

Thinking about Pensions

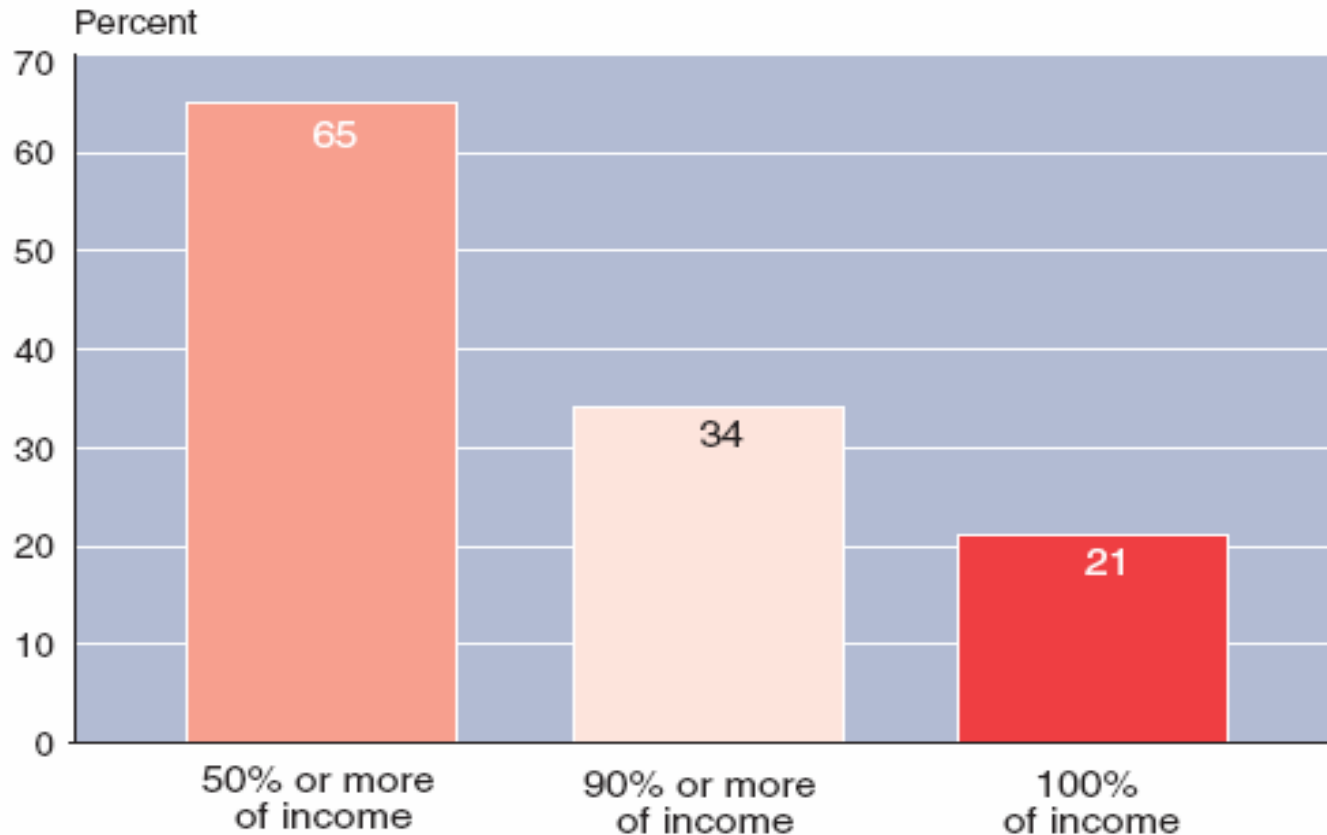
Peter Diamond
September 28, 2007

Reforming Pensions: Principles and policy

Nicholas Barr and Peter Diamond

Reliance on Social Security, 2003

Percentage of the aged receiving Social Security benefits, by
Relative importance of benefits to total income



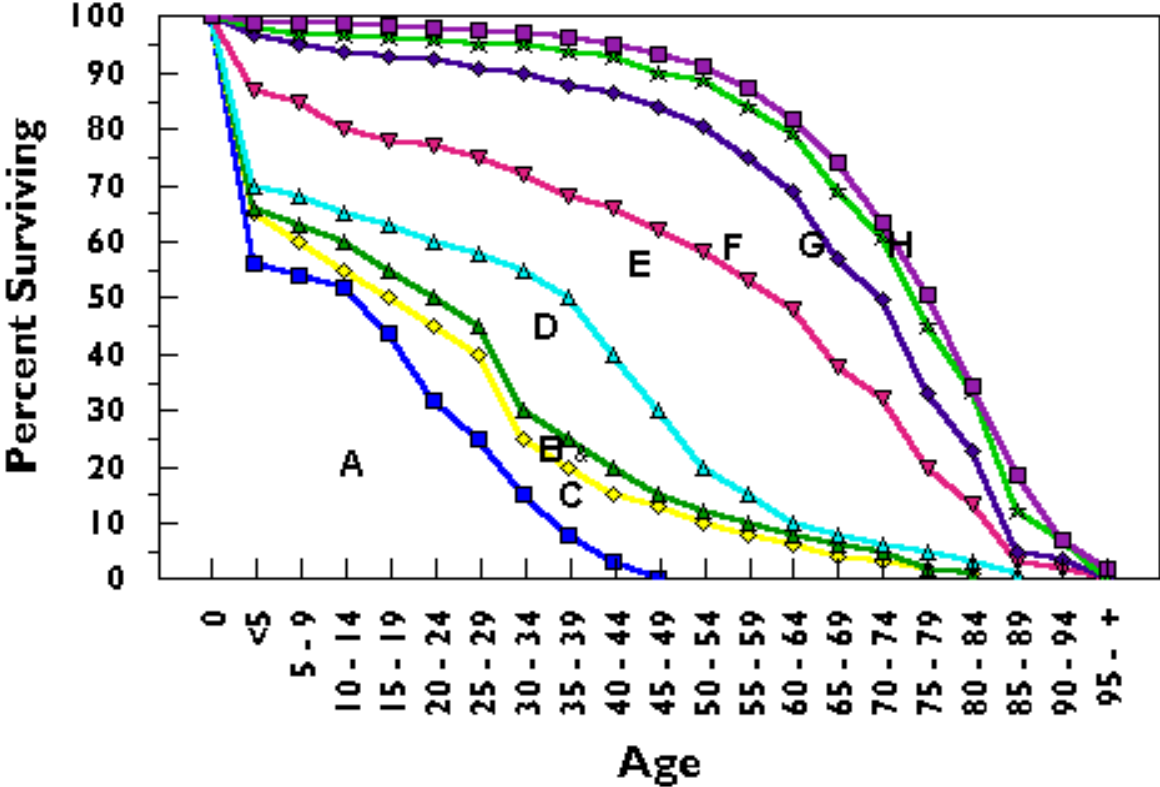
Source: Fast Facts & Figures about Social Security, 2005
SSA Publication # 13-11785, September 2005

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"Winning is crucial to my retirement plans."

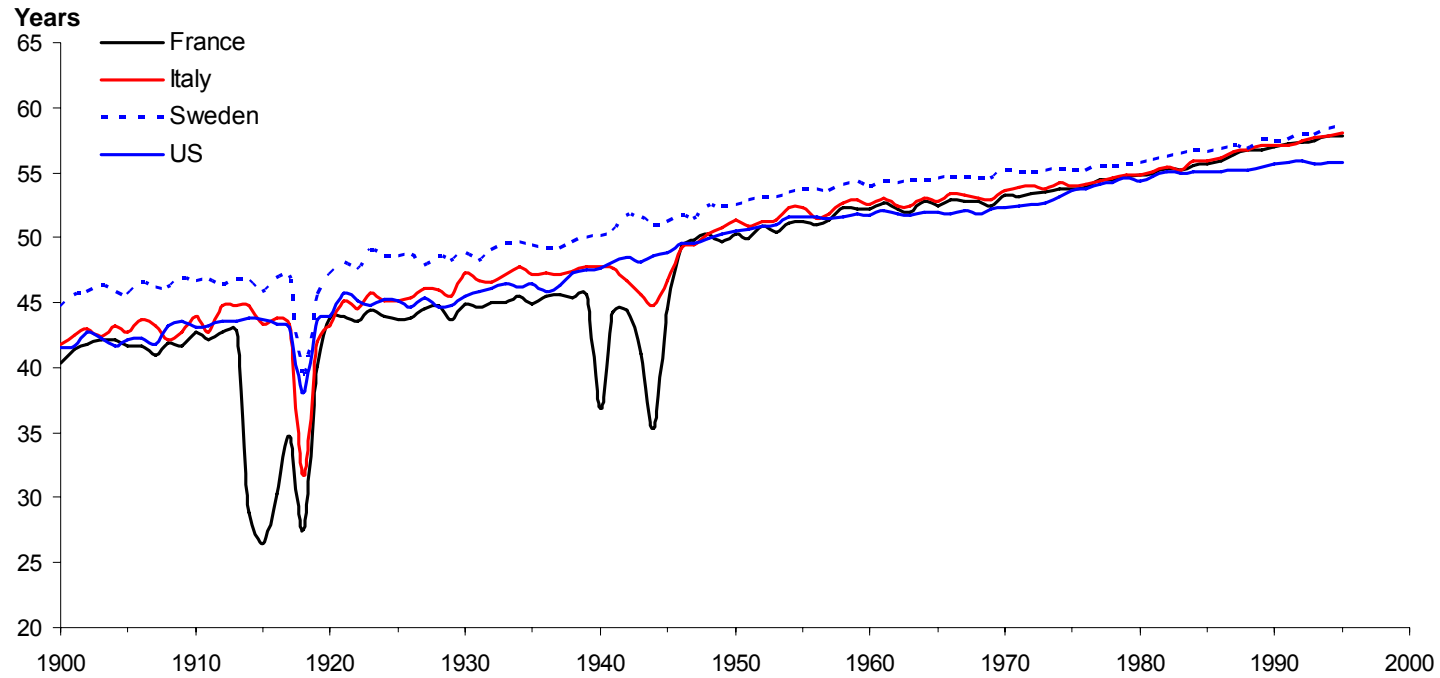
Survival Curves



A= Stone Age
 B&C = Greece and Rome
 D = 1800 England
 E = 1900 US
 F = 1941 US
 G = 1961 US
 H = 1998 US

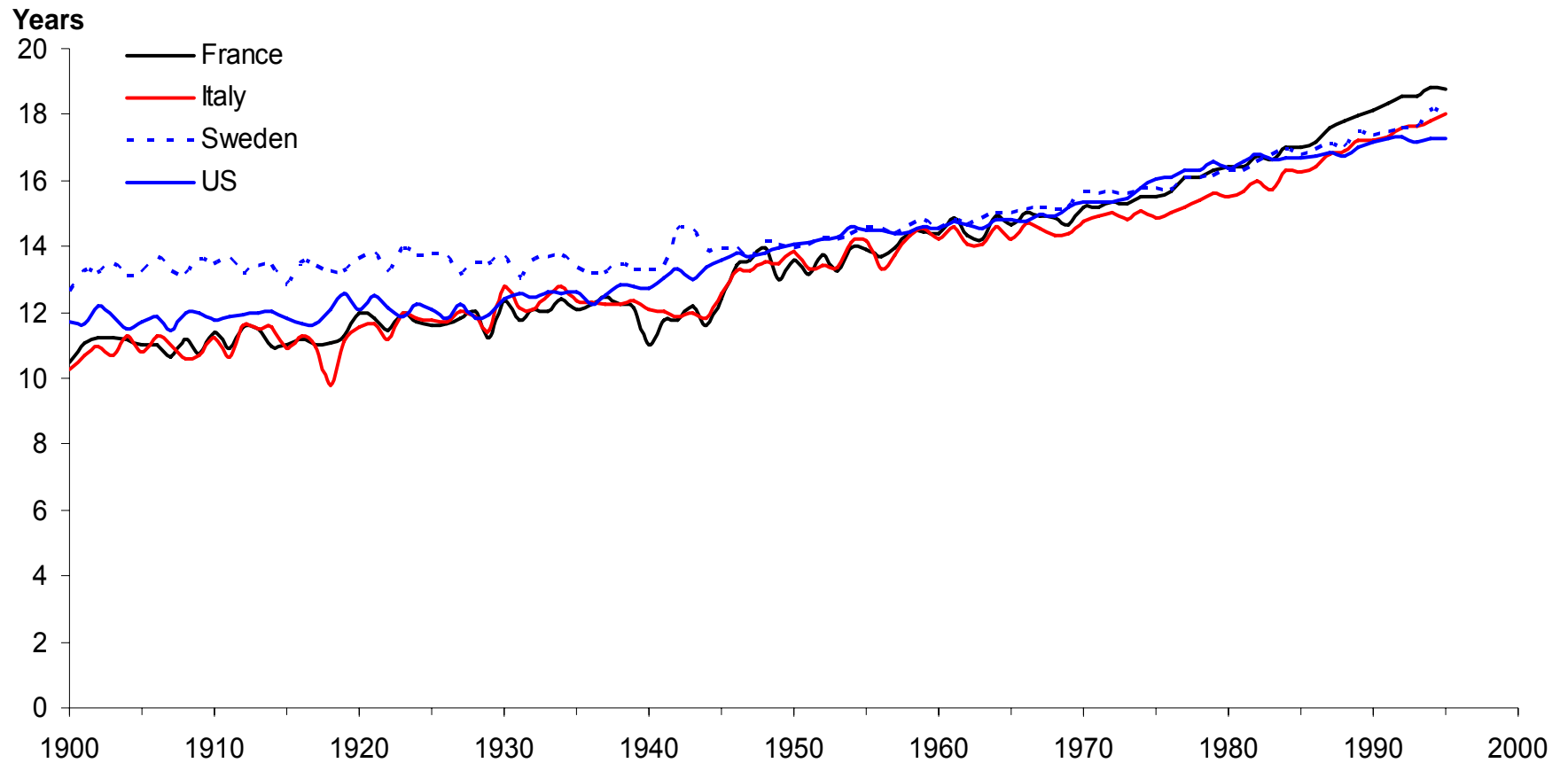
Source: Foundation for Infinite Survival, Inc. Berkeley CA, historical slide no. 6.

