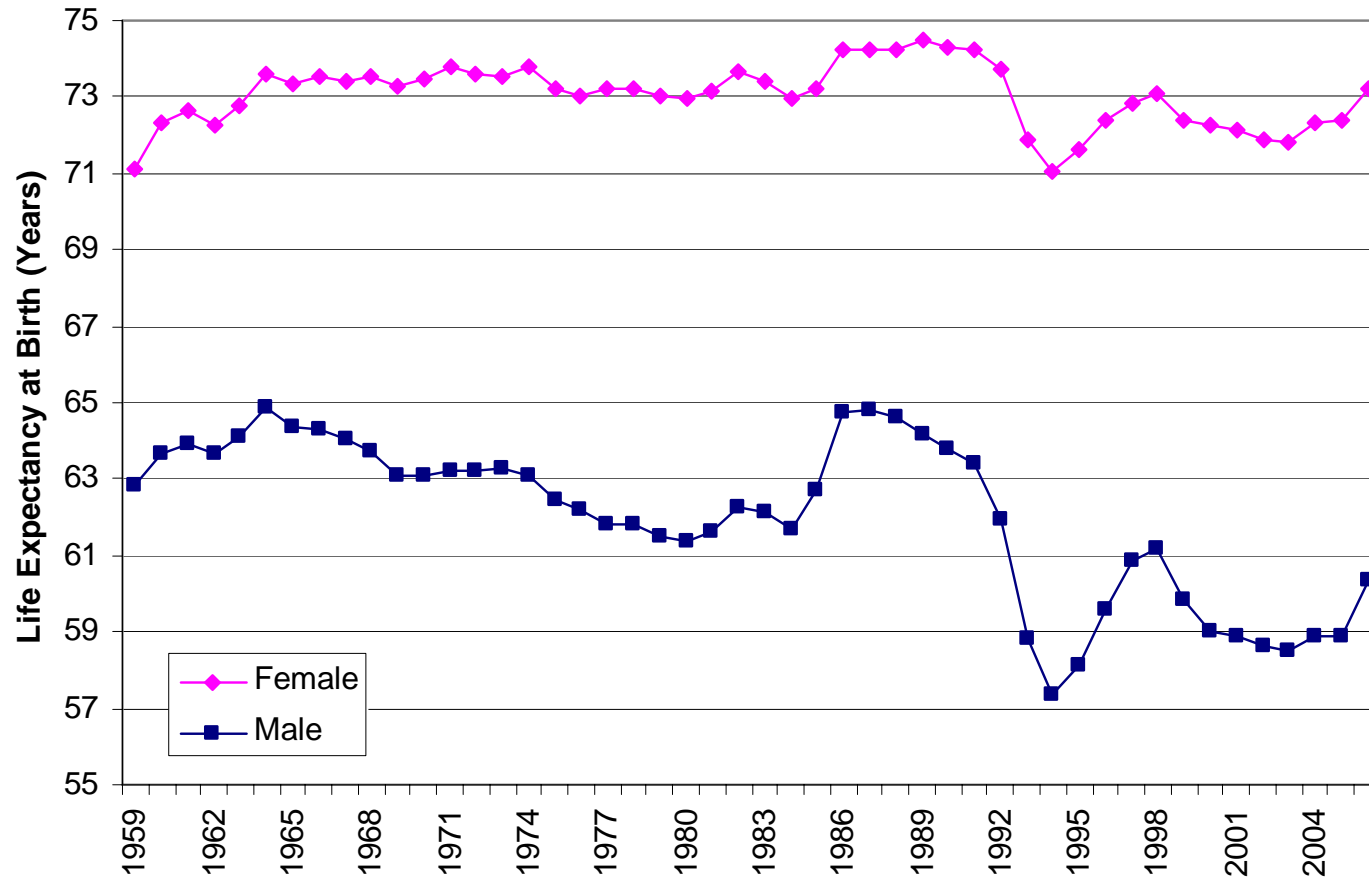
Source: U.S. Census Bureau, International Data Base, <http://www.census.gov/ipc/www/idb/pyramids.html>. (accessed March 31, 2008).

Births, Deaths, and Natural Increase in Population: Russia, 1960-2007



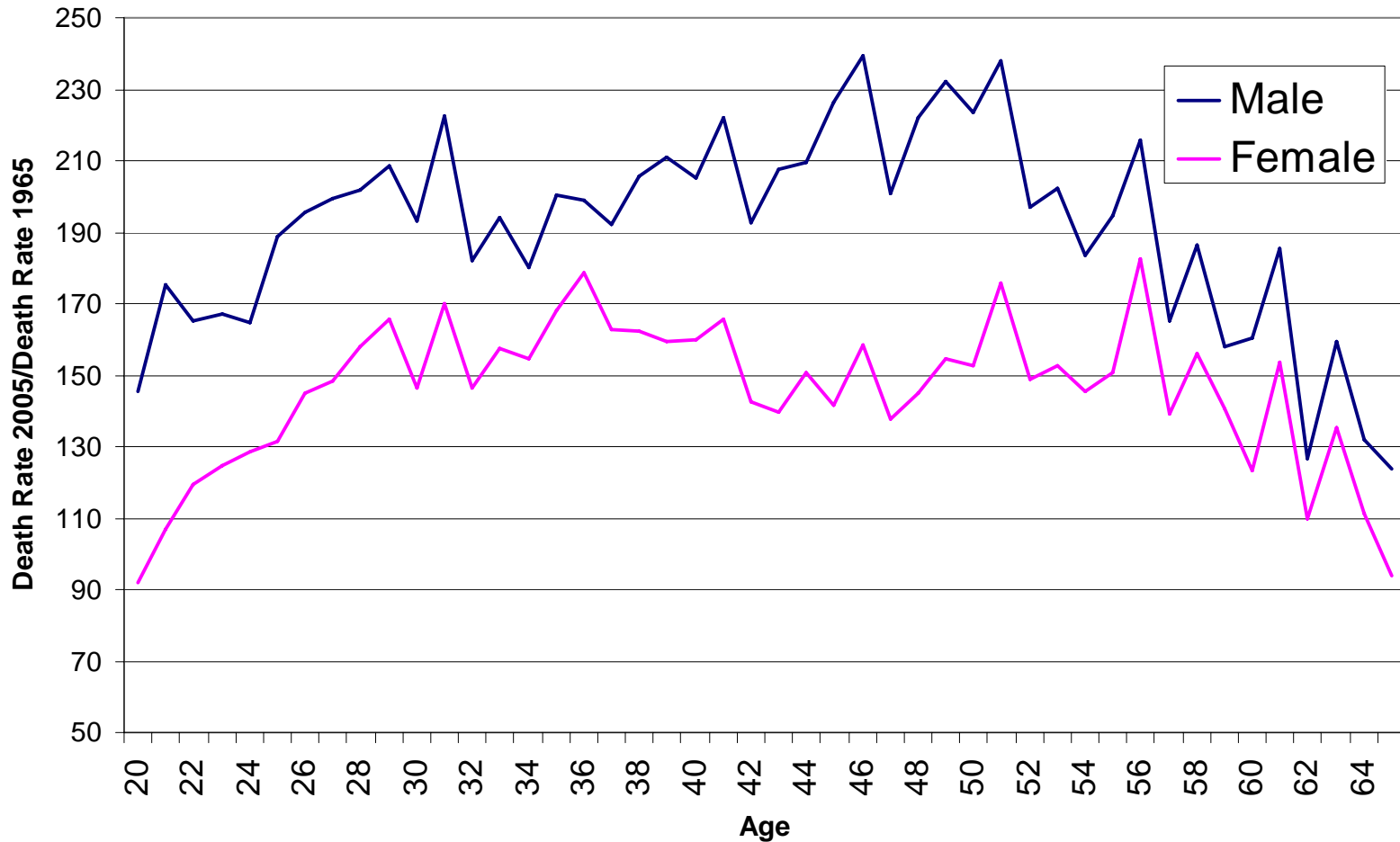
Source: The Russian Federation Ejegodnik: 2004 (State Committee of the Russian Federation on Statistics, Moscow, 2004), Table 2.25, Source for 2004-05 figures: Federal Statistics Service, accessed December 6, 2007, 2:00 PM. Source for 2006-2007 figures: Interfax News Agency, "Russia's Population Shrinks by 0.24 Million in 2007," March 27, 2008.

