

Hitotsubashi University  
Department of Economics  
**Labor Economics**  
Winter 2016

**Instructor:** Hiroaki Mori

**Lecture Time:** M,W 8:50-10:20 AM

**Course Website:** <https://manaba.hit-u.ac.jp>

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**Office Hours:** M 11:00-12:00 & 15:00-16:00

**Office:** Faculty Building 2, Room 211

## Course Description

The objective of the course is to provide students with basic economic tools needed to understand and analyze how labor markets work and how various government policies may affect the outcomes of the market. This course covers theory, policy applications, and standard econometric methods. Besides, we will discuss relevant empirical research throughout the course.

## Learning Outcomes

- Students will learn how to analyze supply and demand behaviour in labor markets and the consequences for the determination of wages and employment.
- Students will learn how to analyze the effects of government policies, such as minimum wage laws, on labor markets.
- Students will learn how to explain a wide variety of wage patterns, including wage variation across different individuals, across regions, across countries, across occupations and across demographic groups.
- Students will be able to explain, using human capital models, why earnings for most individuals increase over their working lives and why the increase may be different for different individuals.
- Students will learn about econometric methods relevant to labor economics and will understand how to implement the empirical techniques to provide evidence on various labor market topics.

## Lecture Style

This course consists of 24 lectures, two in-class midterm exams, one final exam, and three assignments. Lectures will be given in English. If time permits, a lecture will be followed by a Q&A session in which students may ask questions in Japanese.

## Prerequisites

The prerequisites for this course are introductory microeconomics and introductory econometrics.

You are responsible for ensuring that you have successfully completed all course prerequisites. Lack of prerequisites may not be used as a basis for appeal. If you are found to be ineligible for a course, you may be removed from it at any time and you will receive no adjustment to your fees.

If you find that you do not have the course prerequisites, it is in your best interest to drop the course well before the end of the add/drop period. Your prompt attention to this matter will not only help protect your academic record, but will ensure that spaces become available for students who require the course for graduation.

## Registration

You are responsible for ensuring you are registered in the correct courses. If you are not registered in this course, the Department will not release your marks until your registration is corrected. If you notice a problem, please contact your faculty academic counsellor right away.

## Assessment

The course grade will be based on 3 assignments, two in-class midterm exams and a final exam. The distribution of the marks is as follows:

Assessment	Weight
Assignments (3)	30%
Midterm exam (2)	40%
Final exam	30%

*Assignments:* Three assignments will be posted to the course website. Typically, students will be given three weeks to complete each assignment. Students are permitted to work in groups of up to three students and to submit a single copy of their solutions per group. Assignments are due at the start of the day's lecture. The deadline for each assignment is listed below:

*Exams:* Midterm and final exams will contain multiple choice problems as well as short answer problems. Midterm will be held in class. All exams are closed book. All electronic

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Assignment 1	10/31
Assignment 2	12/05
Assignment 3	01/23

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devices, except for a non-programmable calculator, will be prohibited during exams. Final exam date will be TBA.

**Policy Regarding Late/Missed Assignments:** Late assignments will be assessed a 10% penalty the first day, and not accepted subsequently. If a student fails to submit an assignment on time, and has a valid reason, it is their responsibility to contact the instructor and explain the reason. Proof supporting this reason may be requested by the instructor.

**Policy Regarding Missing Midterm Exam:** There will be no make-up midterm. If a midterm is missed for acceptable reasons, I will reweigh the assessments and the term grade accordingly. Students may be required to provide medical or other relevant documentation that support their reasons for the absence.

## Textbook

[1] **Borjas, George J., Labor Economics, 6th Edition, 2013.** [Text]

It is required that students have access to the textbook. The 7th edition, published in 2015, also works as a textbook. A copy of the textbook will be available in the library once the term begins. Please note that my lectures will not strictly follow the textbook. Rather, my lectures will be mostly based on the references listed at the end of the syllabus.

## Schedule

Please note that the following is a tentative schedule for the course. All changes in schedule will be announced in class in advance. Students are responsible for learning about these changes.