Remaining Life Expectancy at 21 (Men and Women)



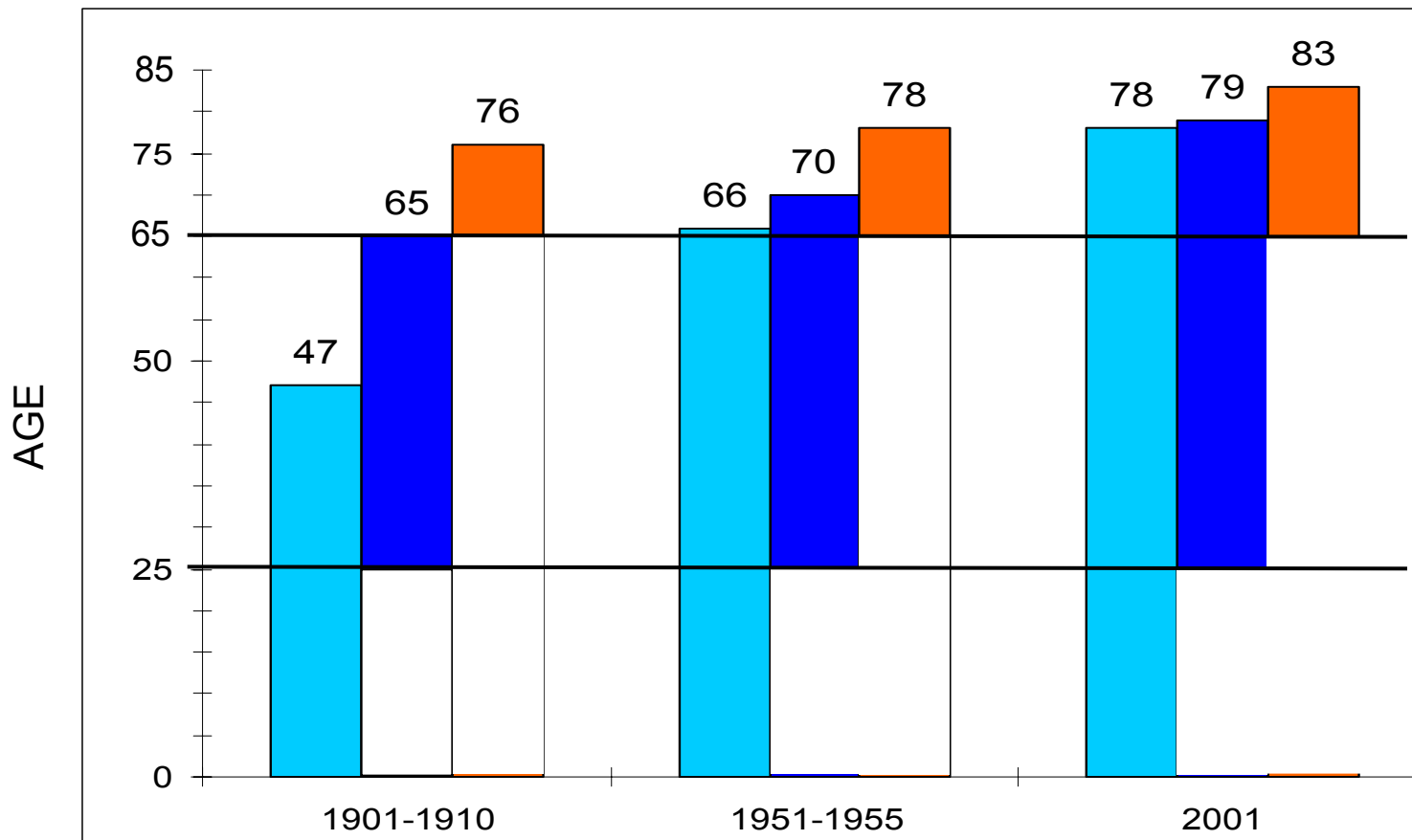
Source: For the US, Berkeley Mortality Database. For other countries, Human Mortality Database.

Remaining Life Expectancy at 65 (Men and Women)



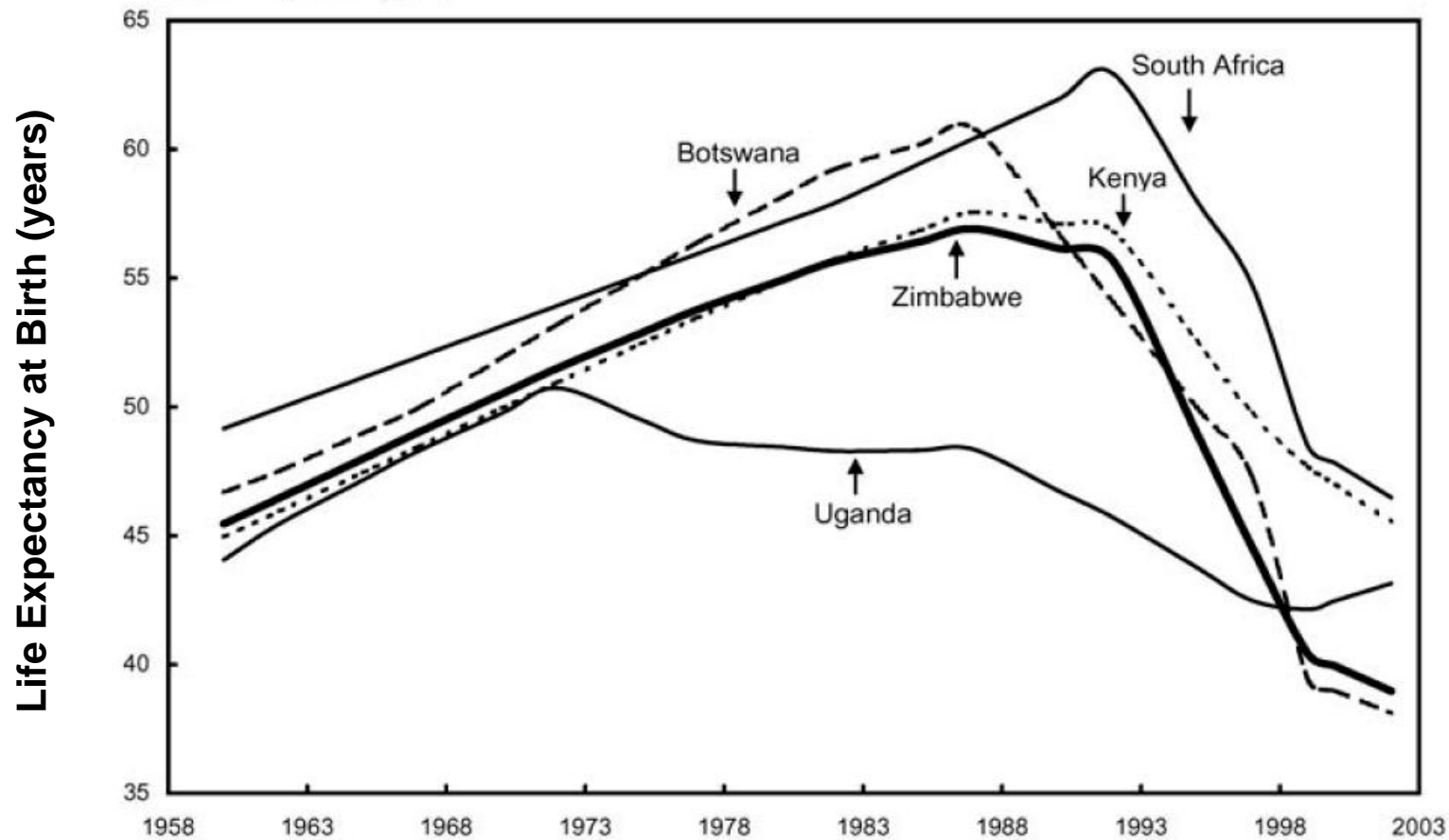
Source: For the US, Berkeley Mortality Database. For other countries, Human Mortality Database.

Changes in Life Expectancy in Finland at Birth, ages 25 and 65



Source: “Longevity is Increasing – What about the Retirement Age?”, Christina Lindell, Finnish Centre for Pensions, Working Paper 6, chart 1. *StatFin*.

