



The Actuarial Profession

making financial sense of the future

Pensions, Labour Markets, and Early Retirement

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Motivation

- The steady withdrawal of workers from the workforce at a younger age suggests that retirement income is gradually increasing or that older workers are increasingly being forced out of the labor market.
- Moreover, incentives built into national social insurance systems often encourage workers to retire early.
- Unlike their 18th century colleagues, the average worker today has accumulated substantial wealth during his working life.
- But the modern worker can not only afford to retire early but is also willing to do so since recreational opportunities have increased, and the relative prices of leisure activities have decreased.
- Life expectancy is also on the rise.

Motivation

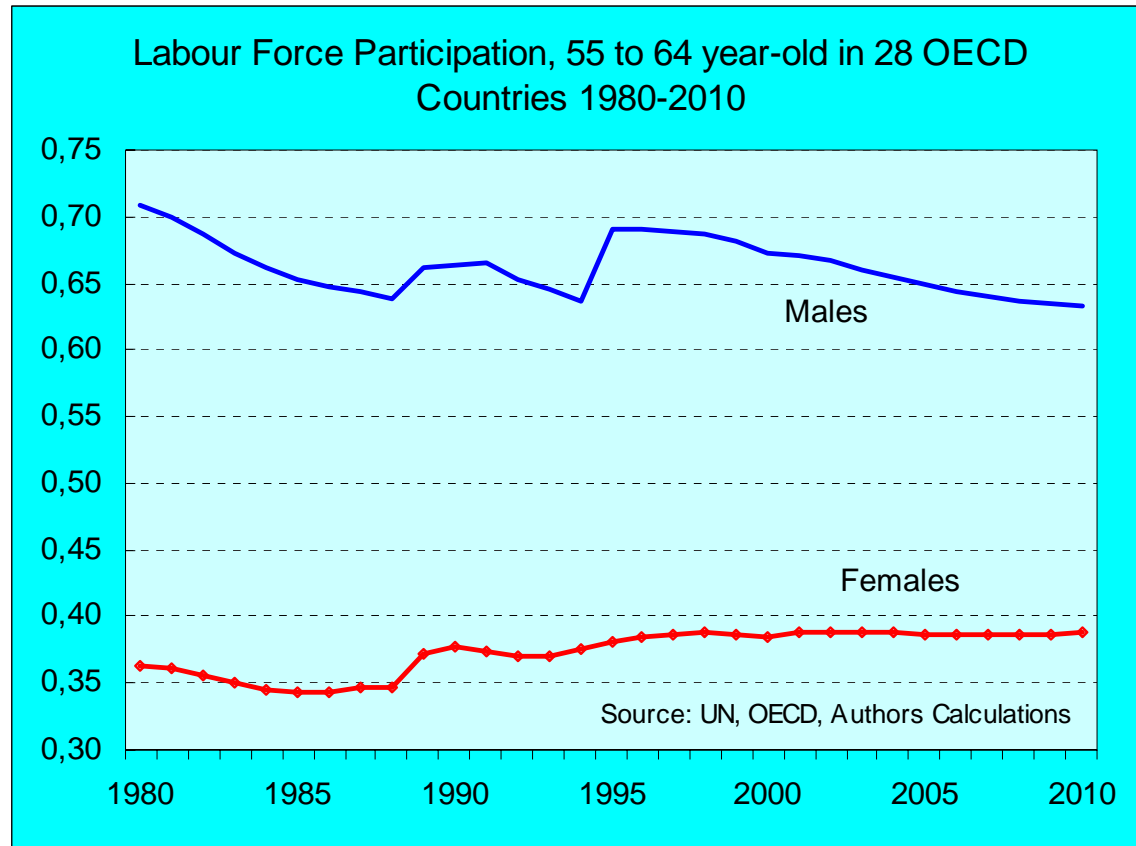
- This combination of earlier retirement and longer life expectancy results in a much longer span of inactivity which has to be financed.
- Regardless of its causes, the withdrawal of older workers from the labor force leads to an increase in unused production capacity, a reduced tax base, and a heavier load on pension and fiscal systems.
- If the trend toward earlier retirement were to continue far into the future, it would pose even larger fiscal threats to pension systems, especially those that do not include a penalty for early retirement.
- General outline of presentation:
 - Shrinking labor forces
 - The costs
 - Why do people retire early?
 - Policy implications

Shrinking Labor Forces

Shrinking Labor Forces

- Despite substantial increases in longevity in OECD countries, the age of retirement has steadily fallen throughout most of the twentieth century.
- In 28 OECD countries, the average labor force participation of 55-64 year-old males fell by 7.6 percentage points between 1979 and 2002 and is predicted to fall by another 3.3 percentage points by 2010.
- At the same time the participation rate increased by approximately 1.2 percentage point for females and is predicted to remain approximately the same in 2010 as in 2002.