Life Expectancy at Birth: Russian Federation, 1959-2006



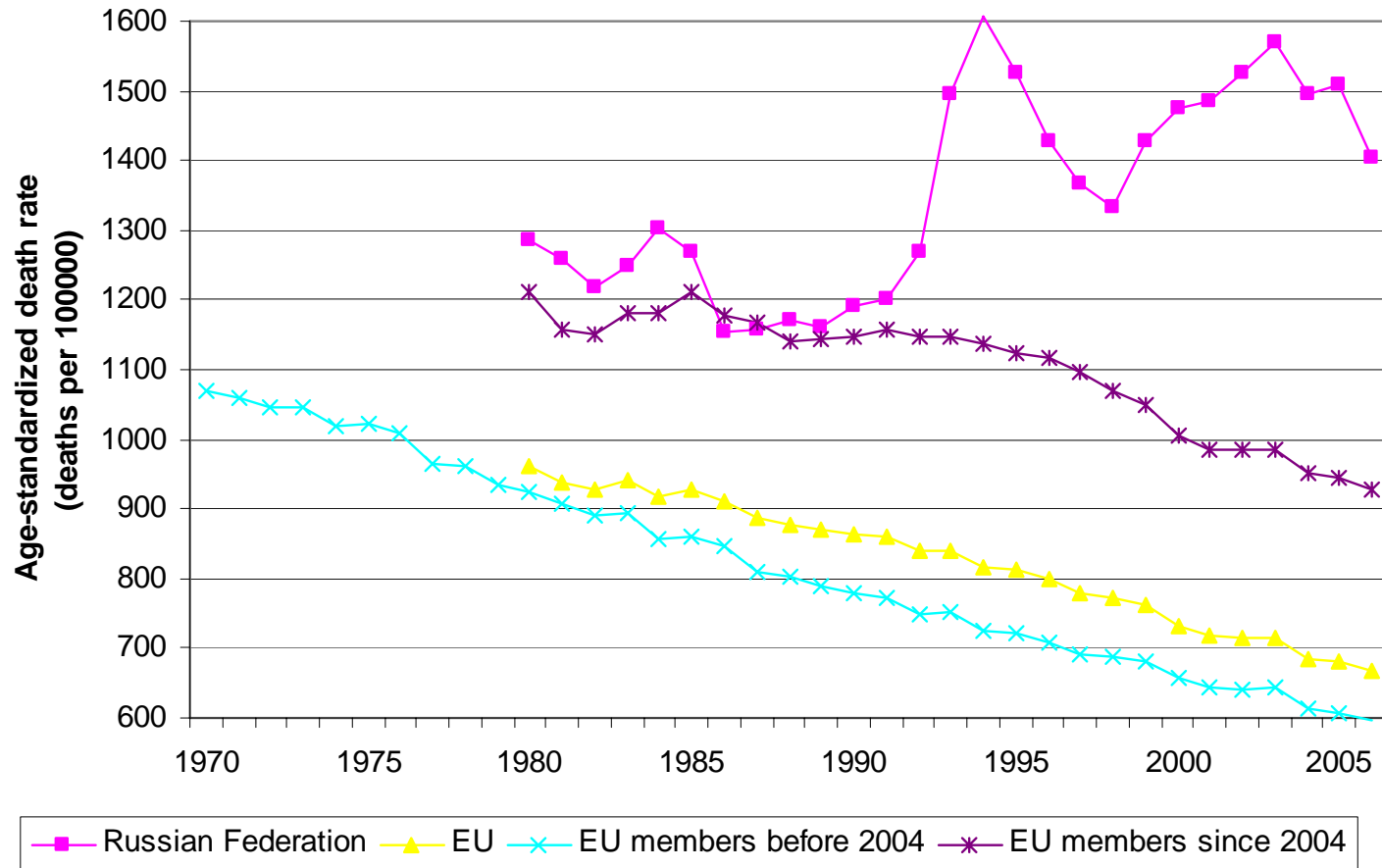
Source: Human Mortality Database. University of California, Berkeley and Max Planck Institute for Demographic Research. Available at www.mortality.org, accessed on November 7, 2008.

Death Rate Ratio by Gender, Ages 20-65: Russia, 2005 vs. 1965 (1965 = 100)



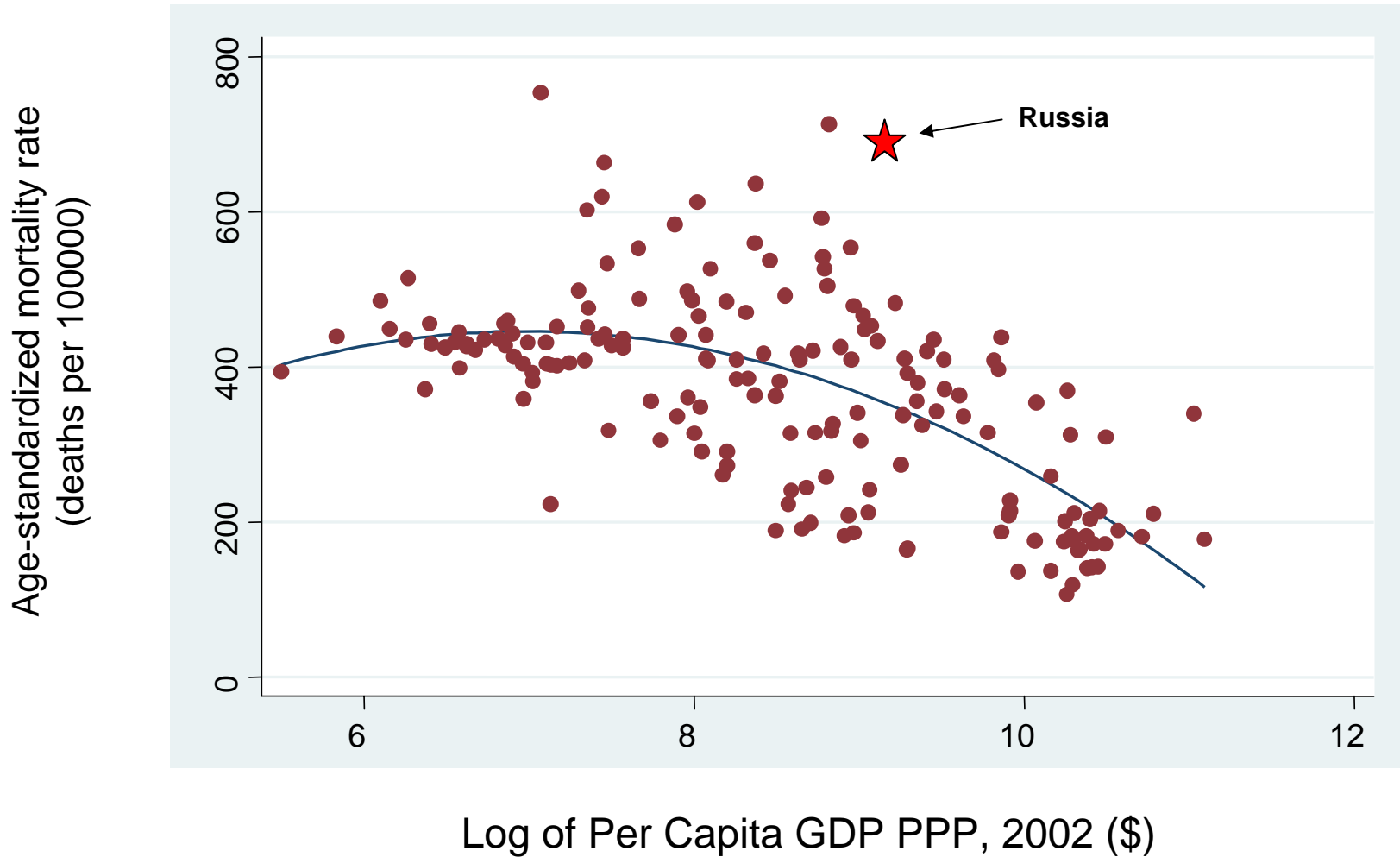
Source: Human Mortality Database. University of California, Berkeley and Max Planck Institute for Demographic Research. Available at www.mortality.org, accessed 10/17/2006.

Death rates from all causes, 1970-2006: Russia vs. EU (males plus females)