Changes in Life Expectancy in Select African Countries from 1960 to 2002



Source: World Development Indicators, World Bank, 2004

Second Edition

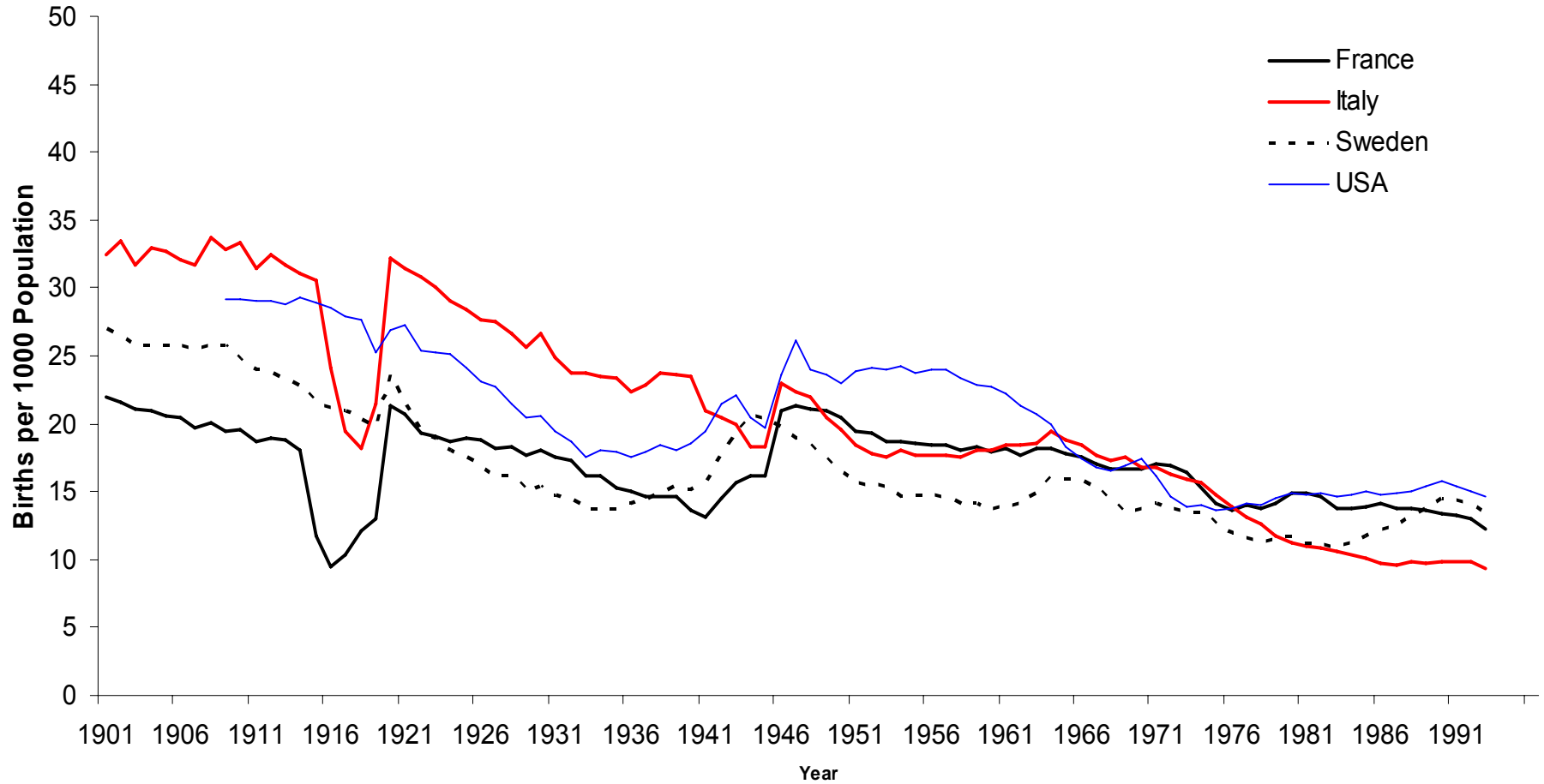
SAVING SOCIAL SECURITY

A
Balanced
Approach

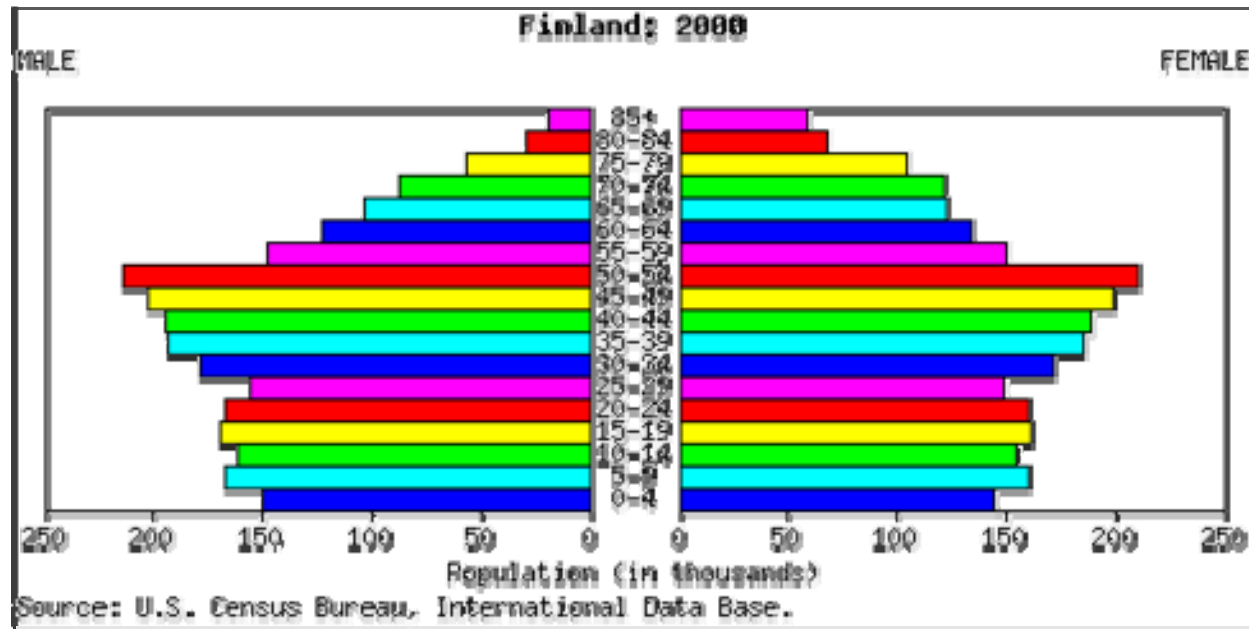
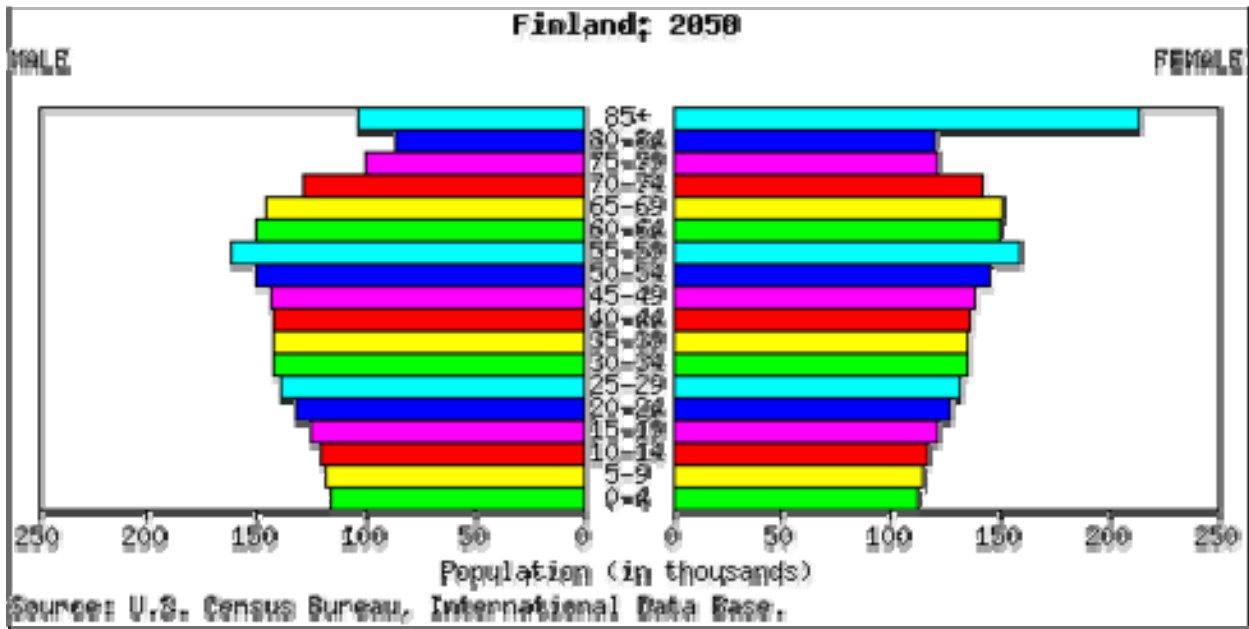
Peter A. Diamond

Peter R. Orszag

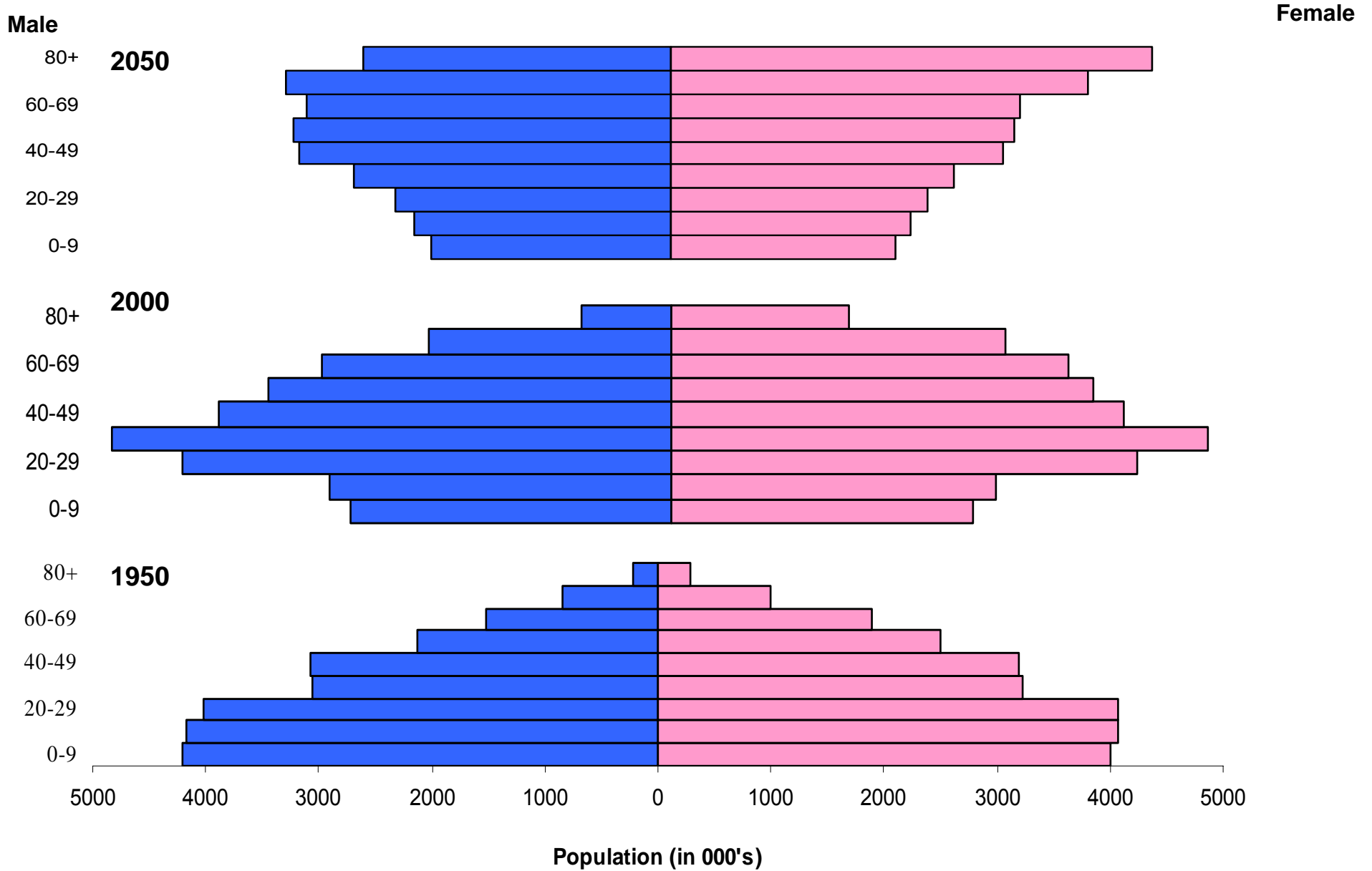
Crude Birth Rates



Source: Mitchell, Brian R. 1998. *International Historical Statistics: The Americas, 1750-1993, 4th ed.* New York: Stockton Press.
Mitchell, Brian R. 1998. *International Historical Statistics: Europe, 1750-1993, 4th ed.* New York: Stockton Press.

