



## Shanghai Jiao Tong University

### EC339 Introduction to Labor Economics

<b>Instructor Information</b>	<p>Yao Yao Home Institution: Curtin University &amp; Shanghai Lixin University of Accounting and Finance Email: ethan.yao@curtin.edu.au Office Hours: To be determined</p>		
<b>Term</b>	June 28, 2021 - July 23, 2021	<b>Credits</b>	4 units
<b>Class Hours</b>	Monday through Friday, 120 mins per teaching day		
<b>Discussion Sessions</b>	2.5 hours each week, conducted by teaching assistant(s)		
<b>Total Contact Hours</b>	66 contact hours (1 contact hour = 45 mins, 3000 mins in total)		
<b>Required Texts (with ISBN)</b>	<p><b>Labor Economics 7<sup>th</sup> Edition by George Borjas</b> ISBN10: 007802188X ISBN13: 9780078021886</p> <p><b>Principles of Econometrics, 5<sup>th</sup> Edition</b> R. Carter Hill, William E. Griffiths, Guay C. Lim ISBN: 978-1-119-32094-4</p>		
<b>Prerequisite</b>	<p>Introductory level Microeconomics Fundamental Statistics Regression Analysis</p>		
<p>The course might be moved to online delivery due to COVID-19 pandemic. Students will be notified once the decision is made.</p>			



## Course Overview

An introduction to the concept of the labor market, and the elements that distinguish it from commodity or other factor markets. The economic theory of trade union behavior is discussed, as well as the effects of unions on labor markets and the economy as a whole. Economic statistics from Macao, Hong Kong, China and the United States are applied to understand problems of the labor markets in those countries.

## Course Goals

1. Understanding the fundamental tools for analyzing labor market
2. Applying labor demand and labor supply framework into real world contexts
3. Evaluating welfare tools for labor market e.g. unemployment benefits, minimum wage.
4. Estimating the returns to human capital (education, training or learning by doing)

## Exams

The final exam is not carried out to assess learning outcomes of this unit. Instead, students are expected to conduct research using real world dataset and write a formal report with at least 3000 words in length. This exercise is group oriented. Students are encouraged to form several groups, each of with 4-6 individuals. The final marks are based on the quality of both group report and class presentation.

The following topics are encouraged but not limited to them. Other topics from students are upon approval from instructor:

1. The potential impact of COVID-19 on labor market of Hong Kong, Macao or Mainland China.
2. Evaluating the free cash gift in the US and its implications to unemployment during the pandemic of COVID-19.
3. The stricter border control between the US and Mexico, its potential labor market implications.
4. The relaxation of Hukou policy in first-tier cities and its effect on migrant workers' wage in mainland China.
5. Returns to attaining college in China: its trend over the post-reform era.
6. Will education make our society more environmentally friendly?
7. Gender discrimination in Macao.

## Personal Strategic Plan

1. Explain the economic theory using real world context.
2. Avoid too much mathematical derivations.
3. Focus on real world implications and applications.
4. Apply the theory into practice with dataset.
5. Formal research training



### Grading Policy

Attendance	10%
Participation	10%
Homework	10%
Group report	40%
Group presentaion	30%

### Grading Scale

Number grade	Letter grade	GPA
90-100	A	4.0
85-89	A-	3.7
80-84	B+	3.3
75-79	B	3.0
70-74	B-	2.7
67-69	C+	2.3
65-66	C	2.0
62-64	C-	1.7
60-61	D	1.0
≤59	F (Failure)	0



