Chapter 1

Introduction to Public Finance

What is Public Finance?

How the gov’t raise money?

How that money is spent?

How those activities affects on economy and society?
Learning Objectives

• Brief review of Microeconomic

• Introduction to Public Finance
  • Public Finance Definition and Concept
  • People’s Views of Public Finance: Organic and Mechanistic Views of the Government

• Summary of the chapter
1. Brief review of Microeconomics

- Supply,
- Demand,
- Equilibrium,
- Utility, and
- Budget constraints
1. Supply and Demand

Supply, demand, and equilibrium

• In equilibrium, the supply and demand curves intersect.

• When quantity supplied is higher than quantity demanded, then, there is a push for prices to go down:
  • Excess supply or Supply surplus $\rightarrow$ Price decrease

• When quantity supplied is lower than quantity demanded, then, there is a push for prices to go up:
  • Excess demand or Supply shortage $\rightarrow$ Price increase
1.2. Supply and Demand Curves

![Graph showing Supply (S) and Demand (D) curves]

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1.3. Equilibrium: Price and Quantity

- State where the quantity demanded and quantity supplied are balanced is called “Equilibrium”.

- *Equilibrium quantity* is a quantity buyers and sellers are able to trade with a reasonable price.

- *Equilibrium price* is a price at which consumers are able to pay and sellers are willing to accept.
1.3.1. Example of excess demand
1.3.2. Example of excess supply
1.3.3. Factors of demand

- **Price**: Higher price $\rightarrow$ lower quantity demanded
- **Income**: Most goods are normal
  - Normal goods: Higher income means higher demand
- **Price of related goods**: (complements, substitutes)
- **Tastes and preferences**: (sweet, smell ...)
- **Information**: (cholesterol, side affect...)
- **Expectation**: (future expectation of customers ...)
- **Market size change**: (Increase in total population ...)
- **Government policies & actions**: tax rate, price control
1.3.4. Factors of supply

- Price: Higher price ➔ higher quantity supplied
- Price of inputs or costs products
- Government policies (rules and regulations)
- Technology
- Weather
1.3.5. Shift in demand; movement along supply curve
1.3.6. Shift in supply; movement along demand curve
1.4. Utility

- Utility is a level of satisfaction or happiness or amount of happiness of consuming goods or services.

- Utilities properties:
  - **sign matters:** *(positive and negative numbers)*
  - **bigger is better:** *(The greater the positive utility number, the more happiness the consumer receives and conversely for the negative utility number)*
  - **ordinal but not cardinal:** *(Utility numbers can be compared, but not countable. i.e., a utility of 6 is better than a utility of 3, it is not necessarily to calculate)*

- Total utility = real utility + transaction utility
1.4.1. Types of Utility

- **Total utility**: *is a full of happiness or satisfaction achieved from consumption of specific goods or services*
  - Total utility = real utility + transaction utility

- **Average utility (AU)**: *refers to level of utility get from a unit of goods or service consumed*
  - \[ AU(c) = \frac{U(c)}{c}, \text{ for single goods and } c \text{ is quantity used} \]
  - \[ AU(c_1, c_2, ...) = \frac{U(c_1, c_2, ...)}{(c_1 + c_2 + ...)}, \text{ for multiple goods} \]

- **Marginal utility (MU)**: *refers to additional satisfaction of utility gained from an extra unit of consumption*
  - \[ MU(c) = \frac{\Delta U(c)}{\Delta c} \]
Example: bananas and utility

- Notice this example, where the utility level is a function of the number of bananas consumed
  - Common unit of utility is called a “utils”
  - Typically assume non-satiation or not full eating.