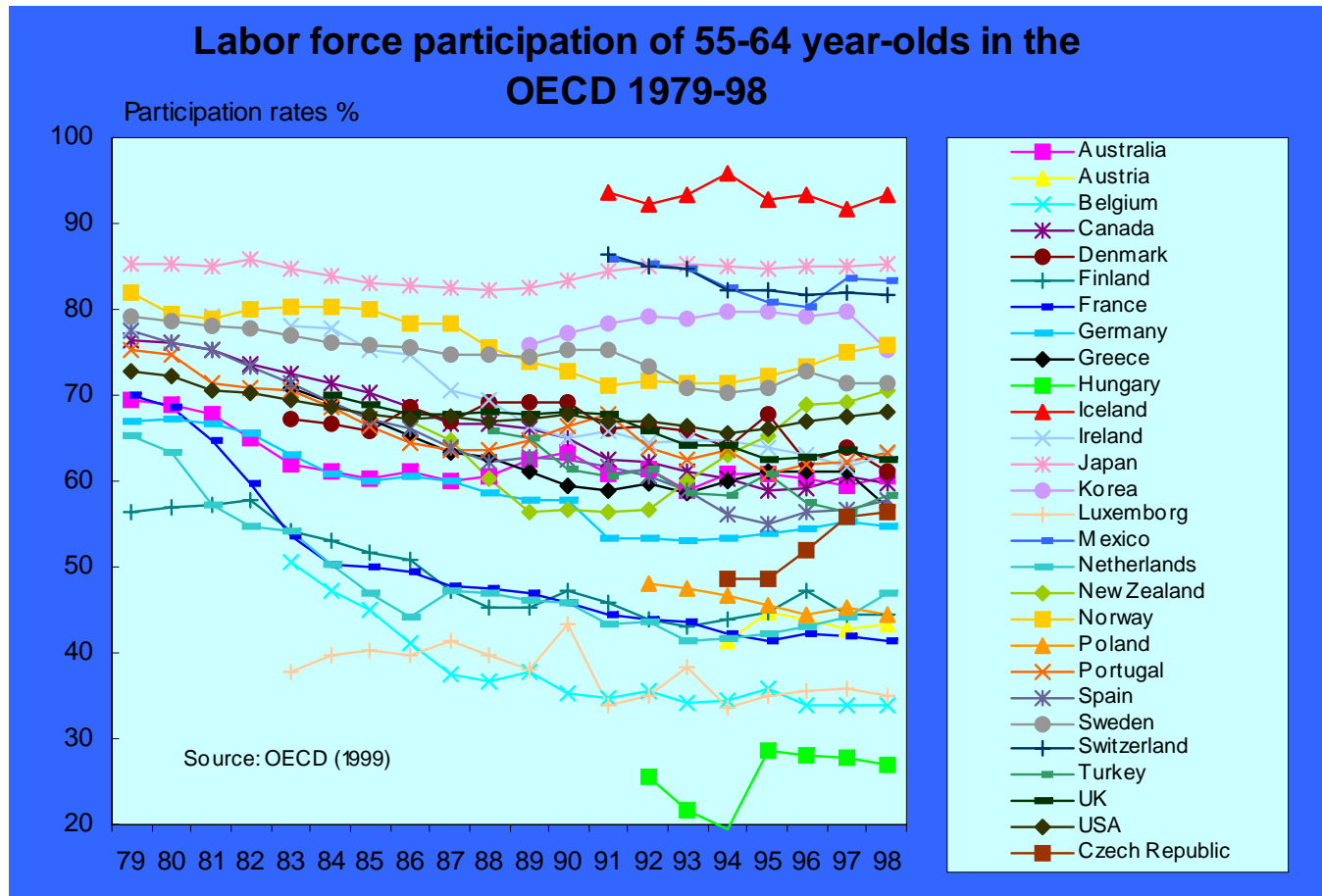
Shrinking Labor Forces



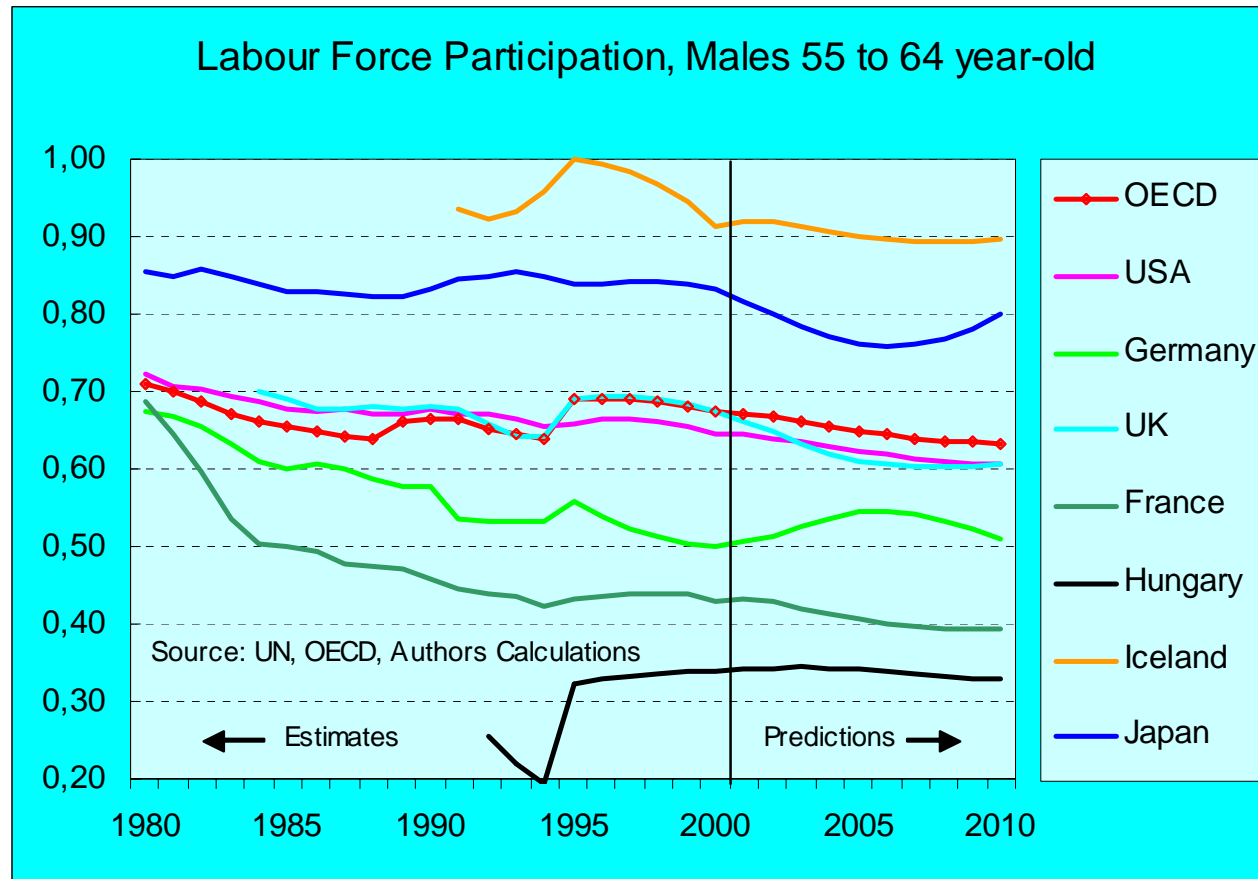
Shrinking Labor Forces

- Although there is common trend towards earlier retirement labor market participation rates differ significantly across countries.
- Iceland has the highest labor force participation of older people by far but Hungary the lowest.
- Moreover, the development of the participation rate is quite different between countries, i.e., the rates have been almost unchanged over the last twenty years in Japan while they have fallen by almost 29 percentage points in France.
- the dispersion of the rates increased dramatically in the '80s and the '90s.
- This divergence illustrates that participation depends on a wide variety of country specific factors.

Shrinking Labor Forces



Shrinking Labor Forces



The Costs

The Costs of Early Retirement

- The withdrawal of older workers from the labor force causes:
 - an increase in unused production capacity,
 - a reduced tax base,
 - and an increased burden on pension and fiscal systems.
- The fact that incentives do not in themselves seem to provide a good indication of the severity of the early retirement problem, it is useful to derive others.
- We have developed a simple framework to assess the costs arising from decreased labour force participation of older workers.

