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ECONOMICS AND PUBLIC POLICY

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CHAPTER 1

INTRODUCTION TO ECONOMICS

Period 1: Basic concepts in economics

Definition of economics

- *Economics is a social science that studies how to allocate scarce resources to satisfy the necessary wants of the society.*

- Scarcity is a fundamental economic characteristic. While human wants are seemingly unlimited, resources are limited; therefore, society must decide how to allocate these resources efficiently for its maximum benefit.

Three basic economic questions

Society, whether socialist or capitalist, developed or developing, must deal with three basic economic questions:

- What to produce?
- For whom to produce?
- How to produce??

- What to produce: Among various types of products, society must determine what to produce and in what quantities. Mass-produce rice, clothes or equipment? Produce high quality or low quality rice?

- How to produce? Because resources are limited, society must decide how to allocate productive resources for its maximum benefit.

- For whom to produce? Who consumes the goods and services produced, or how the national products are distributed in society.

Production Possibility Frontier - PPF

- Because of resource scarcity, we cannot produce unlimited quantities of goods and services; therefore, we must choose the goods and services to be produced. This issue is illustrated by the model of production possibility frontier (PPF).

Case 1:

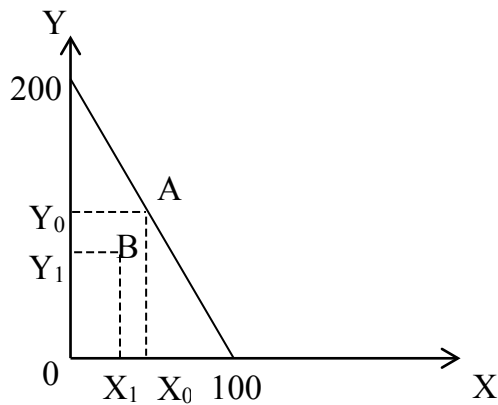
- Assuming that:

- The economy produces only two goods X and Y
- The required input used to produce these goods is labour.
- The economy produces 2 units of Good Y and 1 unit of Good X per working hour
- The economy has 100 working hours in total.

- Supposing that the technology remains unchanged, the output that the economy produces is as follows:

Working hours required for X	Working hours required for Y	X	Y
0	100	0	200
100	0	100	0
1	99	1	98
99	1	99	2

- We draw a two-dimensional graph. In this graph measure Good Y on the vertical axis and Good X on the horizontal axis.



- The line that connects Point X=100 and Y=200 is called the Production Possibility Frontier (PPF). The PPF divides production space into attainable and unattainable areas of production. Because of the assumption that human wants are seemingly unlimited, the PPF shows limited production possibilities. Producing more of one good can only occur by producing less of another good. Any point that lies either on the PPF or to the left of it can be attainable with the current level of resources and technology.

- Attainable area:

$$\frac{1}{2}Y + X \leq 100$$

- Point A is a point of maximum productive efficiency, and shows the maximum output of the two goods when the factors of production are used to their full potential.

- Point B inside the PPF is a point of productive inefficiency. At that point, the economy does not utilize the factors of production to their full potential.

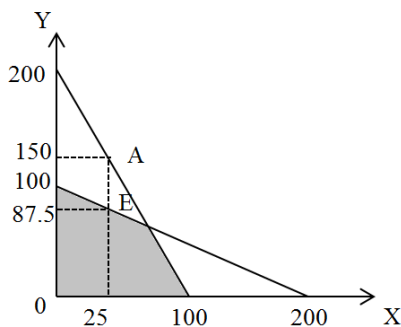
- Points outside the PPF are unattainable points. They show the unattainable output with the economy's current level of resources and technology.

Case 2:

- Continue using the example in Case 1, but assuming that the required input used to produce Good X and Good Y are labour and equipment, and the economy produces 1 unit of Good Y and 2 units of Good X per equipment operating hour, then the economy has 100 equipment operating hours in total.
- In this case, it takes 1 working hour and $\frac{1}{2}$ equipment operating hour to produce 1 unit of Good X, and $\frac{1}{2}$ working hour and 1 equipment operating hour to produce 1 unit of Good Y.
- The attainable area is determined by the following system of equations:

$$\begin{cases} \frac{1}{2}Y + X \leq 100 \\ Y + \frac{1}{2}X \leq 100 \end{cases}$$

- Illustrated on the graph
 - + The attainable area is illustrated by the bold area.
 - + Because of scarcity of resources (in this case equipment and labour), the PPF is graphed as a curve which is convex outward from the origin.



Opportunity cost

- The opportunity cost is a benefit, profit, or value of something that must be given up to acquire or achieve something else. For example, you have a savings of 100 million. You decide to keep it in your safety deposit box. Because of your decision, you miss the opportunity of receiving the interest if the savings is deposited into a bank. Therefore, the interest can be considered as the opportunity cost of keeping the savings.
- It is necessary to distinguish the opportunity cost and the accounting cost.
- The opportunity cost cannot be measured by money in some cases.

Macroeconomics and Microeconomics

Microeconomics studies separate economic units, like: each family's or company's decisions; or the interaction between families and companies in the manufacturing market; or the products and services market. In short, when it comes to researching Microeconomics, we mention one specific business, one company, or one family. We also measure the production of one company, price of one specific product, number of employees in a factory, or other such elements.

Microeconomics studies the economy in general, or the main parts of the economy, such as: total supply, total demand, inflation, unemployment. Put another way, macroeconomics analyzes the whole forest, whereas microeconomics analyzes each tree in that forest.

Macroeconomics analyzes issues like GDP, Total national income and economic growth. Hence, macroeconomics also analyzes other issues like: depression, unemployment, international balance of payments, economic cycle and the government's policy in solving these issues.

Macroeconomics issues are bound to the balance between total supply and total demand.

If total supply is too large compared to total demand, a loss in the international balance of payment and inflation will occur.

Inflation is the rise of the general unit price in the economy. If total demand is too high, companies will find ways to improve their production capacity in order to meet the public demand. Should the total demand stay high, companies will sell the same amount of products at a higher price, and hence receive more profits. When companies raise the selling price, inflation will occur.

A loss in the international balance of payment - this is the situation when importing overcomes exporting. It means that a society is consuming overseas products more than overseas markets are consuming their products.

Depression is a situation that happens when production capacity plummets. Put another way, the economy has negative growth. Depression is bound to an economy's low total expenses. The less people buy, the more inventory a company will have. As a result, companies will have to lower their production amount.

Unemployment results from a decrease in production amount. When companies produce less, the number of employees also decreases.

Hence, macroeconomics policy is implemented in order to keep the balance between the total demand and total supply. This policy can be the demand-side policies, in order to affect the total expense of the economy. And through this policy, it will affect the production level, employment and the unit price of the economy. The macroeconomics policy can be the supply-side policy in order to directly affect the production level.

Differentiating between macroeconomics and microeconomics does not mean that the topics can be clearly divided. Macroeconomics and microeconomics are closely related. In practice, there are many issues that relate to both. For example, although unemployment is the subject of macroeconomics, each employee's decision when finding a job, or the decision to expand or reduce the business size of the company, will directly affect the general unemployment level in the economy.

Why do economists disagree with each other?

Economists are often invited to participate in the public policy process. For example: Should the Government reduce taxes? How much should the minimum wage be? Should we continue or stop implementing the Tay Nguyen bauxite project? In such public policies, economists often disagree with each other. Firstly, economists can express their points of view about the effect of each policy. Secondly, economists can evaluate such effects.

When economists describe and establish an economics model, they forecast how the economy will be affected by the policies. Hence they see the economics from a practical angle. When economists evaluate different policy alternatives, and consider cost versus benefits, they are looking from a normative viewpoint.

Positive economics provides data, and causes-and-effect relationships. Consider the positives under the describing point of view; theory establishment, then experience. The positive statement does not give a subjective statement. Its main mission is to generalize about the economic behavior. The statement about economics is based on the data and plays an important role in analyzing the government's policy.

Normative economics: as opposed to the positive statement, normative statements give subjective statements about the economic operation process, or they give choices or solutions to different economic problems.

Positive statements study what something is, whereas, normative statements give subjective statements on how should something be. For example, take the positive statement: “The unemployment rate in some rural areas in Vietnam are higher than on the plains”. Then compare with the normative statement, “Leaders from rural areas of Vietnam need to implement policies in order to reduce the unemployment rate in their regions.”

Period 2:

Specialization and trade

Specialization and division of labour are two concepts identified in the theory of Adam Smith, who is considered to be the founder of economics. As he stated, the division of labour in which individuals specialize to perform specific tasks and roles can help to increase productivity. This specialization is the basis of trade. When mentioning the origin of trade, classical economists used two concepts: absolute advantage and comparative advantage.

Absolute advantage

- o Absolute advantage refers to the ability of a country to produce higher numbers of a good or service than other countries, using the same amount of resources.
- o All countries should specialize in producing goods and services in accordance with their absolute advantage.

For example, Country A and Country B produce and consume 2 necessities: rice and clothes. Assuming that both countries can choose to produce these goods in the following quantities, using the same amount of resources:

	Rice	Clothes
A	1	3
B	3	2

To conclude, Country A has an absolute advantage in the production of clothes, so Country A should specialize in producing clothes and trade clothes for rice. Country B has an absolute advantage in the production of rice, so Country B should specialize in producing rice and trade rice for clothes.

What would happen if Country B could produce 3 units of rice and 3 units of clothes? Country A loses the absolute advantage in the production of clothes. Does a basis for trade between the countries remain?

In this case, the basis of trade is explained by comparative advantage.

Comparative advantage

- o A country with a lower opportunity cost of producing a specific good or service is considered to have a comparative advantage in the production of the good or service.
- o A country should specialize in producing goods and services in accordance with their comparative advantage.

Back to the aforesaid example:

	Rice	Clothes
A	1	3
B	3	3

- In the case of Country A, the opportunity cost of producing rice is 3 units of clothes, and the opportunity cost of producing clothes is 1/3 unit of rice. In the case of Country B, the opportunity cost of producing rice is 1 unit of clothes, and the opportunity cost of producing clothes is 1 unit of rice.

Therefore, Country A has a comparative advantage in the production of clothes while Country B has a comparative advantage in the production of rice.

- When trade does not occur

	Rice		Clothes		Total	
	A	B	A	B	Rice	Clothes
Production	1	3	3	3	4	6
Consumption	1	3	3	3	4	6

- When specialization and trade occur

+ Country A concentrates on producing clothes and purchasing rice while Country B concentrates on producing rice and purchasing clothes. Assuming that according to the PPF of each country the maximum output of Country A and Country B is 6 units of clothes and 6 unit of rice respectively. Each country wants to consume 3 units of clothes. It means Country B wants to purchase 3 units of clothes from Country A.

+ The price at which Country B is willing to pay Country A cannot exceed the opportunity cost of producing clothes of Country B, and cannot be lower than the opportunity cost of producing clothes of Country A. Details are as follows:

$$1 \text{ unit of clothes/ rice} \leq P \leq 3 \text{ unit of clothes/ rice}$$

+ Assuming that 2 units of clothes can be traded for 1 unit of rice.

	Rice		Clothes		Total	
	A	B	A	B	Rice	Clothes
Production	0	6	6	0	4	6
Consumption	1.5	4.5	3	3	6	6

- To conclude, specialization and trade help to increase the production and consumption of both rice and clothes.

Modern economic systems

Command economy

A command economy is an economy where all the decisions on production and consumption are made by the government. Almost all of the productive resources are owned by the government. Companies/firms belong to and obey

the government. Their production plans are made and instructed by the National Planning Commission.

Market economy

A market economy is an economy where almost all of the decisions on production and consumption are made by individuals and firms. Three basic economic questions: what to produce, how to produce and for whom to produce are answered based on the system of price, market, benefit.

- A free market economy can be called a pure market economy. The pure market economy is established based on the concept of laissez-faire. The government entails support for private ownership of property and a convenient business environment.

- A mixed economy: History has demonstrated the failure of both command economies and free market economies; therefore, the mixed economy concept is applied to almost all of the countries worldwide. This is an economy where market factors are coordinated with government regulations. In a mixed economy, the government plays an important role in the economic environment. The government not only issues regulations and laws but also assures the stability and durability of economic development, as well as produces goods and services which private enterprises do not want to or cannot produce. However, the government is not the prime economic force which answers three basic economic questions: what to produce, how to produce, and for whom to produce. These questions are answered by the market.

Motivation and information of the market economy

In the market economy, to operate effectively, companies and individuals need to have sufficient information and have motivation to act based on the information gathered.

The market economy provides information and motivation through price, profits and asset rights.

Price provides information about the relative scarcity of the various goods. The price system guarantees that products will be provided to those who can pay the most. Price provides consumers with the information about the scarcity and consumers react by adjusting the goods consumed.

Profit is the objective of most companies. When companies receive considerable profit, they react by increasing their production. On the other hand, when profit decreases, companies should reduce their production. Companies always reduce production cost to reduce price and increase profit.

Ownership: In order to operate efficiently, a company's ownership rights need to be guaranteed. One company cannot operate without profit ownership. In the private ownership system, companies and individuals can own and use machines and factories. If there is not private ownership, companies will not have the motivation to invest in new factories, produce goods and services that consumers want to buy, or make a profit.

Ownership rights include both asset ownership and asset selling right.

These two properties cause individuals to use the assets efficiently.

Why the government needs to be involved in the economy

- Failure of the market

This is a situation in which a competitive market cannot produce goods and services at the level which the society wants.

- The economy's instability

The periodic operation of the economy has caused inflation and unemployment to be a disease of the market economy and has caused considerable damage.

The reason for the involvement of the government is the market itself can lead to inefficient results.

Even when the economy functions efficiently, there are still 2 reasons for the government to be involved

- Unfair issues in society

Income disparity exists among classes of people, and there are always vulnerable individuals such as the elderly, the poor, children, and those with disabilities.

- Recommended and not recommended goods:

Recommended goods: goods and services which provide benefits to the individuals who consume them, but are purposely not consumed; hence the government forces citizens to consume them.

Examples: Wearing helmets when riding motor-bikes

Not recommended goods: Goods and services which harm individuals, but are consumed regardless; hence the government has to issue policies discouraging or forbidding their consumption.

Examples: Alcoholic drinks, cigarettes, gambling, drugs

Periods 3 & 4: Discussion

Assuming that Vietnam and Korea produce 2 goods: beef and potatoes. In order to produce these goods, each economy uses the productive resource of labour.

Vietnam:

- It takes 8 working hours to produce 1kg of potatoes (1kg of potatoes = 8 working hours)

- It takes 1 working hour to produce 1kg of potatoes (1kg of beef = 1 working hour)

Korea:

- It takes 10 working hours to produce 1kg of potatoes (1kg of potatoes = 10 working hours)

- It takes 20 working hours to produce 1 kg of beef (1 kg of beef = 20 working hours)

1. Vietnam proposes to Korea to trade 1 kg of potatoes for 3 kg of beef. Do both countries benefit from this proposal?

2. Assuming that the technical development of Korea results in higher productivity of beef; it takes only 2 working hours to produce 1 kg of beef.

a. Does this development change Korea's comparative advantage?

b. Does the trade proposal offered by Vietnam that 3 kg of beef is traded for 1 kg of potatoes remain beneficial to Korea?

c. Please propose another contract for which Vietnam and Korea mutually agree.

CHAPTER 2: APPLICATIONS OF SUPPLY AND DEMAND MODEL INTO PUBLIC POLICY PROGRESS

Period 5

Supply – S

Definition: Supply is the amount of a good or service per unit of time that producers are able to produce and willing to sell at various given prices when all other factors are held constant.

- Distinguish supply and quantity supplied

o Quantity supplied is the amount of a good or service per unit of time that producers are able and willing to sell at a given price when all other factors are held constant.

o Supply shows the relationship between the quantity supplied and the good's price.

- Distinguish individual supply and market supply

o Individual supply is the supply of a good or service of each seller.

o Market supply is the sum of the suppliers of all sellers within a specific market.

- Supply schedule and supply curve

Supply schedule

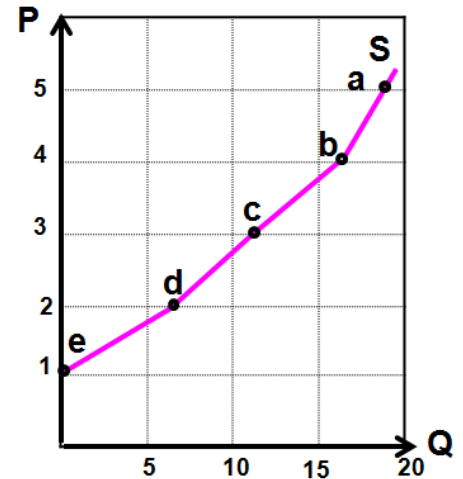
Supply curve

o The vertical axis displays the price of a specific good or service

o The horizontal axis displays the quantity supplied of this good or service

	Price of rice (P) (10000 dong)	Quantity supplied (tons/week)
A	5	18
B	4	16
C	3	12
D	2	7
E	1	0

∅ The supply curve (S) is drawn as a slope rising upward from left to right, and shows a direct relationship between price and quantity supplied.



The market supply curve is the summation of individual quantities supplied at various given prices shown on the horizontal axis.

Law of supply

- The quantity supplied increases when the price rises and vice versa (assuming that other factors are held constant).

∅ Reasons:

∅ Price (P) rises => Total revenue (TR) increases, Total cost (TC) remains unchanged => Profit (Π) increases => Q_s increases.

∅ P falls => TR decreases, TC remains unchanged => Π decreases => Q_s decreases.