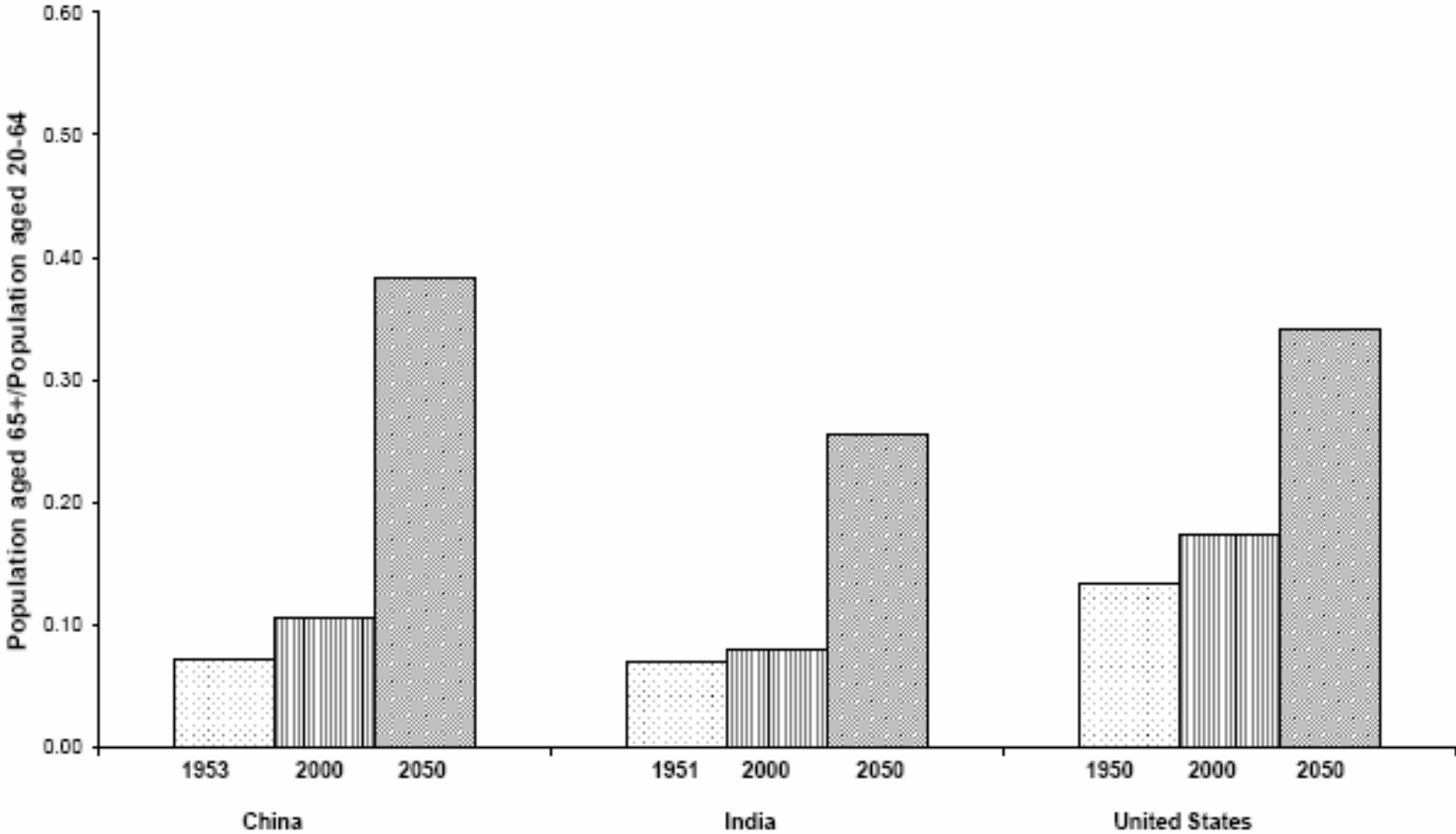


Age Pyramids, Italy (1950-2050)



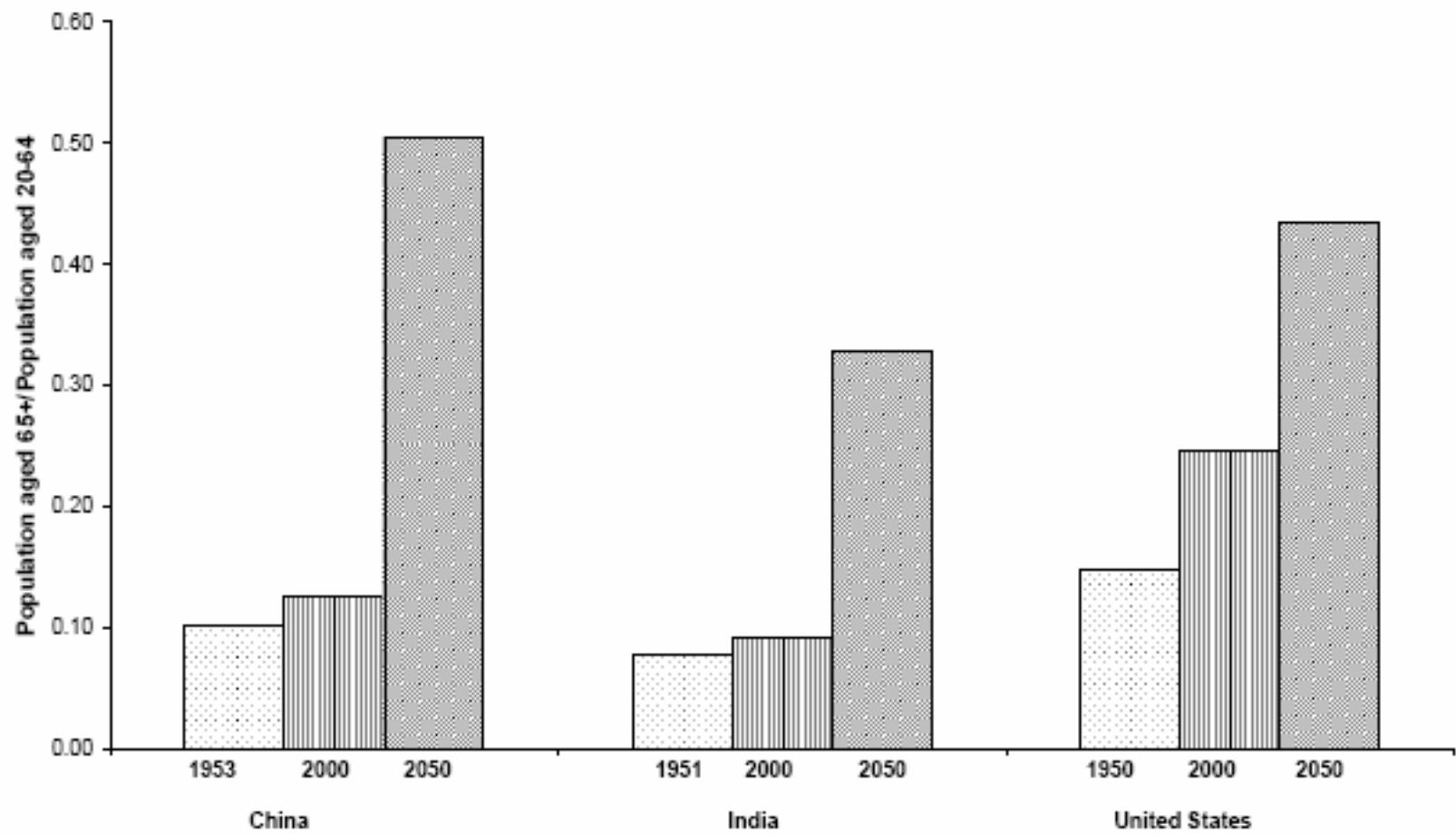
Source: Mitchell, Brian R. 1998. *International Historical Statistics: Europe, 1750-1993, 4th ed.* New York: Stockton Press (for 1901 and 1951). International Database, US Census Bureau (for others).

Age Dependency Ratio for Males



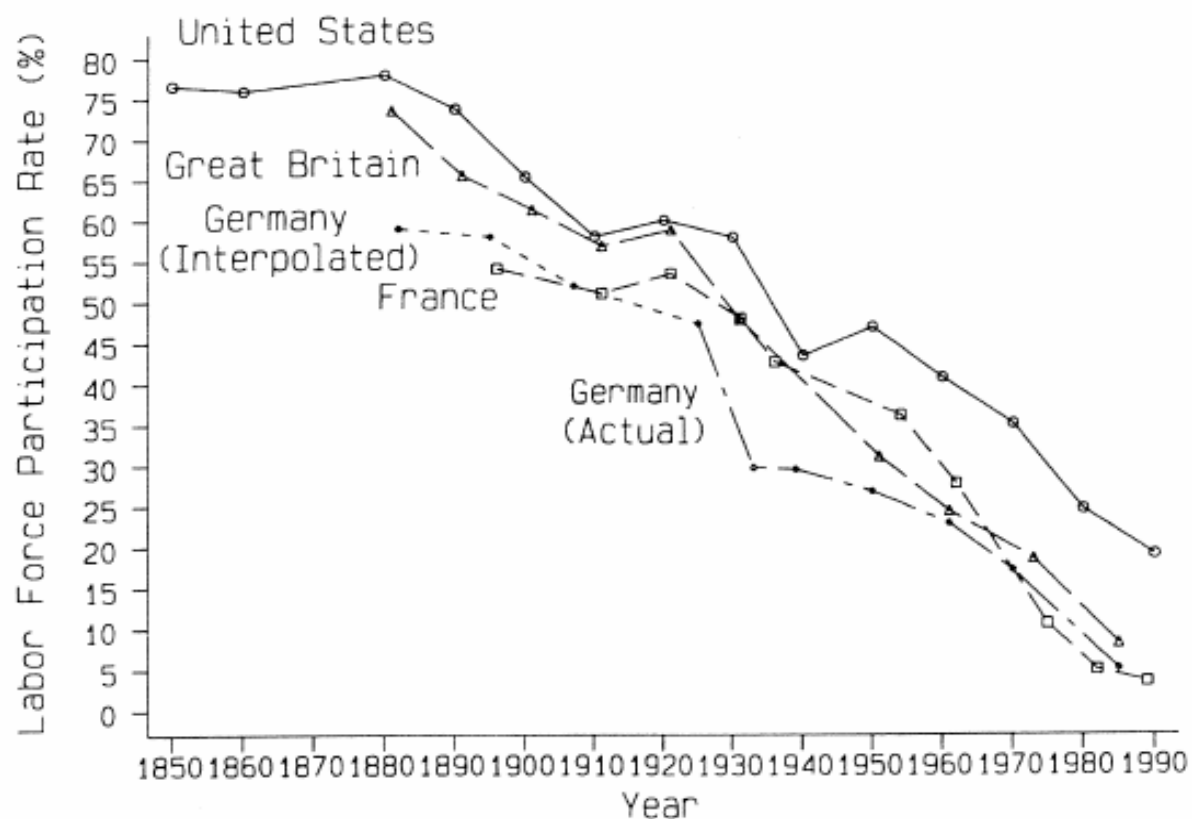
Source: Mitchell (1998a), U.S. Census Bureau, International Data Base

Age Dependency Ratio for Females



Source: Mitchell (1998a), U.S. Census Bureau, International Data Base

Labor Force Participation Rates of Men (aged 65 and over) for the United States, Britain, France, and Germany from 1850 to 1990



Source: The Evolution of Retirement: An American Economic History, 1880 to 1990, Dora L. Costa, University of Chicago Press, 1998, pg 9.

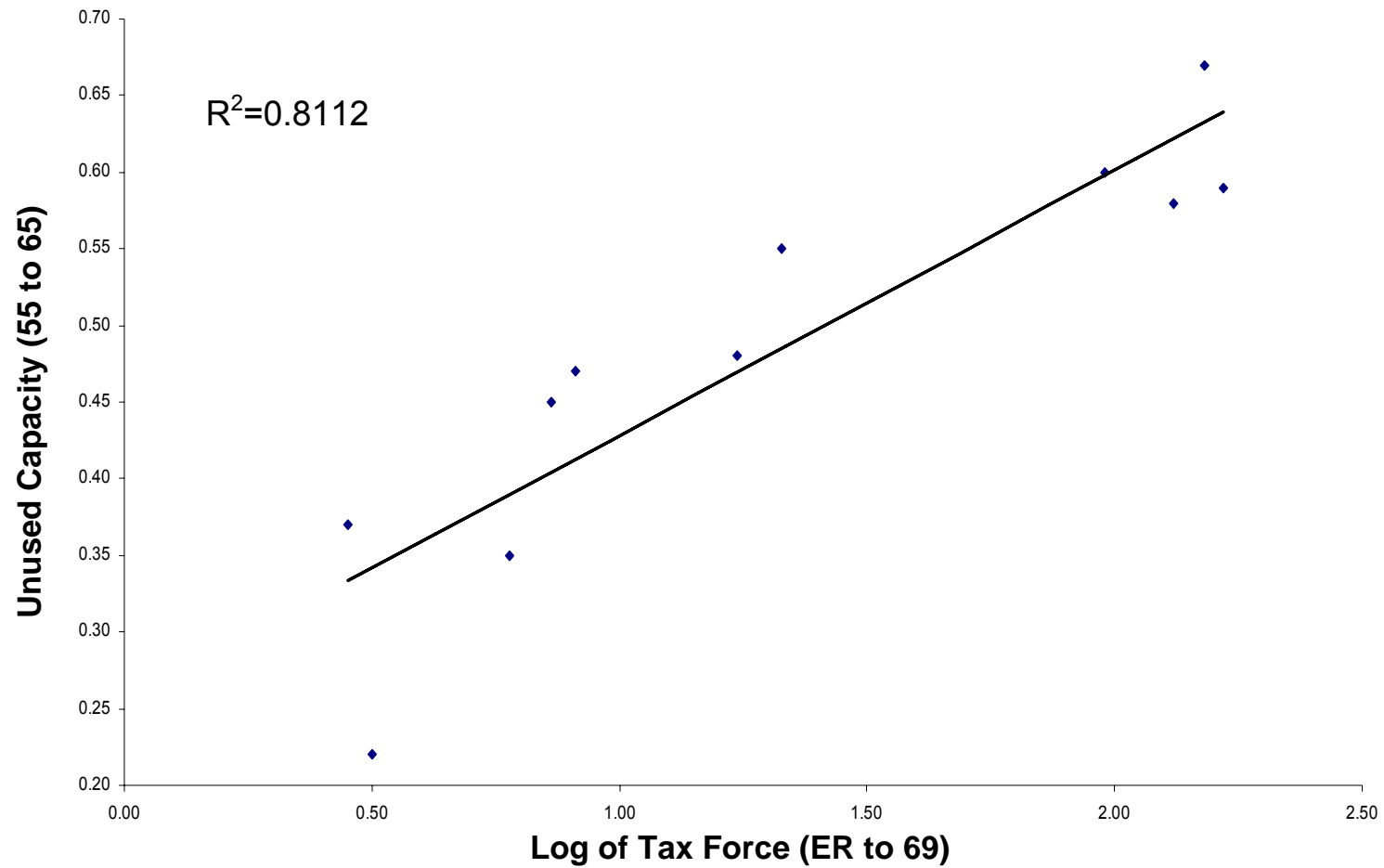
The main cause of the pensions 'crisis' is a failure to adapt to long-term trends