**Class Schedule**

Date	Lecture	Readings
Day 1	<p><b>Basic ideas of <i>Labor Economics</i></b></p> <ul style="list-style-type: none"> <li>● Its differences from general economics</li> <li>● Agents within labor market</li> <li>● Fundamental Framework of labor market analysis</li> <li>● Concept of returns-to-education (With Regression Analysis)</li> </ul>	<p>Chapter 1 of <b>Borjas</b> &amp; My publication See reading A</p>
Day 2	<p><b>Labor Supply</b></p> <ul style="list-style-type: none"> <li>● Concept of labor participation rate (gender heterogeneity)</li> <li>● Neo-classical model of labor-leisure choice</li> <li>● Concept of utility function &amp; indifference curve</li> <li>● Budget Constraint &amp; Optional decision</li> <li>● Labor supply curve: its shape and elasticity</li> <li>● Policy implications from what we have learned: Estimating labor demand curve using real-world dataset th</li> </ul>	<p>Chapter 2 of <b>Borjas</b></p>
Day 3	<p><b>Labor Demand</b></p> <ul style="list-style-type: none"> <li>● Firms' production function</li> <li>● Concept of Marginal Product &amp; Average Product</li> <li>● Profit Maximization behaviors of firms (Competitive market)</li> <li>● Hiring Decision of firms</li> <li>● Short-run labor demand curve</li> <li>● Isoquant Curves &amp; Isocost Curves: Cost Minimization</li> <li>● Long run demand for labor</li> <li>● Applications: Labor market in casino in Macao during the pandemic of COVID-19</li> </ul>	<p>Chapter 3 of <b>Borjas</b> &amp; See reading B</p>
Day 4	<p><b>Labor Market Equilibrium</b></p> <ul style="list-style-type: none"> <li>● Two market types: Monopsony &amp; Monopoly</li> <li>● Equilibrium in a single competitive labor market</li> <li>● Market efficiency (Pareto efficiency)</li> <li>● Open market (Wages and International Trade: NAFTA)</li> <li>● International wage differences &amp; convergence</li> <li>● The impact on payroll tax assessed on workers (What US and UK have done to stimulate labor market during the pandemic of COVID-19?)</li> <li>● Immigration and its impact on domestic labor market (The wall on the border between US and Mexico)</li> </ul>	<p>Chapter 4 of <b>Borjas</b> &amp; See reading C, D</p>
Day 5	<p>Compensating Wage Differentials</p> <ul style="list-style-type: none"> <li>● Risk premiums (The market for risky jobs)</li> <li>● Determining the market compensating differential</li> <li>● Hedonic wage theory</li> <li>● Policy Application: Safety and health regulation</li> </ul>	<p>Chapter 5 of <b>Borjas</b></p>



Day 6	<p><b>Human Capital</b></p> <ul style="list-style-type: none"> <li>● The most important form of human capital: Education</li> <li>● The wage-schooling model (Mincerian equation)</li> <li>● School quality and the rate of return to schooling (Why QS ranking is getting popular?)</li> <li>●</li> </ul>	<p>Chapter 6 of <b>Borjas</b> &amp; See reading E, F</p>
Day 7	<p><b>Human Capital (Continuous)</b></p> <ul style="list-style-type: none"> <li>● Estimating the rate of return to schooling</li> </ul> <p>We will use 2005 China Population Census micro dataset to estimate the returns-to-education for the mainland Chinese. (N=2.1 million observations)</p> <ul style="list-style-type: none"> <li>● Education or innate ability matters?</li> </ul> <p>Post-school human capital: training &amp; learning-by-doing</p>	<p>Chapter 6 of <b>Borjas</b> &amp; See reading E, F</p>
Day 8	<p><b>The Wage Structure</b></p> <ul style="list-style-type: none"> <li>● Why some workers earn more than others? The determinant of wage distribution</li> <li>● Labor productivity</li> <li>● Measuring Inequality: The Lorenz curve and the Gini coefficient</li> </ul>	<p>Chapter 7 of <b>Borjas</b></p>
Day 9	<p><b>The Wage Structure (Continuous)</b></p> <ul style="list-style-type: none"> <li>● Why did wage inequality increase? (Think about the context of Hong Kong)</li> <li>● Inequality across generations</li> <li>● Concept of social capital and its labor market implications</li> </ul>	<p>Chapter 7 of <b>Borjas</b></p>
Day 10	<p><b>Research training: preparing for the group report &amp; presentation.</b></p> <ul style="list-style-type: none"> <li>● Topic selection</li> <li>● Data collection</li> <li>● Literature review and online resources</li> </ul>	<p>Prepared by myself <i>Principles of Econometrics 5<sup>th</sup> edition</i> By Lim, Hill and Griffiths</p>
Day 11	<p><b>Research training: preparing for the group report &amp; presentation.</b></p> <ul style="list-style-type: none"> <li>● References</li> <li>● Statistical tools (e.g. regression analysis)</li> <li>● Structure of scientific reports</li> <li>● Some writing tips</li> </ul>	<p>Prepared by myself <i>Principles of Econometrics 5<sup>th</sup> edition</i> By Lim, Hill and Griffiths</p>
Day 12	<p><b>Research training: preparing for the group report &amp; presentation.</b></p> <ul style="list-style-type: none"> <li>● Regression analysis</li> <li>● Cross-sectional or panel data estimation</li> <li>● Estimation using STATA</li> <li>● Explaining the regression output</li> </ul>	<p>Prepared by myself <i>Principles of Econometrics 5<sup>th</sup> edition</i> By Lim, Hill and Griffiths</p>