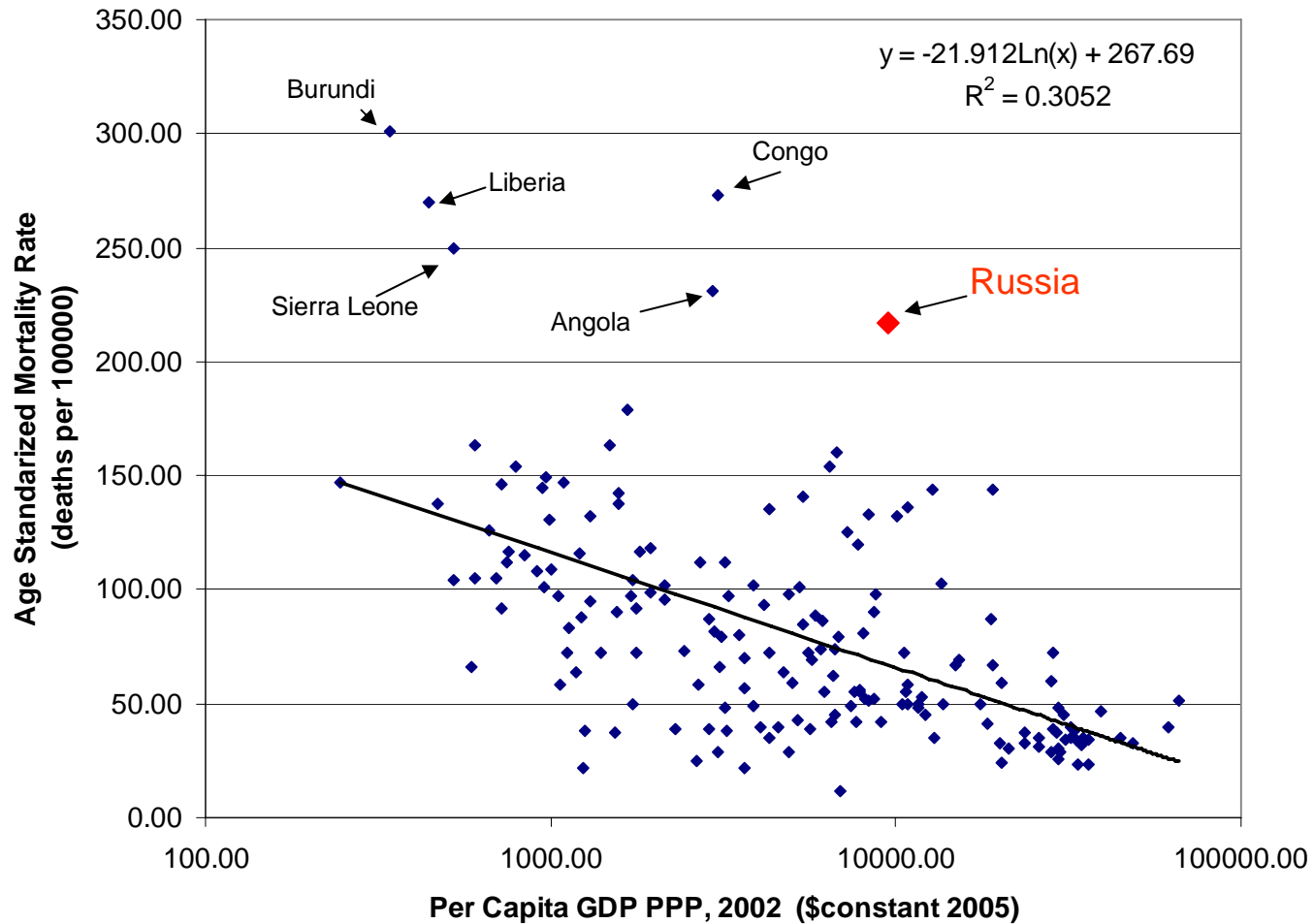


Source: Europe Health For All Database, World Health Organization, July 2008.

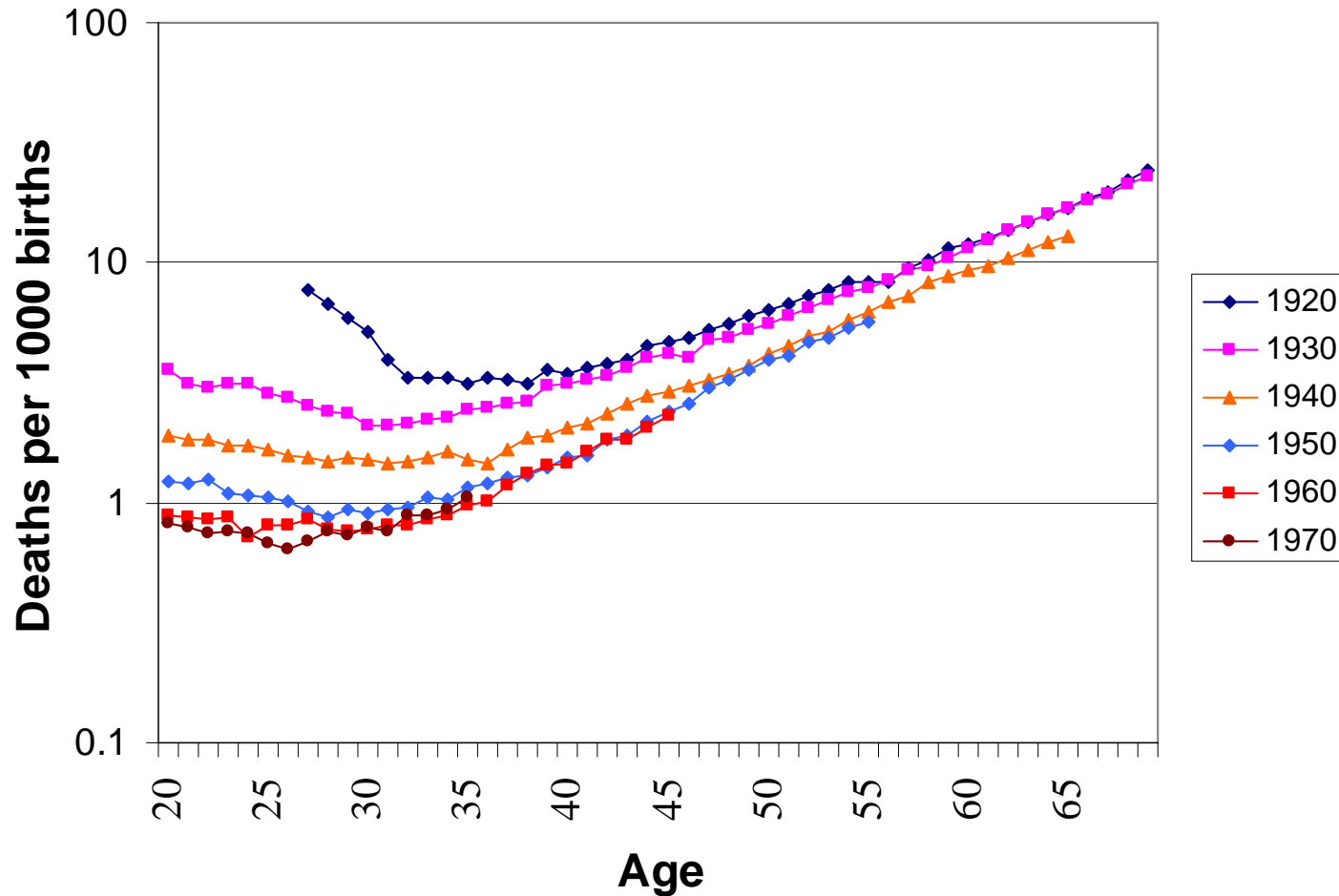
Age-standardized mortality rates from Cardiovascular Disease vs. PPP-Adjusted Per Capita GDP, 2002



Age-standardized mortality rates from injury/external causes vs. PPP-Adjusted Per Capita GDP, 2002