Factors affecting supply

- In a functional form the law of supply can be stated as:

$$Q_{sx} = F(P_x, P_i, T, N, G, E, P_y).$$

->> factors affecting supply

a. Price of Good X (P_x): P_x rises ->> Q_{sx} increases

b. Input prices (P_i): Price of input rises -> Cost increases -> Profit decreases -> Supply decreases

c. Technology (T): Advanced technology -> Cost decreases -> Profit increases -> Supply increases

d. Number of sellers (N): N increases -> Supply increases

e. Government (taxes and subsidies): Taxes increase or subsidies decrease -> Supply decreases

f. Producer price expectation (E): Producers have optimal expectations regarding future prices -> Current supply decreases.

g. Prices of related goods and services (P_y): P_y rises -> Q_x decreases and vice versa.

Movements & shifts in supply curves

- Changes in price (internal factors) result in movement along the supply curve. A change in price results in a change in quantity supplied and represents movement along the supply curve.

- Changes in other relevant factors (external factors) cause a shift in supply. The supply curve shifts to the right when these factors affect the supply increase and to the left when these factors affect the supply decrease.

Supply equation:

$$Q_s = a.P_s + b$$

$$P_s = c.Q_s + d$$

o Q_s : Quantity supplied

o P_s : Price

o a,c : show the relationship between quantity supplied and price

Period 6: Practicum

Exercise 1: How will the following events affect the supply of Good A?

- The production technology of Good A is improved
- The number of manufacturers of Good A decreases
- The prices of production input of Good A increases
- A special tax rate is applied to Good A by government
- A subsidy rate of 50% of the price is applied to Good A by government

Exercise 2: Using the supply schedule of the gas stove market

Price (million dong)	Quantity supplied (million)
1.0	3
1.2	4
1.4	5
1.6	6
1.8	7
2.0	8
Price (million dong)	Quantity supplied (million)

Find the supply equation and graph the supply curve of the gas stove market.

Period 7

Demand – D

Definition: Demand is the amount of a good or service per unit of time that consumers are able and willing to purchase at various given prices when all other factors are held constant.

- Distinguish demand and quantity demanded

- Demand supplied is the amount of a good or service per unit of time that consumers are able and willing to purchase at a given price when all other factors are held constant.
- Demand shows the relationship between the good's price and quantity demanded

- Distinguish individual demand and market demand

- Individual demand is the demand of a good or service of each consumer.
- Market demand is the sum of the demands of all consumers at a given price.

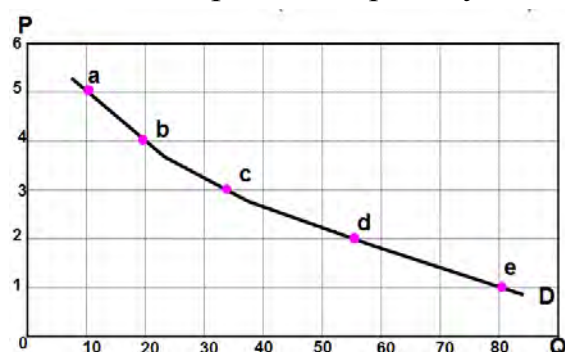
Demand schedule and demand curve

Demand schedule:

	Ice-cream price 10.000/kg	Quantity demanded/wee k
A	5	10
B	4	25
C	3	35
D	2	55
E	1	80

Demand curve

- The vertical axis displays the price of a specific good or service
- The horizontal axis displays the quantity demanded of this good or service
- The demand curve (D) is drawn as a slope falling downwards from left to right, and shows an inverse relationship between price and quantity demanded.



- The market demand curve is the

summation of individual quantities demanded at various given prices shown on the horizontal axis. The market demand curve is normally flatter than the individual demand curves.

Law of demand

- The quantity demanded (Q_d) decreases when the price (P) rises and vice versa.

○ Reasons:

○ Income effect: When the price of Good A rises and current income remains unchanged, consumers purchase less of Good A; thus, the quantity demanded of Good A decreases.

○ Substitution effect: When the price of Good A rises, it becomes more expensive than its substitute, Good B. Therefore, consumers tend to purchase more of Good B. This tendency results in the demand decrease of Good A.

- Exception to the law of demand: Giffen good

Factors affecting demand

- In a functional form the law of demand can be stated as:

$$Q_{dx} = F(P_x + P_y + I + E + N + T)$$

->> factors affecting demand

a. Price of Good X (P_x): P_x rises ->> Q_{dx} decreases

b. Relative prices of goods (P_y)

○ Complementary goods: are items that go together, P_y increases -> Q_{dy} decreases -> Q_{dx} decreases

○ Substitute goods: are substitutes for something, P_y increases $\rightarrow Q_{dy}$ decreases $\rightarrow Q_{dx}$ increases

c. Income (I)

○ Normal goods: I increases $\rightarrow Q_{dx}$ increases

○ Inferior goods: I increases $\rightarrow Q_{dx}$ decreases

d. Taste (T): High T of Good or service X \rightarrow High demand

e. Population (N): N increases $\rightarrow Q_D$ increases

f. Expectation (E): Expectations regarding future changes of price, income, and taste affect the current quantity demanded. The future prices are expected to fall \rightarrow Current demand decreases.

Movements & shifts in demand curves

- Changes in price (internal factors) result in movement along the demand curve. A change in price results in a change in the quantity demanded and represents movement along the demand curve.

- Changes in other relevant factors (external factor) cause a shift in demand. The demand curve shifts to the right when these factors affect the demand increase and to the left when these factors affect the demand decrease.

Supply equation

$$P_D = a.Q_D + b$$

$$Q_D = b.P_D + d$$

○ Q_D : quantity demanded

○ P_D : price

○ a,b: coefficients shows the relationship between price and quantity demanded

Period 8: Practicum

Exercise 1: How will the following events affect the demand of Good A? Graph these affects:

- a. Good A is now trendy
- b. The price of Substitute B decreases
- c. Consumer income decreases (assuming that Good A is an inferior good)
- d. Consumers expect that the price of Good A will decrease in the near future.

Exercise 2: Using the demand schedule of the gas stove market:

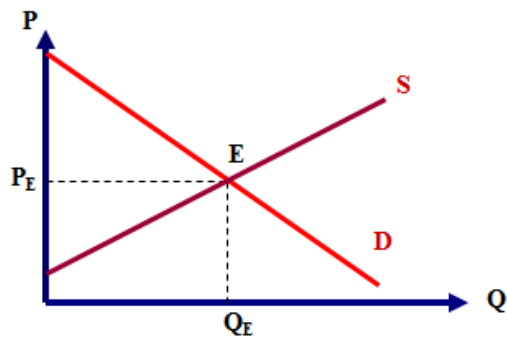
Price (million dong)	Quantity demanded (million)
1.0	10
1.2	9
1.4	8
1.6	7
1.8	6
2.0	5

Find the demand equation of the market.

Period 9. Market equilibrium

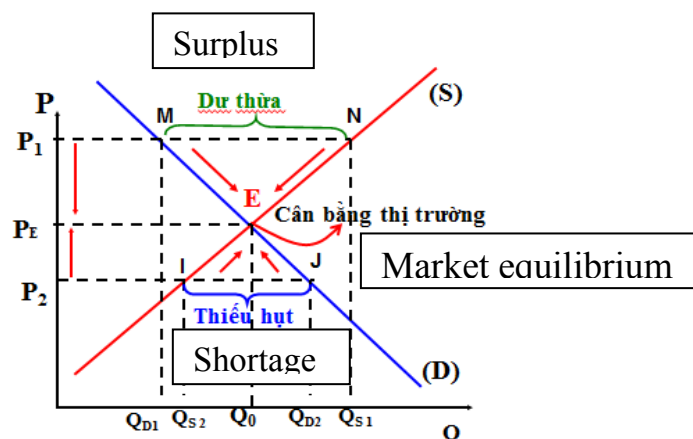
Market equilibrium

- The equilibrium point is the point at which the supply and demand curves intersect.
- The equilibrium price P_E is the price at the equilibrium point.



Requirement: Based on the supply and demand data of the gas stove market, find the equilibrium price and quantity of this market

- What will happen in the case of market disequilibrium?
 - o If $P > P_E$: supply > demand -> surplus
 - o Nếu $P < P_E$: supply < demand -> shortage



- What is the impact of surpluses and shortages on the market?

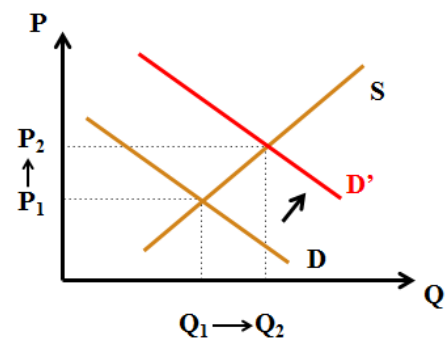
(Discussion)

- In the case of surpluses (supply surplus), sellers will lower their selling prices. These prices will be constantly decreased until market equilibrium is reached.
- In the case of shortages (demand surplus), the quantities demanded are higher than the quantities supplied. Sellers will raise their selling prices to an extent which does not affect their revenues. These prices will be constantly increased until market equilibrium is reached.

Change in market equilibrium

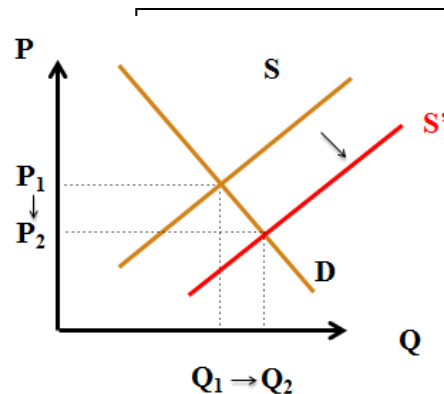
- What is the impact of raising beef price on pork price?

- Because beef and pork are substitutes of each other, an increase in beef price results in a decrease in beef demand, an increase in pork demand, and the pork demand curve shifts to the right from $D \rightarrow D'$
- Price rises from $P_1 \rightarrow P_2$
- Quantity rises from $Q_1 \rightarrow Q_2$



- What is the impact of advanced manufacturing technology of computers on the computer market?

- Advanced technology helps to increase quantity supplied at each price. The computer supply curve shifts to the right



from S → S'

∅ Price falls: P₁ → P₂

∅ Quantity increases: Q₁ → Q₂

Exercise

Using the schedule of rice supply and demand in Hanoi:

Price (thousand dong/kg)	7	8	9	10	11	12
Quantity supplied (kg/day)	11	13	15	17	19	21
Quantity demanded (kg/day)	20	19	18	17	16	15

- Find the supply equation and demand equation.
- Find the equilibrium price and quantity.
- Graph the supply curve, demand curve, and equilibrium point

Period 10: Discussion

Using the supply-demand model to analyze the following cases

CASE 1:

On Sept. 11 2001, terrorists attacked the World Trade Center. Twenty-one (21) buildings, equivalent to about 10% of the total number of office buildings in Manhattan, were destroyed. Before the attacks, the office vacancy percentage was 8% and the average rental price was 52\$.50/sf (square feet) in Manhattan. In your opinion, what was the impact of the Sept. 11 attacks on the office vacancy percentage and rental price in Manhattan?

CASE 2:

“Around 40,000 Vietnamese people die of smoking-related diseases every year, and this number may increase to 70,000 per year in 2030”.

Cigarette smoke contains over 4,000 chemicals

Smoking is among the leading causes of mortality in men in Vietnam, with nearly 11 percent of the total deaths in men caused by smoking-related diseases, according to the statistics of the health sector.

Vietnam is one of 15 countries with the highest numbers of smokers in the world. According to the Global Adult Tobacco Survey, about 15 million adults are smokers in Vietnam. Among men, overall smoking prevalence is 47.4%. That means there is one smoker for every two men. 2/3 of women and children are exposed to secondhand smoke at home; 33 million non-smokers are usually exposed to secondhand...” <http://nguyentandung.org/vietnam-co-khoang-40-000-nguoi-tu-vong-moi-nam-do-hut-thuoc-la.html>. In your opinion, what does the Government of Vietnam need to do to reduce smoking consumption?

Period 11: Supply and demand elasticity

Demand elasticity

Price elasticity of demand

Definition: The price elasticity of demand shows the relationship between a change in the quantity demanded of a particular good or service and a change in its price

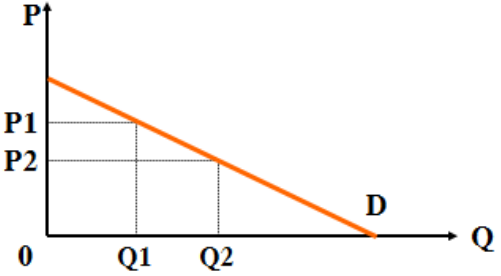
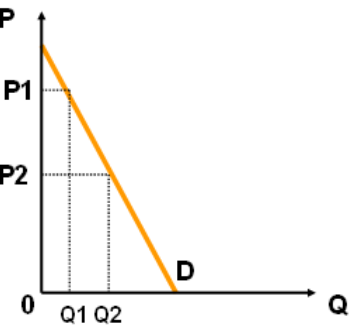
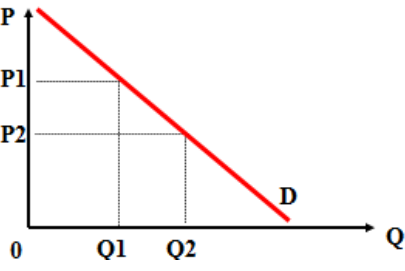
- The coefficient of elasticity shows the sensitivity of the quantity demanded to changes in the price when all other factors are held constant.
 - The negative value for the price elasticity of demand shows an inverse relationship between price and quantity demanded.
 - For example, what is the percentage change in rice quantity demanded if the rice price increases by 1%?
- In a functional form the coefficient of the price elasticity of demand can be stated as

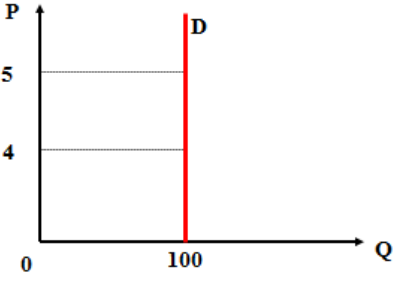
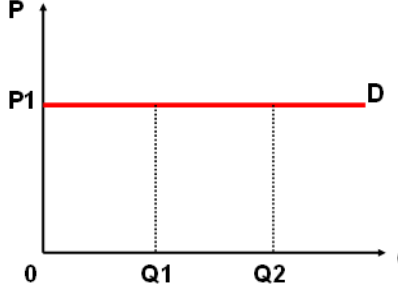
$$E_D^P = \frac{\% \Delta Q_{dx}}{\% \Delta P_{dx}} = \frac{\Delta Q_{dx}}{Q_{dx}} \cdot \frac{\Delta P_{dx}}{P_{dx}}$$

- E_D^P : coefficient of the price elasticity of demand of Good X
 - ΔQ_{dx} : Change in the quantity demanded of Good X
 - ΔP_{dx} : Change in the price of Good X
 - Q_{dx} : Quantity demanded of Good X
 - P_{dx} : Price of Good X
- Midpoint elasticity formula: Calculate the coefficient of elasticity between 2 points (Q_1, P_1) and (Q_2, P_2)

$$E_D^P = \frac{(Q_2 - Q_1) / [(Q_2 + Q_1) / 2]}{(P_2 - P_1) / [(P_2 + P_1) / 2]}$$

Classification of the price elasticity of demand (Absolute value equations)

<p>○ $E_D^P > 1$, elastic demand, changes in price have a greater than proportional effect on the quantity (For example: luxuries)</p>	 <p>The graph shows a downward-sloping demand curve labeled 'D' on a coordinate system with price (P) on the vertical axis and quantity (Q) on the horizontal axis. Two price points, P1 and P2, are marked on the vertical axis, with P1 > P2. Dotted lines from P1 and P2 meet the demand curve at points corresponding to quantities Q1 and Q2 on the horizontal axis. The horizontal distance between Q1 and Q2 is visibly larger than the vertical distance between P1 and P2, indicating that a small change in price leads to a large change in quantity.</p>
<p>○ $E_D^P < 1$: inelastic demand, changes in price have a less than proportional effect on the quantity (For example: necessities)</p>	 <p>The graph shows a downward-sloping demand curve labeled 'D' on a coordinate system with price (P) on the vertical axis and quantity (Q) on the horizontal axis. Two price points, P1 and P2, are marked on the vertical axis, with P1 > P2. Dotted lines from P1 and P2 meet the demand curve at points corresponding to quantities Q1 and Q2 on the horizontal axis. The vertical distance between P1 and P2 is visibly larger than the horizontal distance between Q1 and Q2, indicating that a large change in price leads to a small change in quantity.</p>
<p>○ $E_D^P = 1$, unitary demand, the demand curve forms a 45 degree angle with the horizontal axis, and changes in price lead to equal changes in quantity</p>	 <p>The graph shows a downward-sloping demand curve labeled 'D' on a coordinate system with price (P) on the vertical axis and quantity (Q) on the horizontal axis. Two price points, P1 and P2, are marked on the vertical axis, with P1 > P2. Dotted lines from P1 and P2 meet the demand curve at points corresponding to quantities Q1 and Q2 on the horizontal axis. The vertical distance between P1 and P2 is equal to the horizontal distance between Q1 and Q2, indicating that changes in price and quantity are proportional.</p>

<p>○ $E_D^P = 0$: perfectly inelastic demand, the demand curve is a vertical straight line parallel to the price-axis, quantity demanded will remain unchanged irrespective of change in the price. This situation rarely occurs. (For example: drugs to fight incurable diseases)</p>	 <p>The graph shows a vertical red line labeled 'D' on a coordinate system. The vertical axis is labeled 'P' and has tick marks at 4 and 5. The horizontal axis is labeled 'Q' and has a tick mark at 100. The origin is labeled '0'. The vertical line is positioned at Q=100.</p>
<p>○ $E_D^P = \infty$, perfectly elastic demand, the demand curve is a horizontal straight line parallel to the quantity-axis (Q), any increase in price will see quantity demanded fall to zero. (two goods that are exactly the same as each other)</p>	 <p>The graph shows a horizontal red line labeled 'D' on a coordinate system. The vertical axis is labeled 'P' and has a tick mark at P1. The horizontal axis is labeled 'Q' and has tick marks at Q1 and Q2. The origin is labeled '0'. The horizontal line is positioned at P=P1. Vertical dashed lines connect the points (Q1, P1) and (Q2, P1) on the demand curve to the horizontal axis.</p>

Factors affecting the price elasticity of demand

- Availability of substitutes: The higher the possibility of substitutes, the greater the elasticity. For example: Pepsi and Coke
- Degree of necessity or luxury: Luxuries tend to have greater elasticity. For example: travelling abroad and curing diseases.
- Definition of the market: Elasticity is greater when the market is defined more narrowly. For example: Fairy tale books and entertainment books in general
- Time period considered: Elasticity tends to be greater over the long run.

