

# **Europe's Coming Demographic Challenge: Unlocking the Value of Health**

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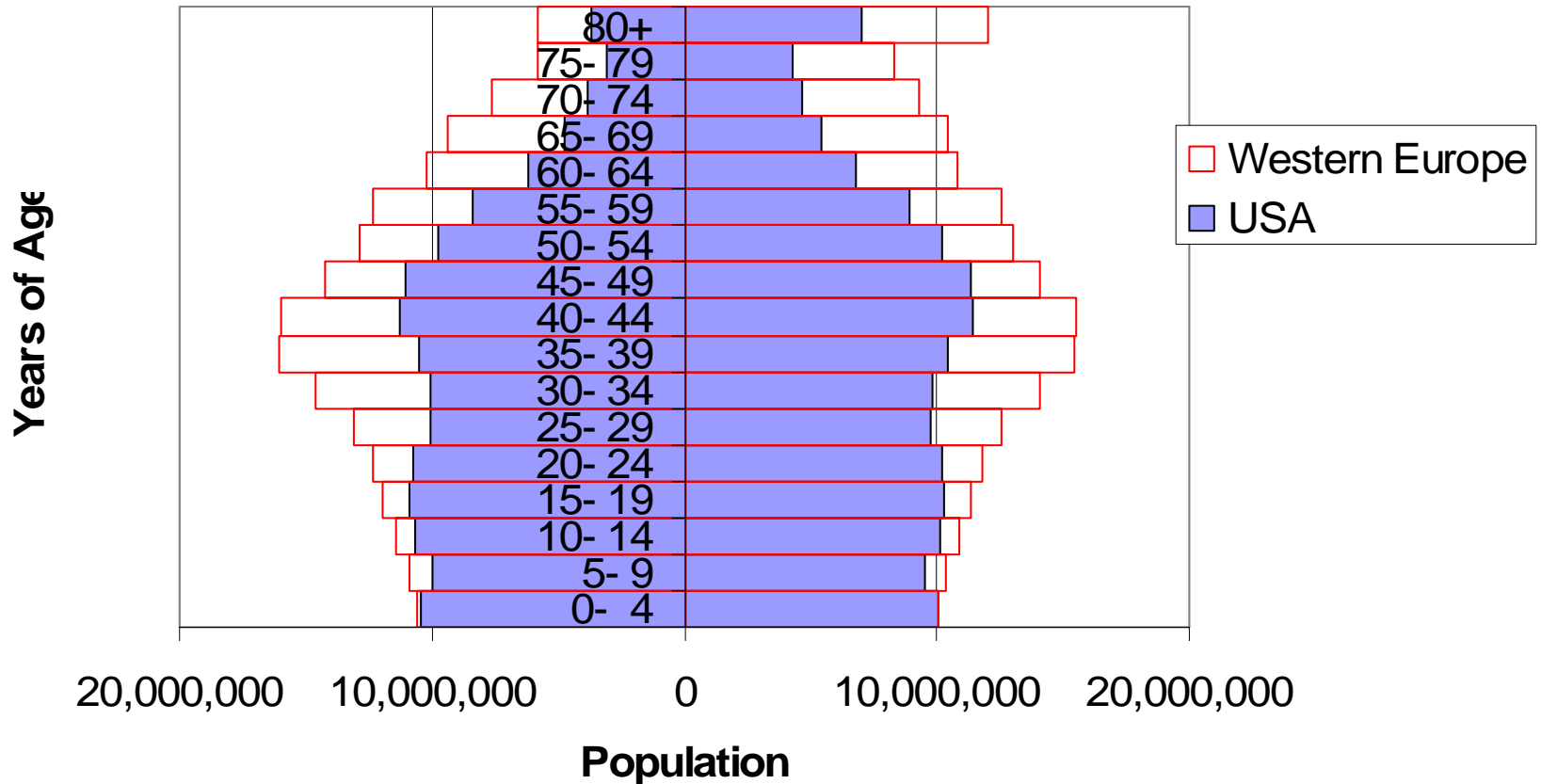
**[hans.groth@pfizer.com](mailto:hans.groth@pfizer.com)**

**December 2007**

# Outline of Presentation

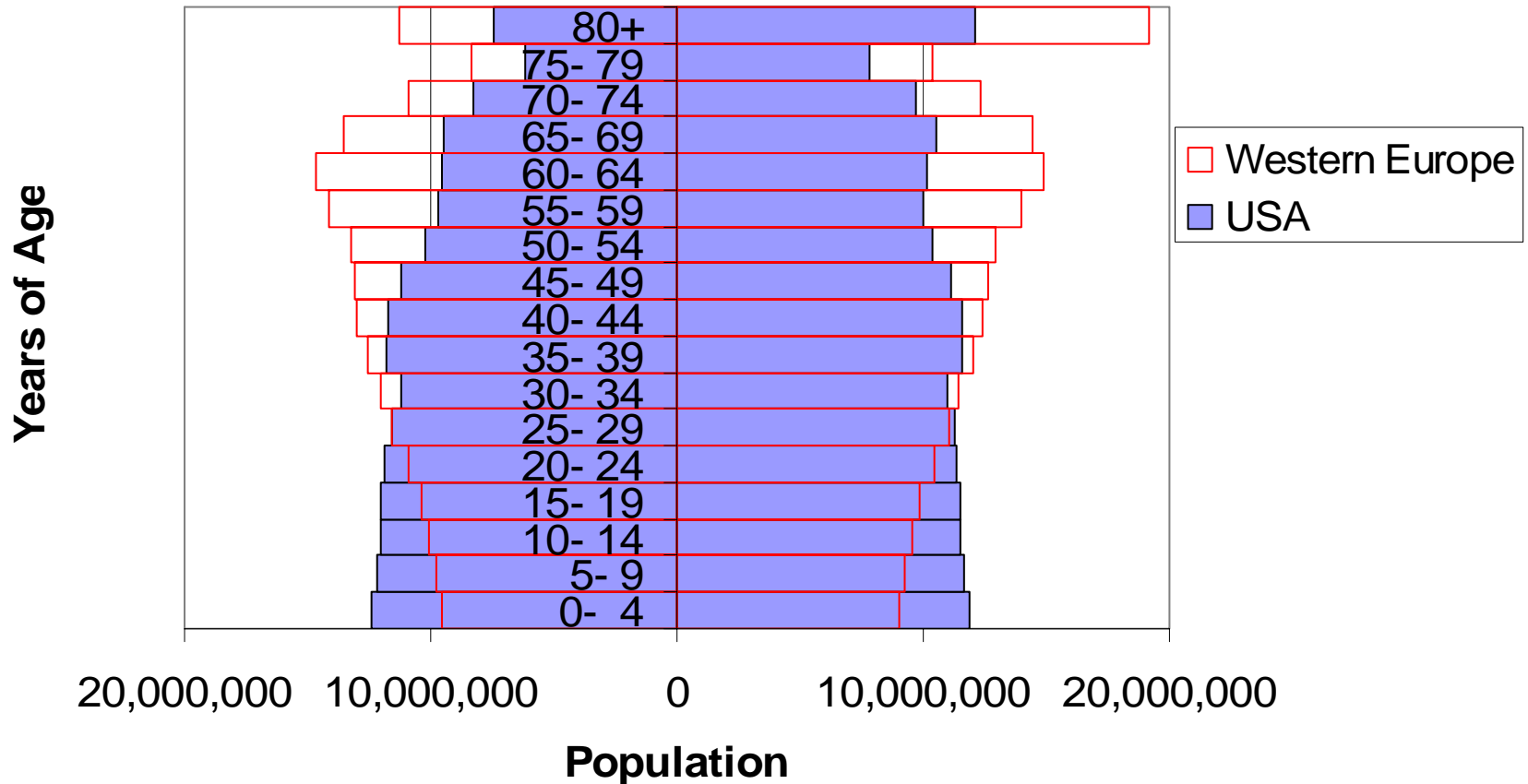
- Western European Demographic Prospects: Dimensions and Implications
- Can Pro-natalist or Immigration Policies Compensate?
- The Economic Promise of “Healthy Aging”
- Western Europe’s Retreat from Work at Older Ages
- Unlocking the Value of Health in Europe: Policy Issues