- Pension systems in many countries face a series of trends:
 - a long-term and continuing trend increase in life expectancy,
 - a long-term and continuing trend decline in fertility
 - a long-term trend to earlier retirement.
- Superimposed are two more recent phenomena:
 - the baby boom
 - the increase in the scale of pension systems since World War II
- The more recent trends are aggravating factors, but the the problem arises even in their absence

Finland has gone from “early exit [from the labor market] as a social right...to a paradigm, which highlights work as a duty in an individually flexible context.”

Source: The Finnish Centre for Pensions, a summary of Working Paper 4 by Raija Gould and Laura Saurama.

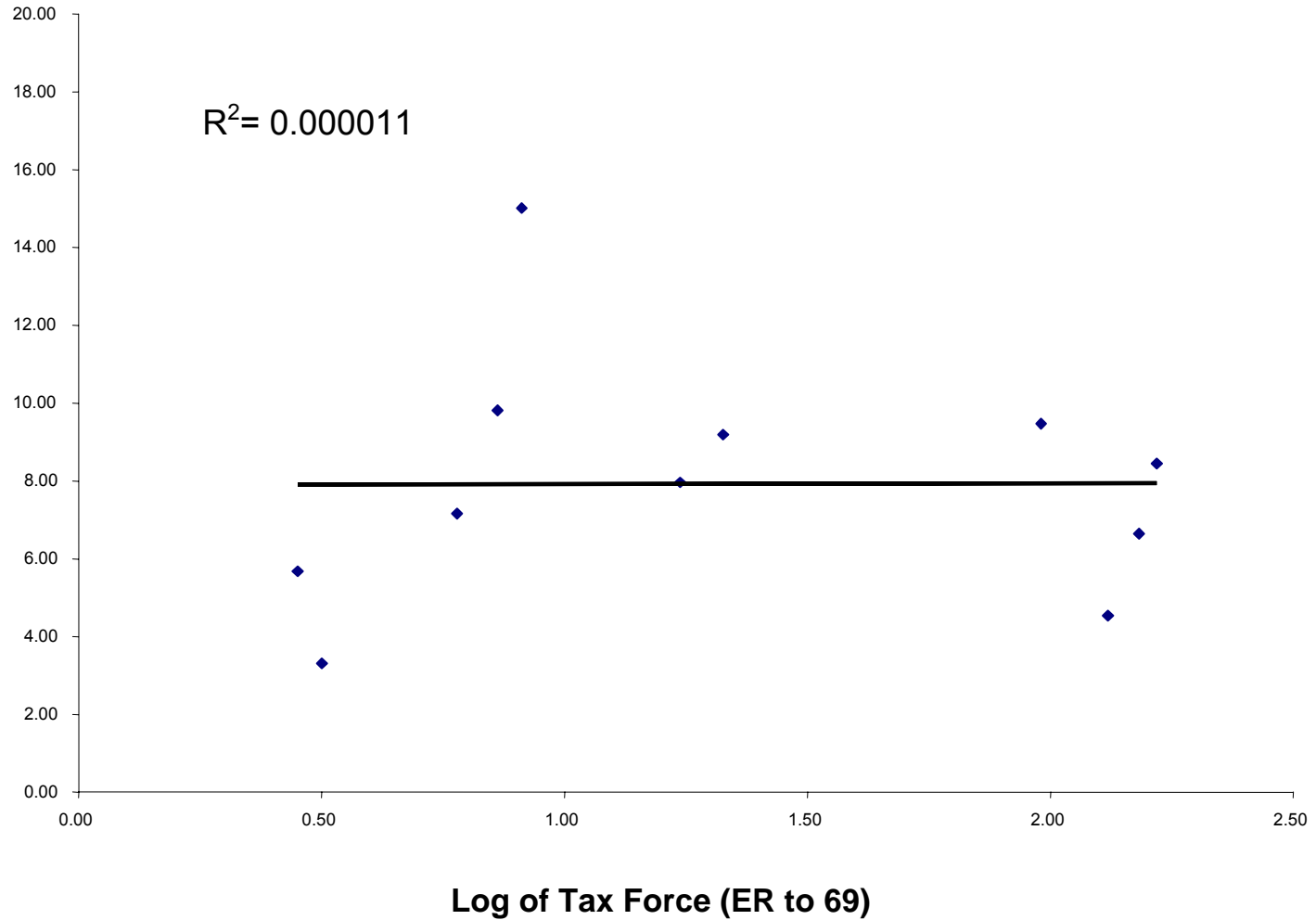
Unused Labor Force Capacity vs. Log of Tax Force



Source: Gruber and Wise (1999)

Average Unemployment Rate for Males (1991 to 2000) vs. Log of Tax Force

Average of Unemployment Rate for Males (1991 to 2000)



Benefit Adjustment

- Initial benefits
- Benefit increase for a delayed start
- Benefit increase for additional work or for additional contributions

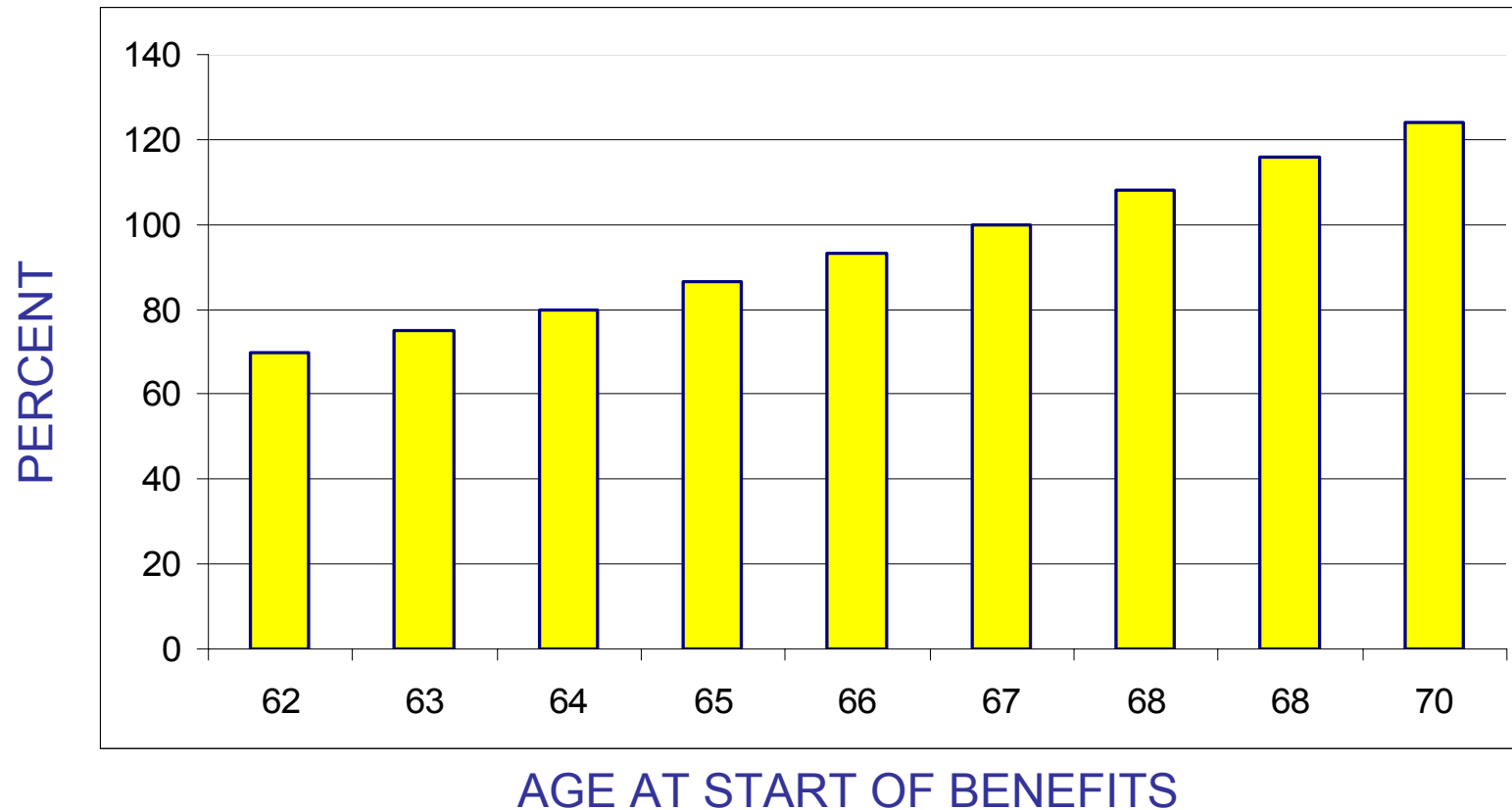
Starting Benefits

Benefit Eligibility Rule

Benefit Start Rule	Age Only	Age and Earnings
Must Start at EEA	1	3
Can Defer	2	4

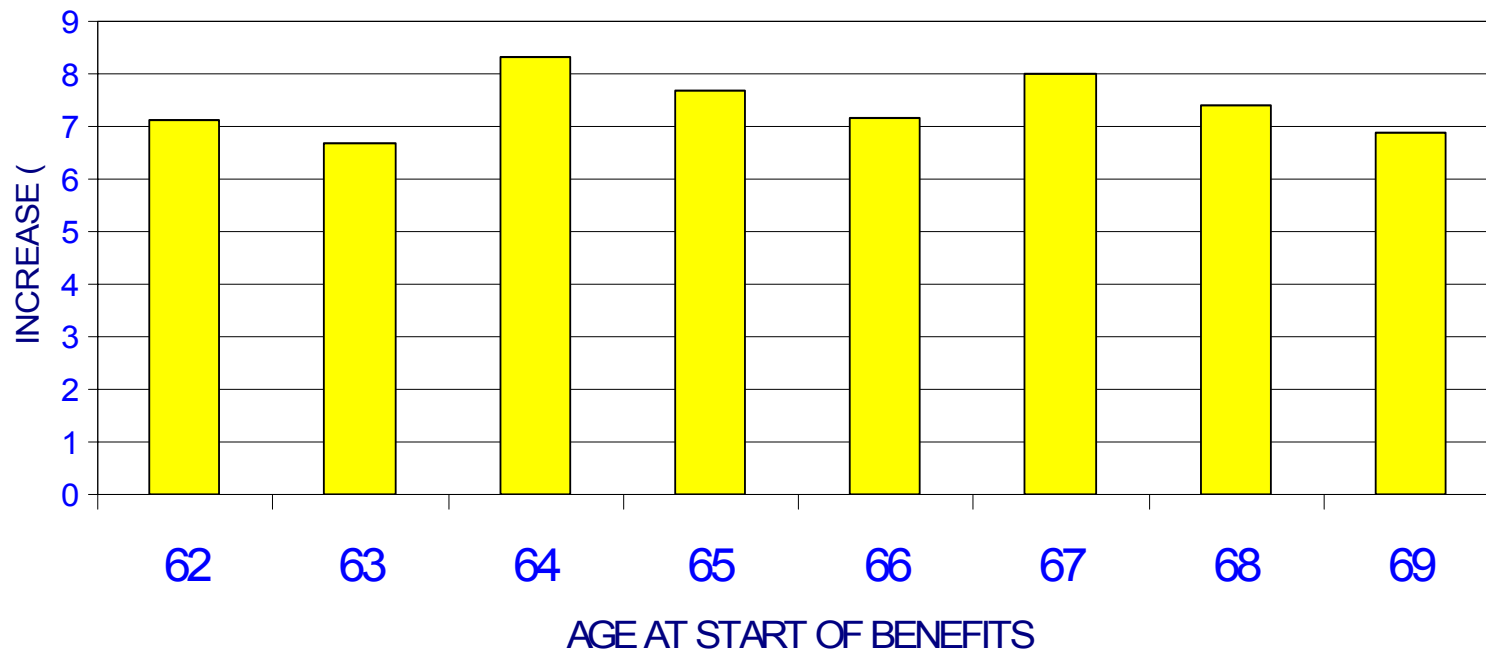
The size of the increase in benefits for a deferral forms an effective continuum from must start to and beyond actuarially fair.