Application of price elasticity of demand

a. Analyze the impact of a change in price on the total revenue (do exercises)

Type of elasticity	P rises	P falls
$E_D^P > 1$	TR decreases	TR increases
$E_D^P < 1$	TR increases	TR decreases
$E_D^P = 1$	TR remains unchanged	TR remains unchanged

b. Estimate the change in price to eliminate market surplus or shortage

Market status	$E_D^P > 1$	$E_D^P < 1$
Surplus	P falls a little	<i>P falls a lot</i>
Shortage	<i>P rises a little</i>	P rises a lot

Cross elasticity of demand

- Definition: Cross elasticity of demand is calculated by taking the percentage change in quantity demanded of a good or service, divided by the percentage change in price of its substitute.

- Formula:

$$E_D^{Py} = \frac{\% \Delta Q_x}{\% \Delta P_y}$$

- o $E_D^{Py} > 0$ if X, Y are substitutes
- o $E_D^{Py} < 0$ khi X, Y are complements
- o $E_D^{Py} = 0$ khi X, Y are independent.

Income elasticity of demand

- Definition: Show the change in quantity demanded when the consumer's income changes by 1%

- Formula:

$$E_D^I = \frac{\% \Delta Q_x}{\% \Delta I}$$

o $E_D^I < 0$: Inferior goods

o $E_D^I > 0$: Normal goods:

+ $E_I < 1$: necessities

+ $E_I > 1$: luxuries

Price elasticity of supply

- Definition: *Price elasticity of supply is calculated by taking the percentage change in quantity supplied of a good or service, divided by the percentage change in its price.*

$$E_S^P = \frac{\% \Delta Q_{Sx}}{\% \Delta P_{Sx}}$$

o E_S^P : Price elasticity of supply of Good X

o ΔQ_{Sx} : Change in quantity supplied of Good X

o ΔP_{Sx} : Change in price of Good X

- Factors affecting elasticity of supply

o Ability of sellers to increase the amount of the good or service they produce.

- Time period in which the supply can be changed in accordance with the change in price.

Period 12: Discussion

Case 1: The invention of a new type of rice is good for agriculture, but can be bad news to farmers. Please explain the reason why.

Case 2: Since the 1970s, the member countries of OPEC have decided to increase the price of oil in order to increase their revenue. The price of oil has been sustainably increased for a decade and reached the highest point at its increase of 34% in the middle of 1981. However, OPEC found that it is hard to maintain such an increase rate. In your opinion, what is the basis on which OPEC decided to increase the oil price, and why did this strategy fail after 1981

Case 3: Explain the fact that in the rice market if there is a run of bumper harvests, prices will fall; if not, prices will rise.

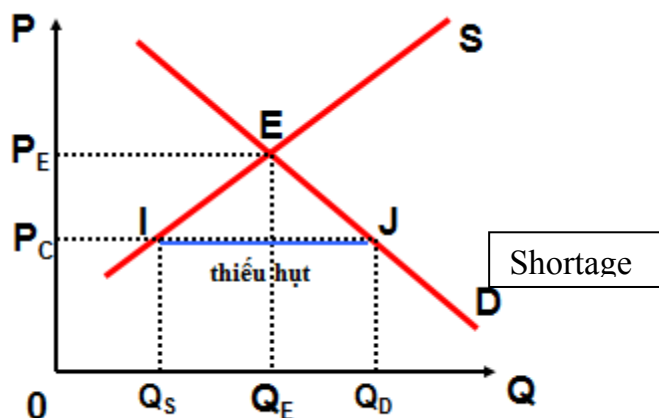
Period 13: Apply the law of supply and demand to the public policy process

The law of supply and demand, and relevant knowledge, is mainly applied to analyze and evaluate the impact of policies on the market.

Evaluate the impact of price controls on the market

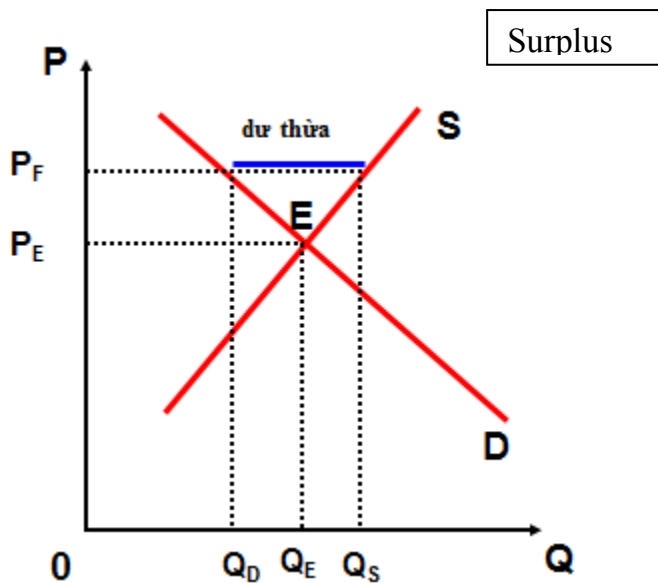
Ceiling price: is the maximum legal price which sellers may charge for their goods or services.

- o Purpose: Protect the consumer benefits
- o Ceiling price is normally kept lower than equilibrium price
- o Ceiling price causes shortages



Floor price: is the lowest price for which a government allows a good or service to be sold. Every price which is higher than or equal to this price is considered legal. Every price which is lower than this price is considered illegal.

- o Purpose: Protect the producer benefits.
- o Floor price is normally higher than equilibrium price
- o Floor price causes surpluses



Evaluate the impact of taxation

Impact of taxation on the market

Consider the situation to answer 3 questions

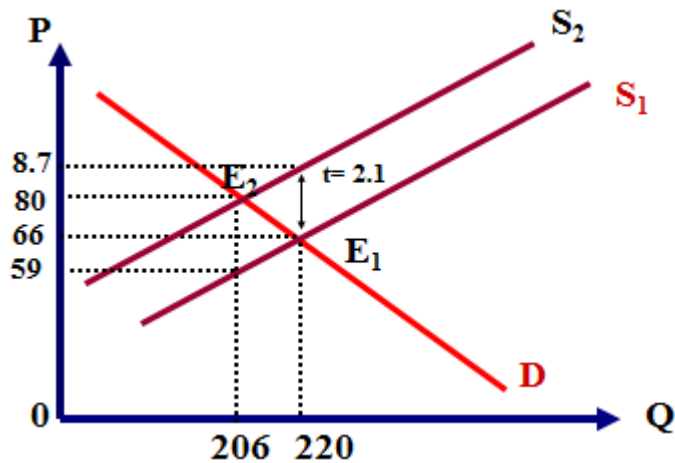
- o What is the impact of taxation on the market equilibrium price and quantity?
- o Who pays the tax?
- o Do the equilibrium price and quantity depend on whether the tax is levied on consumers or on producers?

Situation: Examine the pork market

Before taxation: The equilibrium quantity is 220 million kg and the equilibrium price is 66,000 VND/kg

Assuming that a tax rate of 21,000 VND/kg ($t = 21,000$ VND/kg) is levied on producers by the government.

Because of the taxation, the producers only provide a quantity of 206 million kg.



Assuming that a tax rate of 21,000 VND/kg ($t = 21,000$ VND/kg) is levied on consumers by the government. Find the quantity demanded and draw a graph to illustrate it.

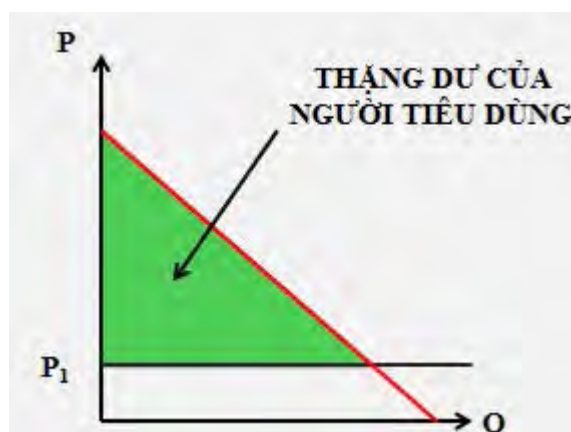
- Impact of taxation:

- o Tax lower the equilibrium quantity and raise the price of the good or service for consumers.
- o Tax causes negative impacts on both sellers and buyers
- o There is no difference between two cases: tax from producers and tax from consumers.

Impact of taxation on public welfare

- Consumer surplus

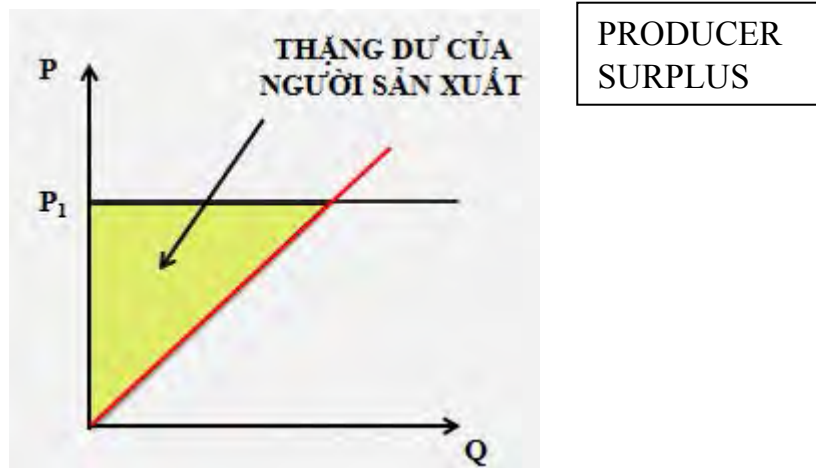
- o Consumer surplus is the difference between the maximum price a consumer is willing to pay and the actual price they pay.
- o Shown graphically as the area under the demand curve and above the price line.



CONSUMER SURPLUS

- Producer surplus

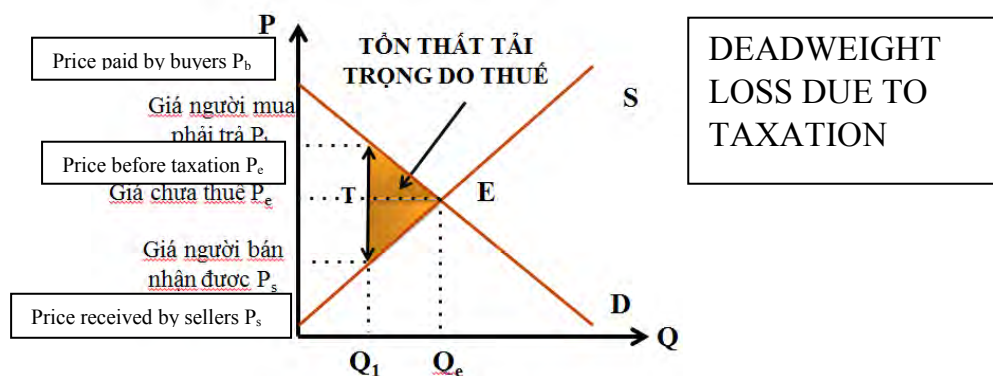
- Producer surplus is the difference between the amount a producer receives and the production cost.
- Shown graphically as the area under the price line and above the supply curve.



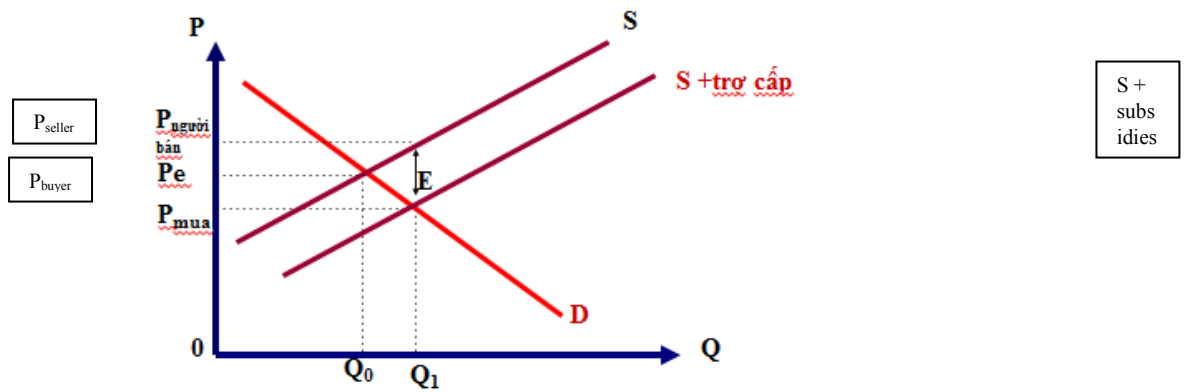
Total surplus = Consumer surplus + Producer surplus

At the market equilibrium point, the total surplus reaches the highest level.

- Deadweight loss due to taxation



Evaluate the impact of subsidies: Discussion: what is the impact of subsidies on public welfare?



Period 14: Practicum

1. Here are the supply and demand curve formulas of Good X in the market:

$$P_S = 8Q + 40$$

$$P_D = 90 - 20Q$$

In these formulas, the units of P and Q are million dong and product respectively

- a. Find the equilibrium price and quantity of Good X
- b. If the government imposes a ceiling price of 72 thousand dong, what will happen to the market of Good X? How does the public welfare change in this case?

2. Here are the supply and demand curve formulas of Vinataba Tobacco in the market:

$$P_S = Q - 14$$

$$P_D = 86 - 4Q$$

In these formulas, the units of P and Q are million dong and boxes respectively

- a. Find the market equilibrium price and quantity
- b. If the government imposes a tax rate of 2,000 dong/box on producers, how do the market equilibrium price and quantity change?
- c. How does the public welfare change due to taxation?

3. The following schedule shows the price per square metre (m^2) of social housing in Hanoi

Demand		Supply	
P (million VND)	Q (thousand)	P (million VND)	Q (thousand)
12,5	10	12,5	50
10	14	10	42
9	25	9	31
8	28	8	28
7	31	7	20

- a. Find the market equilibrium price (P) and quantity (Q)
- b. The Hanoi People's Committee imposes a subsidy rate of 2 million VND/ m^2 on consumers. Find the market equilibrium price (P) and quantity (Q) in case of such subsidy rate. What is the impact of subsidy on the market equilibrium price (P) and quantity (Q) of social housing?

**Period 15: Apply the law of supply and demand to the public policy process
(continued)**

Trade policy

- The government of the importing country can apply one of four trade policy instruments as follows:

- + Free trade
- + Import prohibition
- + Import taxation
- + Import quotas

- We will compare the public welfare in case of free trade and in case of the others.

- Example: The petroleum oil market in the US. Some assumptions: (1) Transportation cost is 0; (2) The supply curve of imported goods is a horizontal line at the world price p^*

+ The US can purchase an unlimited quantity of goods at the price p^* . The US accepts the world price because their demand for petroleum oil is too small to affect the world price.

+ The equation of the daily demand of petroleum oil in the US is as follows:

$$Q = D(p) = 35.4p^{-0.37}$$

+ The equation of the daily domestic supply of petroleum in the US is as follows:

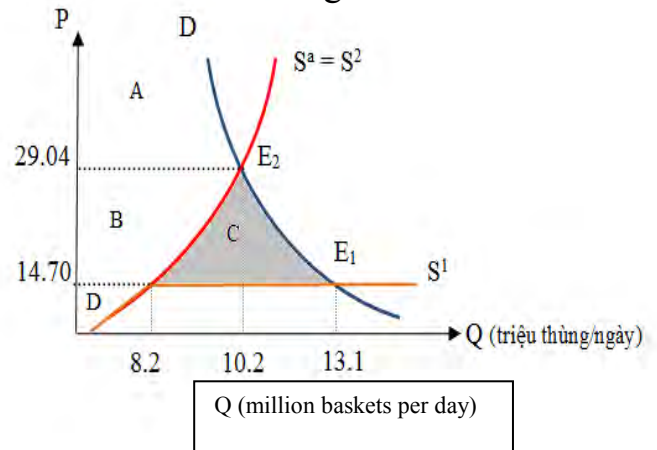
$$Q = S(p) = 3.35p^{0.33}$$

+ The world price $p^* = \$14.70/\text{basket}$

- The domestic supply curve of the US is curve S^a , with a slope rising upward from left to right. The demand curve slopes downward from left to right.

Free trade policy:

- If the market price $P > P^* = \$14.7/\text{basket}$, the US will import oil. The oil supply curve of the US is S^1 . The equilibrium point E_1 is at the price $P = 14.70$ and the quantity $Q = 13.1$ million baskets per day.