# Western Europe vs. U.S. Population Structure, 2005



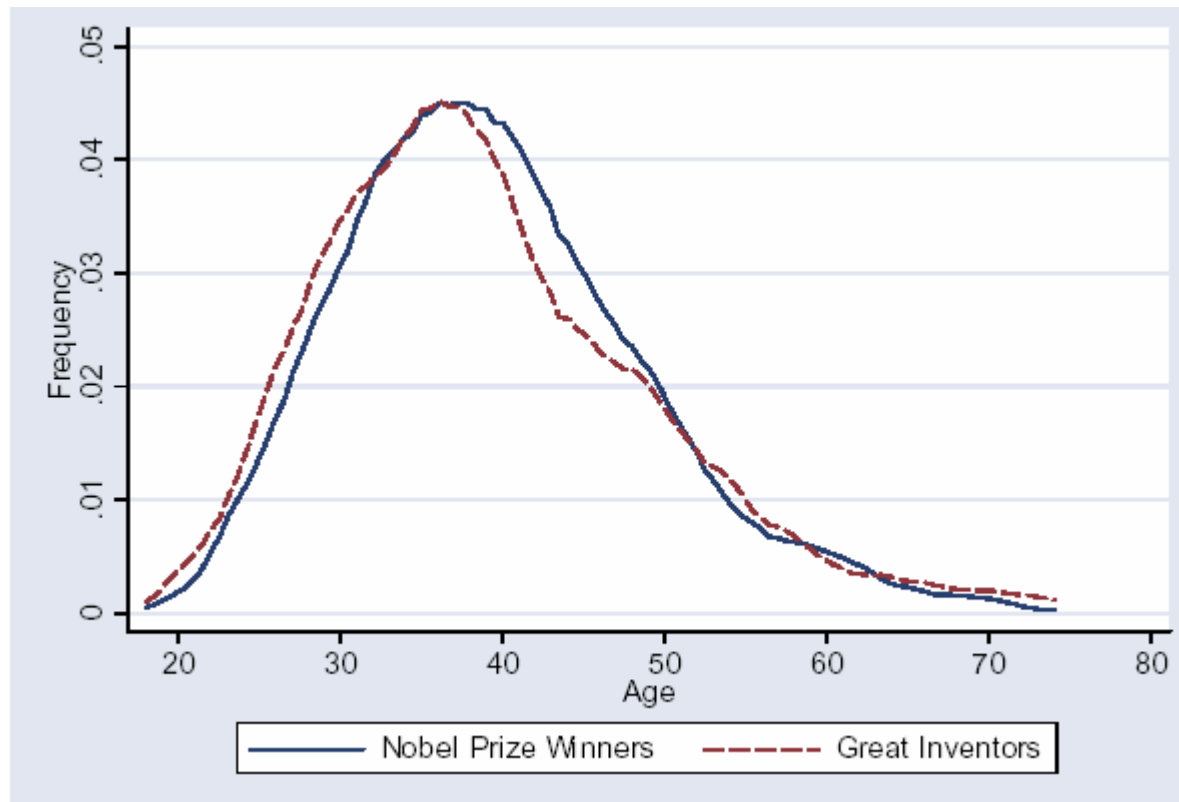
Note: "Western Europe" defined according to U.S. Census Bureau taxonomy as EU-15, plus Iceland, Norway, and Switzerland.  
Source: U.S. Census Bureau, International Data Base, <http://www.census.gov/cgi-bin/ipc/idbagg> (accessed June 1, 2007).

# Western Europe vs. U.S. Population Structure, 2030



Note: "Western Europe" defined according to U.S. Census Bureau taxonomy as EU-15, plus Iceland, Norway, and Switzerland.  
 Source: U.S. Census Bureau, International Data Base, <http://www.census.gov/cgi-bin/ipc/idbagg> (accessed June 1, 2007).

# The Age Distribution of Great Innovation

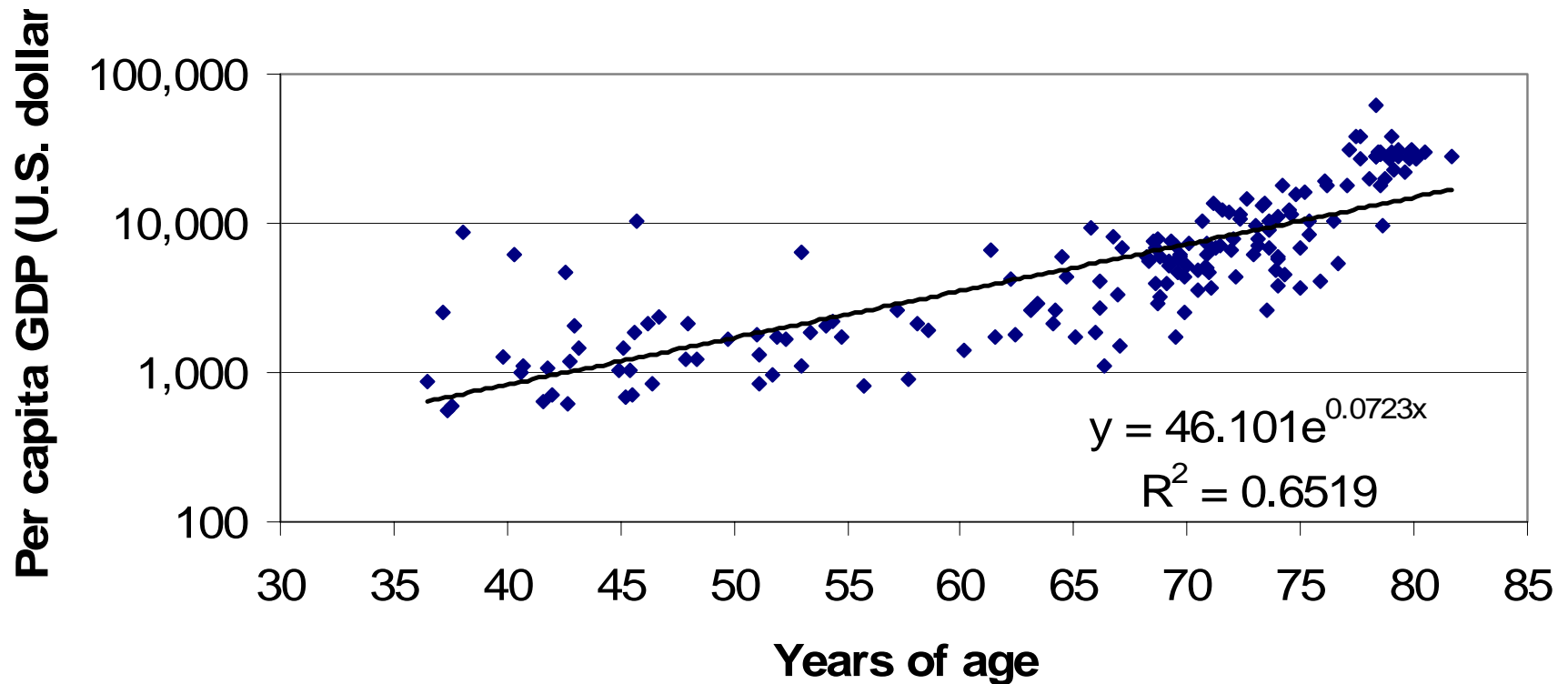


Benjamin F. Jones, "Age and Great Invention" (Working Paper 11359, National Bureau of Economic Research, May 2005), <http://www.nber.org/papers/11359> (accessed July 2, 2007).