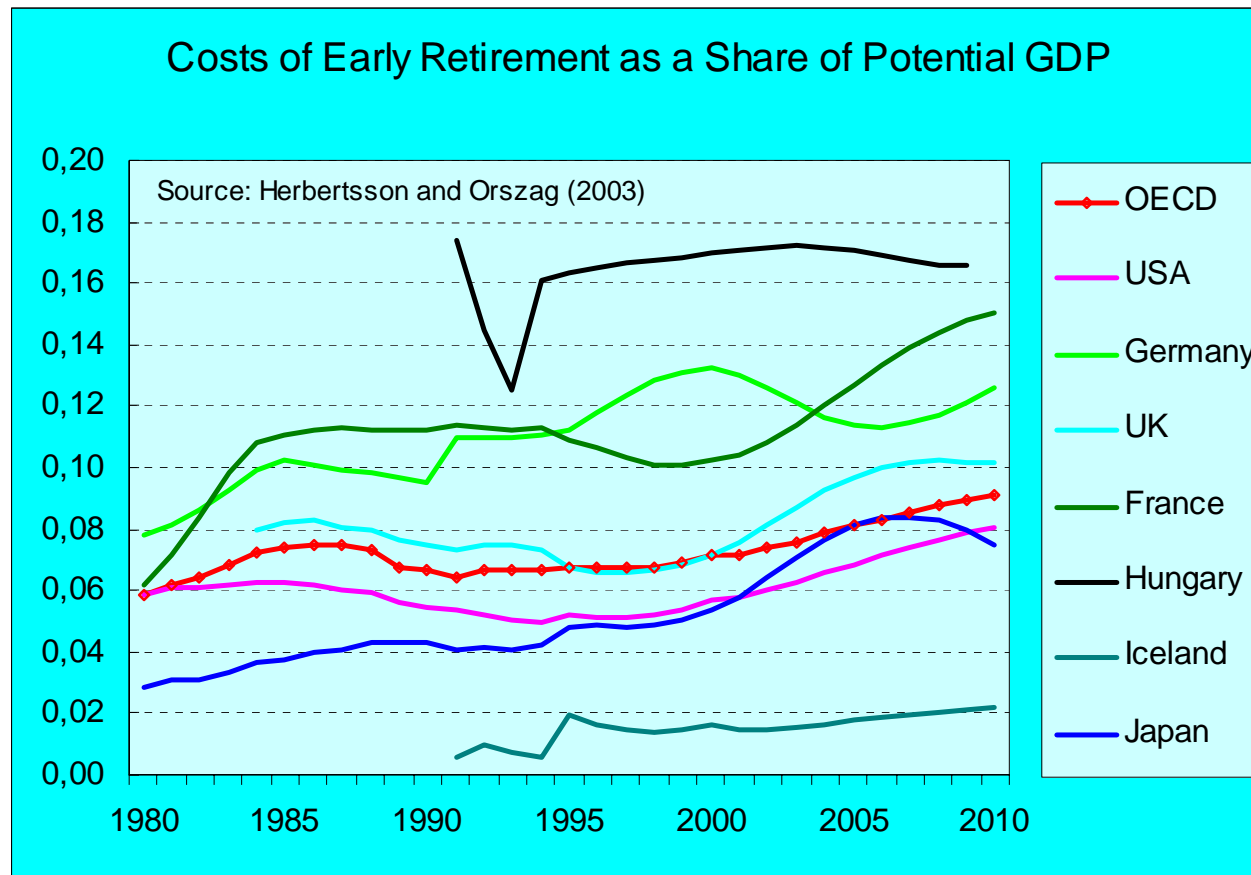
The Costs of Early Retirement

Costs of Early Retirement in OECD Countries as a Share of Potential GDP

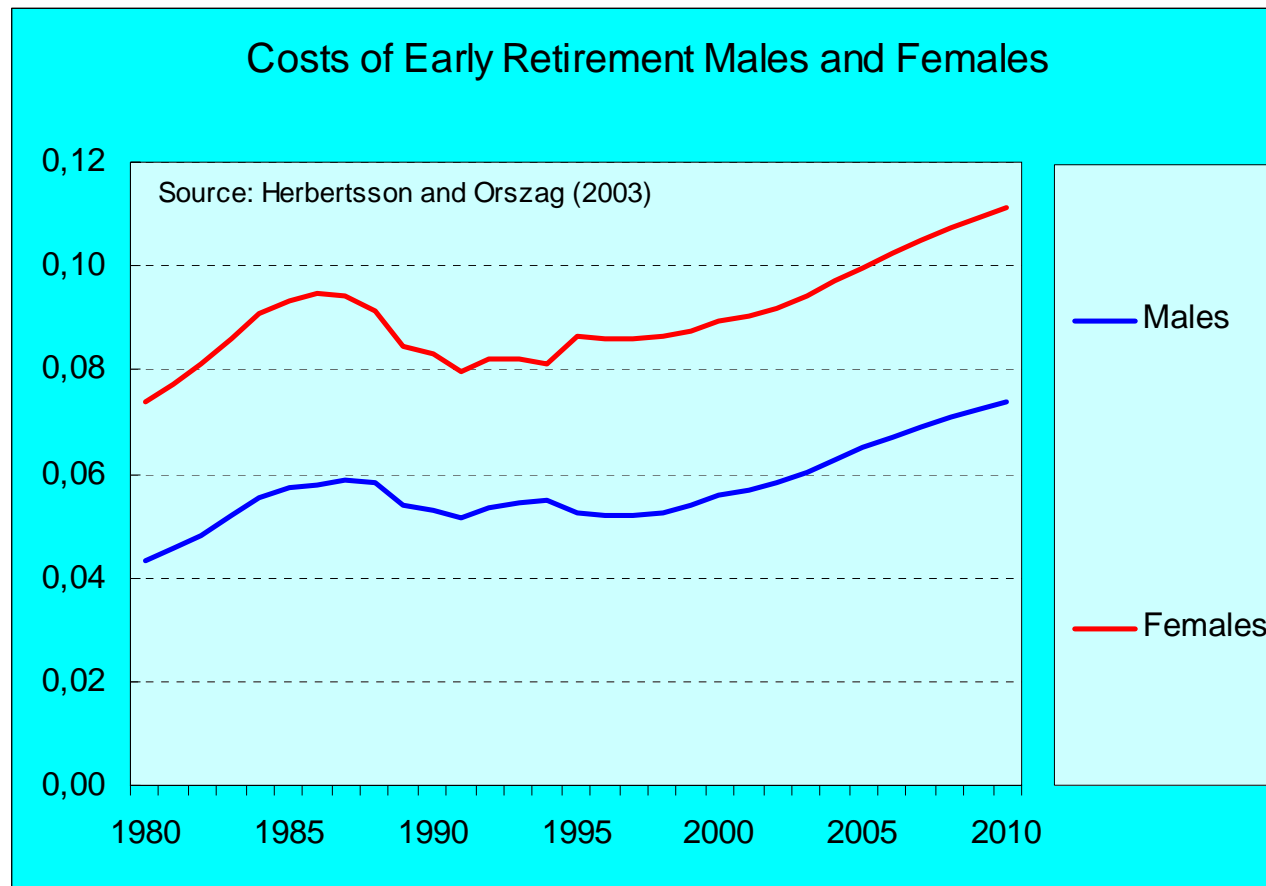
	1980	1990	2000	2010		1980	1990	2000	2010
Hungary	-	-	16,5%	19,4%	Ireland	4,6%	6,9%	6,8%	8,9%
Belgium	-	15,2%	14,1%	17,9%	Australia	7,5%	7,5%	8,1%	11,1%
Luxemburg	-	12,5%	12,6%	15,1%	Canada	5,5%	6,7%	7,2%	10,5%
Austria	-	-	14,4%	15,9%	Sweden	5,9%	4,7%	5,2%	7,5%
Germany	7,8%	9,5%	13,2%	12,6%	USA	5,6%	5,4%	5,7%	8,1%
Greece	-	10,4%	10,7%	11,2%	New Zealand	-	7,9%	7,8%	11,6%
Czech Republic	-	-	11,1%	15,2%	Turkey	-	5,0%	4,0%	5,1%
France	6,2%	11,2%	10,3%	15,1%	Japan	2,8%	4,3%	5,4%	7,5%
Netherlands	8,1%	10,5%	11,2%	15,9%	Norway	5,0%	4,9%	5,2%	8,1%
Poland	-	-	7,7%	11,1%	Switzerland	-	2,9%	6,7%	9,3%
Finland	8,2%	9,6%	10,6%	15,8%	Korea	-	2,2%	3,7%	5,0%
Spain	4,8%	9,7%	9,3%	11,1%	Mexico	-	2,1%	2,8%	3,7%
Portugal	6,0%	9,1%	8,6%	9,4%	Iceland	-	0,5%	1,6%	2,2%
Denmark	-	6,9%	8,2%	11,3%					
UK	-	7,5%	7,2%	10,1%	OECD Average	5,3%	6,7%	7,1%	9,1%