- At the price $P = 14.70$, the domestic quantity supplied $Q_{\text{domestic}} = 8.2$ million baskets. Thus, the quantity imported is 4.9 million baskets.

- Consumer surplus: $CS = A+B+C$

- Producer surplus: $PS = D$

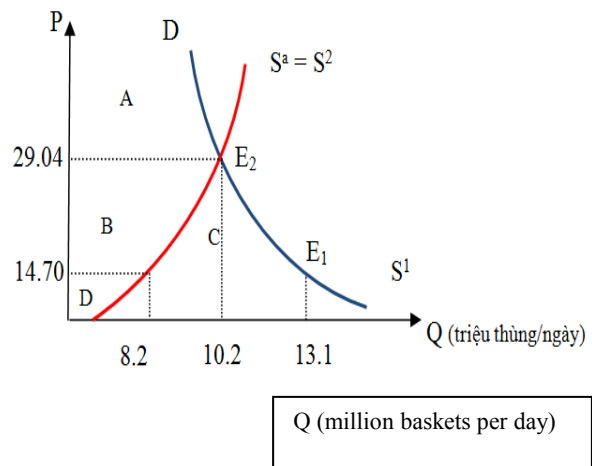
- Public welfare = $A+B+C+D$

Import prohibition policy

- If the import prohibition policy is applied, the market supply curve is the domestic supply curve S^a

- The equilibrium point E_2 is at the price $P = 29.04$ and quantity $Q = 10.2$ million baskets per day.

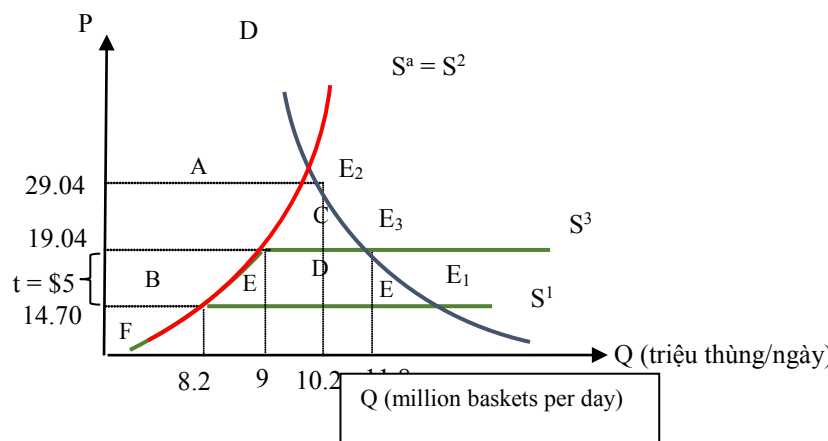
- Consumer surplus: $CS = A$



- Producer surplus: $PS = B+D$
- Public welfare = $A+B+D$
- To conclude, the import prohibition policy causes a decrease in the public welfare (area C) in comparison with that of free trade.

Import taxation

- Assuming that the tax rate of \$5 per basket is applied. Under the taxation, the import price of oil is \$19.70/basket. The supply curve of the US oil market (domestic supply and supply of imported oil) is graphically shown as S_3 .



- The equilibrium point E_3 is at the price $P = \$19.7$ and the quantity $Q = 11.8$ million baskets per day. Thus, the quantity imported is 2.8 million baskets per day

- Consumer surplus $CS = A$
- Producer surplus $PS = B + F$
- Revenue collected from taxation: $T = D$
- Public welfare = $A+B+F+D$
- To conclude, the import taxation causes a decrease in public welfare (area $C+E$) in comparison with that of free trade.

Import quotas

- The impact of import quotas is the same as that of import taxation. Assuming that the government wants to limit the quantity imported to 2.8 million baskets per day, import quotas can be applied. In this case, at the equilibrium price the market quantity demanded minus the domestic quantity supplied must be exactly 2.8 million baskets per day. According to drawing 3, at the equilibrium price $P = \$19.70$ per basket, the quantity imported of oil is exactly 2.8 million baskets per day. To conclude, the market equilibrium point stands still at E_3 in the case of imposing import quotas.

- Consumer surplus $CS = A$

- Producer surplus $PS = B + F$

- Public welfare = $A+B+F$

- To conclude, the import quotas causes a decrease in public welfare (area $C+E+D$) in comparison with that of free trade.

Period 16: Discussion

Case 1: Ceiling price of oil

In the 1970s, OPEC countries decided to reduce the quantity exported to Western countries, and this decision affected the domestic price of oil in the US. The domestic price of oil in the US rose. In order to protect consumer benefits, the US government had decided to impose a ceiling price on oil for the period from 1973 to 1979. In your opinion, what is the impact of the ceiling price on the oil market in the US.?

Case 2: Minimum wage laws

In order to protect the benefits of Vietnamese labourers, the government imposes minimum wage laws. What is the impact of minimum wage laws on the labour market?

Case 3: Subsidies

If the government of Vietnam imposes subsidies on producers and consumers of solar energy, what will happen to the energy market? What is the impact of the subsidies on society?

Case 4: Imposing taxes on cigarettes

The government of Vietnam imposes 2 programs on the cigarette market. The media campaigns and label requirements are set off to increase public awareness of the harmful effects of cigarettes, while the Ministry of Trade and Technology imposes a floor price on the cigarette price which makes the cigarette price higher than the equilibrium price.

a. What is the impact of each program on the quantity demanded of cigarettes? Use a graph of the cigarette market in your answer.

b. What is the overall impact of the two programs on cigarettes?

Case 5: Anti-dumping tax

Vietnam has imposed an anti-dumping average tax rate of 18% on stainless steel imported from China, Taiwan, Indonesia, and Malaysia since 2014. Use the model of supply and demand to analyze the impact of the anti-dumping tax rate on public welfare.

CHAPTER 3: PRODUCTION COST AND PROFIT MAXIMIZATION

Period 17 & 18: Production cost theory

Production function

The relationship between input and output of a business is called Production Function, which can be demonstrated in a schedule or a graph.

Demo: A donut factory business.

Schedule 4.1. Production function and total cost of a donut factory business

<i>Number of workers</i>	<i>Products/hour (Pc)</i>	<i>Marginal product (pc)</i>	<i>Machine cost (thousand VND)</i>	<i>Labor cost (thousand VND)</i>	<i>Total cost (Machine cost + Labor cost) (thousand VND)</i>
1	50	50	30	10	40
2	90	40	30	20	50
3	120	30	30	30	60
4	140	20	30	40	70
5	150	10	30	50	80
6	155	5	30	60	90

Short run and long run

- *Short run:*

+ Fixed capacity.

+ Variable intensity.

+ Variable production efficiency (depends on input factors like amount of labor, materials, etc.)

- *Long run*

+ Variable Labour.

+ Variable capacity.

+ Variable production efficiency.

Short run production

Total product, average product and marginal product

Total product (TP) is defined as the total quantity of output produced by a firm in the given input

Marginal product (MP) is the increasing quantity if the input increases by 1 unit (in this case, it means labour)

$$MP = \frac{\Delta Q}{\Delta L}$$

Average product (AP), also called labor productivity, is the average quantity of output produced with 1 labor unit.

$$AP = \frac{Q}{L}$$

In the short term, with a fixed number of factories and machines, a business can increase its production by increasing its labor. However, to answer the question how much labor should be hired, the following rule should be applied.

The rule of gradually decreased marginal product

If we gradually increase one input factor while the other input factors remain the same, marginal productivity will gradually decrease.

Short run cost

In the short run there are 2 types of production cost:

- *Fixed cost* – (*FC*): costs that don't depend on production quantity

- Banking interest.
- Machine and Tooling wear and tear.
- Landing cost.

- *Variable cost* – (*VC*): costs that depend on production quantity

- Labor cost.
- Material cost

- *Total cost* - (*TC*): is the total of fixed cost and variable cost to produce an expected production quantity

$$TC = FC + VC$$

- *Average fixed cost (AFC)* is found by dividing the total of fixed cost by total output
- $AFC = \frac{TFC}{Q}$

+ Average fixed cost (AFC) will gradually decrease if production output increases.

+ AFC shows a slope from left to right.

- *Average variable cost (AVC)* is determined by dividing total variable cost by total output.

$$AVC = \frac{TVC}{Q}$$

+ Average variable cost will fall immediately after the output is raised, however it will rise in the long run due to the rule of gradually decreasing efficiency.

+ AVC graph has a U shape.

- *Average total cost (ATC) can be found by dividing the total of production cost by total output.*

$$ATC = \frac{TC}{Q} = \frac{TFC}{Q} + \frac{TVC}{Q} = AFC + AVC$$

+ ATC is compared with sale price (P) of the product to decide if the product is profitable.

+ ATC graph has a U shape, with the value of bottom U being the minimal average cost.

- *Marginal Cost - MC*: is the cost increased in order to produce one additional unit of output.

+ Marginal cost can be found by dividing the change of total cost TC by the change of total output Q.

$$MC = \frac{\Delta TC}{\Delta Q} = TC'_{(Q)}$$

+ The MC curve has a U-shape due to the law of diminishing marginal returns.

+ At breakeven point: $MC = ATC$

Production in the long run

Production scope

When total input is doubled, will the total output double or decrease by half?
There may be some cases as follows.

Fixed Labor productivity (Constant economies of scale). In this case, the increasing percentage of output equals the increasing percentage of total input.

Increased Labor productivity (Positive economies of scale). In this case the increasing percentage of total output is larger than the increasing percentage of total input.

Decreased Labor productivity (Negative economies of scale). In this case the increasing percentage of total output is smaller than the increasing percentage of total input.

An *economy of scale is positive* when the cost per unit of a business decreases while total output increases. It is demonstrated by the slope on the graph of total cost, as the result of many factors.

Negative economies of scale when the production scale of a business exceeds a certain limit, total cost of a product unit shall rise gradually. There are several reasons that lead to this situation.

Fixed economies of scale. In some cases, when a business extends its production but Positive economies of scale does not happen, neither does the Negative economies of scale. This case is demonstrated in the graph. For example, if total input cost increases by 10%, total output also rises by 10%.

Long run cost

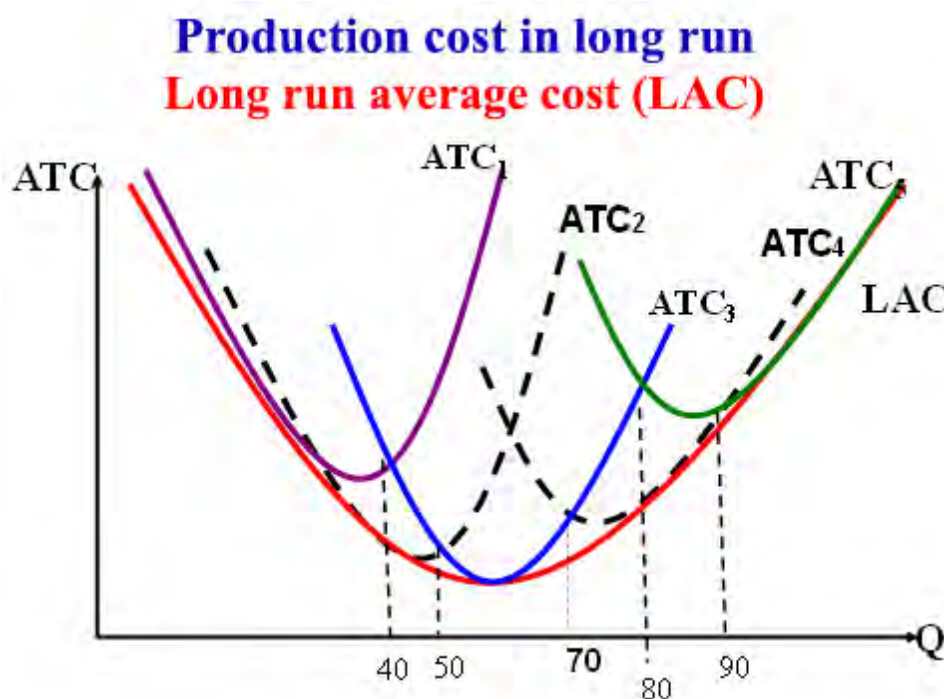
In the long run, there is no fixed cost, only variable cost, and all production factors can be also be changed.

Long run average cost (LRAC) is the average cost per output unit in the long run. The LRAC curve may be a downward slope (due to positive

economies of scale), upward slope (due to negative economies of scale), or a horizontal line (due to fixed economies of scale).

Long run Marginal cost (LRMC). The relationship between Long run average cost and long run marginal cost is similar to the one between the marginal cost and the short run average cost.

The relationship between the Long run average cost and the short run average cost.



Distinguish between the economic cost and accounting cost.

+ *Accounting cost:* Includes costs that the owner must pay in cash, but doesn't take into account the opportunity cost of input factors that were consumed during the production period.

For example: Rice production:

→ land cost, water, rice seeds, manure, labor, etc.

+ *Economic cost*: the total amount of money to produce the output (good or service), including accounting cost and opportunity cost.

Revenue

Total revenue (TR) is total amount of money received after a certain product volume (Q) has been sold throughout a certain period of time. For example, if company X sells 100 TVs per month at a price of 10 million per unit, the total revenue (per month) of company X is $100 \times 10.000000 = 500000000$ VND, which also means:

$$TR = P \times Q$$

Average revenue (AR) is the revenue to be received for a product unit be sold.

$$AR = \frac{TR}{Q}$$

Marginal revenue (MR) is the increasing revenue amount when one additional output unit is sold in a certain period of time.

$$MR = \frac{\Delta TR}{\Delta Q}$$

Profit Theory

Profit

- Profit is the deviation between revenue of a business and its total cost to generate that amount of revenue in a certain period of time.

- Formula to calculate the profit:

$$\pi = TR - TC$$

$$\pi = P \cdot Q - Q \cdot ATC$$

$$\pi = Q \cdot (P - ATC)$$

- Factors affecting profit:

+ Number of product/service sold.

+ Product/service price

+ Price and quality of the input and these input factors were integrated into the production process.

+ Marketing and advertising activities.

Economic Profit and Accounting Profit

Example: You are working with an annual income of \$2200 and you decide to establish a retail clothing store. You withdraw \$2000 from your savings account (at an interest of \$100/year), and take it back to the store that is currently rented for \$500. In addition, you need to hire a salesperson at a salary of \$1800/year.

After a year of operation, the results are as follows:

<i>Revenue</i>	<i>12000</i>
<i>Clothes buying cost</i>	<i>4000</i>
<i>Labor salary</i>	<i>1800</i>
<i>Electricity & Water cost</i>	<i>500</i>
<i>Total cost</i>	<i>6300</i>
<i>Accounting profit</i>	<i>5700</i>

However the accounting profit will be far different from the above number

Revenue	12000
Clothes buying shop	4000
Labor salary	1800

Electricity & Water cost	500
Total cost	6300
Sunk cost	2800
Economic profit	2900

ACCOUNTING PROFIT AND ECONOMIC PROFIT

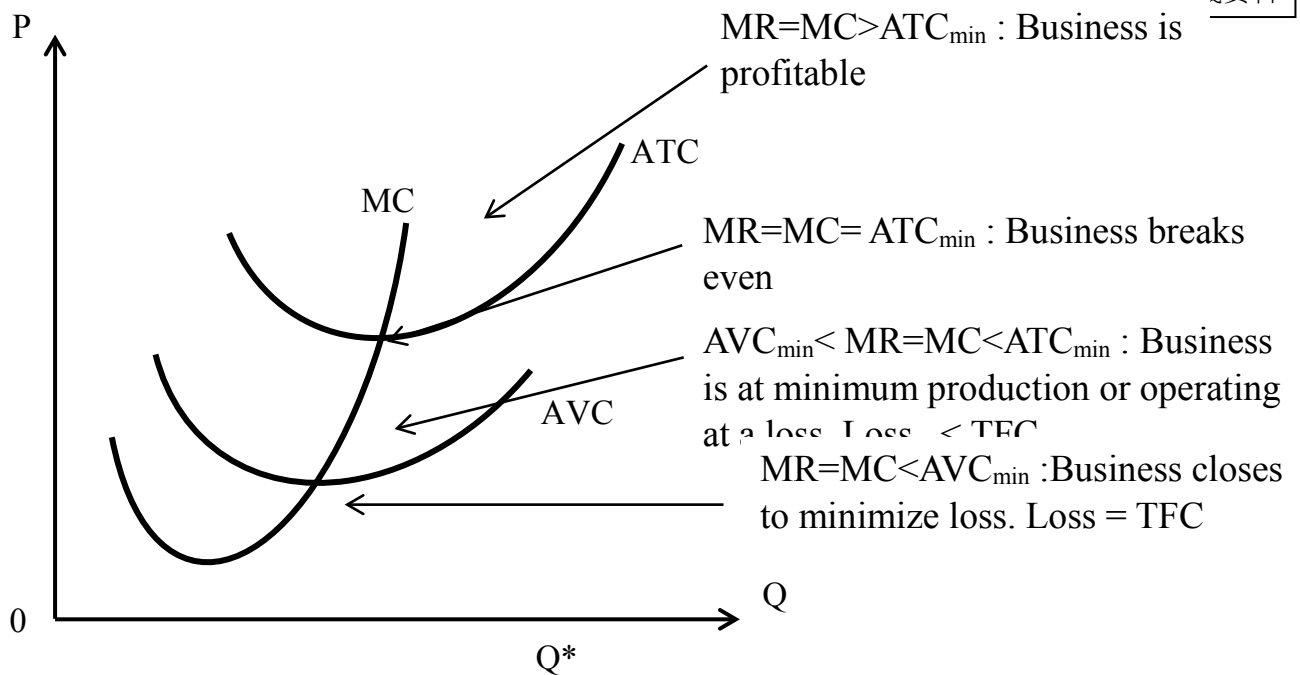


Profit Maximization

- The profit maximized output is when profit stays the same no matter how output Q changes.

$$\mathbf{MR = MC}$$

- At output level Q^* when $MR=MC$, the business profit is maximized.