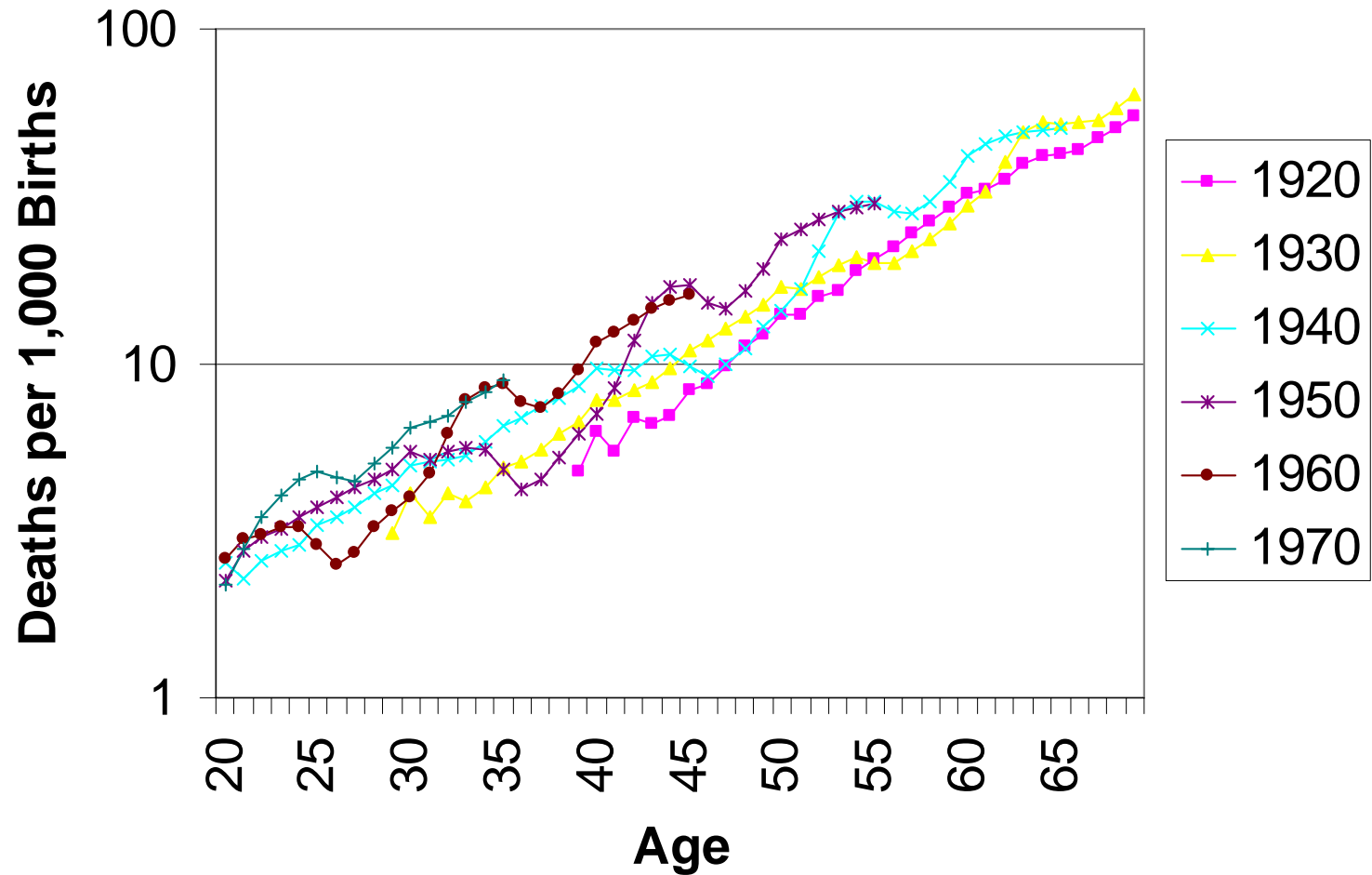


Male Mortality in Japan by Birth Cohort, 1920-1970



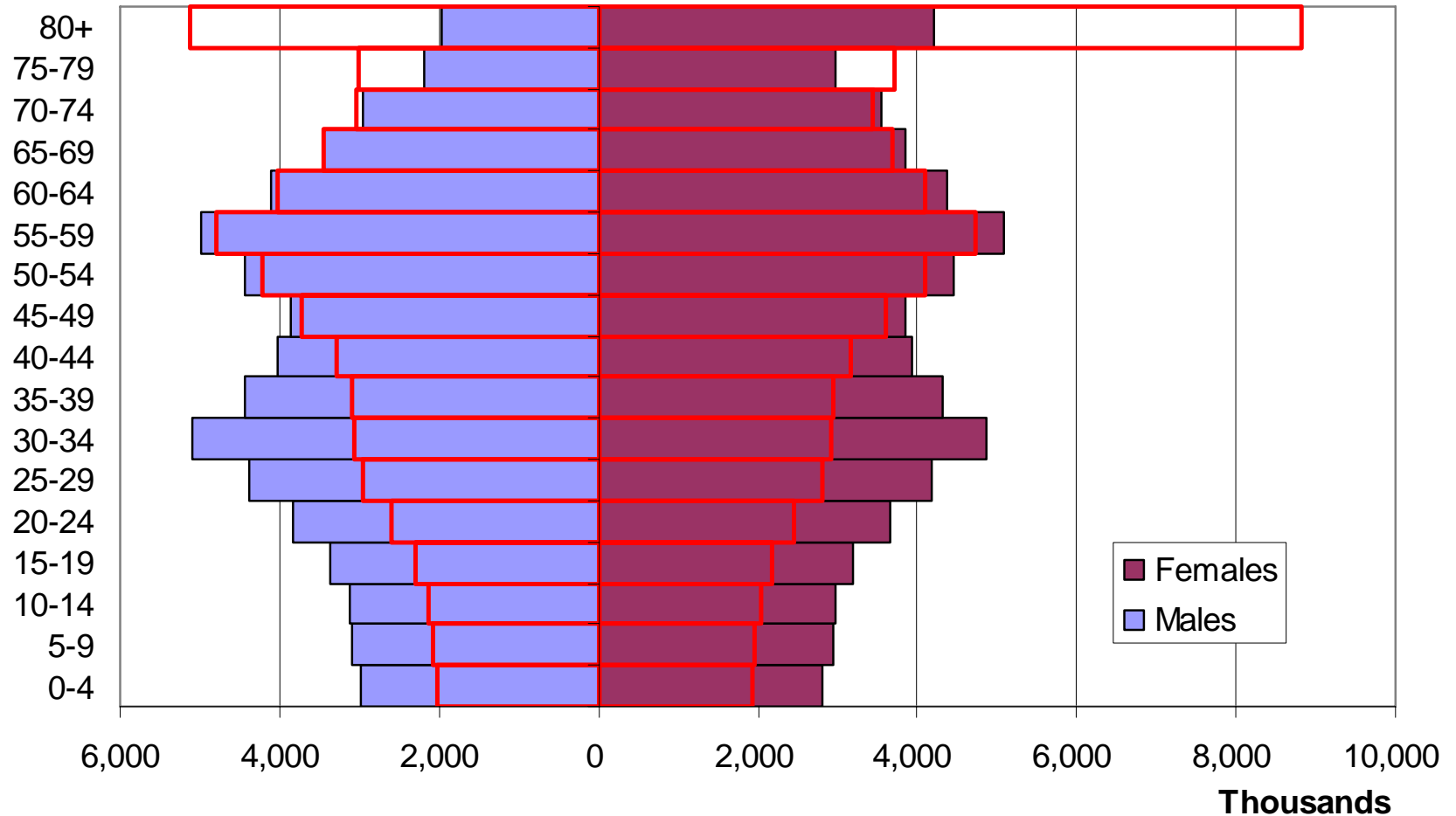
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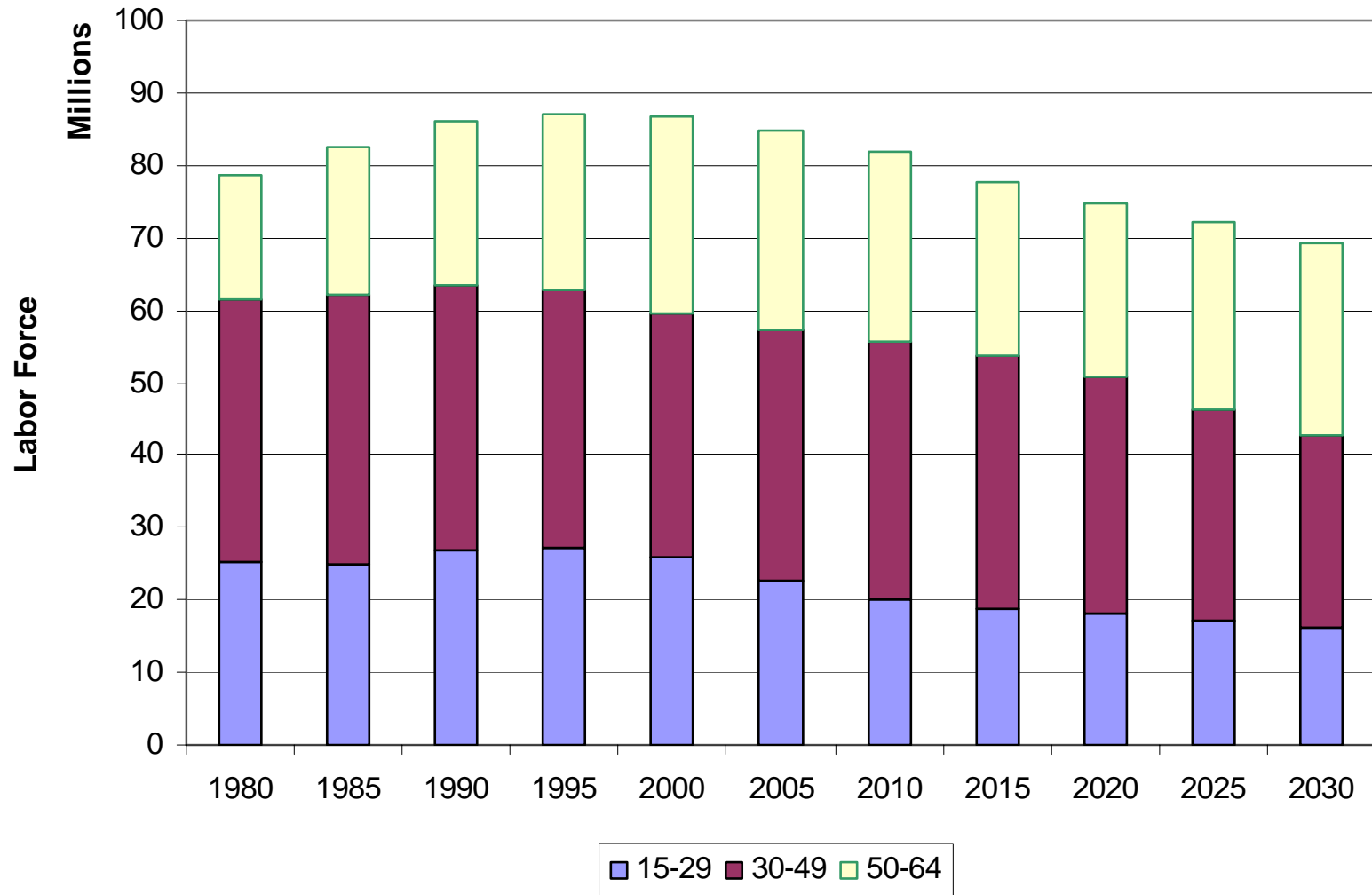
Estimated and Projected Population Structure: Japan, 2005 vs. 2030