<table>
<thead>
<tr>
<th>Banana quantity (bananas)</th>
<th>Total utility (utils)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>70</td>
</tr>
<tr>
<td>2</td>
<td>120</td>
</tr>
<tr>
<td>3</td>
<td>150</td>
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<tr>
<td>4</td>
<td>160</td>
</tr>
<tr>
<td>5</td>
<td>165</td>
</tr>
</tbody>
</table>
Example: total and marginal utility

<table>
<thead>
<tr>
<th>Tacos consumed per meal</th>
<th>Total Utility, Utils</th>
<th>Marginal Utility, Utils</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>28</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL AND MARGINAL UTILITY**

- **Total Utility (utils)**
- **Marginal Utility (utils)**

Graph showing total utility and marginal utility as tacos are consumed.
1.4.2. Two goods and utility

- An indifference curve that is further from the origin has higher utility
- \( U_2 > U_1 > U_0 \)
1.5. Budget constraints

- Assume that each person has wants that are above the resources available to her/his consumption
- Consumption must be made from resources available
- A consumption choice set is the collection of all consumption choices available to the consumer.
- What constrains consumption choice?
  - *Budget*,
  - *time, and*
  - *other resource limitations.*
1.5.1. Budget constraints for 2 goods

Budget constraint is
\[ p_1 x_1 + p_2 x_2 = m. \]
1.5.2. Budget constraints: slope

Budget constraint is \( p_1x_1 + p_2x_2 = m \).

The collection of all affordable bundles.

\( p_1x_1 + p_2x_2 = m \) is
\[ x_2 = -(p_1/p_2)x_1 + m/p_2 \]
so slope is \(-p_1/p_2\).
1.5.3. Substitution and income effects

- When the price of a good changes, there are two things happen:
  - **Income effect**: change in quantity due to level of income
  - **Substitution effect**: change in quantity due to change in relative prices or price of related goods or service
1.5.3. Substitution and income effects

- **Income effect**
  - $E_1$ to $E_c$

- **Substitution effect**
  - $E_c$ to $E_2$

- Note that budget lines to calculate income effect are parallel
1.5.4. Consumer surplus

Consumer surplus is the difference between the price that a consumer is prepared to pay and the actual price paid in the market.

Price

Consumer Surplus

Supply

Demand

Equilibrium Point

Q1

P1

Quantity

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1.5.5. Producer surplus

- The producer surplus is shown by area above the supply curve and below the market price.
- When \( P = 25 \) per unit, shaded area is approximate producer surplus.
- Area is a triangle, one-half times length times height.
  - \( \frac{1}{2} \times 10 \times 25 = 125 \)
Summary: Microeconomics review

- Many microeconomic tools are needed to do with the public finance
- Some of the tools that we will use are based on:
  - supply,
  - demand,
  - utility, and
  - budget constraints
2. Introduction to Public finance

- Topics should be considered in public finance
- Definition and concept of public finance
- People’s view of the public finance
2.1 Topics including in public finance

- We will study topics in which many argue that government intervention is justified
  - *Public revenues generation*
  - *Public goods and markets with externalities*
  - *Subsidized education*
  - *Health care,*
  - *Social Security, and*
  - *Income redistribution*
2.2. Definition and Concepts of PF

• What is public finance?
  • *public economics on how money is raised, spent, and it effects on economy and society.*

• Why public finance is need?
  • *to support provision of public goods and services*
  • *to intervent market failure*
  • *to assure social welfare*
  • *public revenue and expense enable implementation of the above 3 roles mentioned,*

• How public finance affect the economy?
  • *overall performance of economy*
  • *economic growth and employment*
2.2. Definition and Concepts of PF

- There are at least two other terms that mean the same thing as “Public Finance”:
  - *Public sector economics*
  - *Public economics*
- All these are of the “Government”
- The three terms are interchangeably used to mean the same thing
- I will usually use the term “public finance”
Review concept of Public Finance

- Public Finance
  - Public Economics
  - Public Sector Economics

- Government Functions and Roles

- Provision of Public Goods and Services
  - Revenues Collection
  - Expenditures Allocation
  - Market Intervention
People’s View on Public Finance