Period 19: Discussion

1. In public investment projects such as investment in highways, bridges, and labour, is it necessary to calculate the profit? Why?
2. Currently Uber taxi is providing service at a price as low as 2/3 of traditional taxis in almost 200 cities in the world, including HCMC and Hanoi. Explain why Uber can provide service at such a low price. How should the government should manage this service type?

Period 20: Midterm exam

CHAPTER 4

COMPETITION, MONOPOLY AND ROLES OF GOVERNMENT

Period 21: Perfectly competitive market

Characteristics of a perfectly competitive market

- Has countless buyers and sellers.
- Each brand occupies only a small proportion when compared with the total amount of supply in the market.
- Uniform products
- Perfect information
- To join or withdraw from the market is totally free
- The brand has to accept the price, it cannot change the price of the product.
- A perfect competitive brand meets the horizontal demand (perfectly elastic demand)

Scope of operation

- Agricultural products market
- Foreign currency market
- Stock market

PCM and the societal benefits

Positives of PCM

$$P = ATC_{\min} = MC$$

$$MU = MC$$

- This is the optimum status of the market because if $P \neq MC$ then $Q < Q_{cb}$, $P > P_{cb} \rightarrow$ therefore the buyer has to pay a higher price for the product.
- If the company is not doing well, it has to withdraw from the market. This increases the efficiency of the market.
- There is no ad in PCM because products are uniform $\rightarrow AC$ decreases.
- Consumers will benefit from firms' lower costs and firms cannot have super-normal profit.

PCM's limits.

- Companies lack capital for R&D
- Products lack variety.

Pareto efficiency and Improvement Pareto

Pareto efficiency is the measurement of the efficiency of resource allocation in the economy.

- Pareto efficiency, or Pareto optimality, is a state of allocation of resources in which it is impossible to make any one individual better off without making at least one individual worse off.
- If the economy is perfectly competitive then the balance point of the economy will achieve Pareto efficiency because the marginal cost for the production of all goods is equal to the profit margin for the consumers.

Pareto improvement:

- If there exists a way to reallocate resources that harms no one and helps at least one person, that way of resource allocation is called Pareto improvement compared to the first way of allocation.

Period 22: Monopoly

Definition

- Monopoly is the status of the market in which there is only one seller who produces a unique product or service of which there is no other similar product or service able to replace it.

Characteristics of a Monopoly market

- There is only one seller
- The product is unique
- Market participation is not possible

Cause to monopoly

- The copyrights to the certificate of inventions, or ownership of intellectual property

+ Products which use the image of Mickey Mouse and Donald Duck in Vietnam must be approved by Walt Disney (East Media Holding is Walt Disney's representative in Vietnam)

+ The Agreement on Trade-Related Aspects of Intellectual Property (TRIPS) states: "Invented pharmaceutical products are copyright-protected for 20 years"

- The market exploits rights transferred from the government
- In Vietnam, VINACOMIN (Vietnam National Coal and Mineral Industries Group) has the rights to solely exploit business in the coal industry
- To be able to lower price when production is expanded.

- Due to the special characteristic of the industry in which revenue gradually increases with size, when there are many brands who all supply one service, it becomes inefficient. Firms who came first can continuously lower their price when expanding production, and use it as an effective barrier to the market participation of new firms.

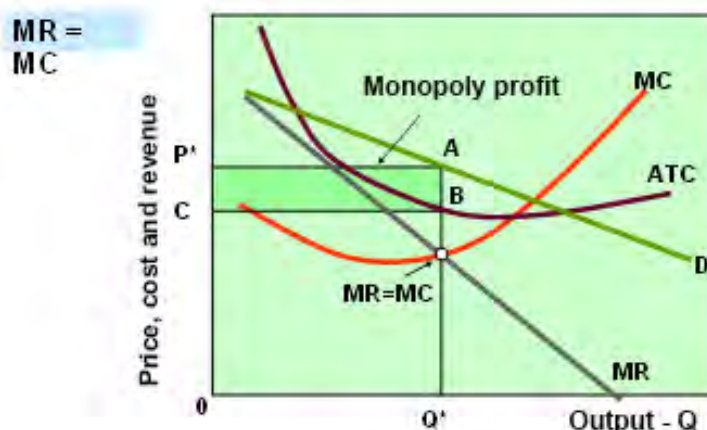
Output and profit of pure monopoly

- The demand line of the monopoly firm is the market demand line or the industry demand line.
- Demand line is steep to the right → The firm can only sell more products once the price is lowered
- Marginal Revenue line (MR) is below the Demand line
- Marginal cost line (MC) rises upward

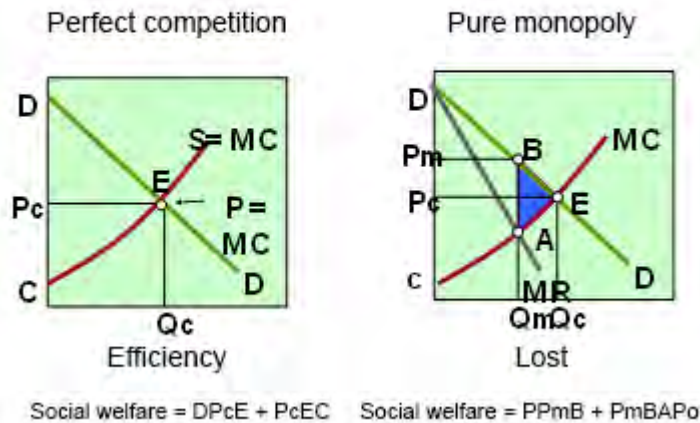
The inefficiency of the natural monopoly

- For natural monopoly firms:
 - + ATC line gradually falls when production size is expanded.

Maximize monopoly profit



Perfect competition vs. Monopoly



- The firm will maximize profit at output Q_1 ($MR=MC$)
 - + At $Q_1 \rightarrow$ Firm's price is P_1
 - + Super profit: P_1EGF
- If the firm's production is at Q_0 (efficient output)
 - $\rightarrow P = MC < ATC$
 - + The firm will lose P_0NMA ($NP_0 \times Q_0$)

Benefits of monopoly

- Save costs due to large production amount
- More chance of lower costs due to more R&D and investment
- Chance of invention and new product creation

Period 23: Government Policy

The policy of the government toward pure monopoly:

- Issue an Anti-Monopoly Law that stipulates:
 - + Cooperation for price-fixing is prohibited. Certain market structures are also restricted.
 - + Allow officials to regularly check a firm's price structure and output supply.
 - + Lower barriers to join the market for SME and FDI firms in order to encourage intensive competition
- State ownership for monopoly industries (gas, electricity, etc.)
- Control prices for goods and services from monopoly firms. The purpose is to force the monopoly firm to sell at a competitive price
 - If government states the maximum price at P_c , the monopoly firm will have to produce at level Q_c
- Issue taxes to lower super-normal profit from a monopoly, in order to reallocate the resources in society.
 - + However, tax will cause the marginal cost line of the monopoly firm to go up. The firm will then lower their output and raise their price. As a result, consumers have to share the tax with the monopoly firm.

Government policy toward natural monopolies

- A natural monopoly is a monopoly in an industry in which it is most efficient (involving the lowest long-run average cost) for production to be permanently concentrated in a single firm rather than contested competitively.

+ *Example: Public services (electricity, water, railways...)*

- The government's natural monopoly regulation strategy

+ Assess price by Average Cost : $P = ATC$ (fair goal)

Pros:

- Totally eliminates super-normal profit from monopoly firms
- Narrows the gap between price and marginal cost

Cons: Monopoly firms produce more but do not reach the optimal output level.

+ Assess price by Marginal Cost plus an amount of poll tax

$$P = MC + \text{Poll tax}$$

Poll tax is a kind of tax applied to every individual (including monopoly product consumers and non-consumers) and no one can change this behavior in order to lower their tax.

Pros: Does not cause tax distortion, therefore does not cause a negative impact on the economy.

Cons: A poll tax is very hard to apply in a practical way and is always criticized for its unfairness.

+ Two-part price assessment:

$P =$ A fee to use the monopoly firm's service + Price which is equal to the marginal cost for every unit that consumers use.

Example: In Tele-communication companies, consumers must pay a fee to reduce the loss which the firm has to suffer when producing at $P=MC$. Then, depending on calling time, each individual will have to pay at price $P = MC$.

Cons: Because consumers have to prepay a certain amount in order to use the service → Real usage level will be lower than optimal level.

Period 24: Corporate monopoly and Monopolistic competition

Corporate monopoly

Definition:

- A market has only a few manufacturers and sellers. When such a market deals with relatively similar products, it's called a pure monopoly (steel, copper, aluminum, alcohol, etc.); when the products are significantly different, it's called a distinctive corporate monopoly (car tires, electronics, etc.)

- Characteristics

+ There are some firms in the market but they are very large

+ The firms depend on each other; one firm, before issuing decisions, must pay attention to the reaction of its opponents (quick through price, or slow through introducing new products).

+ The entry barrier is very high, so joining the industry is due to: economical size, copyright or being sabotaged through some cooperative action of the old firms

+ Cooperating firms in a monopoly all know that: If one raises its price, the others won't. If one lowers its price, the others will have to lower their price also.

- Industries with a corporate monopoly:

+ Manufacturing cars, bikes, steel.

+ Air transportation

Game theory

- Game theory describes the smartest decision of firms who are dependent on each other. A Game of economy can be carried out either with or without cooperation among firms.
- If firms are cooperative, there will be contracts between them which allow them to plan on a common strategy (and vice versa).
- If cooperating, P will rise and Q will decrease, profit increases but is not always certain because firms often break pacts to increase profit for themselves.

Monopolistic competition

Definition:

- Is a market with many suppliers and sellers but there is a difference between each firm's products.

- Characteristics

- + Has many sellers
- + Each firm occupies a small portion of the market.
- + Firms act independently.
- + No under the table agreements.
- + Difference of products.
 - Difference in product quality.
 - Difference in sales service and after sales service
 - Difference in sale position and ability to approach customers
 - Brand and product wrapping.
- + Price can be relatively controlled
- + Easy to enter and withdraw from the market

- Industries with monopolistic competition

- + Furniture manufacturing;
- + Gold, silver, jewelry;
- + Printing industry;
- + Processing industries, etc.
- + Public goods

Period 25: Discussion

1. Singer Hong Nhung holds a monopoly in a rare resource: Herself. She is the only one who can hold Hong Nhung concerts. Should the government adjust her concert ticket fees or not? Why?
2. Explain why those with a monopoly always keep their output at a point where the demand line is elastic (Suggestions: IF Demand line is not elastic, and the firm raise the price, what will happen to TR and TC?)
3. What should the Government do to effectively manage such monopolistic corporations like EVN?

Period 26: Imbalanced information and Government policy

Definition:

- Is the situation of the market in which a party who is participating in the market has more detailed information than the other parties about the product's characteristics.

- Example:

+ The seller knows better about the products they sell than the buyers.

+ Employees know their ability to perform their jobs better than employers.

+ Insurance companies do not know about the insured items as precisely as the insurance buyers.

- Inefficiency of the market due to imbalanced information

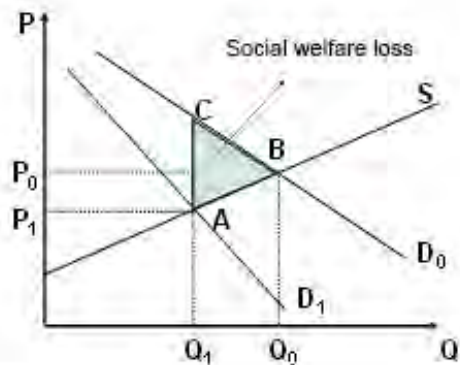
+ Example: Imbalanced information on a clean vegetable market

+ If the consumers have the necessary information to ensure the cleanliness of the vegetables then their demand will be D_0 . The optimum quantity of vegetables will be Q_0 and the equilibrium price will be P_0 .

+ Due to not having enough information, the consumers are only willing to buy an amount of D_1 . Vegetable quantity bought is Q_1 at price P_1 .

+ ABC is the loss of social welfare due to an inefficient level of consumption.

Social welfare loss due to imbalanced information



The government's policy toward imbalanced information

- Issue rules that stipulate honest advertising, build up and ensure the implementation efficiency of copyright law and intellectual property ownership in order to protect honest firms and their brands from fake or imitation products...
- Issuing regulations on wrapping and product labels is a part of the government's efforts to help distinguish and ensure the quality of products in the market.
- The government can also assist companies and organizations as a "third party" (organize product quality examination, issue certificates, consumption advisor, etc.)
- Has means to protect consumers' rights: encourage the activities of the Consumer's organizations, establish courts to judge trade disputes between sellers and buyers...
- The government can provide direct information to assist the market.

Period 27: Public goods and the government's policy

Public goods

Definition

- Public goods are products that one individual can consume without reducing its availability to another individual and from which no one is excluded.

- E.g.:

+ Television and radio programs

+ National defense

+ Public transport buildings

+ Parks

Basic characteristics of public goods

- Does not have competitive characteristics in consumption: One additional individual using public goods will not reduce the current consumers' consumption benefits.

→ Marginal cost to serve one additional public goods consumption individual is 0

+ E.g.: National defense does not have competition. When a nation's population increases, it does not mean that the level of security from which a citizen is benefitting is reduced.

- Has no elimination characteristic in consumption: Cannot eliminate individuals who refuse to pay for their consumption.

+ E.g. No one can force the national defense tax payers out of benefitting from the national defense security.

Types of public goods

- Pure public goods: Are the types of public goods that carry both of the above mentioned characteristics. One certain quantity of public goods, once supplied to an individual, can be consumed by every other individual in the society.

+ E.g.: National Defense, Lighthouse, Public lights, ...

- Impure public goods: Are goods that when there are more individuals using them, jams can occur which will result in benefit decrease of the previous consumers.

→ Marginal cost to supply the increased quantity of consumers after a certain limit is not 0 anymore but gradually increases.

+ E.g.: Transportation during traffic jams

- Public goods which can be eliminated with price: are goods whose benefits can be assessed with price.

+ E.g.: - Travel on a bridge with toll terminals at 2 bridge ends.

- Private clubs with membership cards.

Inefficiency of public goods

- Cannot meet personal demands but have to meet all demands.

- Because consumers have to pay nothing in order to consume more, the consumption amount is very large.

- Public goods caused the dependence of beggars. Beggars here are individuals who always look for the public goods' benefits but are not willing to contribute any coin to the public goods' production cost and supply.

- Public goods can also lead to wasteful usage, or even end up destroying the public goods.

- It is hard for private firms to supply such kinds of goods because they don't have the ability to force individuals to pay them upon using the public goods that they supply.

Policy of supplying public goods

- The government is the one to supply public goods, and can solve the beggar problem by forcing individuals to contribute through tax, then use the tax to sponsor the production and the supply of the public goods.

- The government develops the Public - Private Partnership (PPP) in the production and supply of the public goods.

- The government sponsors (order) private firms to produce or supply public goods.

- The government will have a special policy that allows private firms to participate in producing and supplying public goods (infrastructure) and then operate for a certain amount of time in order to recover capital and gain a reasonable profit.

Period 28: Externality and the government's policy

Externality

Definition

- Externality appears when a production decision or consumption by individuals directly affects the production or consumption of the others, but not through market price.

- There are 2 types of externality: Positive and Negative

+ Externality is negative when an action (or a party) causes costs or damage to others.

Example: A firm dumps its waste chemicals into the river

+ Externality is an action (or a party) that does others some benefit

Example: One family builds a big beautiful flower bed for the whole street.

Inefficiency of externality

- From a social point of view, every externality is inefficient

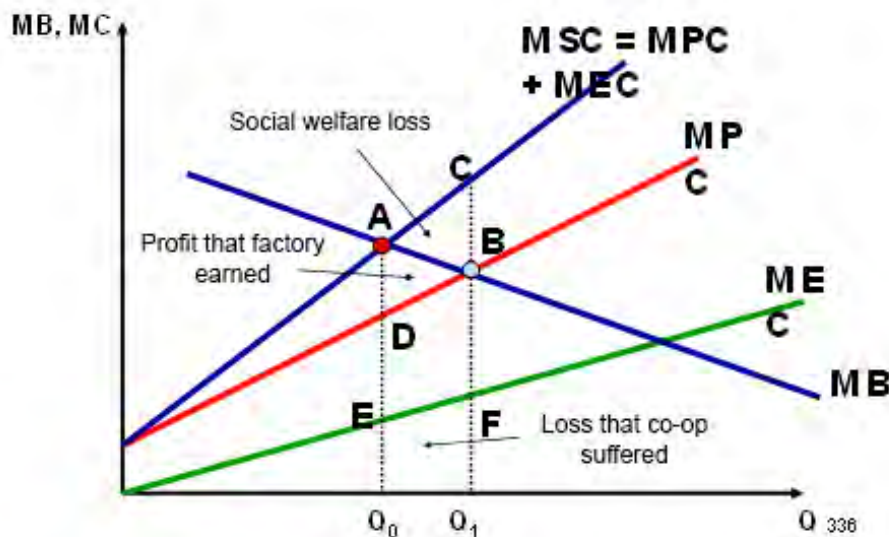
- When externality happens, or marginal cost or marginal profit of personnel does not cohere to social marginal cost or marginal profit.

- Therefore, the optimum production level for a market is also different from the society's efficiency level.

+ E.g.: A factory and a fishing co-op are using the same lake. The factory uses the lake as a waste dumping place. Therefore fish in the lake gradually die, which affects the fishing activity of the co-op.