BENEFIT LEVELS FOR DIFFERENT AGES AT START OF BENEFITS - US



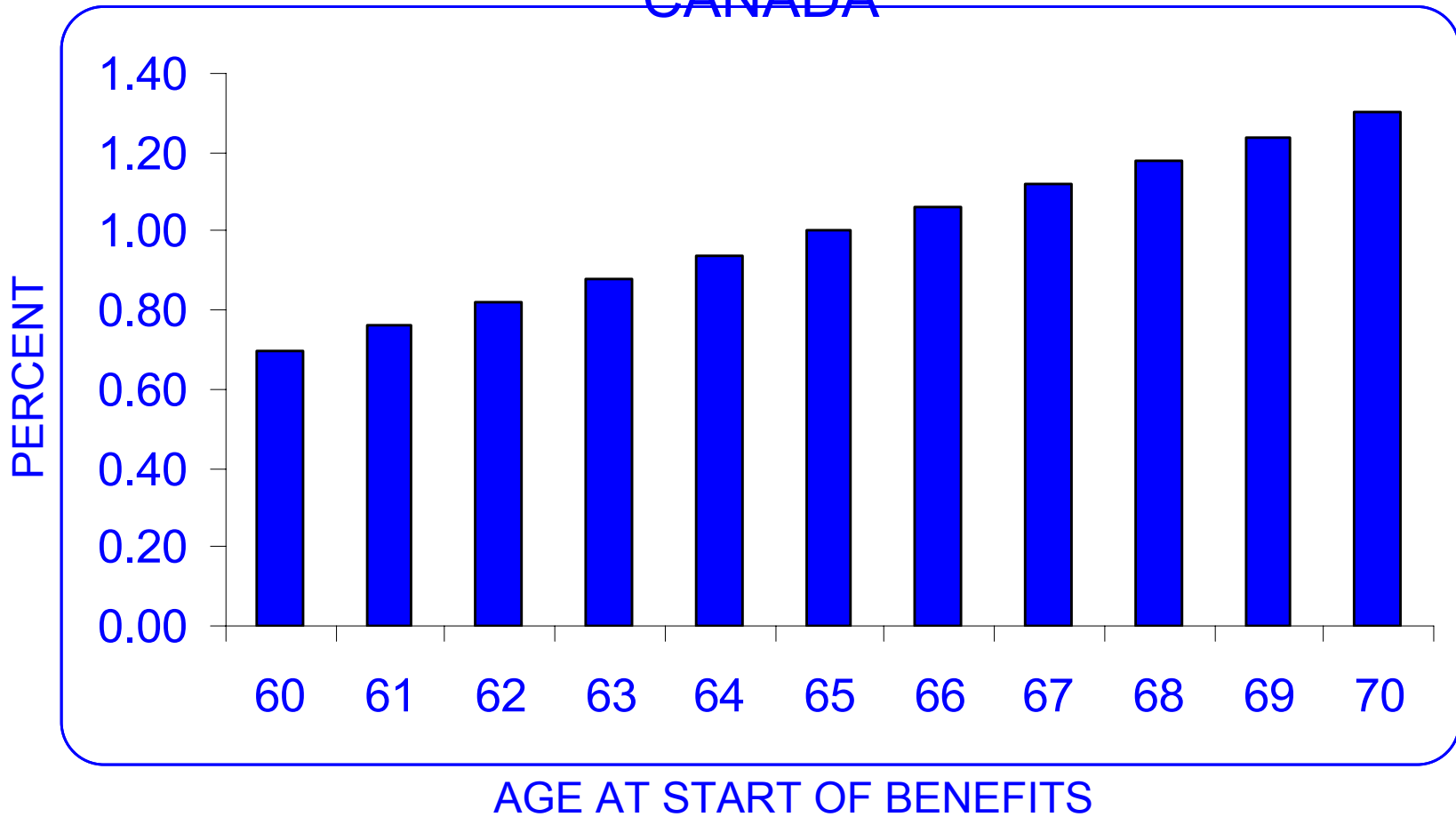
For an age for full benefits (normal retirement age) of 67.

PERCENTAGE INCREASE IN MONTHLY BENEFIT FROM DELAY IN START OF BENEFITS BY ONE YEAR - US

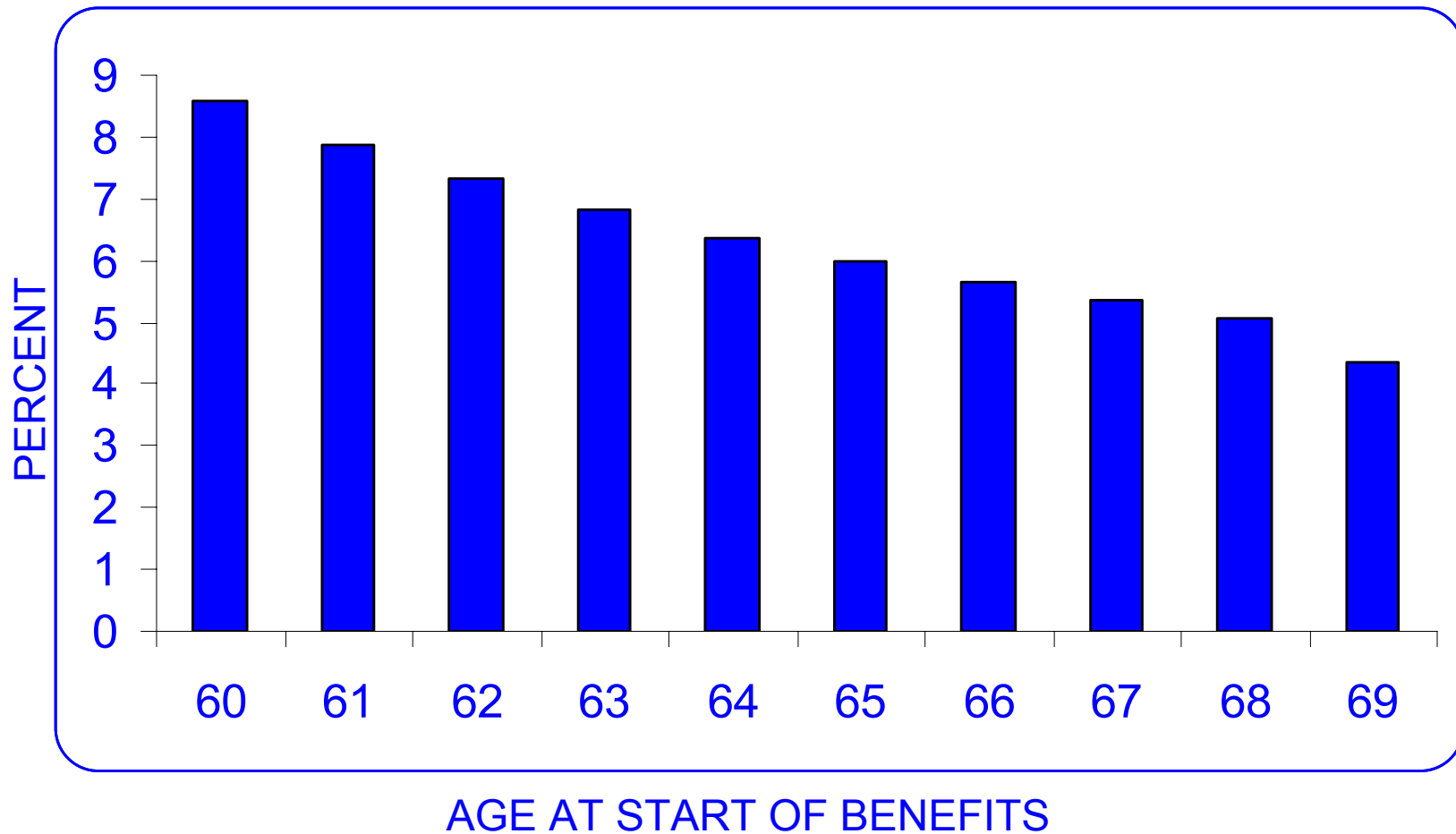


■ Retirement Age of 67

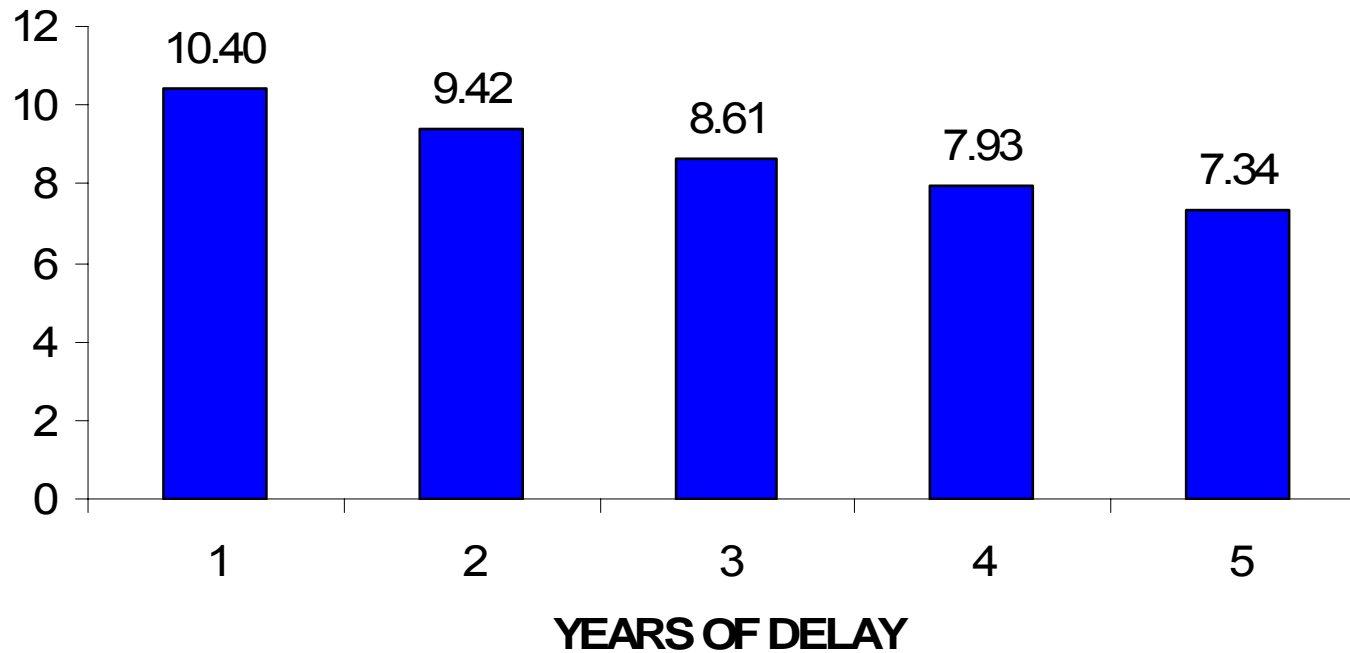
BENEFIT LEVELS AT DIFFERENT STARTING AGES RELATIVE TO BENEFIT AT NORMAL RETIREMENT AGE CANADA