Lecture	Topic
— (10/03)	Introduction
01 (10/05)	Labor supply theory
02 (10/10)	Social insurance
03 (10/12)	Regression
04 (10/17)	Difference-in-differences
05 (10/19)	Family policies
06 (10/24)	Labor demand theory
07 (10/26)	Overtime regulations
08 (10/31)	Labor market equilibrium
— (11/02)	Review for midterm 1
— (11/07)	Midterm 1 (in-class)
09 (11/09)	Minimum wages
10 (11/14)	Job polarization
11 (11/16)	Instrumental variables
12 (11/21)	Discrimination
13 (11/23)	Job search and matching
14 (11/28)	Unemployment insurance
15 (11/30)	College wage premium
16 (12/05)	Compensating differentials
— (12/07)	Review for midterm 2
— (12/12)	Midterm 2 (in-class)
17 (12/14)	Schooling choices
18 (12/19)	Human capital investment
19 (12/21)	Technology of skill formation
20 (12/26)	Executive pay (optional)
21 (01/11)	Parental investment to children
22 (01/16)	Lifecycle wage growth
23 (01/18)	Education topics
24 (01/23)	Roy model and its applications
— (01/25)	Review for final

# Topics and Key Concepts

## 1. Labor Supply

- Consumption-leisure trade-off
- Substitution effect and income effect
- Wage elasticity of labor supply
- Optimal income taxation
- Self-sufficiency project experiment
- Earned income tax credit
- Difference-in-differences (DID) estimation
- Family policies and women's labor supply

## 2. Labor Demand

- Profit maximization problem of firms
- Substitution effect and scale effect
- Capital-skill complementarity hypothesis
- Marshall's rules and union behavior
- Costs of employment adjustment
- Overtime regulations

## 3. Competitive Labor Market Equilibrium

- Welfare theorems
- Equalizing forces of worker mobility
- Incidence of income taxation and mandated benefits
- Simultaneity and exclusion restrictions
- Instrumental variables

#### **4. Minimum Wages**

- Monopsony
- DID strategy using border counties
- Long-term effects of minimum wage hikes
- Anti-poverty efficacy of minimum wage policies

#### **5. Wage Discrimination**

- Audit studies
- Taste-based discrimination
- Statistical discrimination
- Role of premarket factors

#### **6. Compensating differentials**

- Hedonic regressions
- Value of a statistical life
- Wage-amenity trade-off

#### **7. Skill Premium and Polarization**

- College wage premium
- Canonical model of race between education and technology
- Identification of human capital price and quality
- Wage polarization
- Job polarization and jobless recovery
- Political polarization in the U.S.

#### **8. Job Search and Matching**

- Distinction between unemployment and out-of-labor force status
- The DMP model
- Macro effects of unemployment benefit extensions

## **9. Optimal Unemployment Insurance**

- Liquidity effect and moral hazard effect
- Identification of liquidity effect
- Age-dependent unemployment insurance designs

## **10. Schooling Decisions and Returns to Education**

- Net present value
- Internal rate of return
- Life expectancy and schooling decisions
- Credit constraints
- Information constraints and learning
- Mincer equation
- Option value of education
- Signalling role of education
- Regression discontinuity designs
- Local average treatment effect
- Marginal returns to education
- Non-production benefits of education

## **11. Production of Human Capital**

- Parental investment on children
- Non-cognitive skills
- Early childhood education
- Fetal origins hypothesis

## **12. Lifecycle Wage Dynamics and Inequality**

- Search friction as a source of wage dispersion
- Distinction between cross-sectional inequality and lifetime inequality
- Task-specific human capital
- Deferred compensation and mandatory retirement

### **13. Roy Model and Its Applications**

- Comparative advantage and self-selection
- Composition-adjusted gender wage gap
- Factor models and estimation of skills/information sets

### **14. Executive Compensation**

- Information asymmetry
- Paradox of insider information
- Risk aversion and efficient risk sharing
- Principal-agent theory
- Moral hazard and optimal compensation contracts



## References

### 0. Program Evaluation Methods

- [Heckman \(2000\) QJE](#). Causal Parameters and Policy Analysis in Economics: A Twentieth Century Retrospective
- [Blundell and Dias \(2007\) JHR](#). Alternative Approaches to Evaluation in Empirical Microeconomics
- [Lee and Lemieux \(2010\) JEL](#). Regression Discontinuity Designs in Economics
- [Heckman \(2010\) JEL](#). Building Bridges Between Structural and Program Evaluation Approaches to Evaluating Policy