Day 13	<p><b>Labor Mobility</b></p> <ul style="list-style-type: none"> <li>● Migration as an investment in human capital (non-education investment)</li> <li>● Internal migration in the US versus in the context within China</li> <li>● Migrant workers in China: Some stylized factors</li> <li>● The Roy Model</li> <li>● Policy application: economic benefits of migration</li> </ul> <p>Job turnover: stylized facts</p>	Chapter 8 of <b>Borjas</b>
Day 14	<p><b>Labor Market Discrimination</b></p> <ul style="list-style-type: none"> <li>● Race and gender in the labor market</li> <li>● The discrimination coefficient</li> <li>● Employer discrimination</li> <li>● The Black-White wage ratio in the labor market (aftermath of BLM movement)</li> <li>● Employee discrimination, customer discrimination and statistical discrimination.</li> <li>● Measuring the impact of gender discrimination on the wage</li> <li>● (we can estimate it using the example in Day 6)</li> </ul>	Chapter 9 of <b>Borjas</b>
Day 15	<p><b>Labor Unions</b></p> <ul style="list-style-type: none"> <li>● Unions in the US, Macao and Hong Kong.</li> <li>● A brief history of unions</li> <li>● structure of American unions</li> <li>● Determinants of union membership</li> <li>● The demand for and supply of union jobs</li> <li>● Policy application: unions and resource allocation</li> <li>● Empirical facts on strike activity</li> <li>● Union wage effects and the gap</li> </ul>	Chapter 10 of <b>Borjas</b>
Day 16	<p><b>Incentive pay</b></p> <ul style="list-style-type: none"> <li>● Pay systems: Piece rates</li> <li>● Bonuses, profit-sharing, and team incentives</li> <li>● Policy application: Compensation of CEOs</li> <li>● Policy application: incentive pay for teachers</li> </ul>	Chapter 11 of <b>Borjas</b>
Day 17	<p><b>Unemployment</b></p> <ul style="list-style-type: none"> <li>● Historical unemployment in Macao, Hong Kong, and mainland China</li> <li>● Structural unemployment &amp; the rate of unemployment</li> <li>● The sectoral shifts hypothesis</li> <li>● Efficiency wages, minimum wage, and unemployment</li> <li>● The determination of the efficiency wage</li> </ul> <p>The Phillips curve: The short-run and long-run Phillips curves</p>	Chapter 12 of <b>Borjas</b>
Day 18	<b>Group Presentation 1 Q&amp;A</b>	
Day 19	<b>Group Presentation 2 Q&amp;A</b>	
Day 20	<b>Group Presentation 3 Q&amp;A</b>	



## Reading List:

### A:

**Yao, Y.**, Chen, G. S., Salim, R., & Yu, X. (2018). Schooling returns for migrant workers in China: Estimations from the perspective of the institutional environment in a rural setting. *China Economic Review*, 51, 240-256.

### B:

The Economist: *Labour markets are working, but also changing* Retrieved from <https://www.economist.com/special-report/2021/04/05/labour-markets-are-working-but-also-changing>

### C

The Economist: *Borderline disorder Donald Trump's wall will irrevocably change America's south-western border* Retrieved from <https://www.economist.com/united-states/2019/12/21/donald-trumps-wall-will-irrevocably-change-americas-south-western-border>

### D

The Economist: *Construction The big, beautiful border wall America built ten years ago* Retrieved from <https://www.economist.com/united-states/2018/11/24/the-big-beautiful-border-wall-america-built-ten-years-ago>

### E

**Yao, Y.**, Ivanovski, K., Inekwe, J., & Smyth, R. (2019). Human capital and energy consumption: Evidence from OECD countries. *Energy Economics*, 84, 104534.

### F

Salim, R., **Yao, Y.**, & Chen, G. S. (2017). Does human capital matter for energy consumption in China? *Energy Economics*, 67(Supplement C), 49-59.