# The Economic Promise of “Healthy Aging”:

Potential Source of Growth  
And Prosperity  
For Western Europe

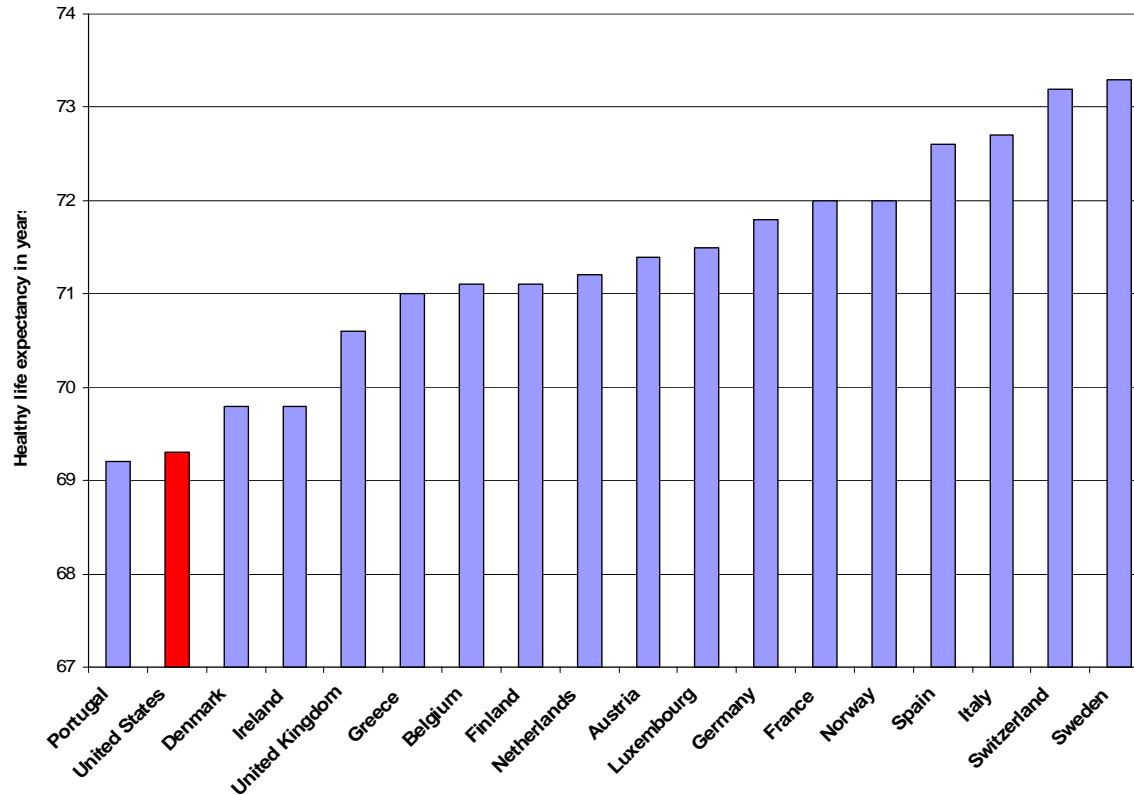
# Health Equals Wealth: Life Expectancy vs. Per Capita GDP (PPP)



Note: Estimates are for the year 2001.

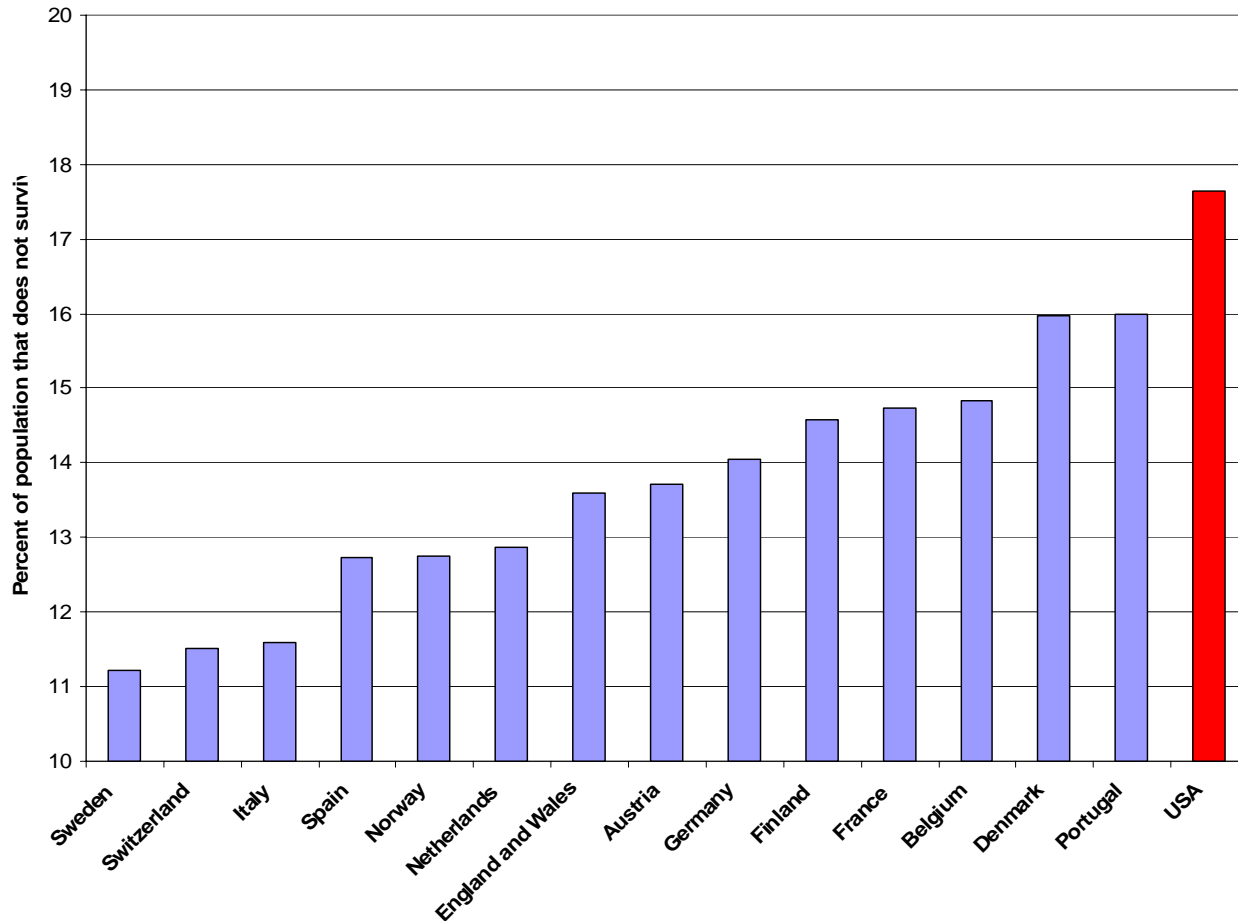
Source: World Bank, *World Development Indicators 2003* (Washington, D.C.: World Bank, 2003).

# Healthy Life Expectancy: Western Europe vs. U.S.



Source: Organisation for Economic Co-operation and Development, *Society at a Glance: OECD Social Indicators, 2005 Edition* (Paris: OECD, 2005).