PERCENTAGE INCREASES IN BENEFIT FROM ONE YEAR DELAY IN START OF BENEFITS IN CANADA

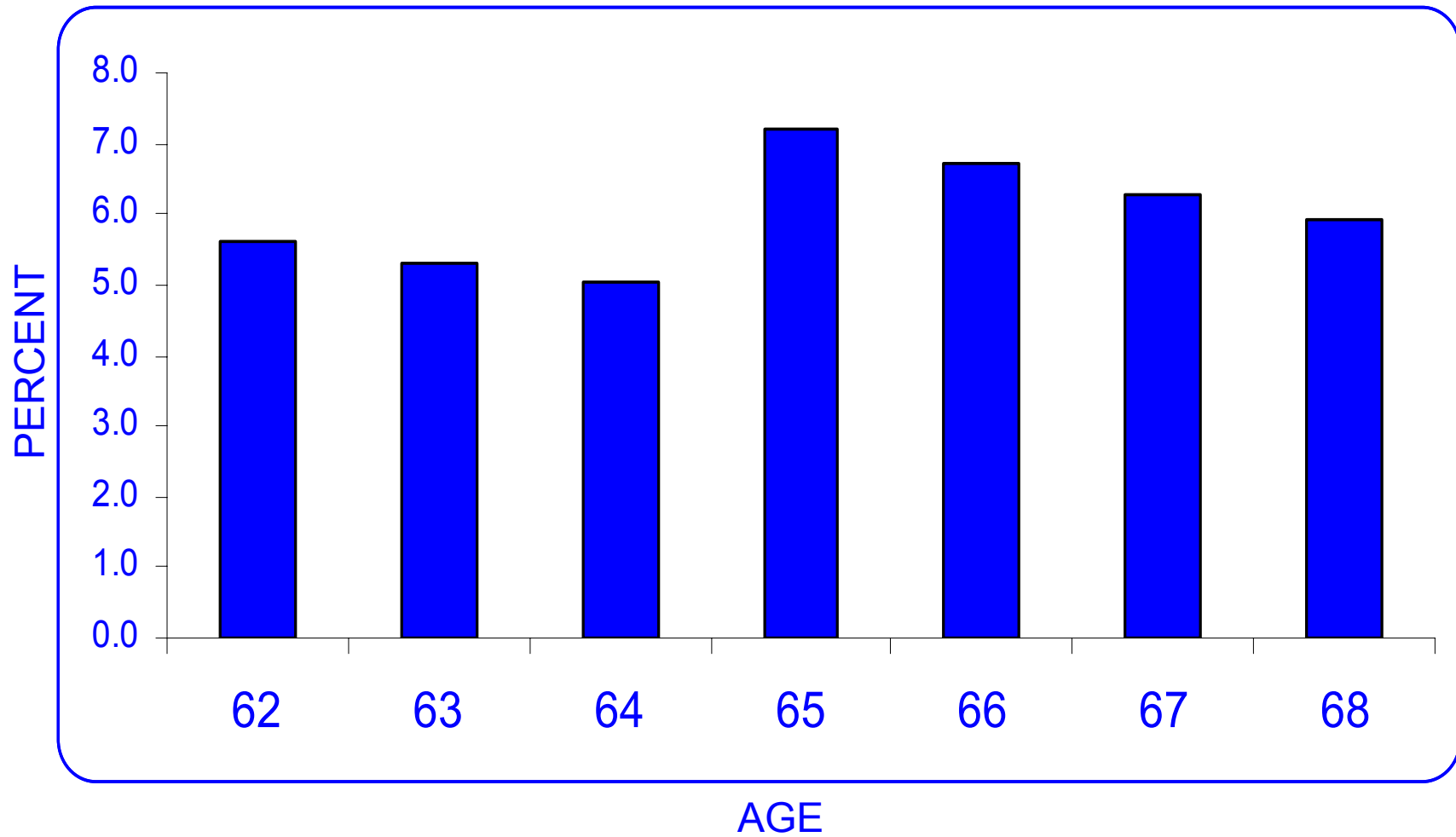


Percentage Increases in Basic State Pension from Delay of Start of Benefits by One to Five Years in the UK



Additional benefit of 10.4% per year of delay

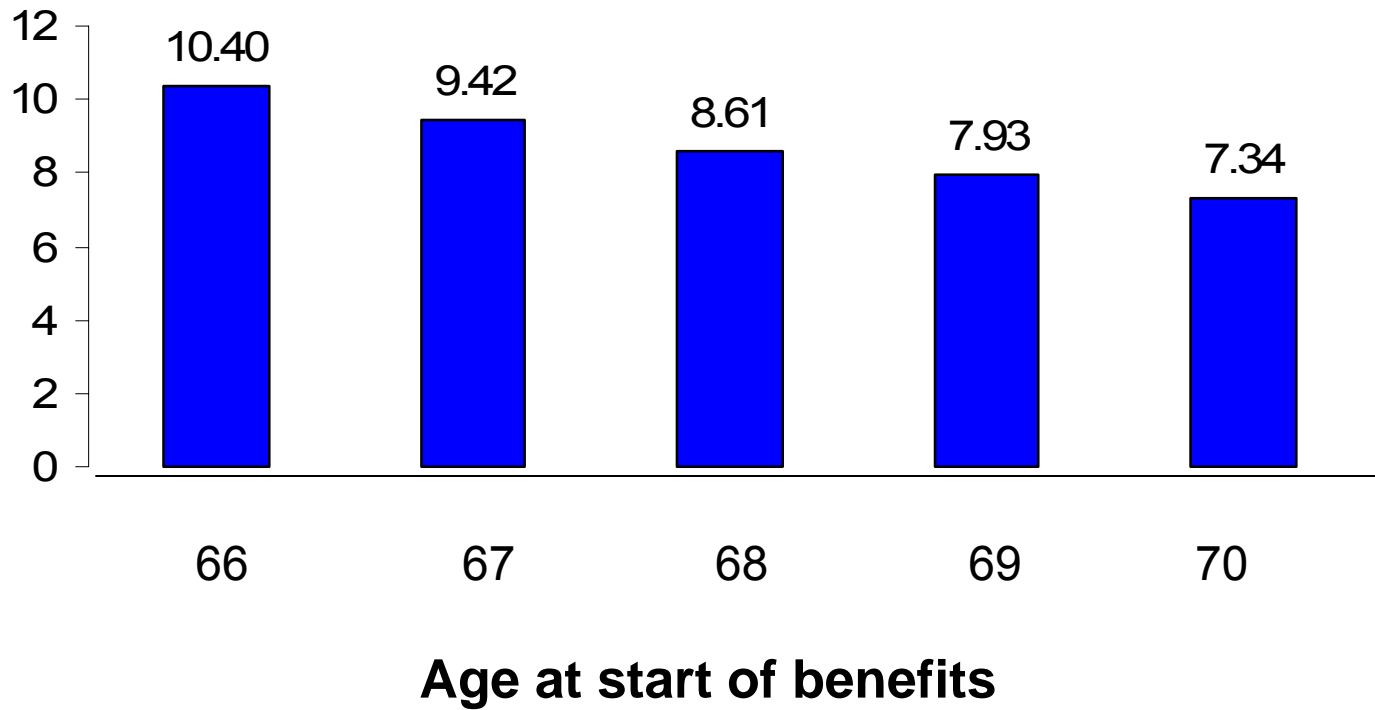
PERCENTAGE INCREASE IN BENEFIT FROM ONE YEAR DELAY IN START OF NATIONAL PENSION IN FINLAND



Early Entitlement Age

- Capital market imperfection – liquidity
- Retirement “too soon”

Benefit Cut from One-Year Increase in the State Pension Age (in percent) - UK



Age for Full Retirement Benefit

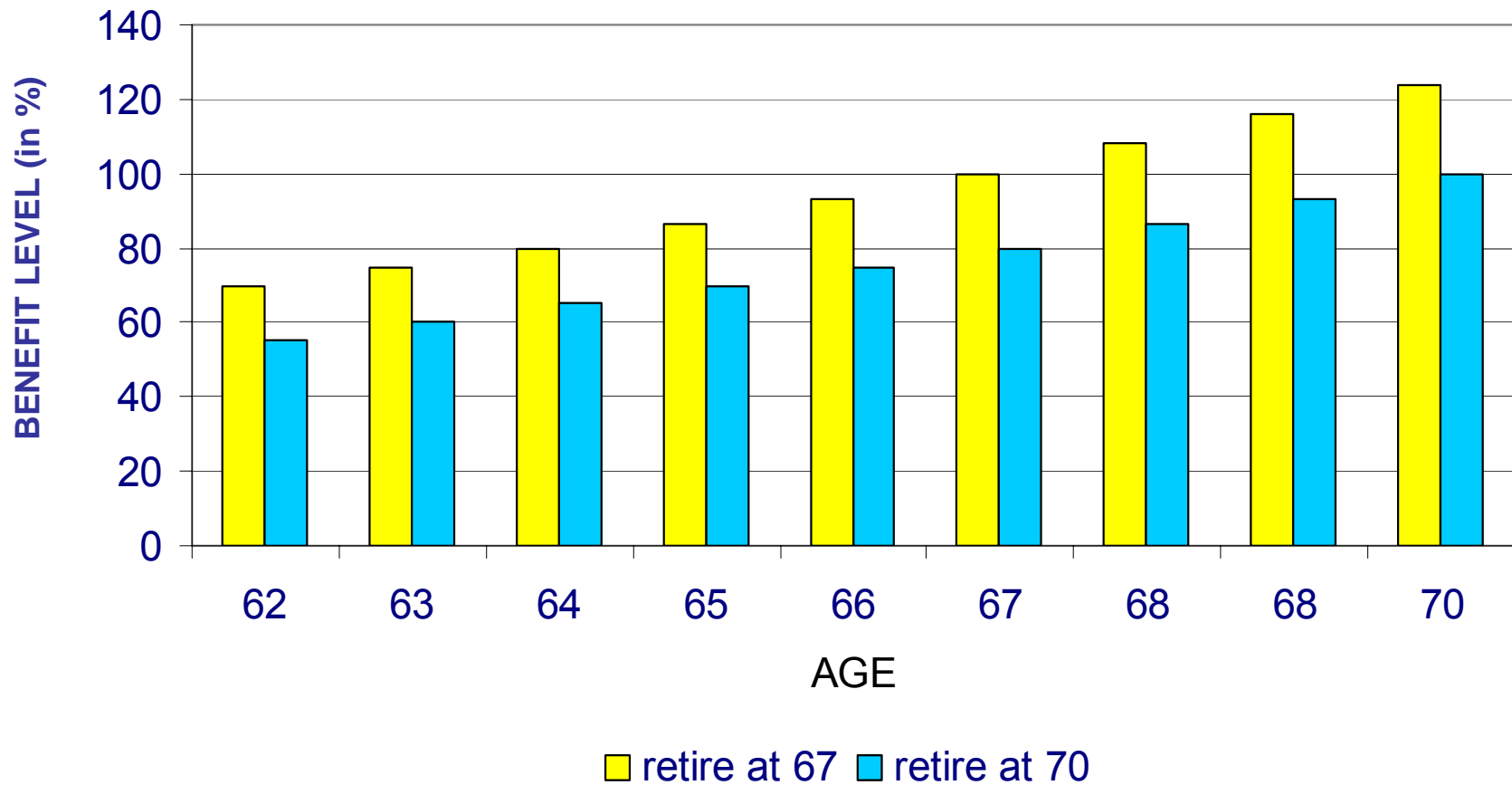
Applicable to workers who were
born in the year...

Full benefit at age...