- Plato
- Adam Smith
- Lenin
- Adolf Hitler

Public Finance or Government

Organic View

Mechanistic View
2.3. People’s views on Public Finance

- Different people have different views about the Public Finance with regard the relationship between the individual and the state.
  - *Organic view of government*
  - *Mechanistic view of government*
2.3.1. Organic view of government

- Government treats an entire society as a natural organism
  - Each individual is part of the organism
  - The government is the heart
  - Individual, valued only by contribution to realize social goals
- Social goals are different and set by the government
- The problem is “who is to represent government? and how to choose the objectives of the society?”
  - **Plato**: realization of perfect rationality.
  - **Hitler**: realization of racial purity.
  - **Lenin**: realization of socialism
- In spite of the many philosophers, it’s sill not clear what is natural for fulfilling the society.
2.3.2 Mechanistic view of government

- Government is needed for individuals to pursue their individual goals
  - “Invisible hand” (Adam Smith)
    - Efficient markets under certain sets of conditions
    - Property rights and lack of violence needed to have efficient markets
- How much government beyond this, is debatable
  - Libertarian: Small government needed
  - Social democrats: Larger government needed
2.3.3. Class activities

- **Determining what is “good”!**
- Ideologically, what is “good” to one person may be viewed as bad as others.
- Let’s do an activity to illustrate this
  - *With a statement from 1-9*
  - *In pairs or in group, read up 1 by 1 and mark “Yes” if you agree and “No” if you disagree with the statement.*
  - *Count number of “Yes and No” in each group or pairs.*
  - *Tell the class the reasons why saying that.*
- **Attention!** There is no “right” or “wrong” answer, give your reasons or arguments.
Statements 1-5

- I believe that reckless (careless) driving should be stopped through government actions such as the use of police.
- I think that government should build and maintain roads and highways.
- I believe that each baby needs to be securely buckled into a car seat while riding in a car, to be enforced by the government.
- I believe that each person in a moving car needs a seat belt on, to be enforced by the government.
- I believe each driver needs liability insurance, to be enforced by the government.
Statements 6-9

- I believe the government has a right to regulate when each person can use the roads, and the route they take, in order to control traffic patterns.
- I believe that the government has a right to prevent pilots of commercial aircraft from using a cell phone while actively flying.
- I believe that the government has a right to prevent drivers of cars from using a cell phone while driving.
- I believe that the government should charge a 90% tax rate on all income I earn in my lifetime.
2.3.4. Government at glance

- Legal framework: Constitution, laws, sub-laws, regulations
- Organizational framework: National, regional, local, ...
- Organizational structures: Ministries, regions, provinces, institutions, units, committee ... etc.,
- Roles of government: Intervention, legislation, regulation, public service, defense, ...
- Size of government: Number of workers, annual expenditures, GDP or GNP, ...
- Sources of government revenues: Taxation, non-taxation, privatization, grant, ...(see Hang Chuon Naron et al.,: Public finance, 2009 for the Cambodia government)
3. Summary of the chapter

- **Microeconomic review:**
  - *supply, demand, equilibrium, utility, and budget constraints*

- **Introduction to public finance:**
  - *Topics related to government intervention, revenues and expenditures*
  - *Different viewpoints about government*
  - *Organic view and mechanistic view*
  - *Government at glance*
Assignments

• Assignment 1: Read and summarize the brief review of microeconomic (additional reading 1). Students are required to work in group for summarizing the lesson do presentation on the specific part to be assigned.

• Assignment 2: students are divided into 3 groups
  • Group 1: Read and summarize lesson by do presentation on the brief introduction to public finance (additional reading 2), specifically from item 1-3.
  • Group 2: Read and summarize lesson by do presentation on the brief introduction to public finance (additional reading 2), specifically from item 4-7.
  • Group 3: Using your knowledge of government at glance, do research and present on Cambodia government at present.
End of the chapter

Thank you!