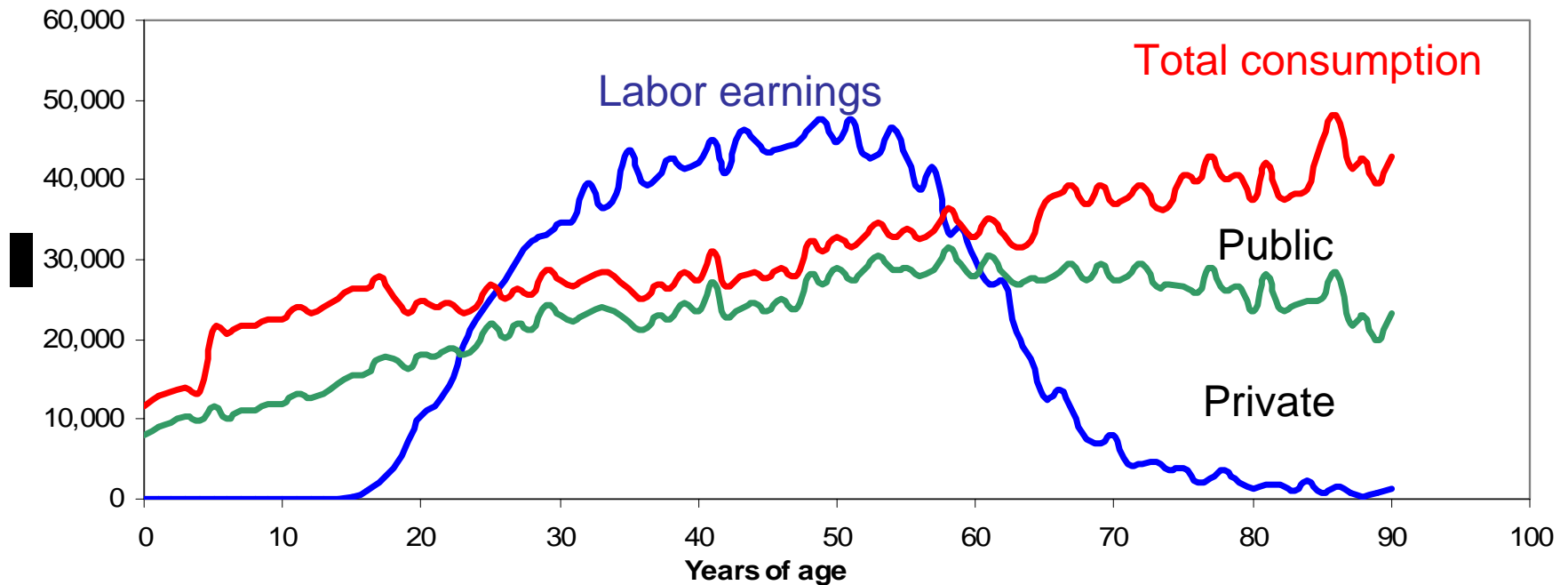
# Odds of *Not* Surviving from Age 20 to Age 65: Western Europe vs. U.S.



Note: Based on age-specific mortality schedules for the year 2002.

Source: University of California, Berkeley (USA) and Max Planck Institute for Demographic Research (Germany), Human Mortality Database, <http://www.mortality.org> (accessed December 21, 2006).

# U.S. Consumption and Labor Earnings by Age, 2000

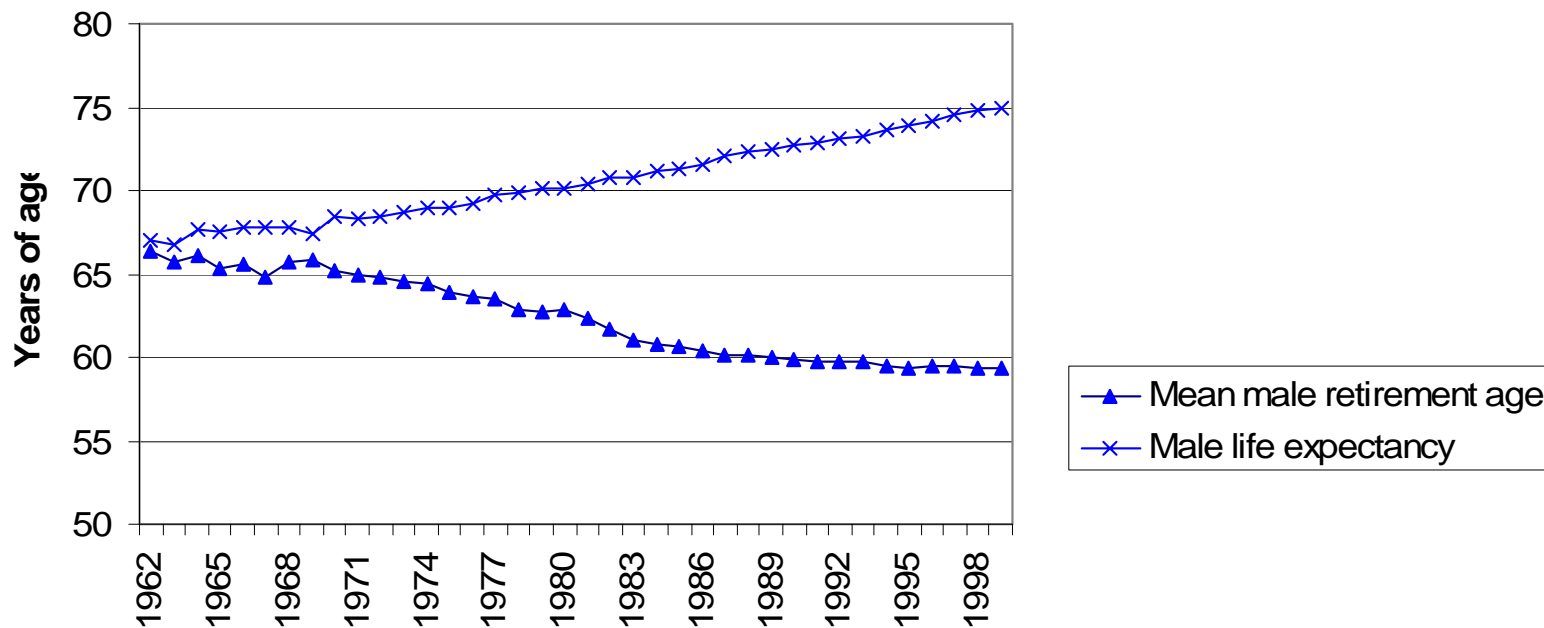


Source: Ronald D. Lee, *Global Population Aging and Its Economic Consequences* (Washington, D.C.: AEI Press, 2007).

The Reality To Date:

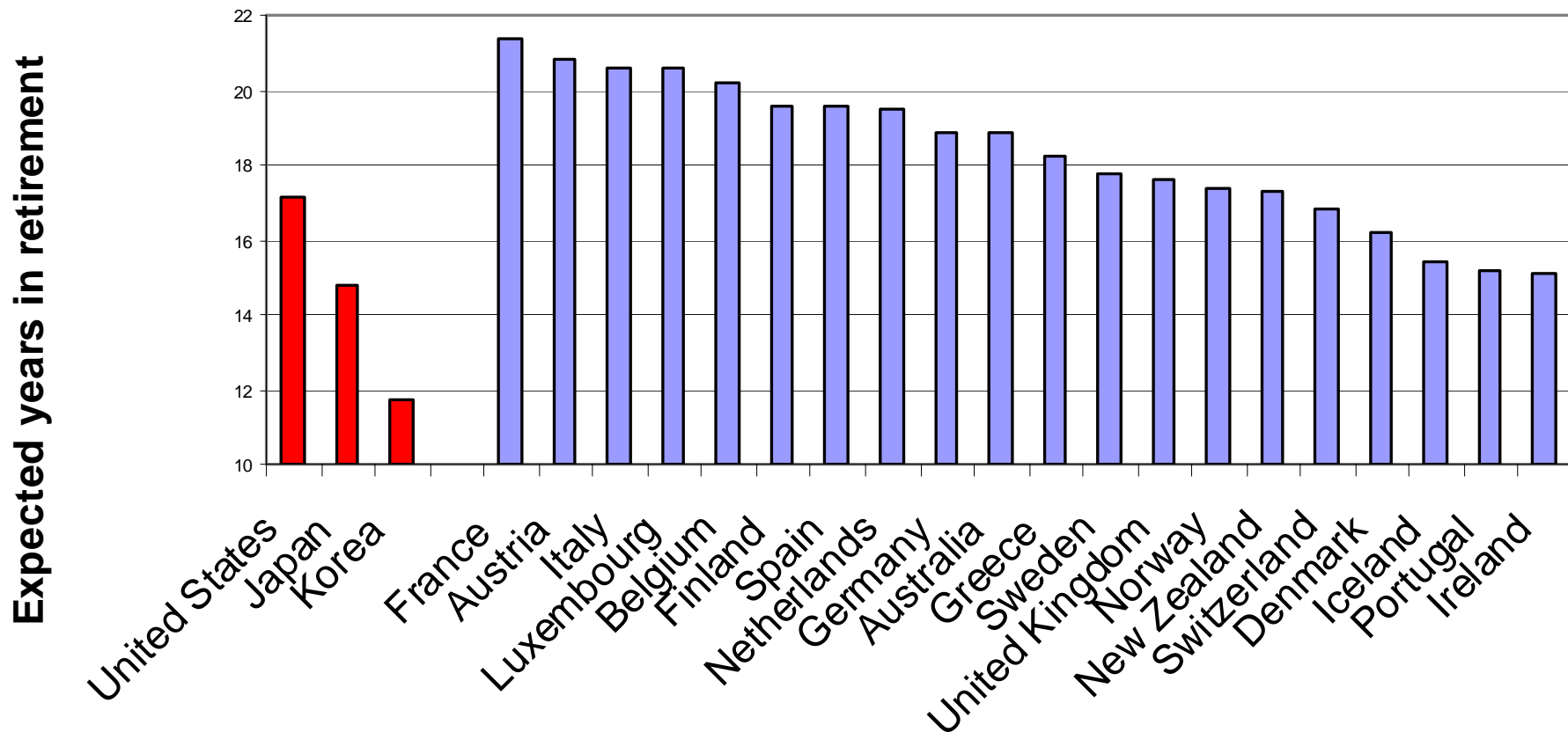
Western Europe's Retreat  
From Paid Work  
At Older Ages

