Introduction to Labour Economics

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Learning Objectives

2. The Neoclassical Model of Labour Supply and Demand.
3. Characteristics of the Labour Market
4. Alternative Perspectives of the Labour Market
5. Why have a separate field of economics
6. How do we study labour markets?
7. What kind of things do labour economists seek to explain?
8. Some Labour Market Outcomes in Canada.
What is Labour Market Economics?
Main players and their Roles.

Labour economics: A subfield of economics that studies markets in which labour services are exchanged for wages. It concerns itself with the interaction of various decision makers in markets which determine the price and amount of labour services exchanged.

The main decision makers include:
1. Households or Individuals (labour supply)
2. Firms or Employers (labour demand)
3. Government
What is Labour Market Economics?  
Main players and their Roles.

Labour supply.

- What decisions do individuals make?
  1. Whether or not to join the labour force.
  2. Which occupation/industry to join.
  3. How many hours to work.
  4. Whether or not to join a union.
  5. How much education to obtain.
  6. When to retire.
  7. Where to live.
  8. etc.

- Dimensions of LS:
  1. quantity dimensions: extensive margin (work or not), intensive margin (how much to work)
  2. quality dimensions (effort, education)
What is Labour Market Economics?
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Labour demand.

■ What decisions do **firms** make?

  1. How much labour to hire.
  2. What wages to pay.
  3. What hours of work to require.
  4. When to lay-off workers.
  5. Plant closings, outsourcing, etc.

**TSCHOPP (2012)**
**INTRODUCTION TO LABOUR ECONOMICS**
What is Labour Market Economics?  
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What decisions does **government** make?

1. Set rules in the labour market (minimum wage, ect.)
2. Rules governing maternity leave, pensions, ect.
3. Workers compensation, unemployment benefits.

→ Governments as legislators and policymakers establish the environment in which individuals and firms interact.
What is Labour Economics? Main Players and their Roles.

Labour supply and demand.

- Individuals, Firms, and Government interact to determine labour market outcomes:
  1. Prices (wages, wage differentials).
  2. Quantities (employment and unemployment).

- Factors influencing labour market outcomes:
  1. Legislative interventions
  2. Unions and collective bargaining
  3. Markets structures (in both the product and the labour markets)

→ Labour economics involves analyzing the determinants of the various dimensions of labour supply and demand.

Tschopp (2012)
Introduction to Labour Economics
The Neoclassical Model of Supply and Demand.

- Workhorse of labour economics/Foundation to explain the level of employment and wages.

- Key assumptions:
  1. Individuals and firms simultaneously act in their own best interests
  2. Perfect competition of the labour market
  3. Perfect information
  4. No transaction costs
The Neoclassical Model of Supply and Demand.

*Figure*: Wages and employment in a competitive labour market.

[Tschopp (2012)]

**INTRODUCTION TO LABOUR ECONOMICS**
The Neoclassical Model of Supply and Demand.

■ Competitive behaviour:
  1. market wage taken as given (a single agent can’t affect the market wage by its action)
  2. quantity of labour determined by agents’ supply or demand curves

■ How is the equilibrium market wage determined?
  1. Assume exchange is voluntary and consider W’
  2. Excess supply: some workers willing to work for slightly less and some firms to hire for a slightly lower wage.
  3. In the absence of rigidities, competitive pressures lead the wage to fall toward W*
The Neoclassical Model of Supply and Demand.

*Figure*: Labour market equilibrium in markets for homogeneous workers: wage equalization.
The Neoclassical Model of Supply and Demand.

- Consider homogeneous workers in two separate markets (e.g. regions or occupations).
- At the outset, $W_a < W_b$.
- Can’t be an equilibrium, unless barriers (e.g. imperfect information about wages, switching costs) prevent workers in A from moving to B.
- Individuals in A move to B, producing a contraction of labour supply in A and an expansion of it in B.
- Workers switch to B until wages are equalized across markets.
Characteristics of the Labour Market

- The neoclassical model of supply and demand suggests we can study labour markets just like we study the market for other commodities.
- If so, why have a separate field for labour economics?
- Because the labour market has a number of characteristics that differentiate it from many other markets and cause it to function differently from a spot market.
Characteristics of the Labour Market

1 Stakeholders with a variety of goals
   - Labour: nonunion and union labour; different types of unions (i.e. industrial or professional).
   - Management: stockholders, chief executive officers, middle management.
   - Government: federal, provincial and local levels; differences in the units that make and enforce the law and operate government programs.