### 1. Labor Supply

- [Bianchi et al. \(2001\) AER](#). Iceland's Natural Experiment in Supply-Side Economics.
- [Imbens et al. \(2001\) AER](#). Estimating the Effect of Unearned Income on Labor Earnings, Savings, and Consumption: Evidence from a Survey of Lottery Players.
- [Blundell et al. \(2007\) HoEX](#). Labor Supply Models: Unobserved Heterogeneity, Nonparticipation and Dynamics
- [Eissa and Liebman \(1996\) QJE](#). Labor Supply Response to the Earned Income Tax Credit.
- [Blundell et al. \(1998\) EMA](#): Estimating Labor Supply Responses Using Tax Reforms.
- [Yamada \(2011\) LE](#). Labor Supply Responses to the 1990s Japanese Tax Reforms
- [Card and Hyslop \(2005\) EMA](#). Estimating the Effects of a Time-limited Earnings Subsidy for Welfare-leavers.
- [Blundell \(2005\) LE](#). Earned Income Tax Credit Policies: Impact and Optimality
- [French and Song \(2014\) AEJ](#). The Effect of Disability Insurance Receipt on Labor Supply
- [Saez \(2010\) AEJ](#). Do Taxpayers Bunch at Kink Points?
- [Krueger and Meyer \(2002\) HoPE](#). Labor Supply Effects of Social Insurance
- [Piketty and Saez \(2013\) HoPE](#). Optimal Labor Income Taxation
- [Piketty et al. \(2014\) AEJ](#). Optimal Taxation of Labor Income: A Tale of Three Elasticities
- [Abe \(2013\) JWE](#). Regional Variations in Labor Force Behavior of Women in Japan.
- [Yamaguchi \(2016\) JER](#): Family Policies and Female Employment in Japan

## 2. Labor Demand

- [Acemoglu and Restrepo \(2016\)](#) JHR. The Race Between Machine and Man: Implications of Technology for Growth, Factor Shares and Employment
- [Genda et al. \(2011\)](#) JHR. Long-Term Effects of a Recession at Labor Market Entry in Japan and the United States
- [Hunt \(1999\)](#) QJE. Has Work-Sharing Worked in Germany?
- [Crepon and Kramarz \(2002\)](#) JPE. Employed 40 Hours or Not Employed 39: Lessons from the 1982 Mandatory Reduction of the Workweek
- [Skuterud \(2007\)](#) JoLE: Identifying the Potential of Work-Sharing as a Job-Creation Strategy
- [Chesmin and Wasmer \(2009\)](#) JoLE. Using Alsace-Moselle Local Laws to Build a Difference-in-Differences Estimation Strategy of the Employment Effects of the 35-Hour Workweek Regulation in France

## 3. Competitive Labor Market Equilibrium

- [Carrington \(1996\)](#) JPE. The Alaskan Labor Market during the Pipeline Era
- [Acemoglu et al. \(2004\)](#) JPE. Women, War, and Wages: The Effect of Female Labor Supply on the Wage Structure at Midcentury
- [Kawaguchi et al. \(2014\)](#) JLawE. Incidence of Strict Quality Standards: Protection of Consumers or Windfall for Professionals?

## 4. Minimum Wage

- [Card and Krueger \(1994\)](#) AER. Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania
- [Baker et al. \(1999\)](#) JoLE. The Highs and Lows of the Minimum Wage Effect: A Time-Series Cross-Section Study of the Canadian Law
- [Kawaguchi and Mori \(2009\)](#) PER. Is Minimum Wage an Effective Anti-Poverty Policy in Japan?
- [Kambayashi et al. \(2013\)](#) LE. Minimum Wage in a Deflationary Economy: The Japanese Experience, 1994-2003.
- [Lee and Saez \(2012\)](#) JPubE. Optimal Minimum Wage Policy in Competitive Labor Markets
- [Flinn \(2011\)](#) MIT Press. The Minimum Wage and Labor Market Outcomes
- [Sorkin \(2015\)](#) RED. Are There Long-Run Effects of the Minimum Wage?
- [MaCurdy \(2015\)](#) JPE. How Effective Is the Minimum Wage at Supporting the Poor?