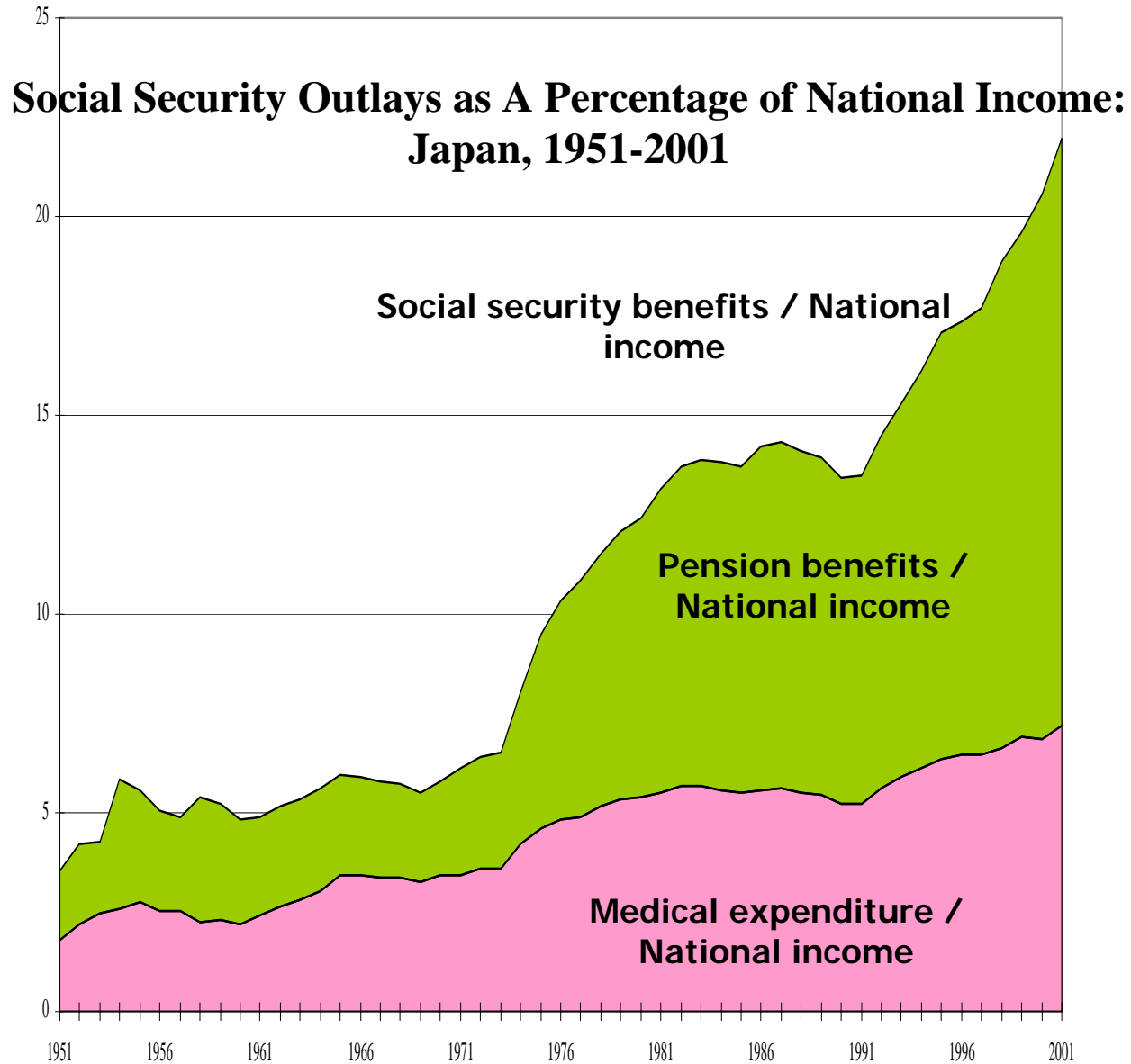
Source: U.S. Census Bureau, International Data Base.

<http://www.census.gov/ipc/www/idb/tables.html>, Accessed January 25, 2009

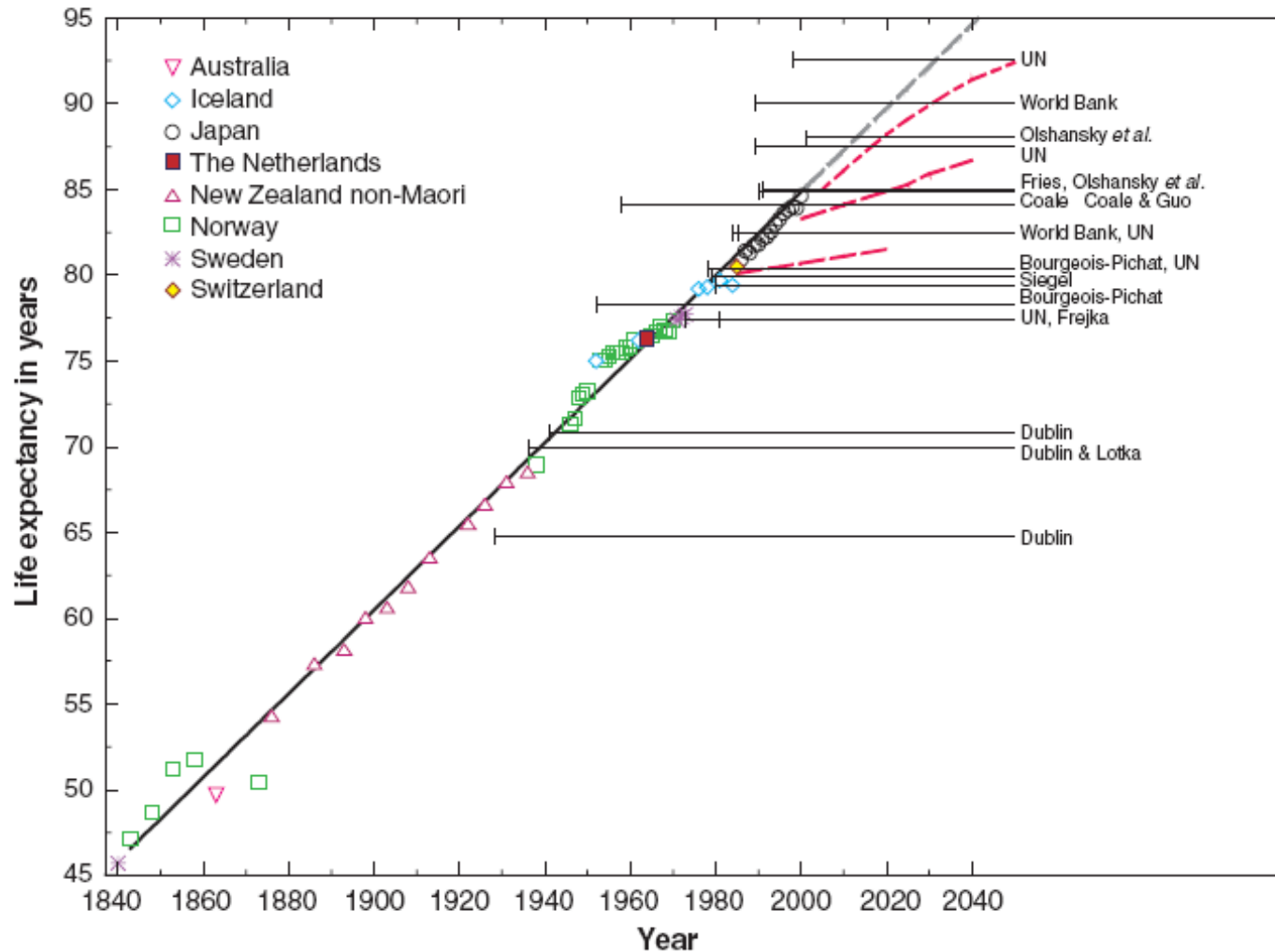
Adult Population 15-64 by Age Group: Japan, 1980-2030 (estimated and projected, millions)



Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision, <http://esa.un.org/unpp>, Friday, January 23, 2009; 3:36:27 PM.



