Introduction

1 Basic Concepts

A. Positive vs. Normative Economics

B. Assumptions
   1) Scarcity - Opportunity costs
   2) Rationality
      a) Maximization
      b) Information usage

C. Model Building
   1) Simplification
   2) Examples from physics
      a) Falling object
      b) Playing pool

D. Market Failures with examples
   1) Departures from rationality - people don’t solve difficult math problems every time they make a decision
   2) Transactions barriers - students give example
   3) Lack of information - students give example
   4) Nonexistent markets - problem of slavery
   5) Public goods - students give example
   6) Capital market imperfections - human capital problems

2 Definitions, Facts, and Trends

A. Labor Force Categories (discuss definition and why people would be in each)
   1) Population: 196,814,000 (≥16 yrs old)
   2) Labor force: 131,056,000
   3) NILF: 65,758,000
   4) Employed: 123,060,000
   5) Unemployed: 7,996,000

B. Ratios and rates
   1) Labor force participation rate
   2) Unemployment rate

C. Labor markets
   1) Definition of labor market: market where people (workers) trade labor for compensation
   2) Types
      a) Local vs. national
      b) Internal vs. external
      c) Primary vs. secondary
      d) Industry vs. national
D. Unemployment rates: Figure 2.2 (p30, v6)
E. Changes in industrial and occupational structure: Tables 2.2 and 2.3 (p27, v4)
F. Earnings
   1) Concepts
      a) Nominal wage/unit
      b) Nominal earnings = wage × # units
      c) Real wages and earnings
         i) Price indices
         ii) Nominal price indices
      d) Fringe benefits
      e) Discuss Table 2.4 (p31, v4)

3 Market Mechanism

A. Demand
   1) Production function
   2) Factors of production
   3) Prices of factors
   4) Declining demand curve
      a) Scale effect
      b) Substitution effect
   5) Firm vs. industry demand curves
   6) Shifts in demand curves
      a) Increase in demand for output
      b) Decrease in price of capital
      c) Increase in rainfall
      d) Increase in price of oil
   7) Long run vs short run

B. Supply
   1) Utility function with leisure and goods consumption
      a) Leisure is good
      b) Consumption is good but costs money

\begin{equation}
\max U(L, X_1, X_2) \\
\text{s.t. } p_1 X_1 + p_2 X_2 \leq (T - L) w
\end{equation}

2) Upward sloping supply curve
   a) More hours
   b) More workers
3) Industry vs Market vs Firm supply curve
4) Shifts in curve
a) Shift in wage in other industry  
b) Increase in price of oil  
c) Extra child  
d) Increase in job search costs  

C. Wage and equilibrium determination  
1) Equilibrium wage  
a) Draw picture  
b) Explain deviations from equilibrium  
2) Changes in equilibrium  
a) Increase in price of oil  
b) Baby boom  
c) Black plague  
d) Increase in interest rate  
3) Estimation  
a) Lack of identification (draw picture)  

D. Application: Equilibrium across two industries  
1) Variables:  
\[ L_A = \text{ labor in Alaska} \]  
\[ L_C = \text{ labor in California} \]  

Demand equations:  
\[ D_A = D_A (w_A); \]  
\[ D_C = D_C (w_C). \]  

Supply equations:  
\[ S_A = S (w_A, w_C), \ S_1 > 0, S_2 < 0; \]  
\[ S_C = L - S_A. \]  

Equilibrium conditions:  
\[ S_A = D_A; \]  
\[ S_C = D_C. \]  

Simplify to  
\[ D_A (w_A) = S (w_A, w_C); \]  
\[ D_C (w_C) = L - S (w_A, w_C). \]  

Draw each curve in \( w_A - w_C \) space. First draw \( D_A (w_A) = S (w_A, w_C) \). To do so, draw supply and demand in \( L_A - w_A \) space and consider how they shift with \( w_C \). Then do the same for California. For each state, draw equilibrium combinations of \((w_A, w_C)\). Look for equilibrium. Consider how one moves toward an equilibrium when away from it.
How do we know there exists a unique equilibrium?  
How do we know there exists any equilibria?  
Why is there likely to be an equilibrium at \( w_A = w_C = 0 \)?  
How could we change the model to get rid of the equilibrium at \( w_A = w_C = 0 \)?