## 5. Wage Discrimination

- [Bertrand and Mullainathan \(2004\) AER](#). Are Emily and Greg More Employable Than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination
- [Goldin and Rouse \(2000\) AER](#). Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians
- [Heckman \(1998\) JEP](#). Detecting Discrimination
- [Charles and Guryan \(2008\) JPE](#). Prejudice and Wages: An Empirical Assessment of Becker's The Economics of Discrimination
- [Neal and Johnson \(1996\) JPE](#). The Role of Premarket Factors in Black-White Wage Differences
- [Lang and Manove \(2011\) AER](#). Education and Labor Market Discrimination
- [Fryer Jr. \(2012\) HoLE](#). Racial Inequality in the 21st Century: the Declining Significance of Discrimination
- [Gayle and Golan \(2012\) ReStud](#). Estimating a Dynamic Adverse-Selection Model: Labour-Force Experience and the Changing Gender Earnings Gap 1968-1997

## 6. Compensating Differentials

- [Rosen \(1986\) HoLE](#). The Theory of Equalizing Differences
- [Ekeland et al. \(2004\) JPE](#). Identification and Estimation of Hedonic Models
- [Ashenfelter and Greenstone \(2004\) JPE](#). Using Mandated Speed Limits to Measure the Value of a Statistical Life
- [Olson \(2002\) JoLE](#). Do Workers Accept Lower Wages in Exchange for Health Benefits?
- [Cowan and Schwab \(2016\) JHE](#). Employer-sponsored Health Insurance and the Gender Wage Gap
- [Sorkin \(2016\)](#). Ranking Firms Using Revealed Preference

## 7. Skill Premium and Polarization

- [Acemoglu and Autor \(2011\) HoLE](#). Skills, Tasks and Technologies: Implications for Employment and Earnings
- [Autor et al. \(2013\) AER](#). The China Syndrome: Local Labor Market Effects of Import Competition in the United States

- [Autor et al. \(2016\) ARE](#). The China Shock: Learning from Labor Market Adjustment to Large Changes in Trade
- [Jaimovich and Siu \(2012\)](#). The Trend is the Cycle: Job Polarization and Jobless Recoveries
- [Beaudry et al. \(2016\) JoLE](#). The Great Reversal in the Demand for Skill and Cognitive Tasks
- [Katz and Murphy \(1992\) QJE](#). Changes in Relative Wages, 1963-1987: Supply and Demand Factors
- [Card and Lemieux \(2001\) QJE](#). Can Falling Supply Explain the Rising Return to College for Younger Men? A Cohort-Based Analysis
- [Carneiro and Lee \(2011\) AER](#). Trends in Quality-Adjusted Skill Premia in the United States, 1960-2000
- [Hendricks and Schoellman \(2014\) JME](#). Student Abilities During the Expansion of US Education
- [Bowlus and Robinson \(2012\) AER](#). Human Capital Prices, Productivity, and Growth
- [Kawaguchi and Mori \(2016\) EER](#). Why has Wage Inequality Evolved so Differently between Japan and the US? The Role of the Supply of College-Educated Workers

## 8. Job Search, Matching and Unemployment

- [Rogerson et al. \(2005\) JEL](#). Search-Theoretic Models of the Labor Market: A Survey
- [Hagedorn and Manovskii \(2008\) AER](#). The Cyclical Behavior of Equilibrium Unemployment and Vacancies Revisited
- [Hagedorn et al. \(2013\)](#). Unemployment Benefits and Unemployment in the Great Recession: The Role of Macro Effects

## 9. Optimal Unemployment Insurance

- [Meyer \(1990\) EMA](#). Unemployment Insurance and Unemployment Spells
- [Gruber \(1997\) AER](#). The Consumption Smoothing Benefits of Unemployment Insurance
- [Browning and Crossley \(2001\) JPubE](#). Unemployment Insurance Benefit Levels and Consumption Changes
- [Feldstein \(2005\) AERPP](#). Rethinking Social Insurance
- [Card et al. \(2007a\) AERPP](#). The Spike at Benefit Exhaustion: Leaving the Unemployment System or Starting a New Job?

