

Topic 6.1 Unemployment Measurement

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Economics 471

Unemployment

- ◆ In general, those not currently employed but who indicate that they want to work at the prevailing wages and working conditions.
- ◆ The most common measure is obtained from the monthly Labour Force Survey (LFS)
- ◆ In this survey people are asked about their labour market activities in the week prior to the survey
- ◆ They are categorized as “unemployed” if they did not have work but were available and searching
- ◆ The unemployed also includes those who were on temporary layoff or had a job starting within 4 weeks
- ◆ Most recent estimate of unemployment rate in Canada is 5.8 percent (February 2018).

Unemployment

Why is there unemployment?

- ◆ The Neoclassical model suggests that prices should adjust to reach an equilibrium in which all those wishing to work find employment.
- ◆ To see why some unemployment might be expected even with our simple supply and demand model let's look at the different types of unemployment.
- ◆ However, we will need more than this to explain the existence and persistence of unemployment.
- ◆ We will examine some of the explanations proposed to explain persistent unemployment as well.

Types of Unemployment:

(i) Frictional Unemployment:

- ◆ Unemployment associated with normal turnover in the labour force.
- ◆ Thus, unemployment would prevail even in a well functioning labour market.
- ◆ New jobs open up, others disappear, workers return to school.

Therefore, unemployment and job vacancies will co-exist at any point in time.

Frictional Unemployment

- Often associated with job search which takes time.
How much time? → "Optimal Search"

- Job vacancies and job seekers exist because of imperfect information.

Costs:

- Takes time/money for the unemployed to discover available jobs and their attributes.
- The same types of costs exist for firms finding suitable candidates.

Benefits:

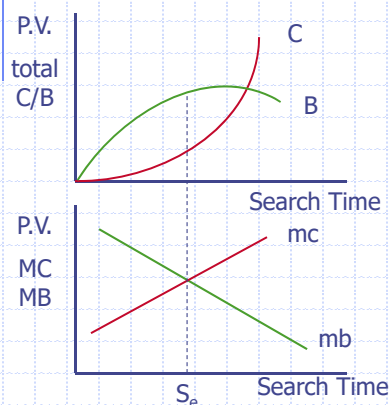
- Good job for the worker.
- Good employee for the firm.
i.e., a good "match"

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Optimal Search

- Assume that individuals choose search activities to maximize expected utility
 - i.e. continue to search until the marginal expected benefit equals the marginal expected cost



- Initially MC of search is low
 - Ask friends etc.
- More costly methods will be necessary as search continues
- Thus, MC rises with search time
- MB likely declines with search time
 - Check most promising alternatives first
- Equilibrium search time = S_e
- "expected" amount of search

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Frictional Unemployment

It may not be beneficial to reduce frictional unemployment.

- ◆ The benefits typically outweigh the costs.
- ◆ Could be costly to reduce frictional unemployment.
- ◆ In any case, frictional unemployment is not likely to be eliminated.

Temporary layoffs due to

- ◆ changes in product demand
- ◆ weather
- ◆ work stoppages

are part of frictional unemployment

i.e., normal “frictions” of a decentralized economy.

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Types of Unemployment:

(ii) Structural Unemployment:

- ◆ Results when the skills or location of the unemployed are not matched with the characteristics of job vacancies.



“matching square pegs with round holes”

e.g. worker and firm are in different labour markets
-- geographically or in terms of qualifications

- ◆ Out of work car salesman finds job available for computer programmer.
- ◆ Like with frictional unemployment, unemployed workers and job vacancies co-exist.

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Structural Unemployment

Here, successful matching requires more than the acquisition of information.

- ◆ employers/employees may have to relocate
- ◆ employers may have to alter their requirements or
- ◆ employees may have to alter their characteristics

Solutions:

- ◆ Improve human capital of workers.
- ◆ Encourage labor mobility.
- ◆ Adapt the characteristics of jobs.
e.g., rearrange job components

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Structural Unemployment

Whether frictional or structural depends on whether changes in demand are permanent or temporary.

Permanent → Structural → need to retrain, etc.

Temporary → Frictional → wait.

- ◆ Not always clear which is the case.

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Types of Unemployment:

(iii) Demand Deficient Unemployment:

- ◆ When there is insufficient aggregate demand in the economy to generate sufficient job vacancies.
- ◆ Doesn't arise because of a lack of the correct skills or by being in the wrong labor market or because of search.

Supply = employed + unemployed

Demand = employed + vacancies

Demand < Supply => vacancies < unemployed

Demand Deficient Unemployment

- ◆ Usually associated with the business cycle "cyclical unemployment".
- ◆ Could be chronic as opposed to short-term e.g., Great Depression.

Types of Unemployment:

(iv) Seasonal Unemployment:

- ◆ Associated with insufficient demand in a particular season.
 - ◆ Different from demand deficient unemployment in that it is not a shortage of aggregate demand but rather a shortage in a particular season.
 - ◆ Usually predictable over the year and specific to particular industries.
- e.g. Unemployment increases in the winter in:
- ◆ construction
 - ◆ agriculture
 - ◆ tourist trade

Seasonal Unemployment

Labour supply may also increase

e.g., university students in the summer

- ◆ Seasonal unemployment is analogous to temporary layoffs in several ways – often included in frictional unemployment.

Seasonally adjusted unemployment rate:

- ◆ The unemployment rate that would have prevailed had the particular month not been associated with seasonal demand conditions.
- ◆ Seasonally unemployed are not removed – simply averaged over the year.

Types of Unemployment:

(v) Involuntary Unemployment:

- ◆ It is important to distinguish between voluntary and involuntary unemployment.