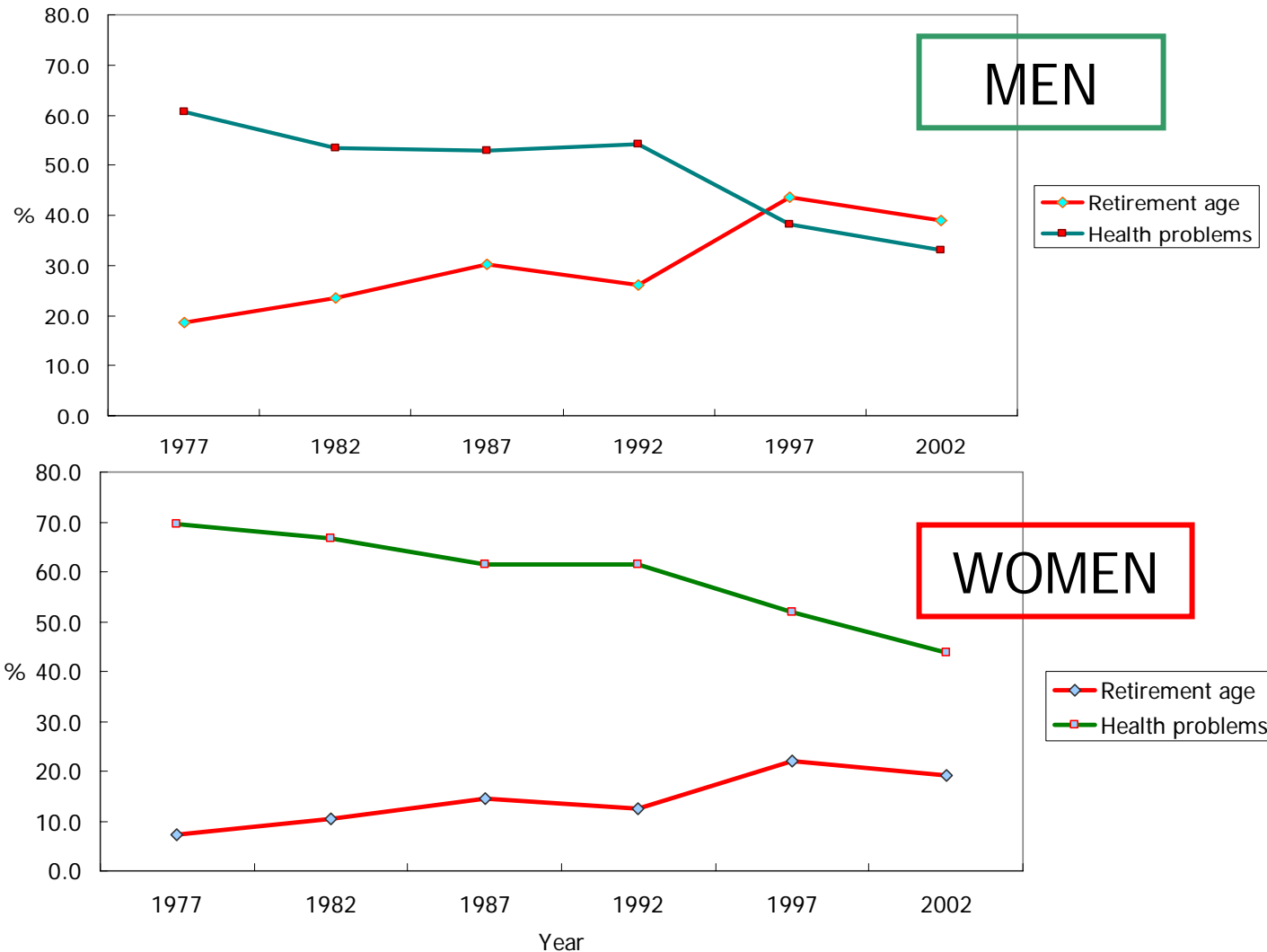
Record Female Life Expectancy, 1840-Present



Source: Vaupel, James W. and Jim Oeppen, "Broken Limits to Life Expectancy," *Science*, May 10, 2002

Note: The horizontal black lines show asserted ceilings on life expectancy, with a short vertical line indicating the year of publication. The dashed red lines denote projections of female life expectancy in Japan published by the United Nations in 1986, 1999, and 2001.

Trends in reasons for quitting job for persons aged 65 and over: Japan, 1950-2004

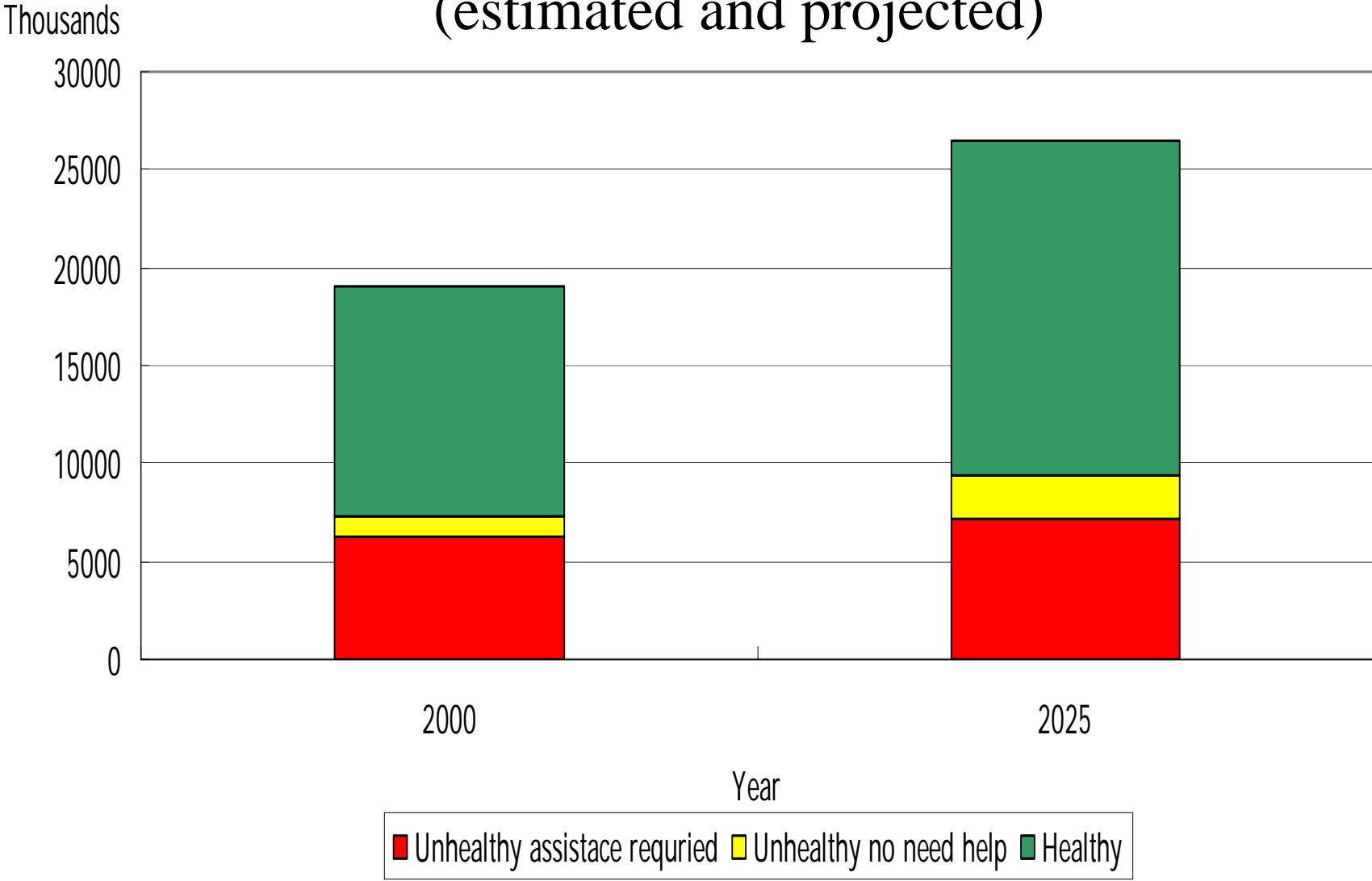


Source: Statistics Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications, *Employment Status Survey*, various years.

Naohiro Ogawa, Nihon University, Population Research Institute, 2005 George Myers Memorial Lecture, "Health and its impact on work and dependency among the elderly in graying Japan"

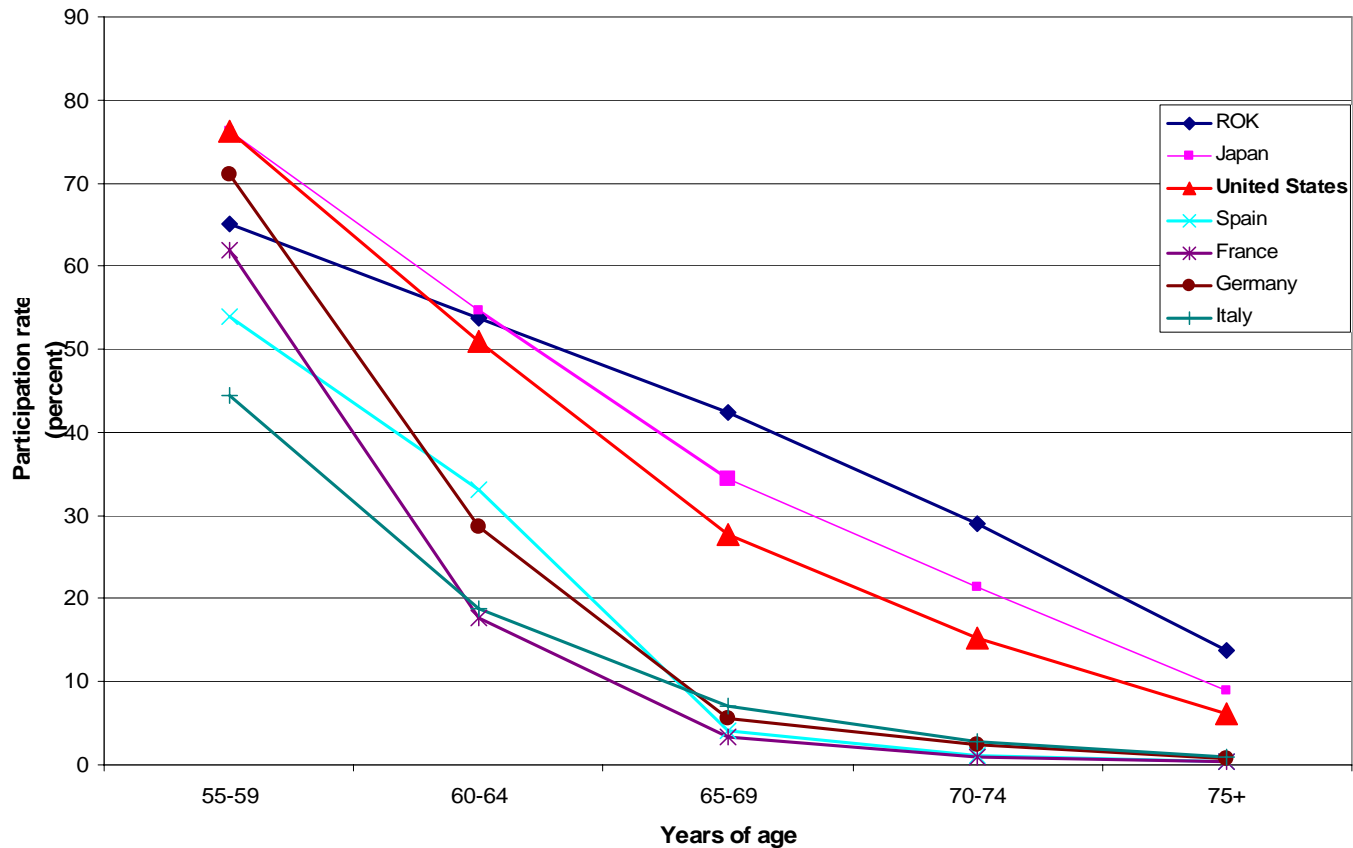
Elderly population by health status, Japan 2000-25