2 Sociological constraints
   - family and community ties affecting labour mobility
   - the role of women in the labour market
   - social norms influencing what is considered an appropriate wage and who should do certain jobs
Characteristics of the Labour Market

1. Institutional constraints (unions): important in Canada where about 1/3 of the work force is unionized.

2. Legislative constraints: employment standards laws; human rights and antidiscrimination legislation; laws on health and safety and workers’ compensation, etc.

3. Market imperfections: imperfect information, asymmetric information, transactions costs, uncertainty and risk.
Characteristics of the Labour Market

1 Complex price

- reflects a variety of factors: returns to investments in education, training, mobility; compensation for risk or undesirable working conditions; a rent from a union or an industrial wage premium; discrimination.
- perform a variety of functions: allocates labour efficiently across industries, occupations, regions; encourages optimal investments in human capital; provides incentives for performance, work effort, productivity; should provide an adequate standard of living and alleviate poverty and discrimination.
- strong moral overtone: labour services and the labourer are not separable - dignity, perceptions of self-worth, prestige, and well-being are tied to wage. A job is an important aspect of “who you are”.

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INTRODUCTION TO LABOUR ECONOMICS
Alternative Perspectives of the Labour Market

- The labour market has a number of features that distinguish it from other markets.
- The traditional neoclassical model: oversimplification unable to account for many labour market phenomena.
- Alternative perspectives:
  1. Institutionalism: emphasis on the descriptive realism and the roles of institutions, customs, and sociopolitical factors.
  2. Dualism: based on segmented labour market tradition – primary and secondary.
  3. Radicalism: emphasis on the class conflicts as the main determinant of the labour market outcomes.
Alternative Perspectives of the Labour Market

Does this mean we cannot use the basic tools of the neoclassical model to study the labour market? Not necessarily.

- It often proves to be a good benchmark or useful approximation.
- It provides a good theoretical foundation of the labour market and of market clearing forces.
- It has evolved to incorporate imperfect competition, imperfect information, incentives, transaction costs.

→ Adaptable enough to remain the dominant paradigm for analyzing labour market phenomena.
Why have a separate field of economics?

If we are just going to use the basic tools of economics why have a separate field for labour?

1. Because it is important.
   1. For virtually all households in the economy, the sale of their labour services constitutes, by far, the major source of income.
   2. What people earn is a major determinant of their economic well-being
   3. To understand the distribution of income - who earns what and why - we must understand labour markets.

2. Because of the special features of labour services and the labour market.
How do we study labour markets?

1. We construct models of behaviour:
   - Based on the same neoclassical tools used to examine other markets
   - We can add to these basic models additional features to address the specifics of the labour market.

2. We test the models:
   - Take the model to the data. We assess the ability of the models to predict features of the data from real labour markets.
   - If the model doesn’t fit, it is rejected or revised.
What kind of things do Labour Economists seek to explain?

- First part of this course: Labour supply and Demand
  1. Who participates in the labour market and why?
  2. For Participants, how much do they work?
  3. How do firms react to increases in legislated wages?
  4. etc.

- Second Part: Wage structures.
  1. Relative wages: who earns what and why?
  2. How does immigration affect the labour market.
What kinds of things do Labour Economists seek to explain?

I think that I’ve always been interested more in human behavior than in the behavior of derivative assets [laughs]... Much of my work has focused on how the labor market works for lower-skilled or less-able people. I think somebody should pay attention to that. It seems important enough to me. Trying to understand why some people succeed and others fail, and how their success or failure is related to the environment, institutions and the people themselves...those seem like important issues to me.

-David Card - UC - Berkeley
Some Labour Market Outcomes in Canada.

Data

- Statistics Canada’s primary survey instrument for tracking incomes and labour market activities: Survey of Labour and Income Dynamics (SLID).
- Individuals between the ages of 20 and 65
- 39’000 Canadians
Some Labour Market Outcomes in Canada.