# Male Retirement Age vs. Life Expectancy in France, 1962-99



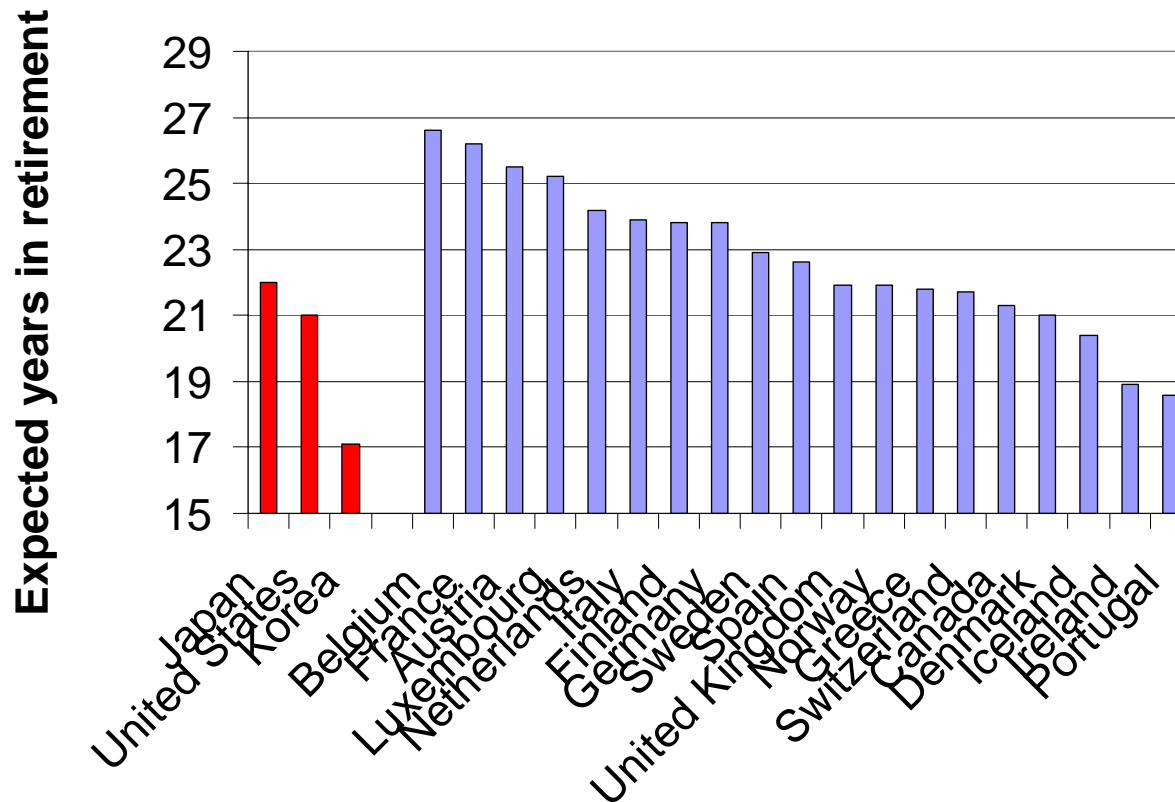
Sources: University of California, Berkeley (USA) and Max Planck Institute for Demographic Research (Germany), Human Mortality Database, <http://www.mortality.org> (accessed August 3, 2006); and Peter Scherer, *Age of Withdrawal from the Labour Force in OECD Countries* (occasional paper, Labor Market and Social Policy, OECD, Paris, France, January 11, 2002).

# Expected Years in Retirement for Males: OECD Countries, 2004



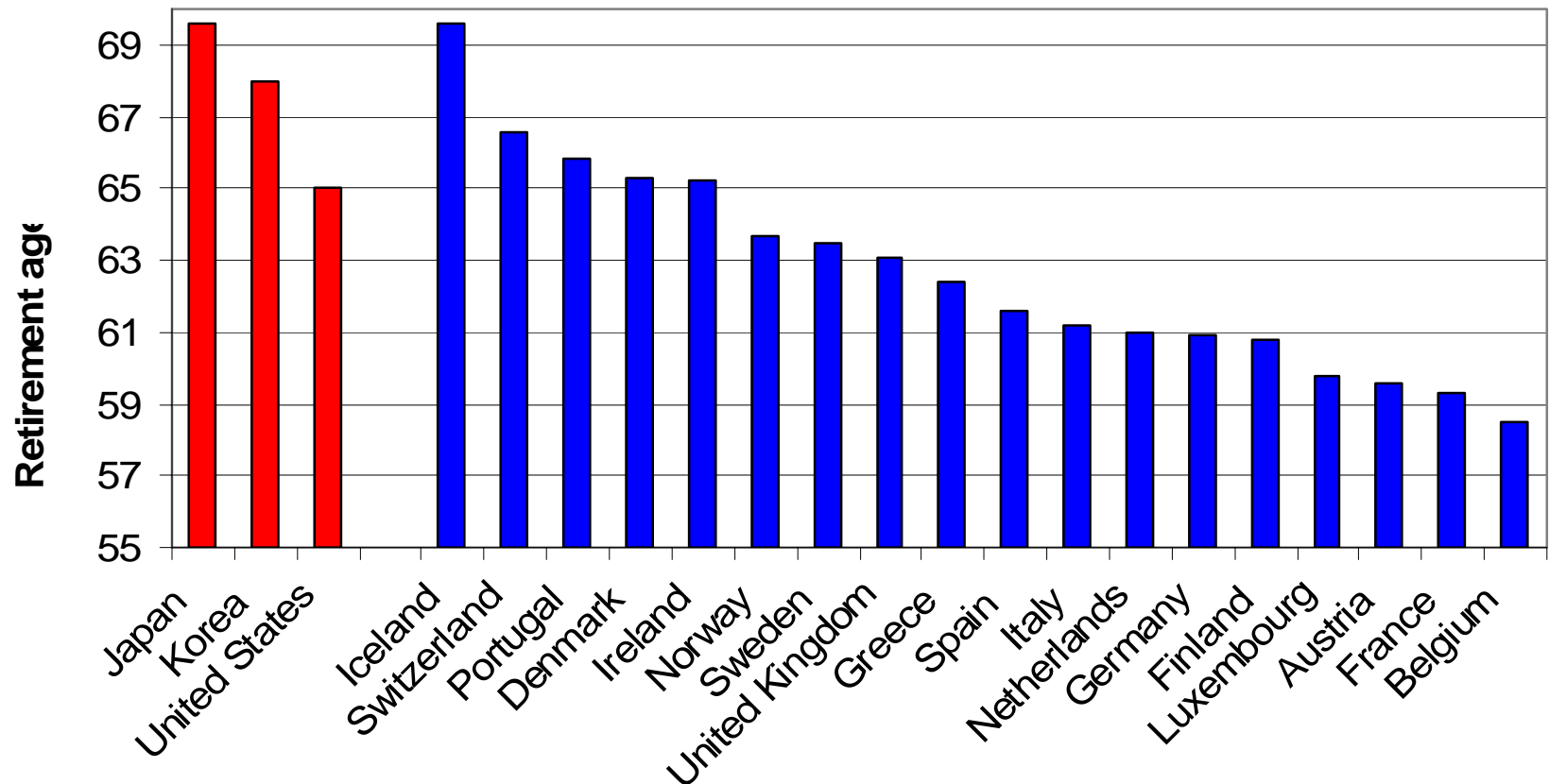
Source: Organisation for Economic Co-operation and Development (OECD), *Live Longer, Work Longer 2006* (Paris: Organisation for Economic Co-operation and Development, 2006).