- [Card et al. \(2007b\) QJE](#). Cash-on-Hand and Competing Models of Intertemporal Behavior: New Evidence from the Labor Market
- [Chetty and Siedl \(2007\) QJE](#). Consumption Commitments and Risk Preferences
- [Shavell and Weiss \(1979\) JPE](#). The Optimal Payment of Unemployment Insurance Benefits over Time
- [Hopenhayn and Nicolini \(1999\) JPE](#). Optimal Unemployment Insurance
- [Chetty \(2008\) JPE](#). Moral Hazard versus Liquidity and Optimal Unemployment Insurance
- [Michelacci and Ruffo \(2015\) AER](#). Optimal Life Cycle Unemployment Insurance

## 10. Schooling Decisions and Returns to Education

- [Goldin et al. \(2006\) JEP](#). The Homecoming of American College Women: The Reversal of the College Gender Gap
- [Kane \(2006\) HoEE](#). Public Intervention in Post-Secondary Education
- [Fortin et al. \(2015\) JHR](#). Leaving Boys Behind: Gender Disparities in High Academic Achievement
- [Bound and Turner \(2007\) JPubE](#). Cohort Crowding: How Resources Affect Collegiate Attainment
- [Bound and Turner \(2011\) HoEE](#). Dropouts and Diplomas: The Divergence in Collegiate Outcomes
- [Belly and Lochner \(2007\) JHC](#). The Changing Role of Family Income and Ability in Determining Educational Achievement
- [Heckman and LaFontaine \(2010\) ReStat](#). The American High School Graduation Rate: Trends and Levels
- [Blundell et al. \(2016\) EMA](#). Female Labor Supply, Human Capital, and Welfare Reform
- [Mincer \(1974\) NBER](#). Schooling, Experience, and Earnings
- [Griliches \(1977\) EMA](#). Estimating the Returns to Schooling: Some Econometric Problems
- [Heckman et al. \(2006\) HoEE](#). Earnings Functions, Rates of Return and Treatment Effects: The Mincer Equation and Beyond
- [Meghir and Rivkin \(2011\) HoEE](#). Econometric Methods for Research in Education

- [Oreopoulos \(2006\) AER](#). Estimating Average and Local Average Treatment Effects of Education When Compulsory Schooling Laws Really Matter
- [Maurin and McNally \(2008\) JoLE](#). Vive la Révolution! Long-Term Educational Returns of 1968 to the Angry Students
- [Lochner and Monge-Naranjo \(2012\) ARE](#). Credit Constraints in Education
- [Cunha et al. \(2005\) OEP](#). Separating Uncertainty from Heterogeneity in Life Cycle Earnings
- [Stinebrickner and Stinebrickner \(2012\) JoLE](#). Learning about Academic Ability and the College Dropout Decision
- [Wiswall and Zafar \(2015\) JHC](#). How Do College Students Respond to Public Information about Earnings?
- [Arcidiacono \(2004\) JoE](#). Ability Sorting and the Returns to College Major
- [Stinebrickner and Stinebrickner \(2014\) ReStud](#). A Major in Science? Initial Beliefs and Final Outcomes for College Major and Dropout
- [Altonji et al. \(2016\) HoEE](#). The Analysis of Field Choice in College and Graduate School: Determinants and Wage Effects
- [Heckman et al. \(2011\) AER](#). Estimating Marginal Returns to Education
- [Lochner \(2011\) HoEE](#). Nonproduction Benefits of Education: Crime, Health, and Good Citizenship
- [Lochner and Monge-Naranjo \(2016\) HoEE](#). Student Loans and Repayment: Theory, Evidence, and Policy
- [Spence \(1973\) QJE](#). Job Market Signaling
- [Clark and Marorell \(2014\) JPE](#). The Signaling Value of a High School Diploma