Source: Herbertsson and Orszag (2003)

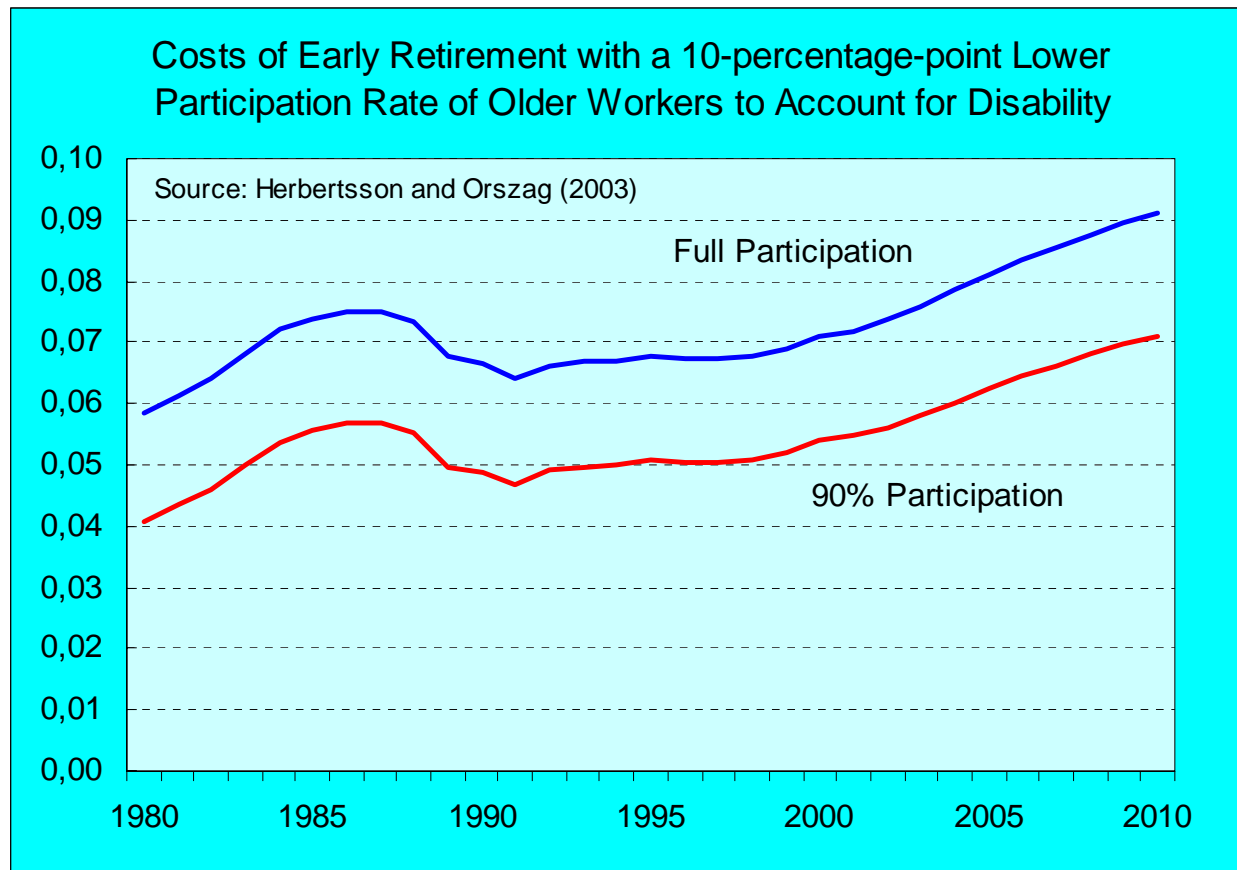
The Costs of Early Retirement



The Costs of Early Retirement



The Costs of Early Retirement



Why do People Retire Early?

Why Early Retirement?

- The causes of high levels of early retirement are less than well understood.
- The main body of research on early retirement has focused on the supply side of the labor market and incentives thereof.
- Wealth, accrual rates, earnings tests, taxes, etc., (see Boskin (1977), Quinn et al. (1990), Stock and Wise (1990), Fields and Mitchell (1984), Börsch-Supan (1992) for Germany, and Meghir and Whitehouse (1992) for the UK and OECD (1995) and Gruber and Wise (1999) for country comparisons).
- Much focus on incentives in research on early retirement.
- But measuring incentives with complex models is not very informative for numerous reasons.

Why Early Retirement?

- Labor supply explanations:
 - Incentives (pension wealth, accrual rate, earnings tests, tax considerations, etc.)
 - Disability (morbidity increases with longevity)
 - Transition from long-term unemployment into retirement
 - Government policies (lump-of-labor fallacy)
- Labor demand explanations (possibly pseudo-theorems):
 - Jobs get obsolete and older workers lack skills (education) to switch jobs
 - Older workers less productive than younger workers