Figure: Sources of Income for Individual Canadians, 2008.

| TABLE 1.1 | Sources of Income for Individual Canadians, 2008 |
|---|---|---|
|   | Full Sample | Men | Women |
|   | Mean | % positive | Mean | % positive | Mean | % positive |
| Earnings | 35,515 | 83.1 | 45,100 | 87.5 | 25,943 | 78.7 |
| Investment income | 1340 | 32.3 | 1607 | 32.5 | 1073 | 32.0 |
| Pension income | 1338 | 6.9 | 1357 | 6.2 | 1319 | 7.6 |
| Other income | 816 | 20.1 | 1100 | 17.6 | 532 | 22.6 |
| Government transfers | 2772 | 65.2 | 2096 | 57.7 | 3448 | 72.7 |
| **Subtotal** | 41,781 | 98.6 | 51,259 | 99.1 | 32,316 | 98.1 |
| Income taxes | 7344 | 70.6 | 10,034 | 77.7 | 4657 | 63.5 |
| **After-tax total** | 34,437 | 98.7 | 41,225 | 99.2 | 27,659 | 98.3 |
| Annual hours worked | 1427 | 79.9 | 1650 | 84.6 | 1204 | 75.2 |
| Average hourly wage | 22.45 | 70.0 | 24.73 | 71.6 | 20.07 | 68.4 |
| Worked, but not self-employed | 68.0 | 70.1 | 65.8 |

NOTES:
1. Income figures are average values for all individuals aged 20 to 65, in 2008 dollars. The “% positive” column reports the percentage of individuals with positive (or negative) income for that source. The income averages are calculated over the whole sample, including individuals with zero income.

2. The “average hourly wage” is the self-reported average hourly wage from the Labour section of the SLID. Note that the product of hours and wages will not equal earnings as they are reported in different parts of the survey.

SOURCE: Adapted from Statistics Canada's Survey of Labour and Income Dynamics public use microdata, 2008. All computations on these microdata were prepared by the authors. The responsibility for the use and interpretation of these data is entirely that of the authors.
Some Labour Market Outcomes in Canada.

Full sample

- Labour earnings: largest source of income for Canadians
  - 91% of nontransfer
  - 85% of total income

- Government transfers: received by 65.2% of the sample

- Income taxes: reduce earned income by 18%.

- Working average: 1427 hours

- Average wage: $22.24 per hour
Some Labour Market Outcomes in Canada.

Earnings’ gap between men and women:

- Ratio of men’s to women’s earnings: 1.74
- Partly explained by differences in hours work:
  - men are more likely to work (84.6% versus 75.2%)
  - men work longer hours (1650 hours versus 1204 hours)
- Hours explanation can’t be the whole story
  - ratio of men’s to women’s wages: 1.23
- Partly offset by higher taxes paid and lower government transfers received by men

→ Considerable amount of labour economics devoted to explain the wage and earnings gap between men and women.
Some Labour Market Outcomes in Canada.

- Averages mask considerable variation/dispersion of outcomes across individuals
- What about the distribution of earnings, wage and hours worked?
- Restriction of the sample
  - individuals with positive earnings
  - exclude self-employed
  - middle 98% of the distribution, i.e. the part above the first percentile and below the 99th percentile.
- Three reference lines:
  - 10th percentile (first decile)
  - 50th percentile (median)
  - 90th percentile
- Measure of the dispersion: ratio of the 90th to the 10th percentile
Some Labour Market Outcomes in Canada.

**Figure:** The Distribution of Individual Earnings, 2008.
Some Labour Market Outcomes in Canada.

- 10% of individuals had earnings below $6000 per year
- half of the sample had earnings below $35,000 per year and half of the sample above it
- only 10% of individuals had earnings above $85,000.
- a high income earner (90th p.) earned about 14 times more than a low income person (10th p.)
- inequality in earnings is driven by inequality in hours worked and hourly wages
Some Labour Market Outcomes in Canada.

Figure: The Distribution of Individual Annual Hours Worked, 2008.
Some Labour Market Outcomes in Canada.

- Considerable variation: hours range from 69 per year to 4131 per year
- Most people work around 2000 hours per year (typical 40 hours a week for 50 weeks per year)

→ What drives the variation in hours?
→ Are low hours voluntarily chosen? Are they the result of unemployment?

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Figure: The Distribution of Individual Average Hourly Wages, 2008.
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- Wages range from $7.87 per hour to $68.2 per hour
- Most people had wages between $10.00 and $38.20 per hour (10th to 90th p.)
- Smaller dispersion than that of earnings: ratio of 90th to 10th p. is 3.82