# Expected Years in Retirement for Females: OECD Countries, 2004



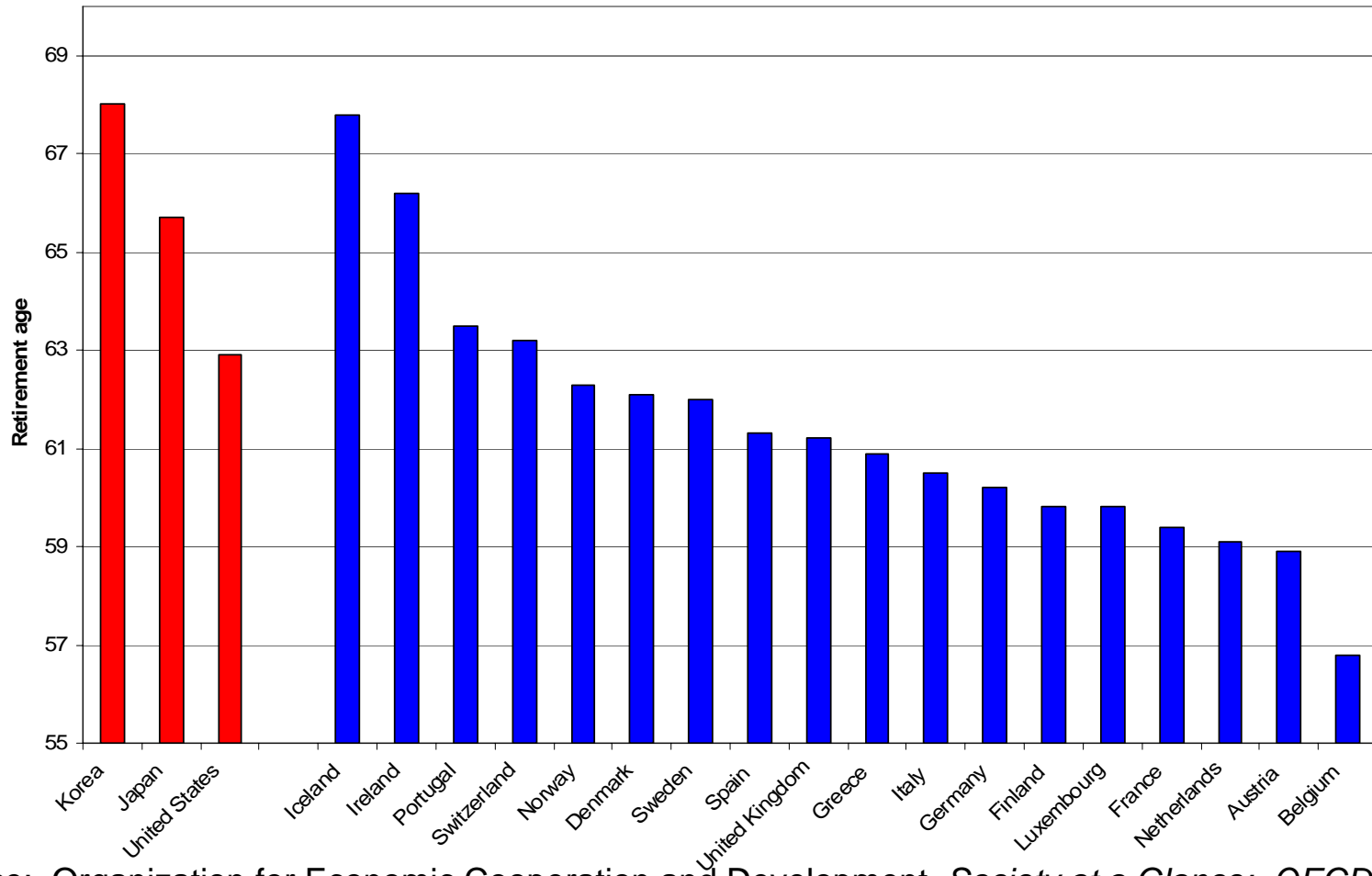
Source: Organisation for Economic Co-operation and Development (OECD), *Live Longer, Work Longer 2006* (Paris: Organisation for Economic Co-operation and Development, 2006).

# Effective Age of Retirement for Men, 1997-2002: Western Europe vs. Selected Non-European OECD Countries



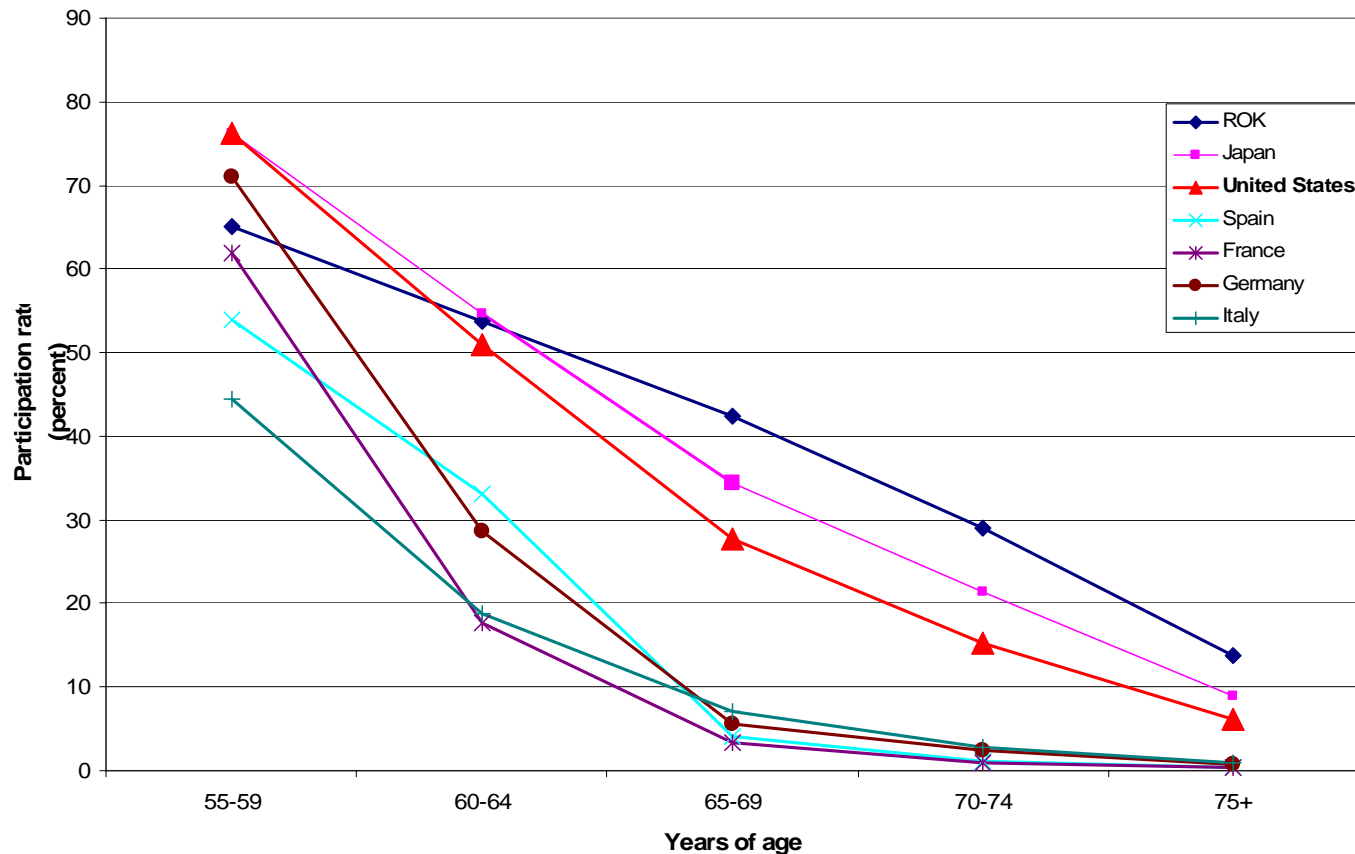
Source: Organization for Economic Cooperation and Development, *Society at a Glance: OECD Social Indicators*, 2005 Edition (Paris: OECD, 2005).