## **11. Production of Human Capital**

- [Ben-Porath \(1968\) JPE](#). The Production of Human Capital and the Life Cycle of Earnings
- [Oster et al. \(2012\) AER](#). Limited Life Expectancy, Human Capital and Health Investments
- [Cunha et al. \(2006\) HoEE](#). Interpreting the Evidence on Life Cycle Skill Formation
- [Currie and Almond \(2010\) HoLE](#). Human Capital Development before Age Five
- [Cunha et al. \(2010\) EMA](#). Estimating the Technology of Cognitive and Noncognitive Skill Formation

- [Del Boca et al. \(2012\) ReStud](#). Household Choices and Child Development
- [Caucutt et al. \(2016\) SJE](#). Correlation, Consumption, Confusion, or Constraints: Why Do Poor Children Perform so Poorly?
- [Chetty et al. \(2011\) QJE](#). How Does Your Kindergarten Classroom Affect Your Earnings? Evidence from Project Star
- [Heckman et al. \(2013\) AER](#). Understanding the Mechanisms through Which an Influential Early Childhood Program Boosted Adult Outcomes

## 12. Lifecycle Wage Dynamics and Lifetime Inequality

- [Flinn \(2002\) ReStud](#). Labour Market Structure and Inequality: A Comparison of Italy and the U.S.
- [Bowlus and Robin \(2012\) JEEA](#). An International Comparison of Lifetime Inequality: How Continental Europe Resembles North America.
- [Kuruscu \(2006\) AER](#). Training and Lifetime Income
- [Rubinstein and Weiss \(2006\) HoEE](#). Post Schooling Wage Growth: Investment, Search and Learning
- [Yamaguchi \(2010\) JoLE](#). Job Search, Bargaining, and Wage Dynamics
- [Gathman and Schönberg \(2010\) JoLE](#) How General Is Human Capital? A Task-Based Approach
- [Yamaguchi \(2012\) JoLE](#). Tasks and Heterogeneous Human Capital
- [Bagger et al. \(2014\) AER](#). Tenure, Experience, Human Capital, and Wages: A Tractable Equilibrium Search Model of Wage Dynamics
- [Lazear \(1979\) JPE](#). Why Is There Mandatory Retirement?
- [Burdett and Coles \(2003\) EMA](#). Equilibrium Wage-Tenure Contracts

## 13. Roy Model

- [Heckman \(1979\) EMA](#). Sample Selection Bias as a Specification Error
- [Willis and Rosen \(1979\) JPE](#). Education and Self-Selection
- [Borjas \(1987\) AER](#). Self-Selection and the Earnings of Immigrants
- [Blundell et al. \(2003\) AER](#). Interpreting Aggregate Wage Growth: The Role of Labor Market Participation
- [Blundell et al. \(2007\) EMA](#). Changes in the Distribution of Male and Female Wages Accounting for Employment Composition Using Bounds



- [Keane and Wolpin \(1997\) JPE](#). The Career Decisions of Young Men.
- [Mulligan and Rubinstein \(2008\) QJE](#). Selection, Investment, and Women's Relative Wages over Time
- [Onozuka \(2016\) JJIE](#). The Gender Wage Gap and Sample Selection in Japan
- [Yamaguchi \(2016\) JHR](#). Changes in Returns to Task-Specific Skills and Gender Wage Gap
- [Cunha and Heckman \(2016\) JoLE](#). Decomposing Trends in Inequality in Earnings into Forecastable and Uncertain Components
- [French and Taber \(2011\) HoLE](#). Identification of Models of the Labor Market

#### **14. Executive Compensation**

- [Murphy \(1999\) HoLE](#). Executive Compensation
- [Gabaix and Landier \(2008\) QJE](#). Why has CEO Pay Increased So Much?
- [Gayle and Miller \(2009\) CES](#). Insider Information and Performance Pay
- [Gayle and Miller \(2009\) AER](#) Has Moral Hazard Become a More Important Factor in Managerial Compensation?
- [Gayle et al. \(2012\) JoLE](#). Gender Differences in Executive Compensation and Job Mobility
- [Gayle et al. \(2015\) EMA](#) Promotion, Turnover, and Compensation in the Executive Labor Market
- [Gayle and Miller \(2015\) ReStud](#). Identifying and Testing Models of Managerial Compensation