

Chapter 2, Life-Cycle Labor Supply

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Outline

1. Life-Cycle labor Supply
2. Policy Applications

Life-Cycle Labor Supply

Lifecycle labor supply

Our current static model is a one-period model. It overlooks lots of issues.

Might wages systematically change over the lifecycle?

Might wage growth result from investments?

Might individuals have time in their lives where the value of leisure is particularly high, perhaps during years with young children at home and when they are older?

Might there be uncertainty about the availability of jobs?

The lifecycle labor supply model

Suppose individuals are forward looking and seek to make the optimal work decision today, considering what they know and don't know about all future years

The model is MUCH more difficult

But one simple idea: Intertemporal substitution hypothesis

If an individual knows their wage will be higher in one period as compared to another, they shift work hours to the high-wage period

An illustration

If one new wages followed an inverted-U, then so should hours...

Empirical evidence for men is consistent with this

$$\text{IES} = +0.1$$

Recall that $\text{LSE} = -0.1$ for men



Labor supply and the business cycle

Business cycle: the regular process of economic expansions and recessions

Do wages for an individual change over the business cycle?

If they did, we might expect individuals to choose to work less during when wages go down during recessions

No evidence that wages for individuals decline on average during recessions

Earnings change—but often due to layoffs

This empirical finding has important implications for macroeconomics

Labor supply and the business cycle

Added worker effect

If one individual in a household loses their job, then another might seek employment as well

Why? The other person's reservation wage may have declined

This is important because this suggests that the business cycle could increase labor force participation (more people are working or looking for work)

Discouraged worker effect

Recall that individuals are only counted as unemployed if they are sought work over the last four weeks

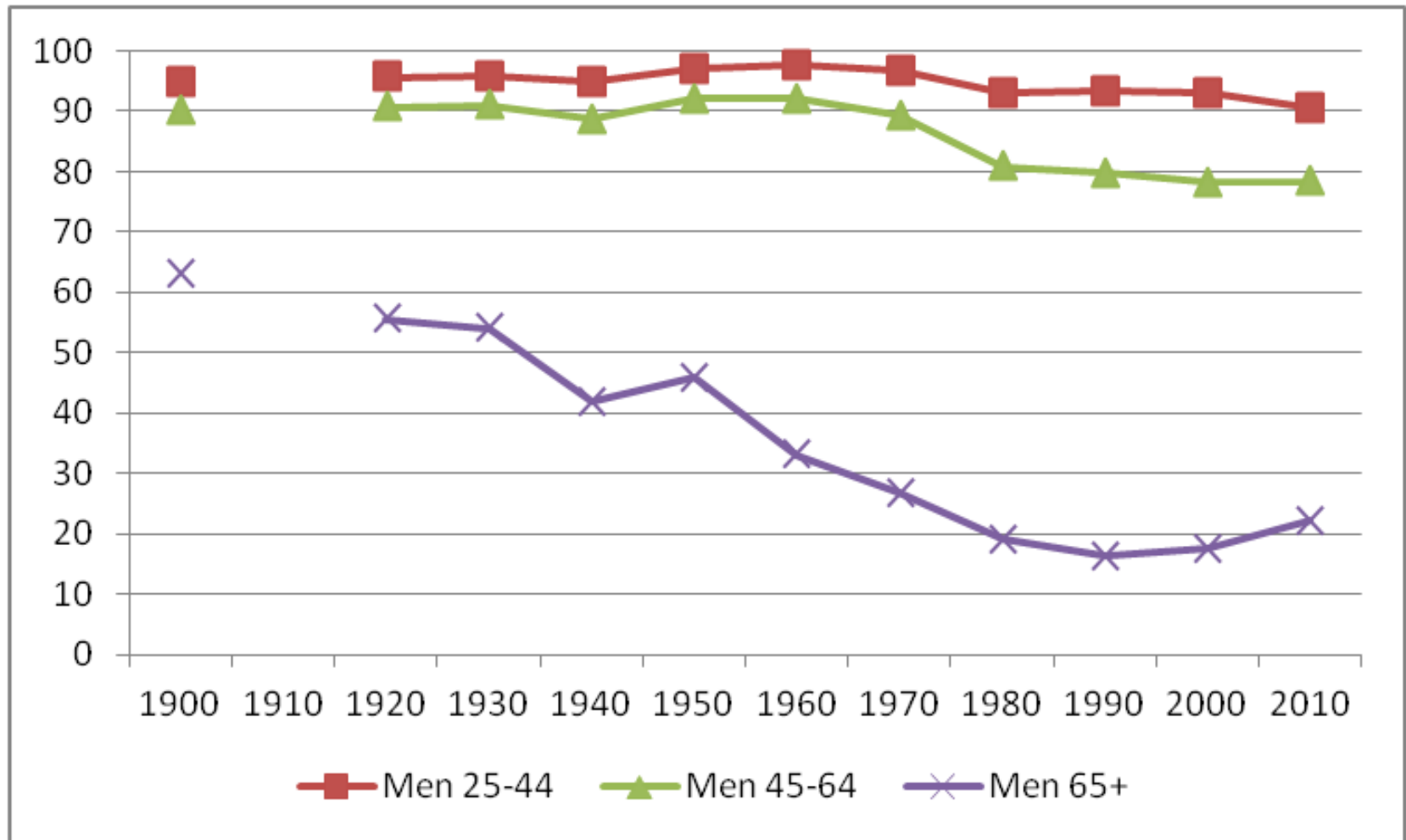
Suppose individuals who are laid off during a recession give up looking for work... This is sometimes called "hidden unemployment"

This is important because this effect suggests that the business cycle could reduce labor force participation

Policy application: elderly labor supply

Why the decline among 65+?

LFPR by age we put up previously



Why the decline for 65+?

Increasing lifetime wealth

Productivity/wages increased dramatically over the century, and we assume leisure is a normal good

Why concentrated among the elderly? Perhaps leisure is more valuable for older individuals, especially when many jobs were manufacturing based

This hypothesis is not evaluated in the text

Increasing pension and social security wealth

Both increased dramatically over the century

Social security cannot account for much—perhaps 15% of the overall decline

Why the decline for 65+?

Expanding disability programs

This is the point of disability programs—to help those who have difficulties working, and perhaps that group is over-represented by the 65+ population

Does disability affect LFPR? Yes, DD evidence from Canada

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TABLE 2-6 The Impact of Disability Benefits on Labor Supply in Canada

Source: Jonathan Gruber, “Disability Insurance Benefits and Labor Supply,” *Journal of Political Economy* 108 (December 2000): 1175.

	Before	After	Difference	Difference-in-Differences
Annual benefits:				
Canada Pension Program	\$5,134	\$7,776	\$2,642	\$1,666
Quebec Pension Program	6,876	7,852	976	
Percent of men aged 45 to 59 not employed last week:				
Treatment group: CPP	20.0%	21.7%	1.7%	2.7%
Control group: QPP	25.6	24.6	−1.0	

Why the decline for 65+?

Structure of social security

If one claims social security benefits, should one be allowed to work?

Early program rules said no. Then, they allowed some work, and then reduced benefits. Now, benefits are not reduced at all

Sound familiar? These program rules cause kinks in the budget constraint, just like welfare programs

Findings

The elderly do respond

Effects are small