# Effective Age of Retirement for Women, 1997-2002: Western Europe vs. Selected Non-European OECD Countries



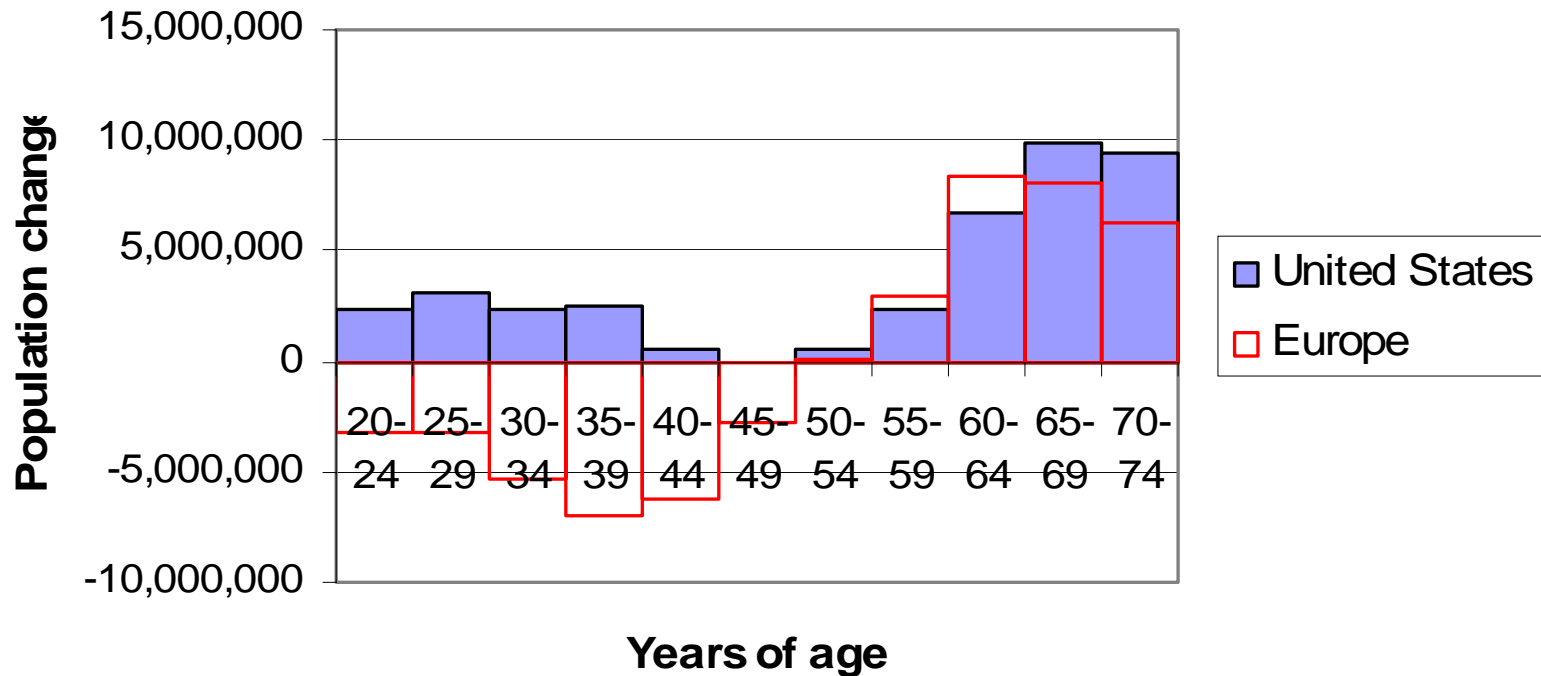
Source: Organization for Economic Cooperation and Development, *Society at a Glance: OECD Social Indicators*, 2005 Edition (Paris: OECD, 2005).

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



Source: International Labour Organization, LABORSTA, <http://laborsta.ilo.org/>.  
Note: Data are for 2004, except for Italy (2005).

# Population Change in Western Europe vs. U.S. by Age Group, 2005-30

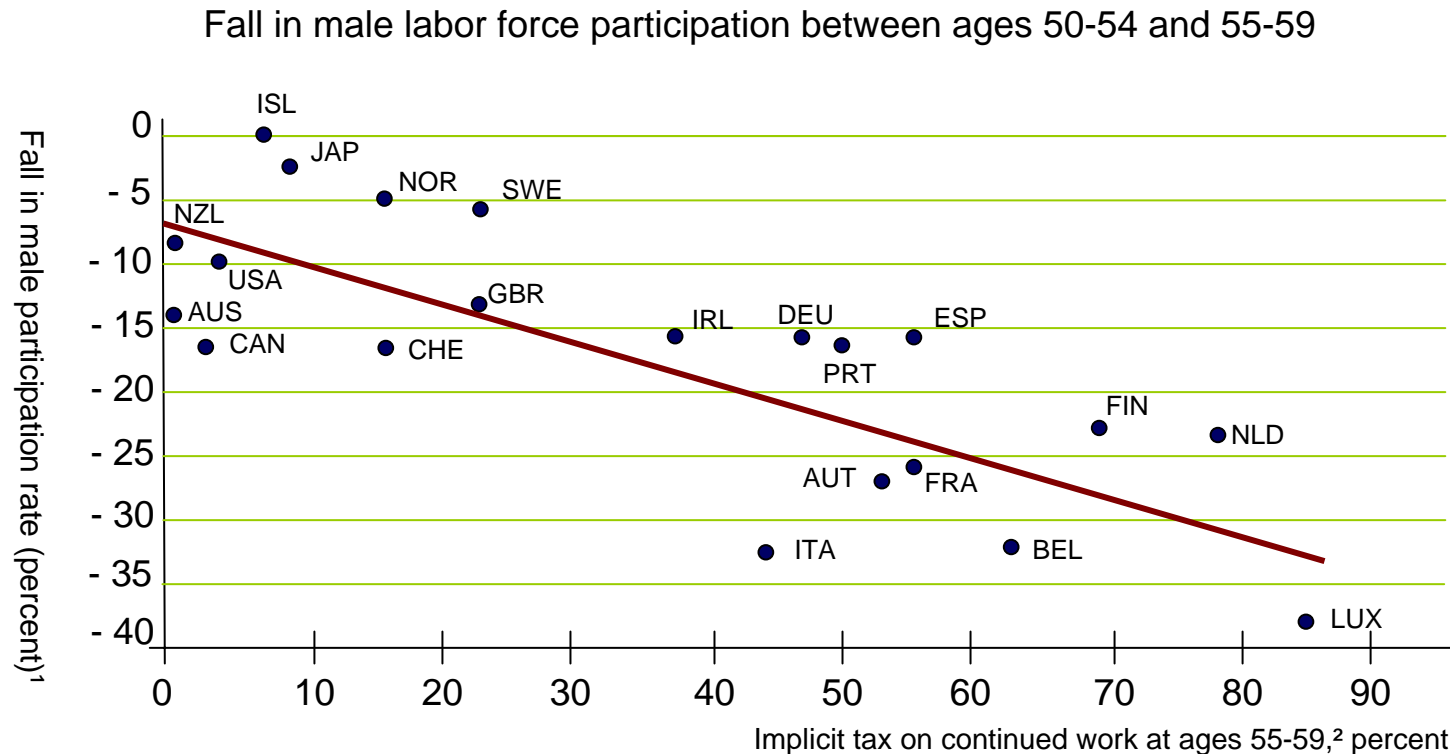


Source: U.S. Census Bureau, International Data Base, <http://www.census.gov/cgi-bin/ipc/idbagg> (accessed August 3, 2006).