- MPC: Factory's Marginal Private Cost

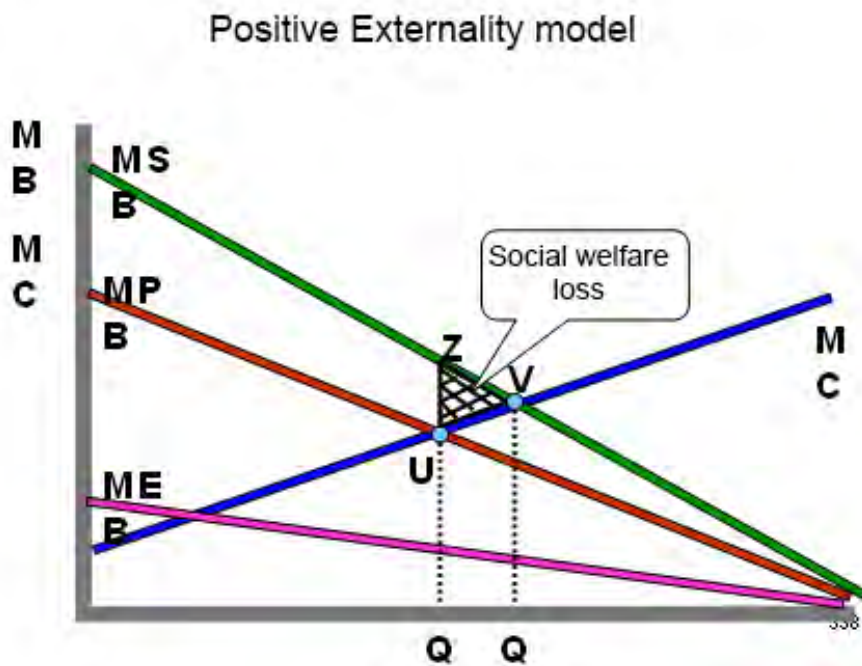
- MEC: Marginal External Cost (loss of the co-op when the factory produces another output unit)
- MSC: Marginal Social Cost ($MSC = MPC + MEC$)



- ABC - Society's Social Welfare Net Loss (caused by externality).
 - ADB - Profit the factory earned when it maintained output from Q_0 to Q_1 .
 - EFQ_0Q_1 - Further loss that the co-op has to suffer.
- The society's efficient output level (Q_0) does not mean there is an unpolluted output, because such requirement is equal to zero production.
- An acceptable level of pollution need to be found, meaning the benefits from production must be able to cover the cost that society has to suffer upon implementing production, including cost for pollution.
- + An example for positive externality: Vaccinations

- MPB: Marginal Private Benefit of the medical center
- Equilibrium happens at U ($MPB \times MC$) with the number of vaccinations being Q_1 .

- MEB: Marginal External Benefit of individuals that are not vaccinated.
 - MSB: Marginal Societal Benefit
 $MSB = MPB + MEB$
- Maximum equilibrium must be V (MSB x MC) with the maximum vaccination level being Q_0
- When positive externality appears, the market always creates an output which is lower than society's maximum level.
- The society will lose UVZ social welfare.



Policy to overcome positive externality

- Pollution tax on factories:

+ Is the tax that charges every output unit of firms that cause pollution, so that it is equal to MEC at the society's maximum output level.

+ The government uses this tax to compensate individuals who are affected by the pollution.

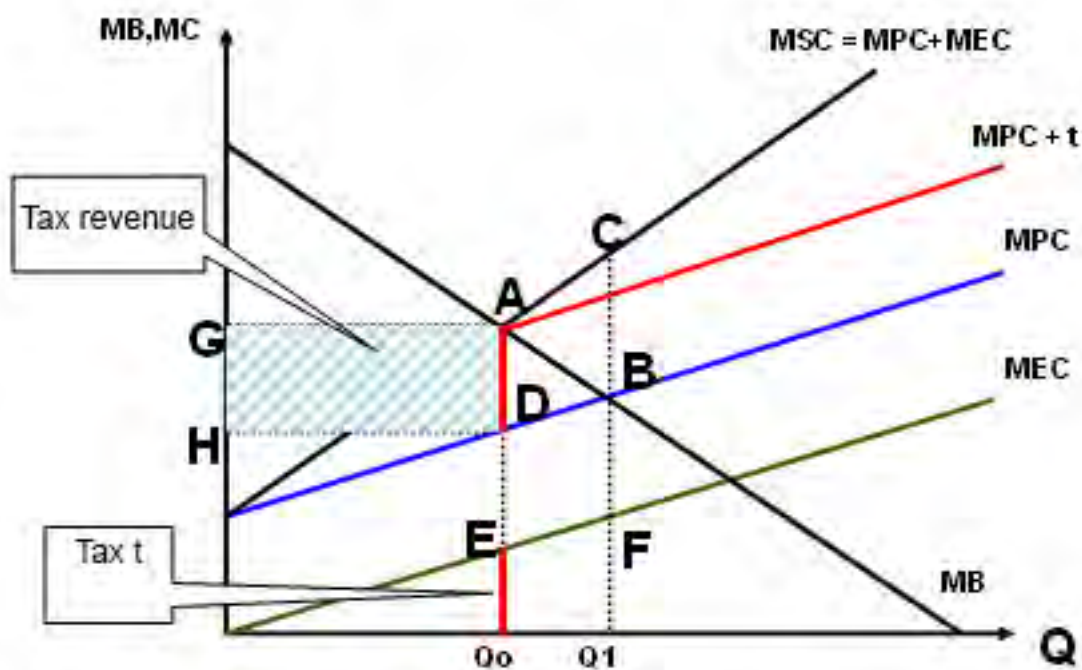
+ E.g.:

- Tax $t = EQ_0 = AD$
- Upon getting taxed, the factory's MPC will then go up to $MPC + t$
- In order to maximize profit, the factory states $MB = MPC + t$

→ Produce at point Q_0 as what the society wants.

- Tax that Government gets = $t \times Q_0 = ADHG$

Model of tax charging for negative externality



- Form the market in pollution

+ Government sells licenses to manufacturers so that they can dump a certain amount of waste equal to the amount of waste when production is at Q_0 (optimum production level)

+ Companies will then bid to buy these licenses and the highest bidder will win.

+ The price of this license will be the balance price of the market, so that the pollution amount will be equal to the price that the Government wants.

+ This balance price to the waste dump license is called waste dump fee

+ The Government can give these waste dump licenses to firms, then allow the firms to trade or buy the licenses from each other.

- Directly control with the standard waste dump level.

+ Each firm will be requested to only cause pollution at a certain level, called a standard waste level. If not, the firm will be requested to close

+ Standard waste level is equal to production point at Q_0 .

+ This method usually is not effective when there are many firms that are causing pollution, but each firm can reduce pollution with different costs.

Policy to positive externality

- The most common way is through subsidy from the government.

- This subsidy will be awarded to the producer to make line MPB go up to line $MPB+s$

- s is the subsidy per output unit of the firms who caused positive externality, so it is equal to MEB at the optimum output production of the society.

- The result of the subsidy policy is the reduction of the price that the consumers have to pay. The manufacturer's price increases in comparison with the balanced price before intervention.

→ Consumers and manufacturers share the Government subsidy.

+ *Notes when positive externality subsidizes*

- Regardless of the way way, subsidies will create more difficulties for taxpayers. Therefore, awarding a subsidy will cause a reallocation from tax payers to receivers. Therefore, effects on efficiency and social fairness need to be carefully considered.
- One activity which creates benefits for society is not enough to ask for a subsidy for that activity. A subsidy only is meaningful when the market does not allow the person who created this benefit to be fully paid for the benefits that they have created.

→ When the person's payment accurately reflects the value of the benefits that he or she created, that activity will not cause positive externality.

Period 29: Discussion

1. If every year the Government starts collecting tax A from every firm in a perfectly competitive market (firms can freely enter or withdraw from the market, there is no limit in the number of firms). How will the long term balance of the market change? Illustrate using graphs.
2. In your opinion, what policy does the Vietnam Government need to apply in order to minimize environmental pollution? Why?
3. In your opinion, should we allow private firms to join in the Public Goods supply? Why?

CHAPTER 5: ECONOMIC GROWTH AND INFLATION

Periods 30 & 31: Economic growth and Factors of Influence

Definition of Economic growth

Economic growth is the increase in an economy's productive capacity or the increase in an economy's scale of output in a year compared with the year chosen as the starting point to study.

Criteria to measure the economic growth

Gross Domestic Product (GDP)

GDP Definition

Gross Domestic Product is the total value of a country's overall output of goods and services within the country's borders in a certain period of time.

How to calculate GDP

a. Calculate GDP according to expenditures.

$$\mathbf{GDP = C + I + G + NX}$$

C – Consumption

I – Investment

G – Government expenditure

NX – Net export

b. Calculate the GDP according to incomes

General formula as below:

$$\mathbf{GDP = Dp + W + i + R + T_E + Pr}$$

In which: Dp: Permanent assets depreciation

W: Wage

i: Interest from loans

R: House and land for rent

Pr: Business profit

T_E: Indirect tax (is the tax on consumption of goods or services)

Below is the summary table of GDP structure according to the above two calculation methods :

c. Calculate GDP according to value added method.

The formula to calculate GDP according to value added method:

$$GDP = \sum VA_i$$

Nominal GDP (GDP_n) và Actual GDP (GDP_r)

a. Nominal GDP (GDP_n)

$$GDP_n = \sum P_t \times Q_t$$

b. Actual GDP (GDP_r)

$$GDP_r = \sum P_0 \times Q_t$$

GDP per capita

$$GDP / \text{người} = \frac{GDP}{\text{Dân số}}$$

Adjustment index GDP (D_{GDP})

$$D_{GDP} = \frac{GDP_n}{GDP_r} \times 100$$

Amount that is not taken into account by GDP

Gross National Product (GNP)

GNP Definition

Gross National Product GNP is the total market value of a country's overall goods and services that is produced by that country's citizens in a certain period of time (usually in a year).

How to calculate GNP

GNP = GDP + NIA (Income from overseas – Income that is earned domestically then transferred overseas)

Included with NIA is Net income attributable from overseas.

Nominal GNP and Actual GNP

- Nominal GNP: is the total value of a country's overall goods and services that are produced by its citizens in a certain time, based on the current price level of the economy (the price of that certain year, at that certain time)
- Actual GNP: is the total value of a country's overall goods and services that are produced by its citizens in a certain time, based on the price level of a set base year, or period (stable price).

Other measuring criteria

Net National Product - NNP

$$\mathbf{NNP = GNP - Dp}$$

In which: NNP: Net national product

GNP: Gross National Product

Dp: Fixed assets depreciation

National Income (Y - Yield)

$$\mathbf{Y = NNP - T_E}$$

Disposable Yield (Y_d)

$$\mathbf{Y_d = Y - T_D + Tr}$$

In which: Y_d : Disposable Yield

T_D : Direct tax

Tr : Grant

In turn, Disposable Yield Y_d is separated into 2 parts: Savings (S) and Consumption (C) as below:

$$\mathbf{Y_d = C + S}$$

The relationship between GDP, GNP, NNP, Y and Y_d is demonstrated in the table below:

GNP	<i>Net income assets</i>	<i>Net income assets</i>	<i>Depreciation</i>			
	NX	GDP				
	G		NNP	<i>Indirect tax</i>		
	I			Y	T_D - T_r	
	C				Y_d	

Economic growth measurement method

Formula to determine the annual economic growth speed

$$D_t = \frac{\Delta Y}{Y_{(t-1)}} = \frac{Y_t - Y_{t-1}}{Y_{t-1}} \times 100\%$$

In which:

D_t: Ratio of economic growth speed of the year studied.

Y: Gross National Product GNP

Y_(t-1) : GNP of the previous year.

Y_t: GNP of the year studied.

Formula to determine the economic growth speed of the period or time studied.

$$\bar{D} = \sqrt[t-1]{\frac{Y_t - Y_0}{Y_0}} \times 100\%$$

In which:

\bar{D} : Average growth speed of the period or time studied.

Y_t : Gross National Product of the last year in the period or time studied
(the current year).

Y_0 : Set base year (the starting year of the period studied)

Factors that influence economic growth

From production formula we have:

$$Y = AF(K,L)$$

Whereas:

Y: Total Yield

K: Capital

L: Labor

A: or TFP: Total Factor Productivity

TFP is the Total Factor Productivity of both labor and capital in a certain activity or for the whole economy. TFP reflects the advance of science, technology and technique, hence the increase of output does not only depend on the increase of the input (traditional method) but also depends on the quality of inputs, which are labor and capital.

Hence, the reason for the increase of production is not only due to the increase of capital and labor but also to the increase of TFP. Therefore we have a formula to calculate the growth rate as below:

$$\Delta Y/Y = \alpha (\Delta K/K) + (1-\alpha)(\Delta L/L) + \Delta A/A$$

As we can see, there are three sources contributing to the growth rate: the change of the amount of capital, labor, and TFP

At long term equilibrium, the economy operates at full resources usage. Therefore, to guarantee the growth rate of the economy, the improvement of TFP is very important.

Discussion: What is the role of the government in pushing the advance of technology?

Periods 32 & 33: Economic Fluctuations in the short run and Economic growth in the long run

Governments often have 4 targets of Macroeconomic policy:

- Stable and high economic growth;
- Low unemployment rate;
- Low inflation rate;
- Avoid causing the balance of payments to fall in deficit and keep the exchange rate stable.

Total expenditure model of Keynes

The relationship of Consumption, Savings and Disposable Income

Household consumption (C)

- Household Consumption depends on many factors, however the most important one is disposable income (Y_d). Household Disposable Income is divided into 2 parts, Consumption (C) and Savings (S).

$$Y_d = C + S \quad (3.1)$$

Consumption (billion VND)

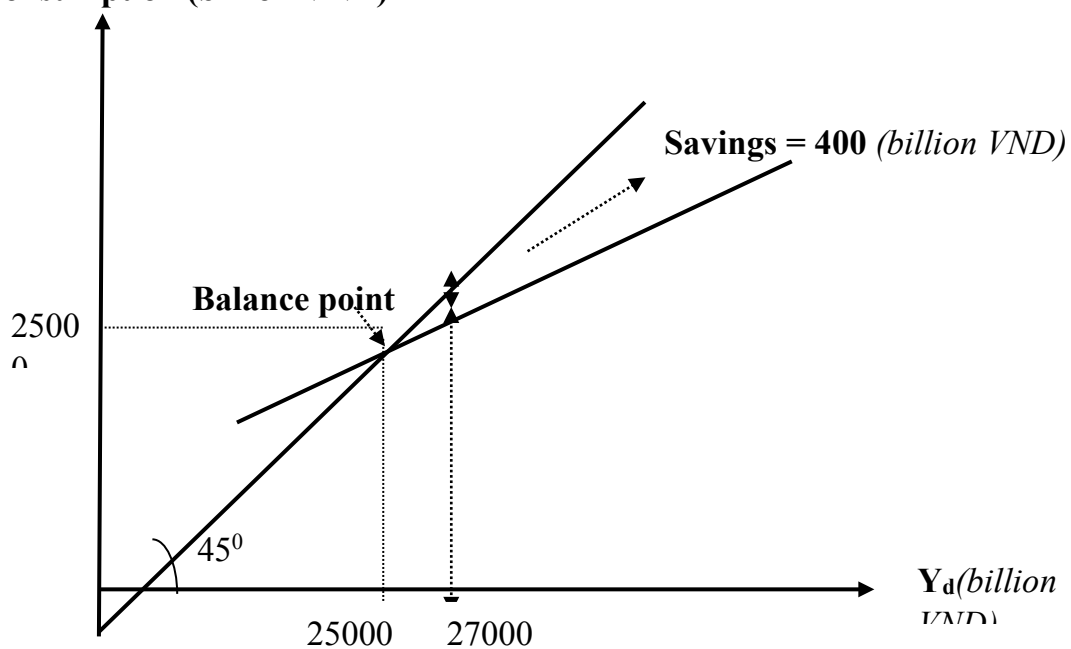


Figure 5.1: Consumption graph

Savings: (S)

Savings is disposable income that is not for consumption. Hence, savings equals income minus consumption ($S = Y_d - C$). Savings at different disposable income levels can be found by deducting Consumption in column 2 from Disposable Income in column 1.