Involuntary unemployed:

- ◆ Willing to work at the going wage rate for your skills but unable to find a job.

Voluntary unemployed:

- ◆ Simply not willing to work at the going wage.

Unemployment in Canada

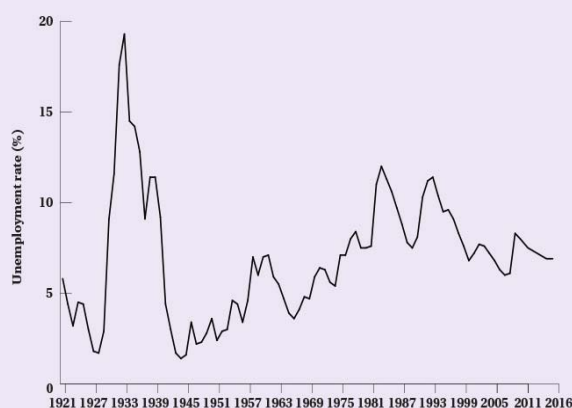


Figure 16.1 Unemployment in Canada, 1921–2015

Unemployment in Canada

- ◆ Canada's unemployment rate fluctuated a great deal during this period
- ◆ Typically because of cyclical fluctuations
- ◆ Great depression began in 1929 and the unemployment rate soared up to almost 20%
- ◆ A lengthy period of declining unemployment followed
- ◆ Unemployment fell to very low levels during WWII
- ◆ Following WWII unemployment remained low until the recession of 1957-58

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Unemployment in Canada

- ◆ From the 1960's on unemployment rates have trended upward
- ◆ Most significant increases occurred in the recessions of 1981-82 and that of 1990-92
- ◆ This trend broke somewhat in recent years as unemployment rates fell to levels not seen in almost 30 years

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Hidden Unemployment (marginal labor force attachment)

- ◆ Refers to situations in which individuals may be without work yet desire to work but are not classified as unemployed
- ◆ They are attached to the labour force but not enough that they “actively” seek work

Examples:

1. “discouraged worker” phenomenon:

- ◆ Individual would work at the going wage but does not seek work because he/she believes there is no work available
- ◆ Typically found during recessions and in regions with few available jobs

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Examples of Hidden Unemployment

2. Those waiting for recall after 6 months of layoff
3. The underemployed

- ◆ Those working fewer hours than they desire

It is difficult to classify these individuals as either employed, unemployed or not in the labor force

- ◆ There is evidence of significant hidden unemployment
- ◆ Some labour force surveys identify those who want to work, are available but not seeking
- ◆ These individuals would inflate the official unemployment statistics significantly

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Should they be “unemployed”?

Yes:

- ◆ They are without work and willing to work
- ◆ May be rational not to search if believe no jobs are available
- ◆ May be rational to wait more than 6 months

No:

- ◆ No job search -- low labour force attachment
- ◆ Should be considered out of the labour force

Note: the number of discouraged workers increases during recessions

“unemployment” is not sufficiently well defined that a single measure will be appropriate

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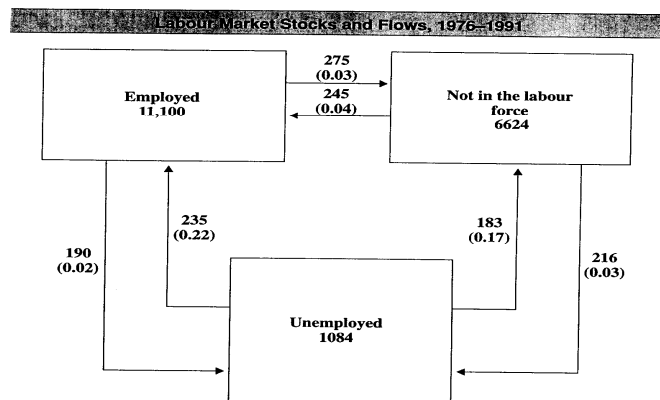
Labour Force Dynamics

- ◆ The measures we have discussed so far provide a snapshot at a point in time
i.e. an estimate of the stock of persons in each labour force state
- ◆ However, even if the stocks remain constant it could be a mistake to say that the labour force hasn't changed
- ◆ Figure 17.2 gives the monthly flows between three labor force states: employed, unemployed and the non market sector between 1976 and 1991

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Labour Force Dynamics



Notes:

1. All numbers are in thousands.

2. All flows and stocks are averages of monthly values from 1976 to 1991.

Source: Stephen R.G. Jones, "Cyclical and seasonal properties of Canadian gross flows of labour." This article first appeared in Vol. XIX:1 March 1993 of *Canadian Public Policy—Analyse de Politiques*. By permission.

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Labour Force Dynamics

- ◆ The flows between the three states are large in comparison to the stocks
- ◆ The gross flows are huge in comparison to the net flows

Even though the number of employed changes only marginally from month to month, many of the unemployed in one month are no longer unemployed the next month

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Incidence and Duration

- ◆ It is important to understand how stocks and flows influence unemployment

Incidence of unemployment:

- ◆ The proportion of individuals who become unemployed in any period

Duration of unemployment:

- ◆ The length of time spent in the unemployment state before leaving

i.e. Incidence measures the probability of becoming unemployed and duration the length of time the individual can be expected to remain unemployed

Incidence and Duration

- ◆ The unemployment rate is affected by both incidence and duration

Unemployment rate = $I \cdot D$

- ◆ In general, we find that those with the highest incidence and low duration of unemployment have the highest unemployment rates

e.g. high youth unemployment

- ◆ high probability of becoming unemployed
- ◆ relatively low duration

low unemployment among older workers

- ◆ tend to be less likely to become unemployed
- ◆ require more time to leave unemployment