# Policy Issues:

- Labor Markets/Pensions
- Educational Systems
- Health/Medical Care

# Incentives to Retire and Retirement Behavior



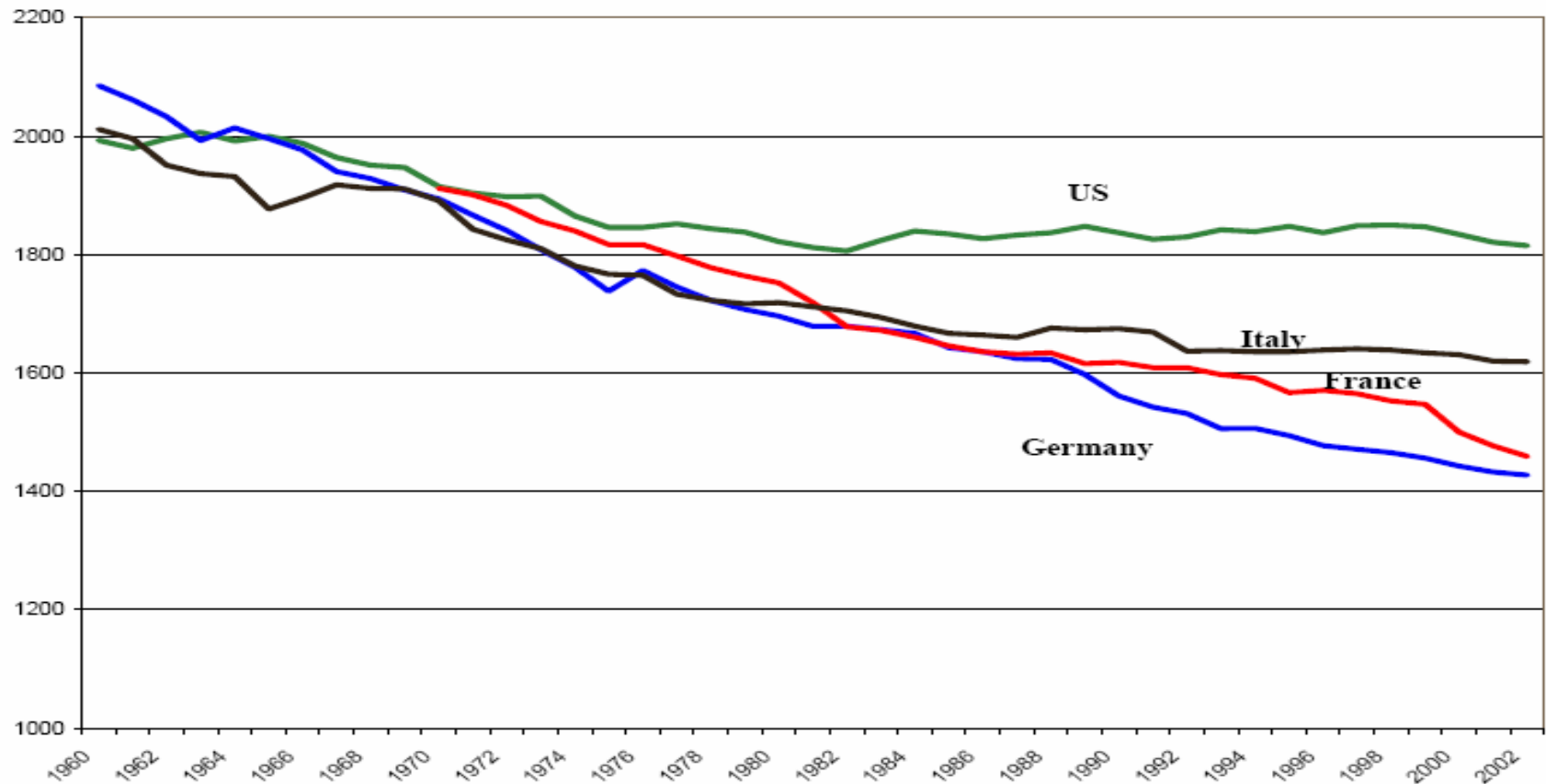
1. Difference in participation rates between the age groups 55-59 and 50-54 as a percentage of the participation rate of those ages 50-54 years.

2. The implicit tax on working an additional year is the forgone transfer/pension income plus the additional pension contributions paid, minus any increase in future pensions as a result of delayed retirement, all expressed as a share of income from work. The calculations in all cases take account of the "regular" old-age pension scheme but consider somewhat different early retirement pathways depending on the country in question or, where such schemes do not apply widely, no such pathways.

Source: Geir H. Haarde, "Strengthening Growth and Public Finances in an Era of Demographic Change" (background paper, Organisation for Economic Co-operation and Development, Paris, France, May 13-14, 2004)

# Annual Hours Worked: United States vs. Major Continental Economies

OECD data. Annual hours per employed person. Annual hours are equivalent to 52\*usual weekly hours minus holidays, vacations, sick leave.



Source: Alberto Alesina, Edward Glaeser, and Bruce Sacerdote, "Work and Leisure in the U.S. and Europe: Why So Different?" (Discussion Paper 2068, Harvard Institute of Economic Research, April 2005).

# Educational Attainment for the Adult Population: Western Europe, the United States, and Western European Residents in the United States, c. 2000

	Educational attainment of population ages 25–64 by country (percent)			Educational attainment of foreign-born ages 25+ living in the U.S. by country of origin (percent)	
	Below upper secondary	Upper Secondary and post-secondary	Tertiary		Tertiary
Austria	24.3	61.8	13.9		37.9
Belgium	41.5	31.4	27.1		46.7
Denmark	19.8	53.7	26.5		47.6
Finland	26.2	41.5	32.3		51.8
France	36.1	40.6	23		51.8
Germany	17.4	59.4	23.2		33.7
Greece	48.6	33.6	17.8		23.5
Ireland	42.4	22	35.6		30
Italy	56.7	33.2	10		17
Luxembourg	47.3	34.6	18.1		39.8
Netherlands	45	32	22.2		44.8
Portugal	80.1	10.8	9		10.4
Spain	59.7	16.2	23.6		38.2
Sweden	19.4	49	31.6		51.2
United Kingdom	37.1	36.9	26.1		42
Iceland (2001)	36	39	25		47
Norway (2001)	15	56	29		43.5
Swizerland (2001)	12	62	26		53.8
EU-15	38.9	37.3	23.8		
United States	12.3	50.3	37.3		

Note: Definitions of educational level here are from the International Standard Classification of Education (ISCED-97); for the U.S. educational system, “tertiary education” would include not only graduate study and a bachelor’s degree, but also training for an associate’s degree.

Sources: Andre Sapir et al., *An Agenda for a Growing Europe* (New York: Oxford University Press, 2004), table 4.4; U.S. Census Bureau, "United States Foreign Born Population: Foreign-Born Profiles," <http://www.census.gov/population/www/socdemo/foreign/datatbls.html> (accessed June 1, 2007); Organisation for Economic Co-operation and Development, *Education At A Glance: OECD Indicators, 2002* (Paris: OECD, 2002), table A3.1a.