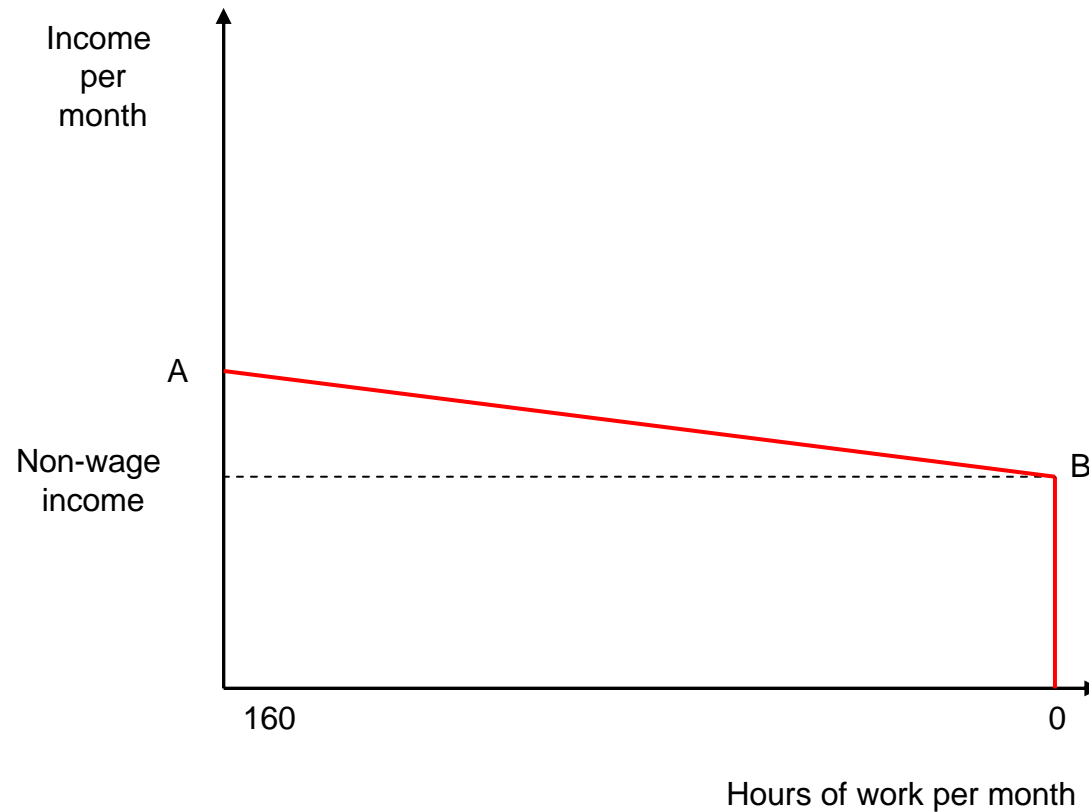
Determination of Labor Force Participation: Supply

Budget line and indifference curves



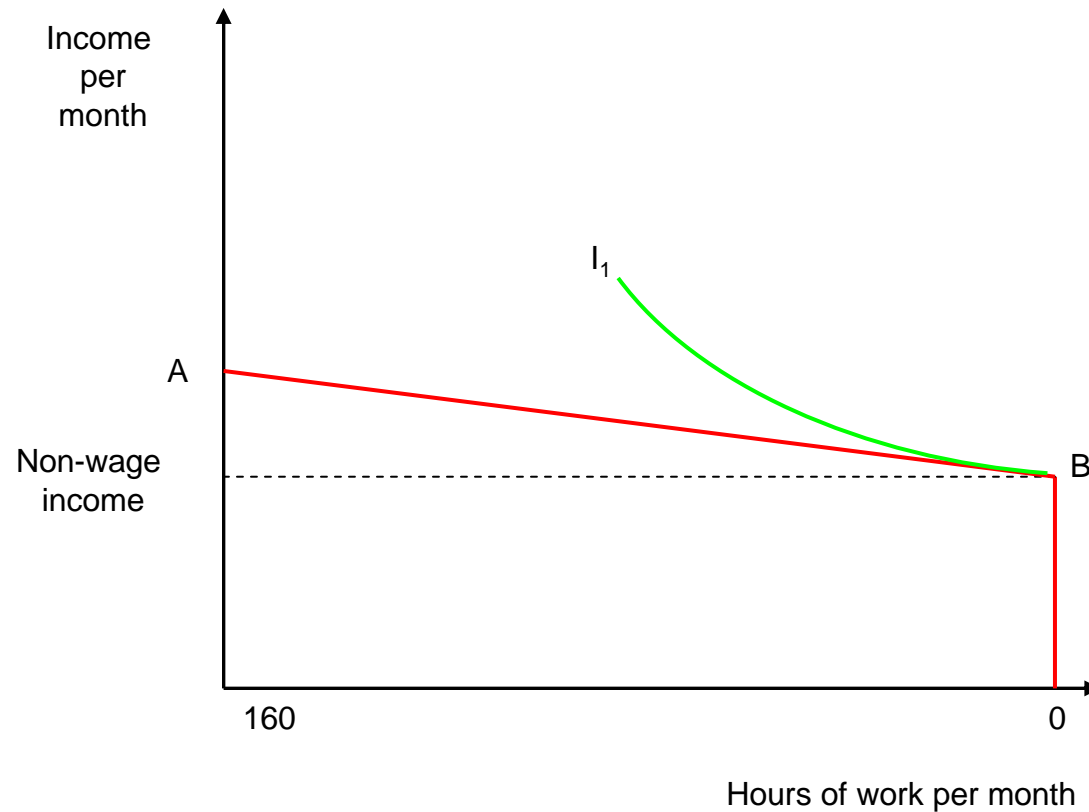
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