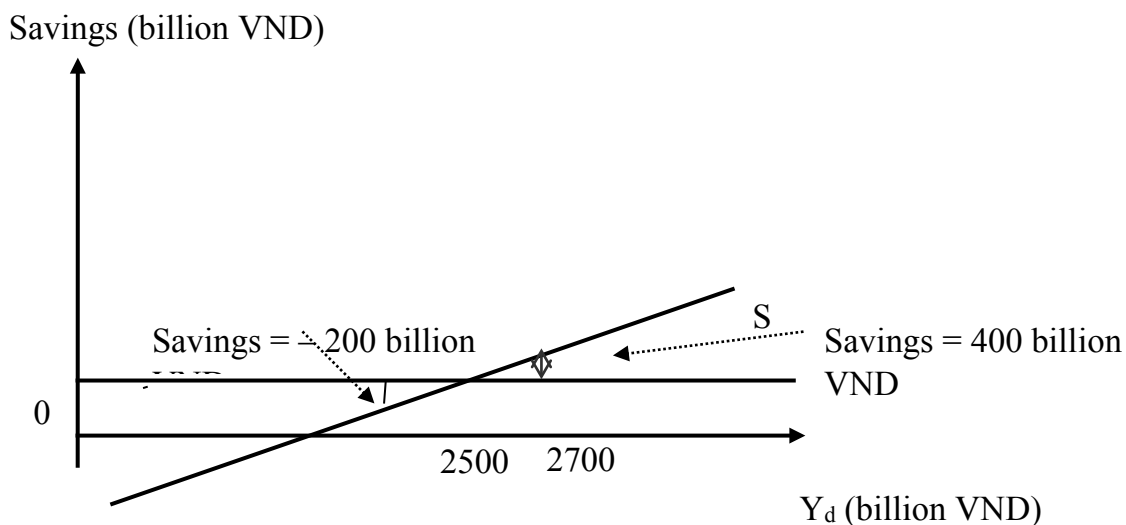
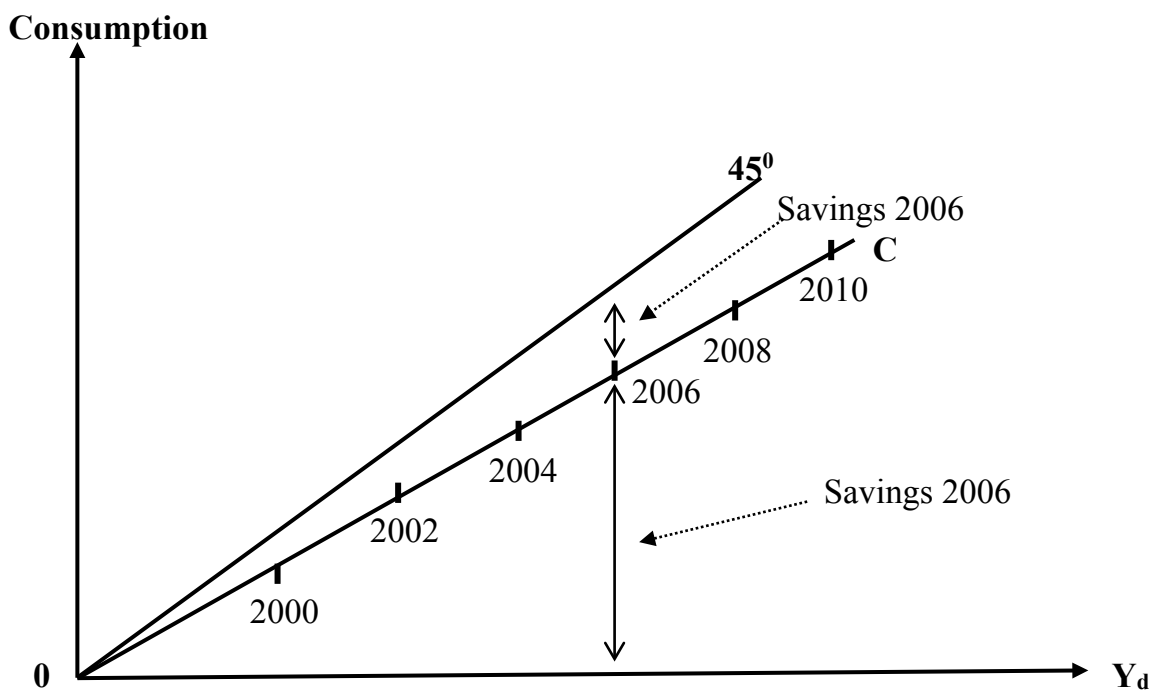


Figure 3.2: Savings Graph



Marginal propensity to consume and marginal propensity to save

Marginal propensity to consume (MPC)

$$MPC = \frac{\Delta C}{\Delta Y_D}$$

MPC – marginal propensity to consume

ΔC - variation of consumption

ΔY_D – variation of disposable income

Similarly, the variation of disposable income that was attributed to savings is called *marginal propensity to save (MPS)*.

$$MPS = \frac{\Delta S}{\Delta Y_D}$$

MPS – Marginal propensity to save

ΔS – variation of savings

ΔY_D – variation of disposable income

$MPS + MPC = 1$

Other factors that influence Consumption and Savings

- Household Assets
- Expectation
- Real interest
- Household loans and mortgage situation

Tax:

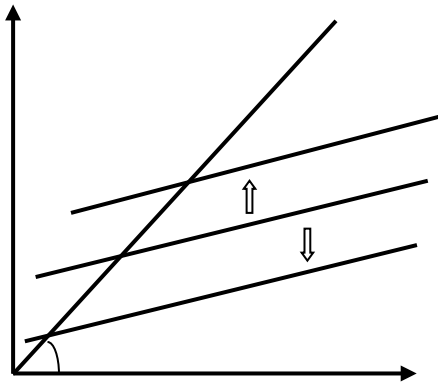


Figure 5.3 (a). Displacement of Consumption line

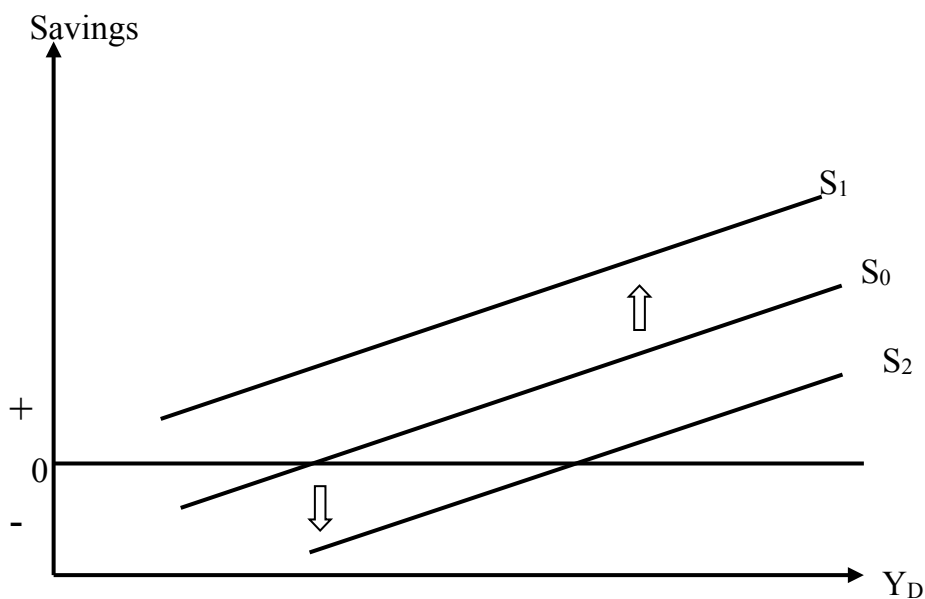


Figure 5.3 (b). Displacement of Savings line

Investment

Investment is the expenditure for purchasing factories, workshops, and machines. The decision to invest is made based on the comparison between marginal costs that the firm must pay and the marginal profit that the firm will receive. Marginal cost – bank interest that the firm must pay for their loans. Thus, there are 2 factors influencing investment decisions: expected profit and bank interest.

Multiplier effect

The Multiplier effect is applied in all events that change the expense of any input. In chapter 2 we learned that GDP is defined based on expenditures: consumption (C), investment (I), Government purchase (G) and net export (NX).

An Expenditure multiplier influences how the variation of yield is compared to variation of expenditure.

Expenditure multiplier is defined by below formula: $m = \frac{\Delta Y}{\Delta AD}$

Which leads to: $\Delta Y = m \cdot \Delta AD$

m – expenditure multiplier

Y – Yield

AD – Expenditure

Δ - Variation

Formula to determine the expenditure multiplier according to marginal propensity to consume

$$m = \frac{1}{1 - MPC}$$

Aggregate demand and equilibrium output in a simple economy.

In a simple economy, aggregate demand is the total demand for final goods and services that will be purchased at all price levels by firms and households.

$$AD = C + I$$

AD – Aggregate demand

C – Demand for consumption of households

I – Demand for investment by firms

In a simple economy, equilibrium output if $AD = GDP$

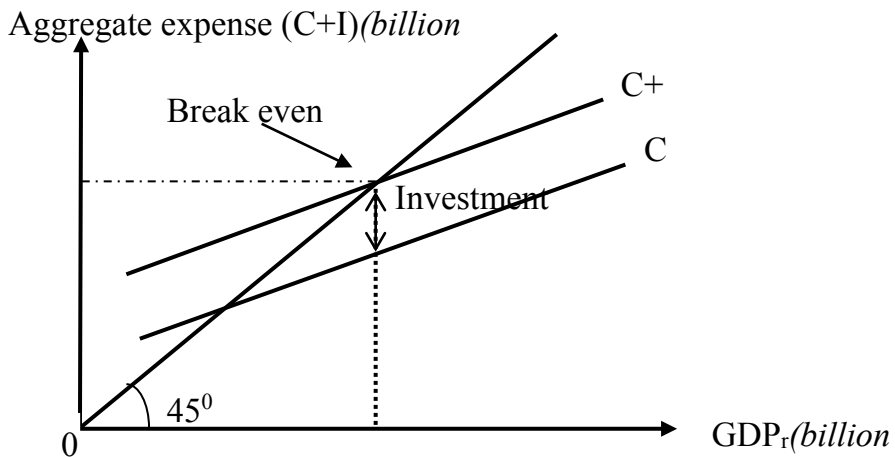


Figure 5.4 (a): Balance GDP

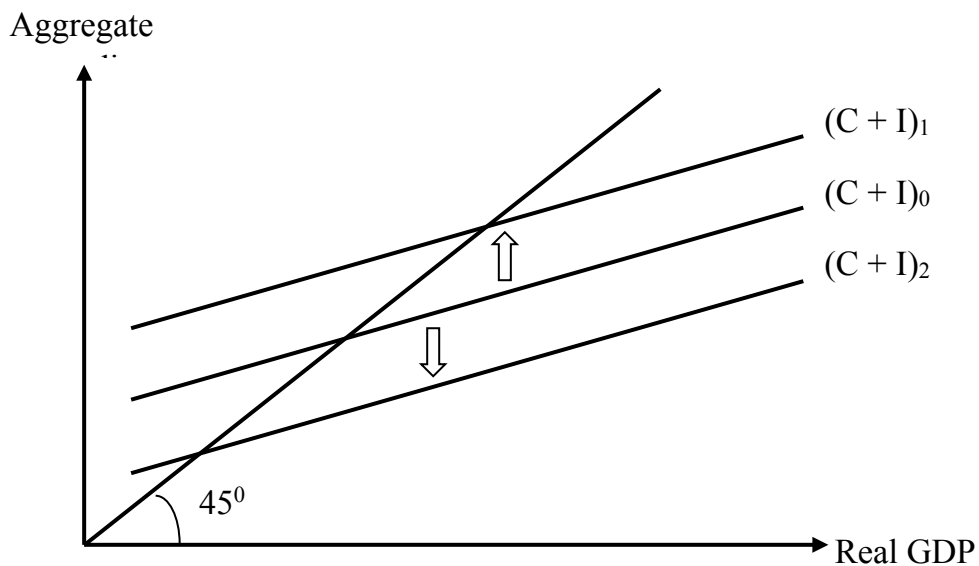


Figure 5.4 (b): Change due to aggregate expense

Aggregate demand and equilibrium output in a closed economy.

In a closed economy, aggregate demand $AD=Y= C+ I +G$

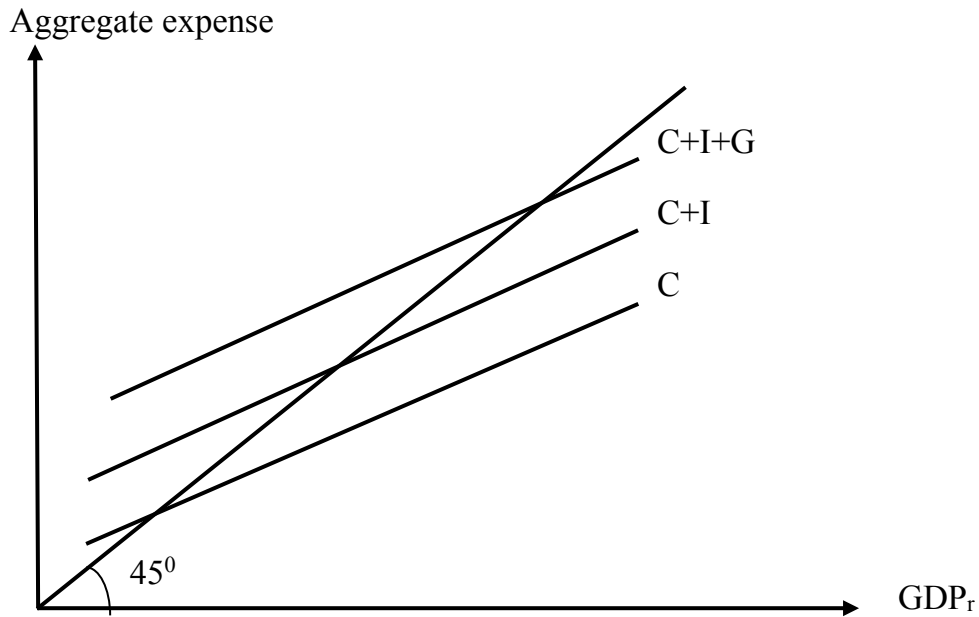


Figure 5.5(a): Government expenses and equilibrium output

Tax and Equilibrium output

From the above example, the formula to calculate a tax multiplier is as below:

$$m_t = -\frac{MPC}{1 - MPC}$$

T = TA-TR

T – Net tax

TA – tax

TR – other grants from the government to citizens.

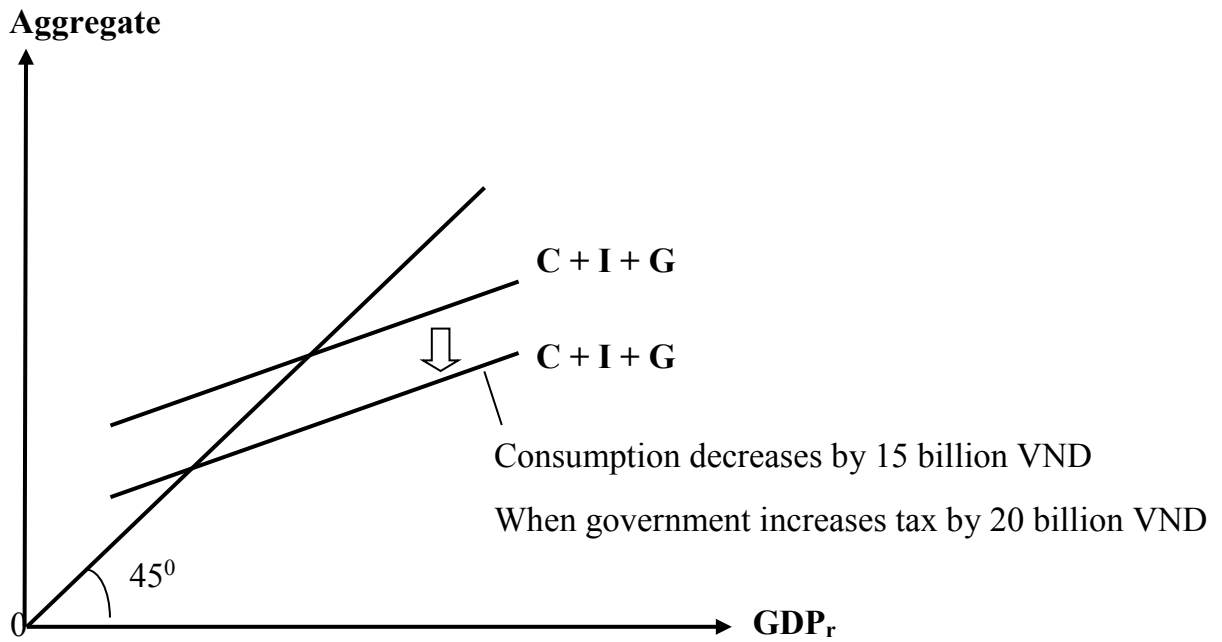


Figure 5.6(b): Tax and Equilibrium output

Aggregate demand and Equilibrium output in an open economy

Positive net export

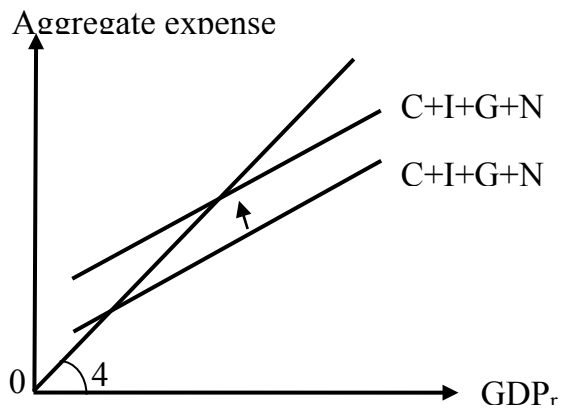


Figure 5.7 (a). Positive net export and equilibrium output

Negative net export

Suppose that net export is negative 5 billion VND, which means the economy imports 5 billion VND more than it exports. This causes the aggregate expense

of the economy to decrease by 5 billion VND and the equilibrium output to decrease by 20 billion VND.