(estimated and projected)



Naohiro Ogawa, Nihon University, Population Research Institute, 2005 George Myers Memorial Lecture, "Health and its impact on work and dependency among the elderly in graying Japan"

Labor Force Participation Rates: Select Western Europe vs. Non-Europe OECD

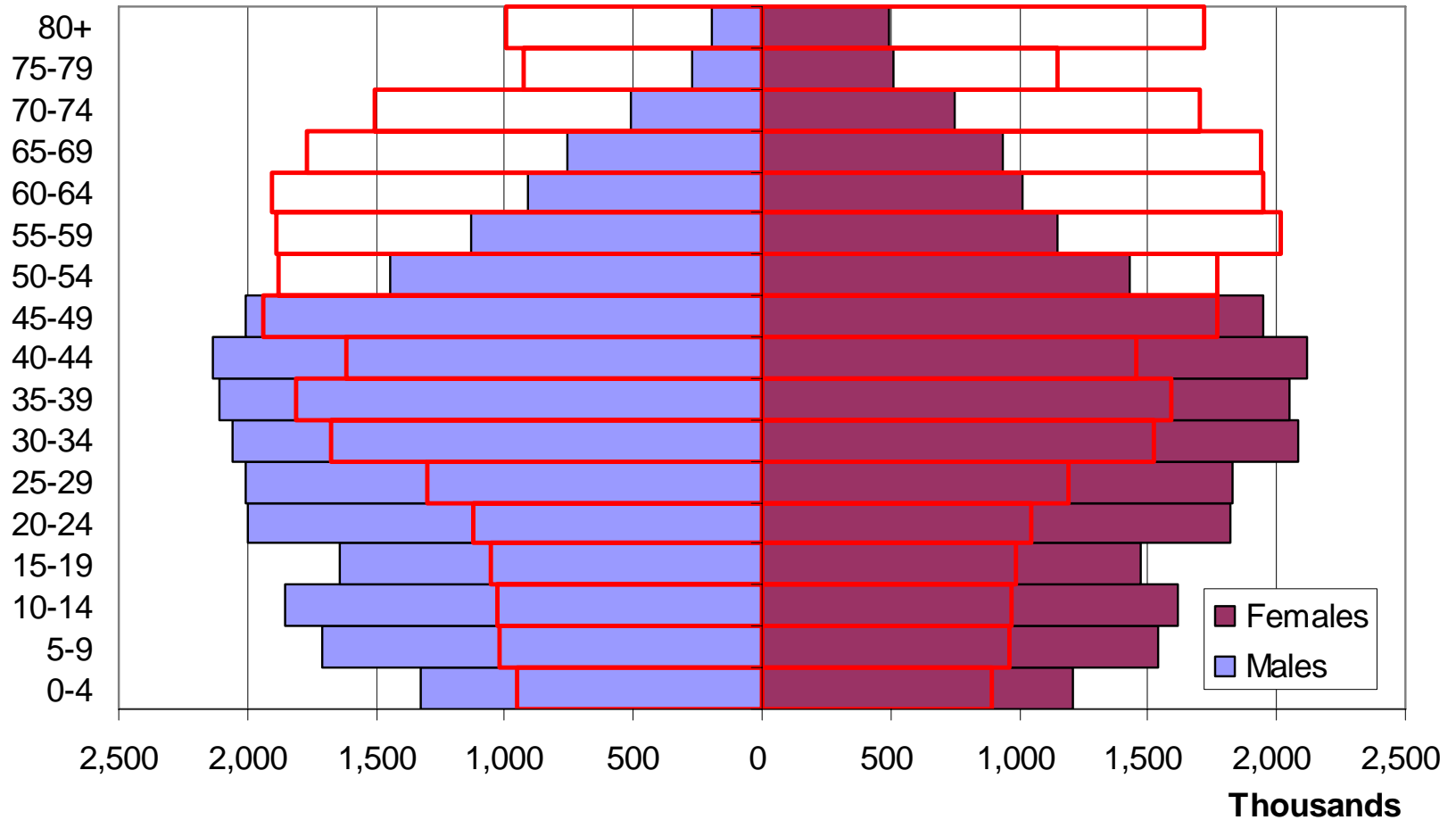


Source: International Labour Organization, LABORSTA Internet, <http://laborsta.ilo.org/>.
Note: Data are for 2006, except for France (2005).

Economic Projections from NUPRI Model

Item	Base Case	Base Case	More Older Workers
	2005	2025	2025
Real GDP(Trillion Yen)	564.7	624.8	693.8
Real GDP Per Capita (million yen)	4.43	5.2	5.74

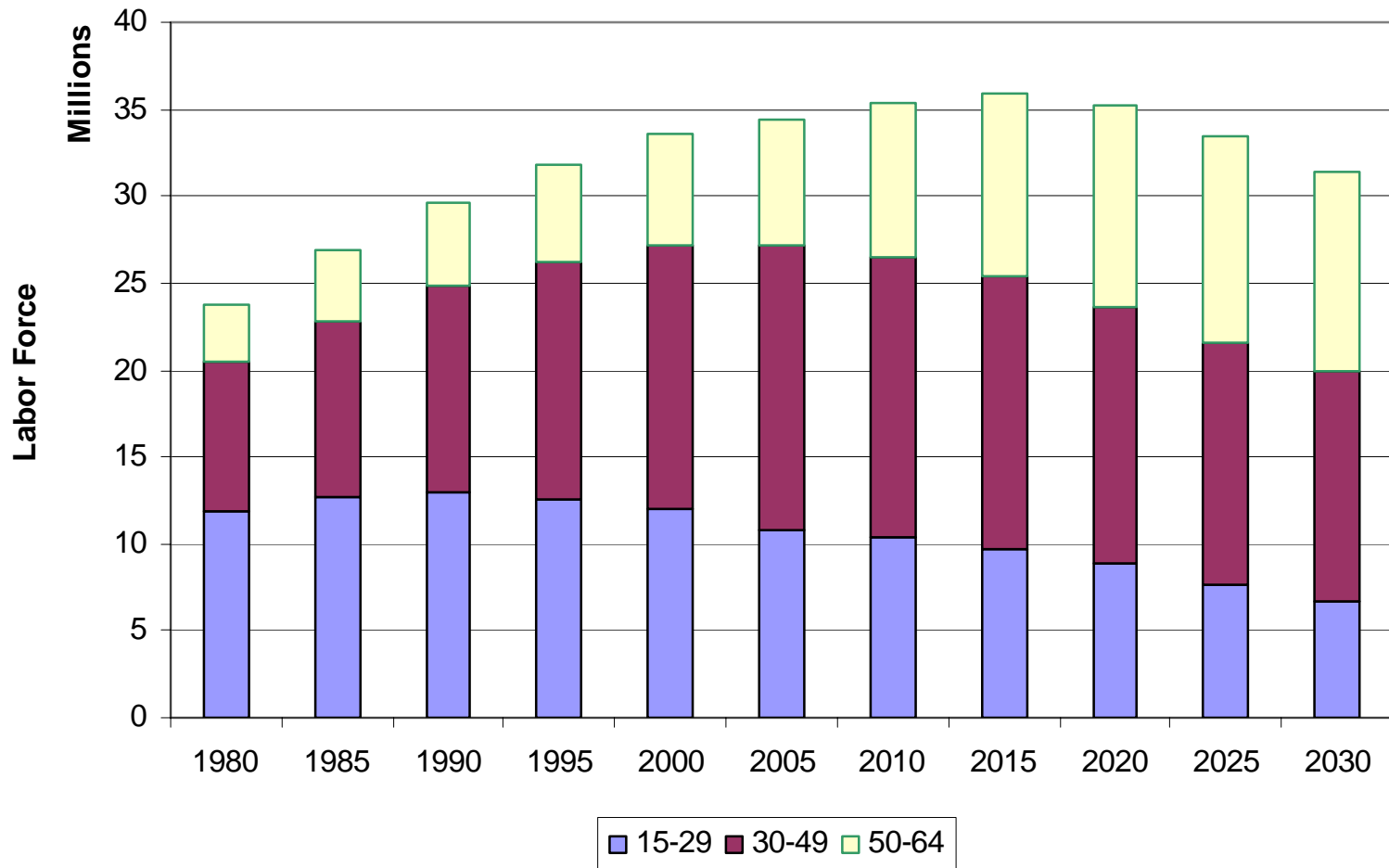
Estimated and Projected Population Structure: Republic of Korea, 2005 vs. 2030



Source: U.S. Census Bureau, International Data Base.