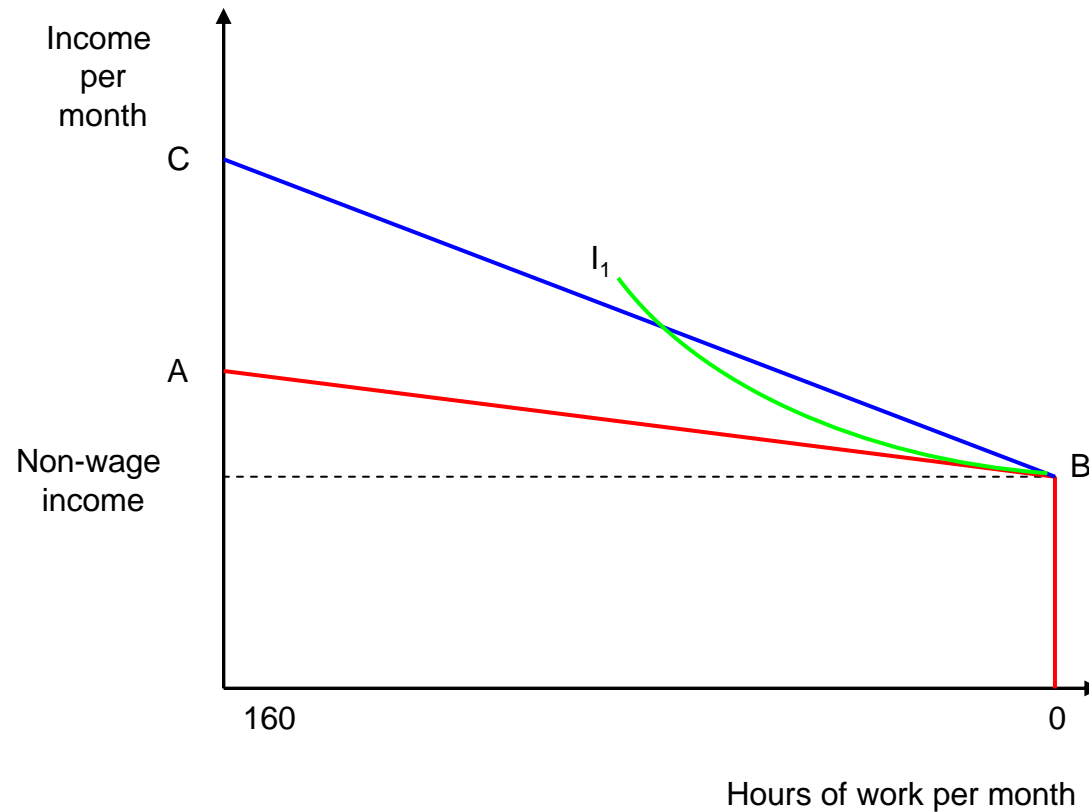
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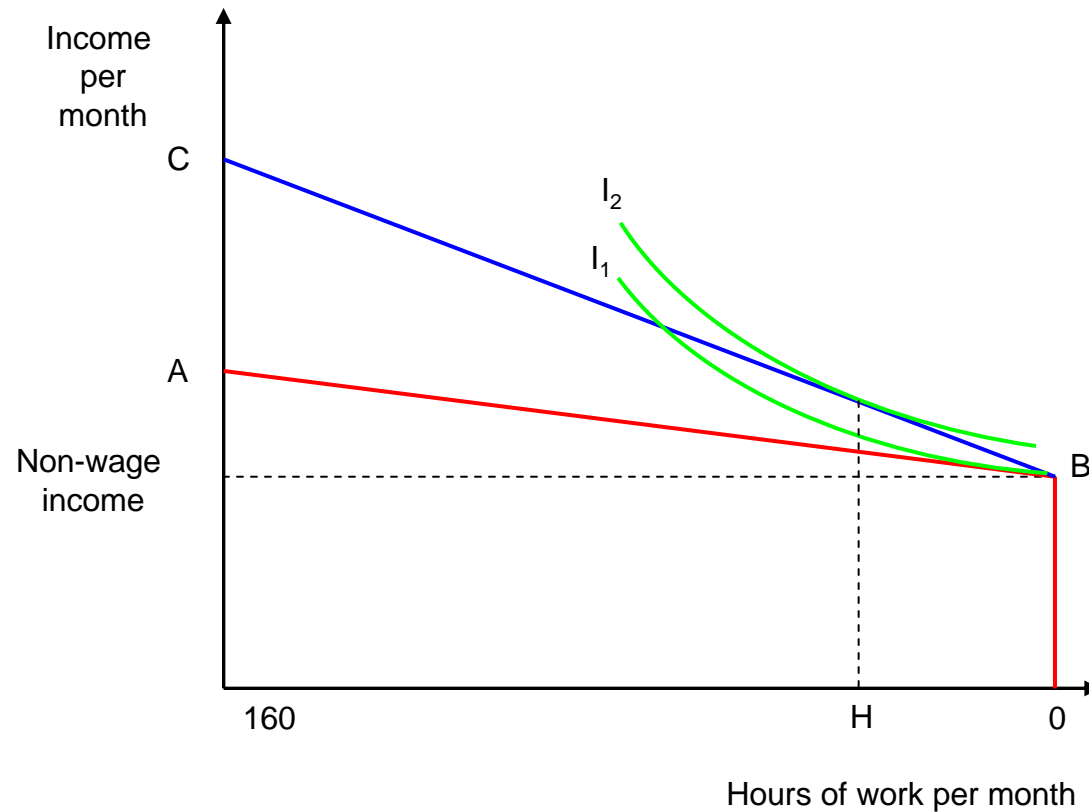
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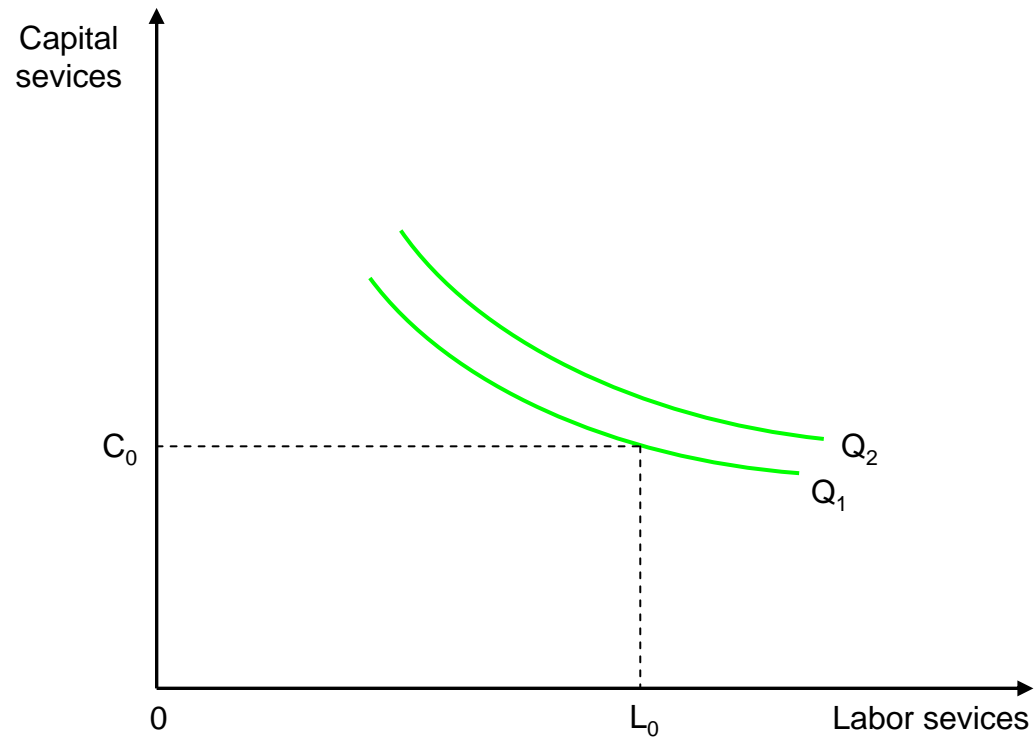


