

# Topic Outline for ECO101

Tianyu Du

Oct. 2. 2017

## Contents

<b>1</b>	<b>What is Economics?</b>	<b>2</b>
1.1	Basic ideas. . . . .	2
1.2	Economics as Social Science and Policy Tool . . . . .	2
<b>2</b>	<b>The Economic Problem</b>	<b>2</b>
<b>3</b>	<b>Demand and Supply</b>	<b>3</b>
3.1	Demand . . . . .	3
3.2	Supply . . . . .	3
<b>4</b>	<b>Elasticity</b>	<b>4</b>
<b>5</b>	<b>Efficiency and Equity</b>	<b>4</b>
<b>6</b>	<b>Government Actions in Markets</b>	<b>5</b>
<b>7</b>	<b>Global Markets in Action</b>	<b>5</b>
<b>8</b>	<b>Utility and Demand</b>	<b>6</b>
<b>9</b>	<b>Possibilities, Preferences, and Choices</b>	<b>6</b>
<b>10</b>	<b>Organizing Production</b>	<b>7</b>
<b>11</b>	<b>Output and Costs</b>	<b>7</b>
<b>12</b>	<b>Perfect Competition</b>	<b>7</b>
<b>13</b>	<b>Monopoly</b>	<b>8</b>
<b>14</b>	<b>Monopolistic competition</b>	<b>8</b>
<b>15</b>	<b>Oligopoly</b>	<b>8</b>
<b>16</b>	<b>Externalities</b>	<b>8</b>

17 Public Goods and Common Resources	8
18 Markets for Factors of Production	8

# 1 What is Economics?

## 1.1 Basic ideas.

**Scarcity** Our inability to get everything.

**Economics** is the *social science* that *studies the choices* that individuals, businesses governments , and entire societies make as they cope with *scarcity* and the *incentives* that influence and reconcile those choices.

### Central problems

1. *What* to produce.
2. *How*: allocation of **factors of production**
  - Land earns **rent**
  - Labour earns **wages**
  - Capital earns **interest**
  - Entrepreneurship earns **profit**
3. *For whom*: allocation of products among agents.

## 1.2 Economics as Social Science and Policy Tool

**Positive Statements** is about what *is*, and can be tested.

**Normative Statements** is about what *ought to be*, and can **not** be tested.

# 2 The Economic Problem

**Production Possibility Frontier (PPF)** is the boundary between those combinations of goods and services that can be produced and those that cannot. PPF is concave due to *increasing of opportunity cost*.

**Production Efficiency** produce at the *lowest* possible cost.

**Allocative efficiency** When goods and services are produced at the lowest possible cost and in the quantities that provide the greatest possible benefit.  $MC=MB$ .

**Opportunity Cost** of an action is the *highest-valued* alternative forgone.

**Marginal Benefit** *willingness to pay*.

**The Cost of Economic Growth**

**Comparative advantage** advantages on *opportunity cost*.

**Absolute advantage** advantages on *actual cost*.

**Economic Coordination** firms, markets, property rights, money.

## 3 Demand and Supply

### 3.1 Demand

**The Law of Demand** Other things remaining the same, the higher the price of a good, the smaller is the quantity demanded; and the lower the price of a good, the greater is the quantity demanded.<sup>1</sup>

- Substitution effect.
- Income effect.

**Factors affecting demand**

- The prices of related-goods.
- Expected future prices.
- Income.
- Expected future income and credit.
- Population.
- Preferences.

### 3.2 Supply

**Law of supply** Other things remaining the same, the higher the price of a good, the greater is the quantity supplied; and the lower the price of a good, the smaller is the quantity supplied.

---

<sup>1</sup>Graph required?

### **Factors affecting supply**

- The prices of factors of production.
- The prices of related goods produced.
- Expected future prices.
- The number of suppliers.
- Technology.
- The state of nature.

★ **Shifting of demand and supply: diagrams** .