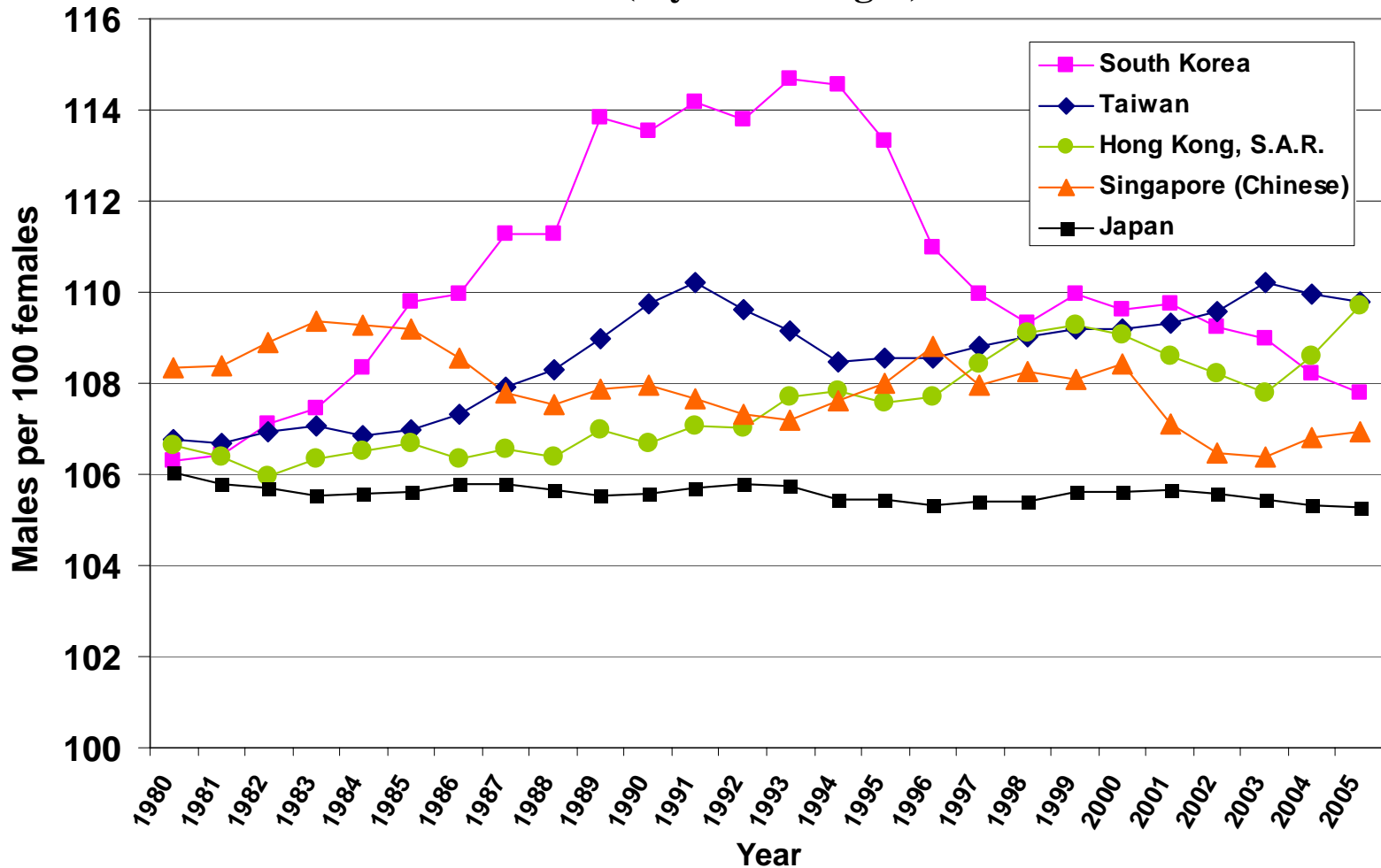
<http://www.census.gov/ipc/www/idb/tables.html>, Accessed January 25, 2009

Adult Population 15-64 by Age Group: ROK, 1980-2030 (estimated and projected, millions)



Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2006 Revision and World Urbanization Prospects: The 2005 Revision, <http://esa.un.org/unpp>, Friday, January 23, 2009; 3:36:27 PM.

Sex Ratios at Birth Reported in East Asia: 1980-2005 (3-year averages)

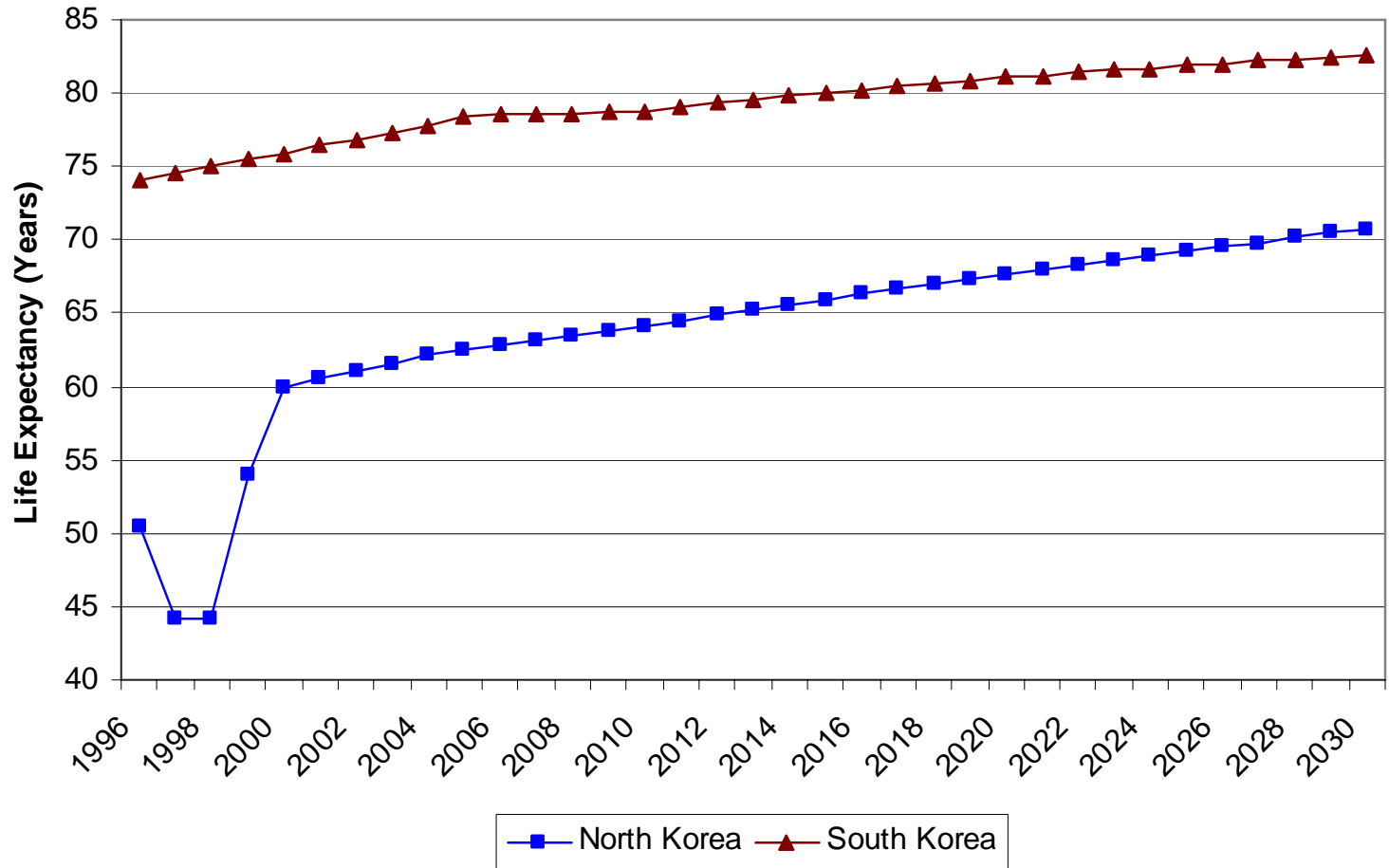


Sources: Annual vital registration data from South Korea, Taiwan, Hong Kong, S.A.R., Singapore (Chinese), Japan

Courtesy of Daniel Goodkind, U.S. Census Bureau, International Programs Center

Life Expectancy at Birth (combined): North Korea vs. South Korea, 1996-2030

[US Census Bureau estimates and projections]



Life Expectancy at Birth (combined): North Korea vs. South Korea, 1950-2030

[UNPD estimates and projections]