Determination of Labor Force Participation: Demand

- As reservation wages increase (increased retirement opportunities) firms substitute to capital (and high productivity labor).
- Low productivity labor are forced out of the labor market and participation rates fall.

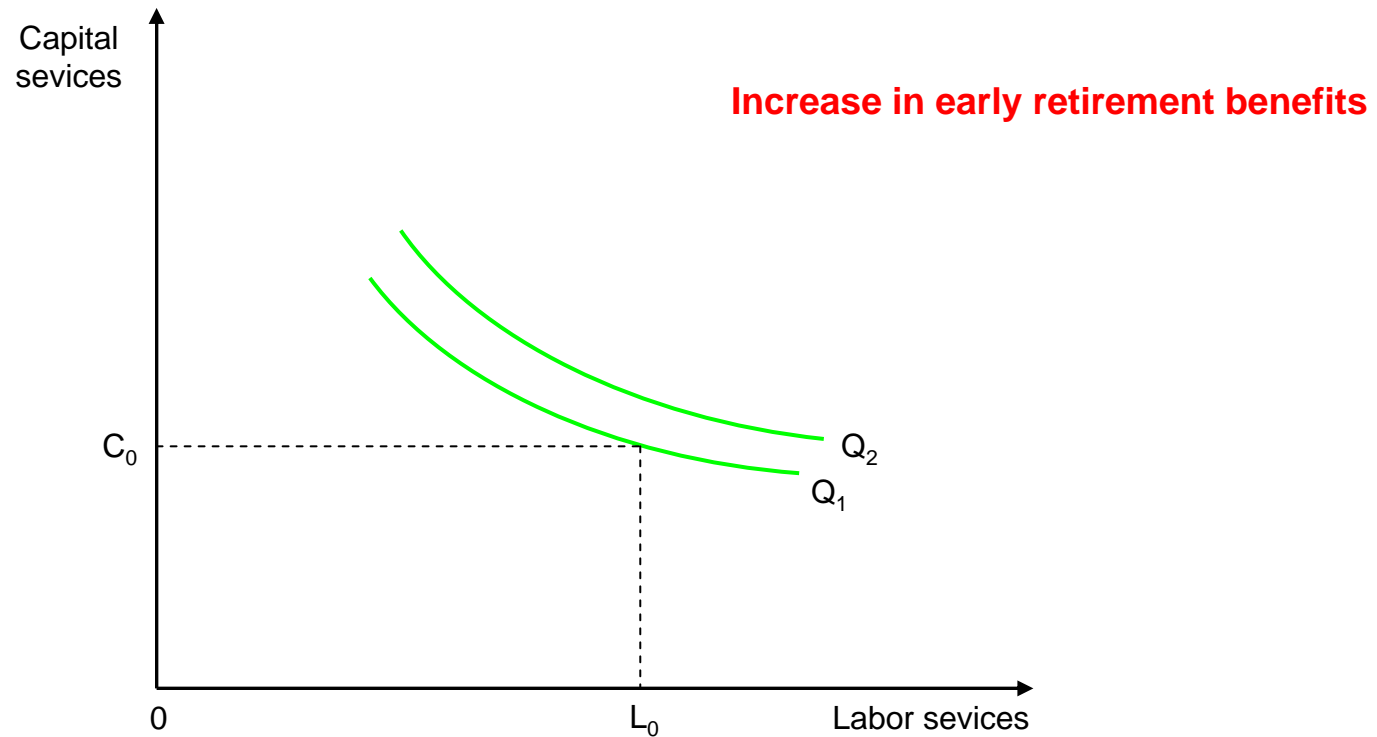
Determination of Labor Force Participation: Demand

Input choice and isoquants



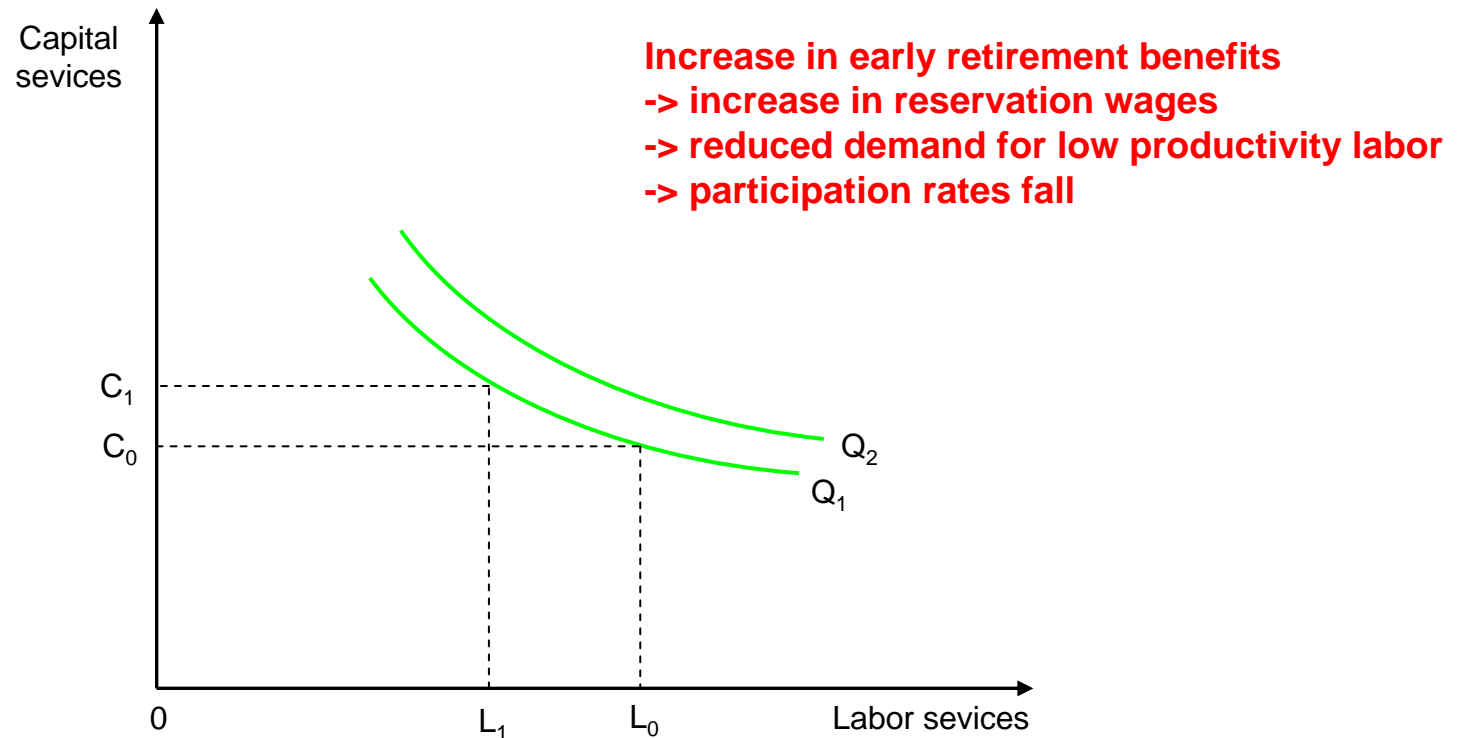
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Why Early Retirement?

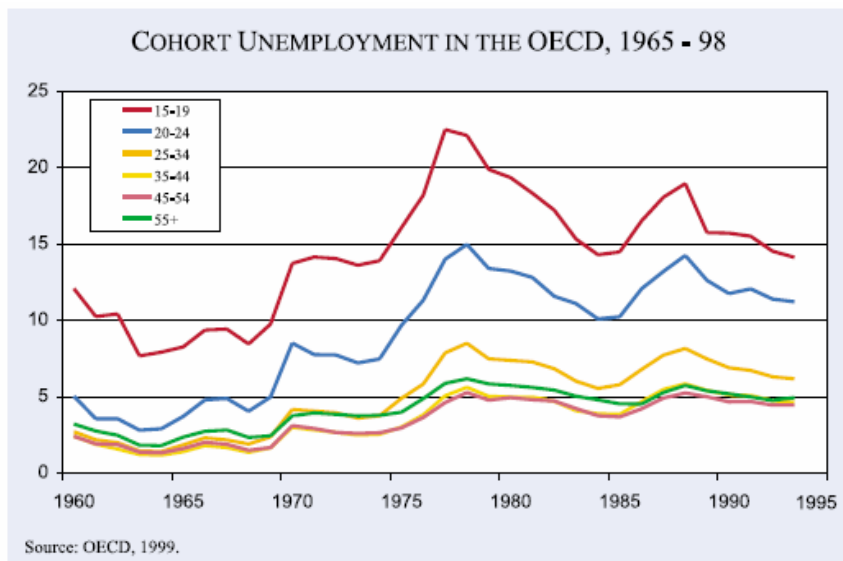
- The UK Cabinet Office (2000) estimates that at most one-third of early retirees have planned their retirement.
- Labor force status of people not working between 50 and state pension in the UK:
 - Voluntary inactive
 - Retired (18 per cent)
 - Taking care of family (14 per cent)?
 - Involuntary inactive
 - Long-term sick or disabled (44 per cent)
 - Looking for work (10 per cent)
 - Other reasons for inactiveness
 - Don't need job (5 per cent)
 - Other (10 per cent)