## **4 Elasticity**

### **Calculating PED**

- By definition.
- Mid-point.
- PED at a point.

### **Factors influencing PED**

### **Total revenue and PED**

### **XED**

### **PES**

### **YED**<sup>2</sup>

## **5 Efficiency and Equity**

### **Consumer/Producer Surplus**

### **Marginal social benefit and marginal social cost**

---

<sup>2</sup>See page 97 for a compact table

### Source of market failure

- Price/quantity regulations.
- Taxes and subsidies.
- Externalities.<sup>3</sup>
- Public Goods and Common Resources.
- Monopoly.
- High transactions costs.

### Fairness? *Fair-results* v.s. *Fair-rules*

- **Fair-results** require income transfers from the rich to the poor.
- **Fair-rules** require property rights and voluntary exchange.

## 6 Government Actions in Markets

### Examples <sup>4</sup>

- A housing market with a *rent ceiling*.
- A labour market with a *minimum wage*.

### Taxes/Subsidies

- Diagram.
- Tax incidence: related to *relative elasticity*.

### Illegal Goods. *black market*.

## 7 Global Markets in Action

**Comparative advantages** drives international trade. Consider domestic price and international price(trade price) to calculate the *fair price* for international trade.

**Rent seeking** is the lobbying for special treatment by the government to create economic profit or to divert consumer surplus or producer surplus away from others.

---

<sup>3</sup>diagram!

<sup>4</sup>diagram!

**Protection** methods:

- import quota.
- tariff.
- subsidies to domestic producers.

**Protection** reasons:

- Infant industry.
- Jobs.
- Dumping?

## 8 Utility and Demand

**Consumption choice**

- Preferences.
- Budget line.
- Diminishing in marginal utility.

**Utility-Maximizing Choice**

**New ideas** :

- Behavioural economics.
- Bounded rationality.
- Neuro-economics.

## 9 Possibilities, Preferences, and Choices

**Consumption Possibilities**

- Budget.
- Indifference curve.
- Marginal rate of substitution.
- Price effect. *Substitution effects* and *Income effect*.

## 10 Organizing Production

**Goal** Maximizing *economic profit*.

**Normal profit** the opportunity cost of entrepreneurship and is part of the firm's opportunity cost.

**Technologically efficient** when a firm uses the least amount of inputs to produce a given output.

**Economies of scale**

**Economies of scope**

**Four-firm concentration ratio**

**Herfindahl-Hirschman Index**

**Implicit rental rate** the firm's opportunity cost of using the capital it owns.

## 11 Output and Costs

**Diagrams !!!!**

- Short Run v.s. Long run.
- $A(T)FC$ ,  $A(T)VC$ ,  $ATC$ ,  $TC$ .
- Increasing/Decreasing/Constant returns to scale.
- Minimum efficient scale.
- Marginal cost/product.

## 12 Perfect Competition

**Diagrams !!!**

**Equilibrium**  $MC=MR=P=D$

- $MR$
- Short run supply
- Shutdown point
- Total revenue.

## 13 Monopoly

Causes of monopoly

Diagrams !!!  $MR=MC$ .

Price discrimination

Monopoly regulation

## 14 Monopolistic competition

Downwards sloping demand. *Product differentiation*

Long run entry and exit causes zero economic profit.

## 15 Oligopoly

Anti-combine Law

Game theory analysis

Nash equilibrium

## 16 Externalities

Difference between social benefit(cost) and private benefit(cost).

Diagrams !!!

## 17 Public Goods and Common Resources

Analyzing with the externalities.

Public good is *non-rival* and *non-excludable*, so it creates *free-rider problem*.

Tragedy of commons lack of private incentives.

## 18 Markets for Factors of Production

Bilateral monopoly



**Derived demand** for factors of production.

**Hoteling Principle** Traders expect the price of a non-renewable natural resource to rise at a rate equal to the interest rate.

**Monopsony**

**Value of Marginal Product**