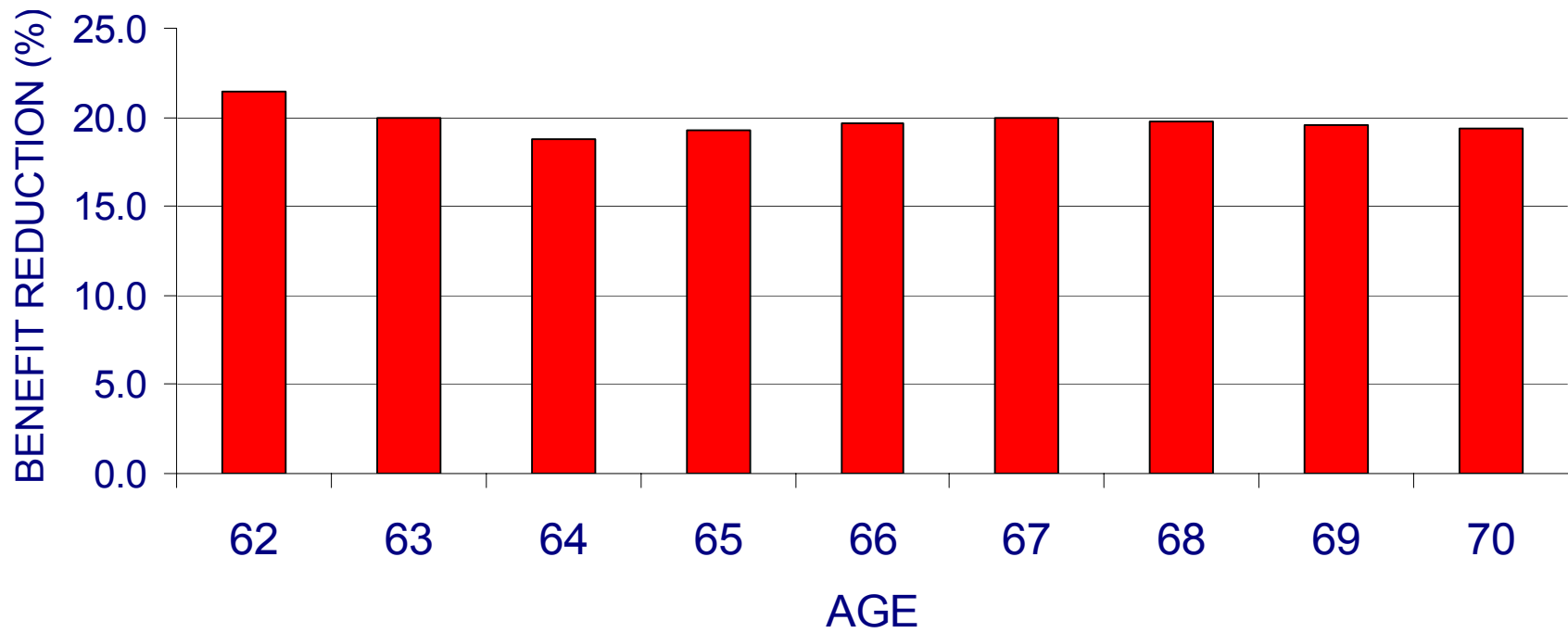
1938	65 and 2 months
1939	65 and 4 months
1940	65 and 6 months
1941	65 and 8 months
1942	68 and 10 months
1943-1954	66
1955	66 and 2 months
1956	66 and 4 months
1957	66 and 6 months
1958	66 and 8 months
1959	66 and 10 months
1960 and later	67

Source: Fast Facts & Figures about Social Security, 2005
SSA Publication # 13-11785, September 2005

BENEFIT LEVELS WITH NORMAL RETIREMENT AGES OF 67 AND 70



BENEFIT REDUCTION FROM INCREASE IN NORMAL RETIREMENT AGE FROM 67 TO 70



Funding and distributional effects

- Any pension reform has distributional consequences.
- Examples:
 - Introducing a new PAYG system makes a transfer to the first cohort of retirees; if, instead, policy makers introduce a funded scheme, the first cohort receives no pension
 - Similarly, a move towards funding that increases saving redistributes from today's workers and pensioners to later generations
- Thus
 - Choices about pension systems are inescapably also choices about intergenerational redistribution
 - Such redistribution may or may not be good policy
 - But ignoring distributional effects is faulty analysis

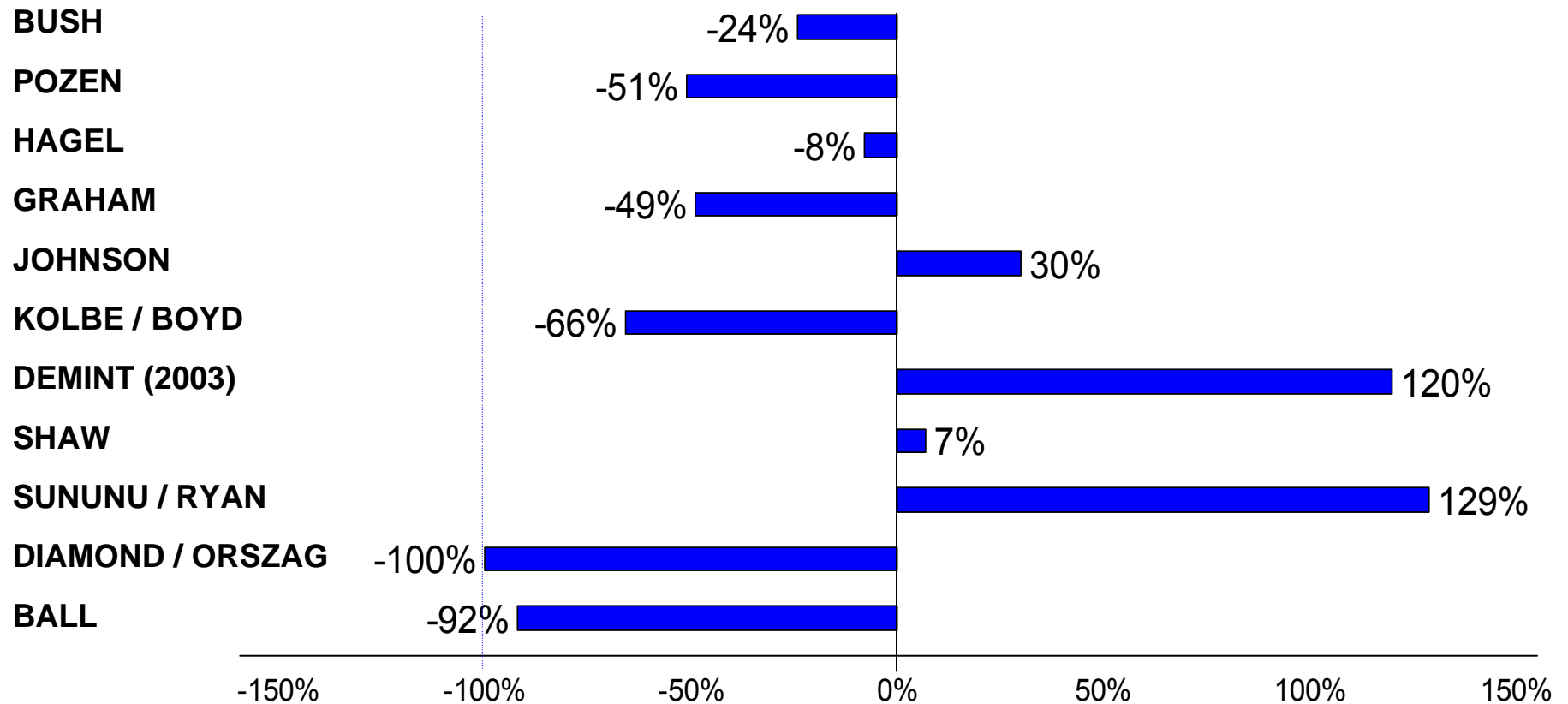
Individual accounts

Decline in Value of Accounts Due to Fees After a 40-Year Work Career ^a

Type and Level of Fees	Percentage Decline in Account Value Due to Fees
Front-load fees (% of new contributions) of:	
1 percent	1 %
10 percent	10 %
20 percent	20 %
Annual management fees (% of account balance) of:	
0.1 percent	2.2 %
0.5 percent	10.5 %
1.0 percent	19.6 %

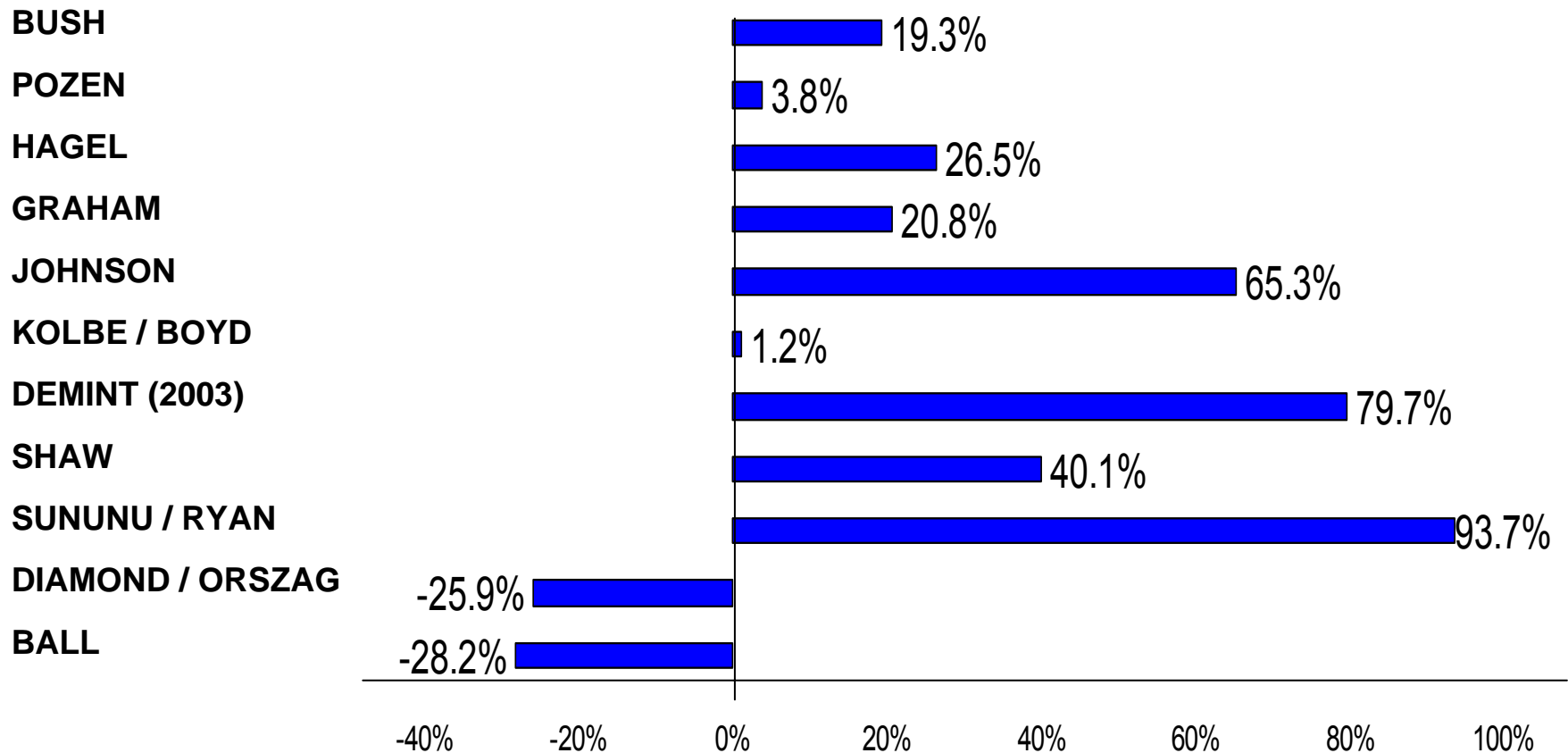
a. Assuming real wage growth of 2.1 percent and a real annual return on investments of 4 percent. With a larger difference between the rate of return and the wage growth rate, the charge ratio with annual management fees is slightly larger, and conversely.

REDUCTION (-) / INCREASE (+) IN THE 75 YEAR SOCIAL SECURITY SHORTFALL (in percent) Over and Above the Levels that Would Otherwise Exist



Source: "Private Accounts Would Substantially Increase Federal Debt and Interest Payments" by James Horney and Richard Kogan, Center on Budget and Policy Priorities, July 27, 2005.

**INCREASE / REDUCTION OF FEDERAL DEBT IN 2050
(as Percent of GDP) RESULTING FROM
PROPOSED SOCIAL SECURITY PLANS
Over and Above the Levels that Would Otherwise Exist**



Source: "Private Accounts Would Substantially Increase Federal Debt and Interest Payments" by James Horney and Richard Kogan, Center on Budget and Policy Priorities, July 27, 2005.

Blinder-Krueger survey

Eliminate SS deficit

Mainly by raising the payroll tax	30%
<i>Mainly by reducing Social Security benefits</i>	5%
Both	34%
No answer	9%
Neither	22%

Alan S. Blinder and Alan B. Krueger, "What Does the Public Know about Economic Policy, and How Does It Know It?" *Brookings Papers on Economic Activity* 1:2002, pp. 327-87.

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"Forget about me—save Social Security."