Source: Winning the Generation Game

Early Retirement as a Result of Weak Labor Markets

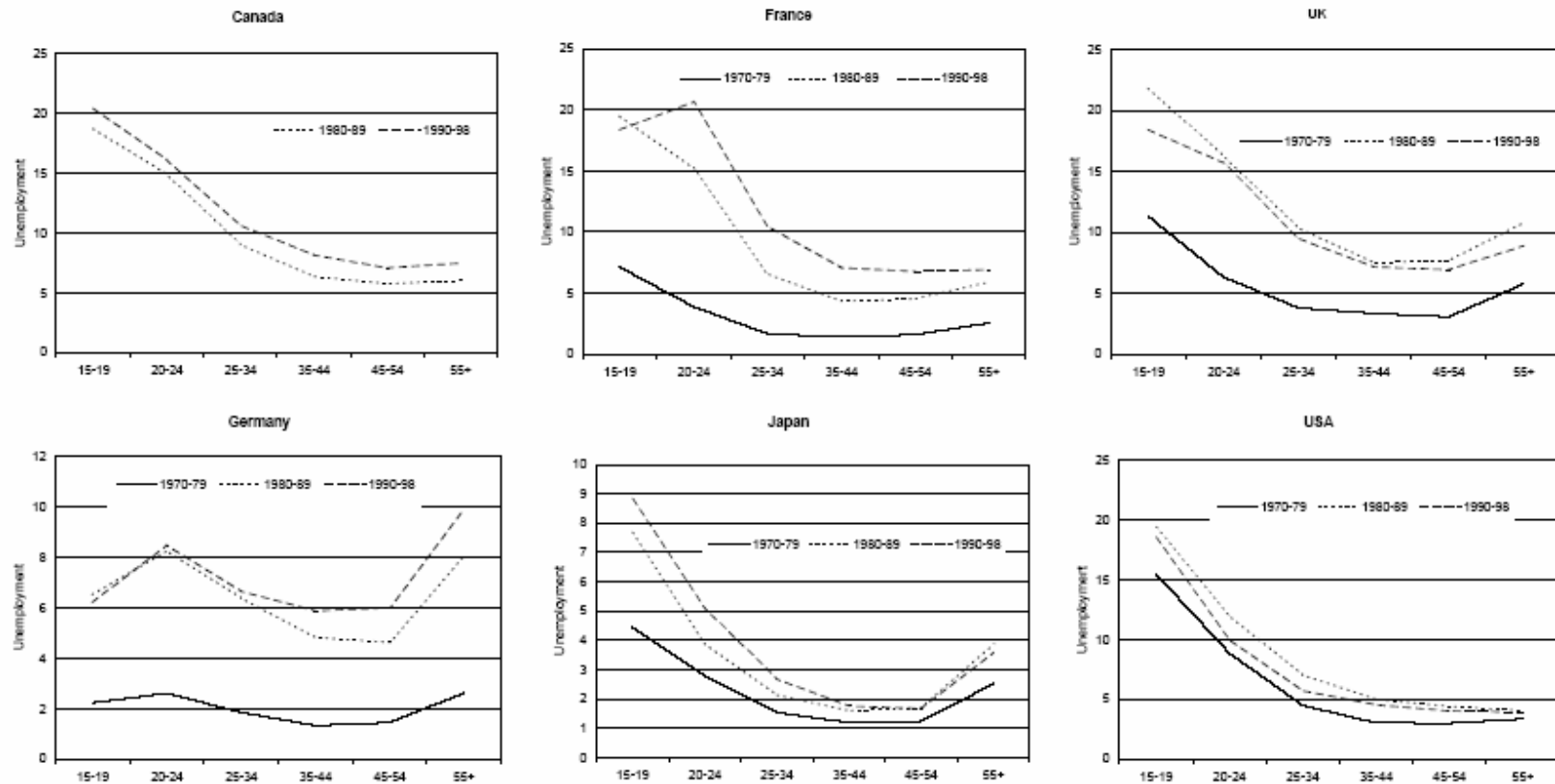
- The political environment in the 1980s was very much influenced by the *early-retirement-as-youth-unemployment-reduction-mechanism* doctrine and the *lump-of-labor-fallacy*.
- Also, the larger the fraction of people at an early retirement age relative to the total population, the greater the political pressure on implementation of early retirement schemes paid for by the public – as the potential early retirees become a stronger force in the political process.
- It is postulated here that the development of many of the early retirement schemes in Europe (and consequently a decrease in the labor force participation of older workers) can be traced to these facts.
- The unemployment rate is age dependant.

Early Retirement as a Result of Weak Labor Markets



- As the workers enter the labor force at young ages, there is a higher probability of being unemployed than at older ages.
- Since it is more difficult to dismiss older workers, the sensitivity of employment to shocks could be a decreasing function of the size of older cohorts.
- The age structure and the institutional framework may interact in such a way that employment-protection legislation may be more effective as the average age of workers increases.

Early Retirement as a Result of Weak Labor Markets



Early Retirement as a Result of Weak Labor Markets

Participation and unemployment

	Dependent variable, participation rate, males 55–64				
	(1)	(2)	(3)	(4)	(5)
Unemployment, males 16–24	– 0.30 (6.37)				
Unemployment, males 55–64		– 0.51 (5.65)			
Total male unemployment			0.60 (6.56)		0.55 (5.98)
Dependency ratio 65+/25–64				– 0.71 (4.13)	– 0.58 (3.54)
R ²	0.93	0.92	0.92	0.92	0.92
Note: Unbalanced panel of OECD countries, 1979–1998. Estimation method fixed effects.					

Source: Herbertsson (2001b).

- (1) the “early-retirement as a youth unemployment reduction mechanism” hypothesis.
- (2) and (3) the “discouraged worker effect” hypothesis.
- (4) the “older worker as a pressure group” hypothesis
- (5) a mixture of (4) and (3)

Policy Implications

Effect on Firms and Pension Schemes

- The decline in labour supply (especially in Continental Europe) will increase pressure on firms to retain older workers.
- Firms need to make the workplace more friendly to older workers and introduce more flexible retirement schemes.
- Occupational pension funds have to rethink incentives and benefit rules in order to delay retirement of members.
- Less skilled workers and those in poor health are less likely to return to work and accordingly policy measures should take into account the relative willingness of different types of individuals to return to work.
- Policy options:
 - Voucher programs and wage subsidies,
 - Changes in benefit programs,
 - Quantity restrictions,
 - Special schemes (FlexJob in Denmark),
 - Bridge jobs,
 - Flexible retirement.
- Important for actuaries to recognize future labor demand and supply in their projections.