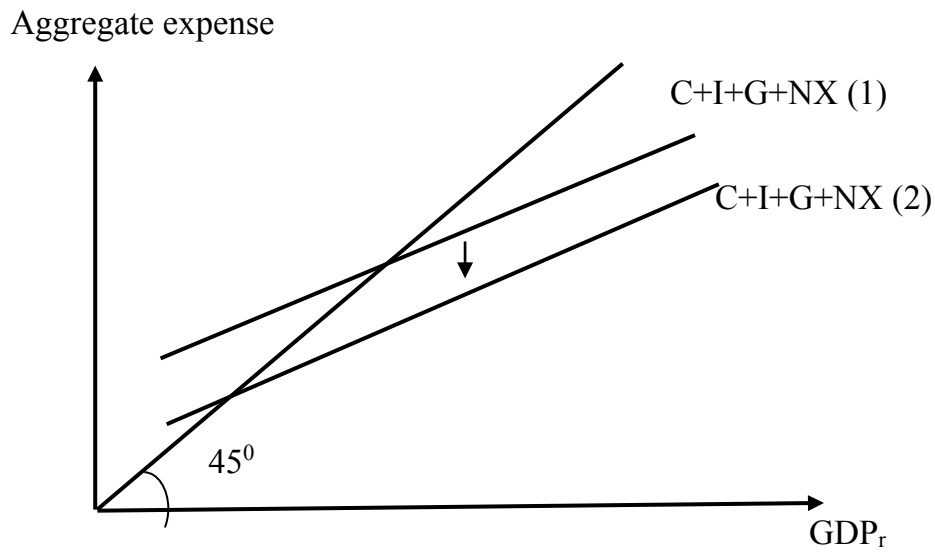


Figure 5.7(b). Negative net export and equilibrium output.

Periods 33 & 34: Aggregate demand – supply model (AD – AS)

Aggregate demand (AD - aggregate demand)

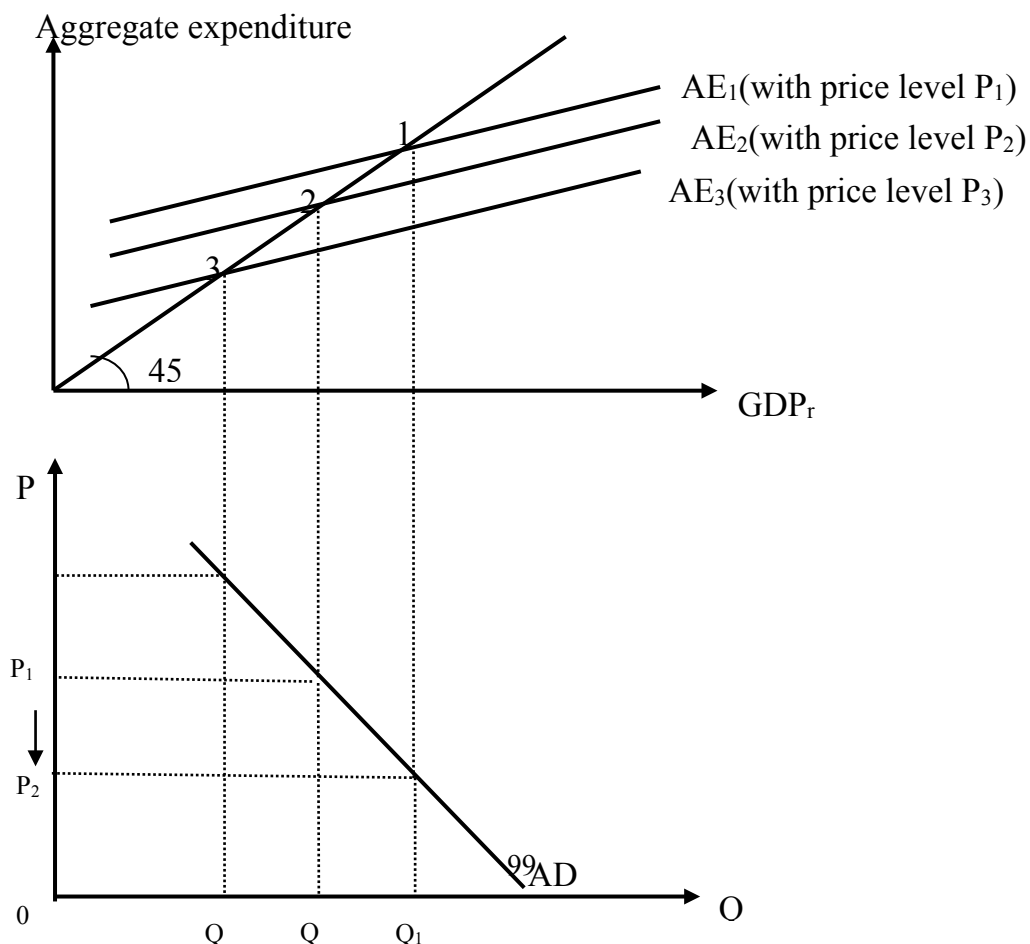
Definition: is the total final goods and services that will be purchased at different price levels by consumers, firms and government on the condition that other factors stay the same. The lower the price level is, the more the actual output to be sold is, and vice versa, the higher the price level is, the less the output to be sold is. Hence, the price level is inversely proportional to the actual expense.

The component parts of Aggregate demand

- Household consumption: C
- Investment: I
- Government expenditure: G
- Net export: NX

Aggregate demand curve

Figure 5.8: Aggregate expenditure model



Factors that influence and displace the aggregate demand curve

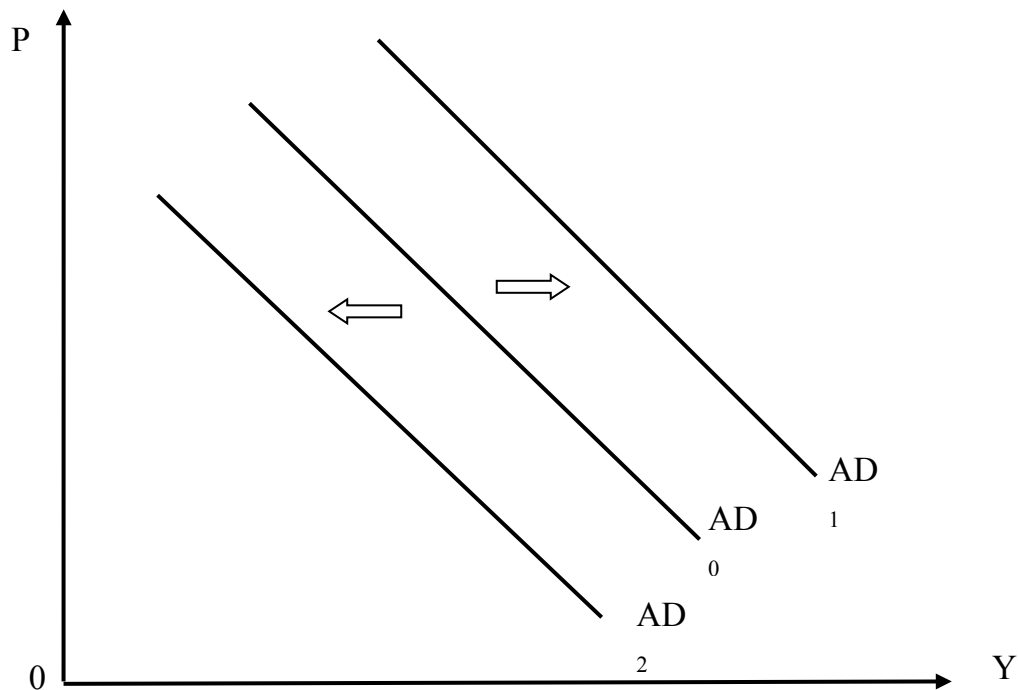


Figure 5.9. Displacement of the Aggregate demand curve

- Displacement derived from consumption (C):

+ Expectation from consumers:

+ Status of household loans

+ Tax

- Displacement derived from Investment (I):

+ Actual bank interest:

+ Expected profit from investment:

- Displacement derived from Government expenditures:

- Displacement derived from net exports:

+ Income from overseas

+ Exchange rate

Aggregate Supply curve

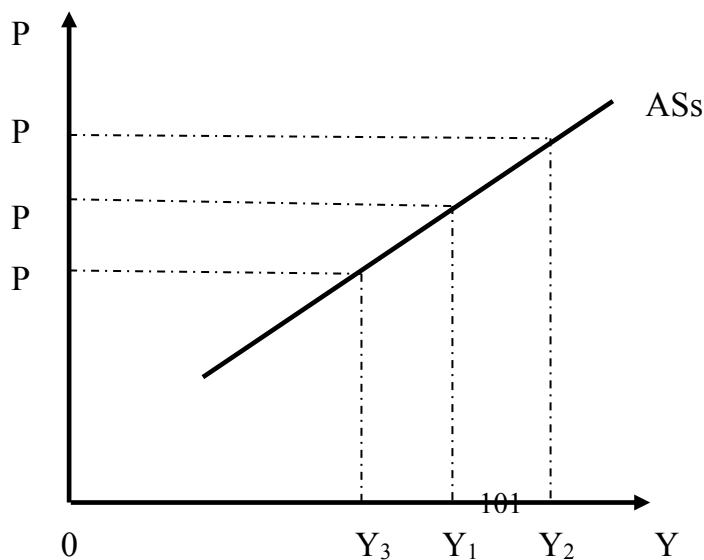
Definition: Aggregate Supply (AS) is the total goods or services produced and sold at different price levels while other factors stay the same. When price level varies, a firm normally adjusts output level. However, the adjustment also depends on the period in which it will take place. In the long run, the aggregate demand curve is vertical, while in the short run, it is a slope going upward.

- **Long run:** in macroeconomics, long run is defined as the period a time that nominal salary (and cost of other input factors) varies according to the variation of price level.

- **Short run:** is the period of time that nominal salary (and cost of other input factors) are not influenced by the variation of price level. In other words, the difference between short run and long run is at the influence level of price level to nominal salary and other factors, not depending on the length of the period, such as 1 versus 2 years, etc.

The short run aggregate supply curve.

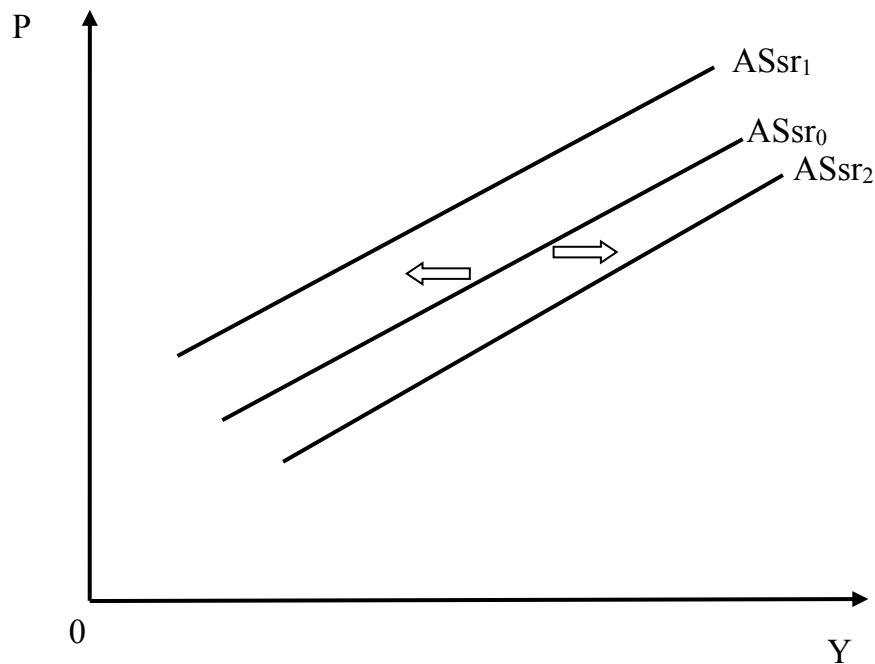
Definition: In the short run, the aggregate supply curve is a slope going upward as in figure 5.10, which means the rise of general price level tends to raise the total goods and services of the economy, and vice versa, the fall of price level also cause a decrease of total supply of goods and services.



Factors that cause displacement of short run aggregate supply curve:

- Labors
- Capital
- Natural resources
- Advanced technology
- Estimated price

Figure 5.11: Displacement of Assr curve



The long run aggregate supply

Definition

- In the long run, the economy operates in full force, and the long run aggregate supply curve is a vertical line, parallel to the vertical axis (as in figure 5.11). The reason is because in the long run, actual GDP level only depends on

production factors such as labor, capital, natural resources and technology, not the price level. Hence, the long run aggregate supply curve is a vertical line at natural output level, parallel to the price level curve.

The displacement of long run aggregate supply curve

- Any policy or adjustment that causes an increase of real GDP that was mentioned in a previous chapter (related to labor, natural resources, capital and technology) will lead to an increase of supply of goods and services and displace the AS_{lr} to the right. Conversely, any policy or adjustment that causes a decrease of real GDP will lead to a decrease of supply of goods and services, and displace the AS_{lr} to the left.

The Equilibrium AD –AS

The intersection point of the AD and AS lines will decide the equilibrium price level and equilibrium total output of the economy. In other words, it is the aggregate demand and aggregate supply that decide the equilibrium price level and real GDP output.

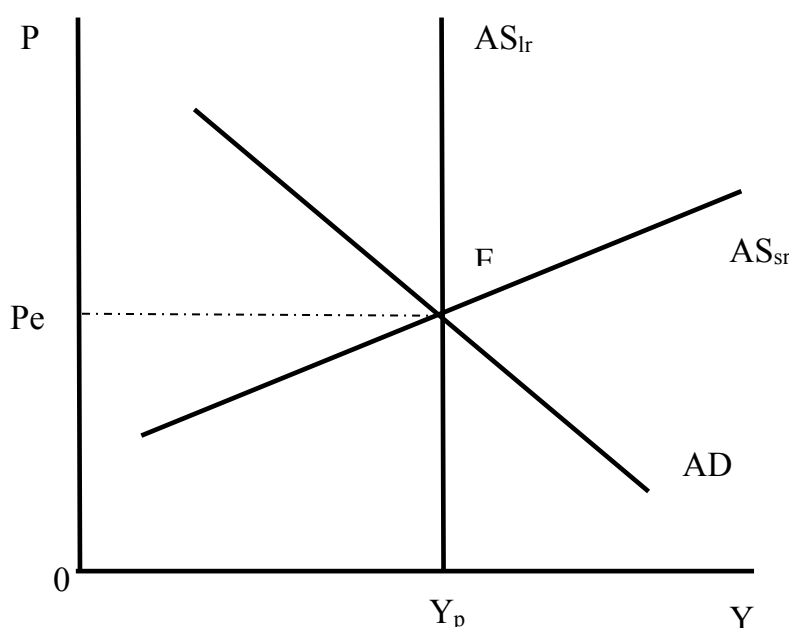


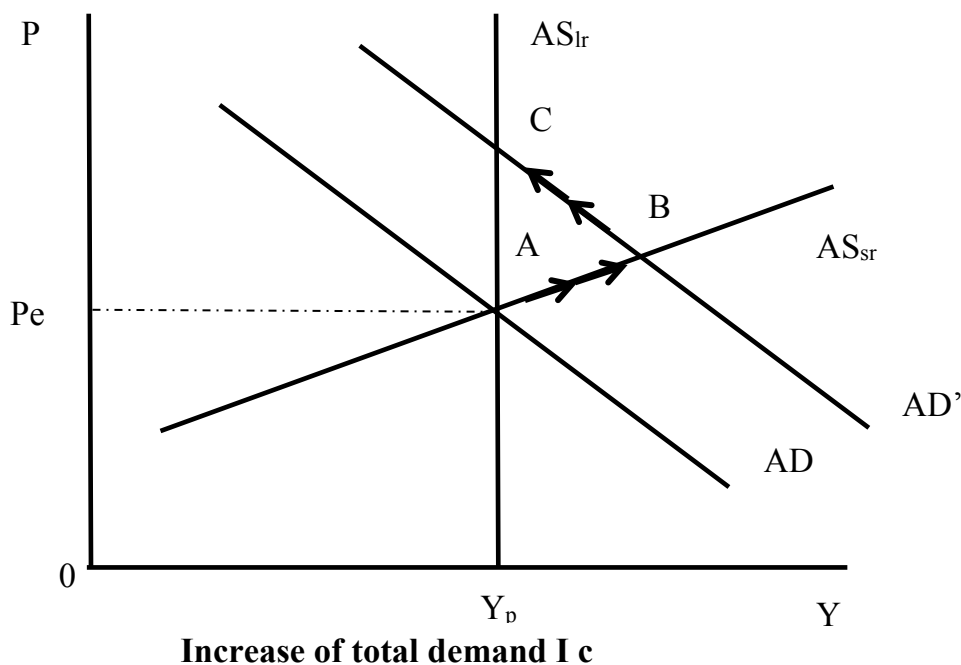
Figure 5.12: The long run equilibrium of the economy

Supply - Demand shock and the government's stabilizing policy

- A change in the economy happens due to the displacement of aggregate supply or demand curve. Economists call these exogenous variables, because they cause a shock to the economy. The variable that displaces the demand curve is called **demand shock**, while the variable that displaces the supply curve is called **supply shock**. These shocks slant the total output and unemployment rate far off the natural level. That is when stabilizing policies will be needed from the government to minimize the effect of these shocks to the economy.

Supply shock:

Suppose the aggregate demand skyrockets for some reason. In the short term, aggregate demand rises, resulting in a rise of the economy's output (Fig. 5.13)



Gradually, the increase of aggregate demand pushes wages and prices higher. When prices increase, the demand of the products decreases and the economy

gradually returns to its natural output. To prevent the effect of the demand shock and to keep the output closer to the natural output, the government can intervene in the market to stabilize the aggregate demand through the currency and fiscal policy tool. This will be researched in the next part.

Supply shock:

Suppose OPEC cuts down on oil production, which results in a sharp increase in the oil price. Tag along is the increase in the production cost, which will result in a decrease of the aggregate supply. If aggregate demand stays unchanged, the common price will rise and the output will fall below the natural level (Point B). This event is inflation along with depression (Figure 5.14)

Facing this supply shock, the policy planners are responsible for controlling the aggregate demand. This time the government has two alternatives:

+ Alternative 1: Keep aggregate demand unchanged. This means output and employment will be below the natural level. There will be a chance that the price will decrease to recover the full level of the old price level (Point A, Figure 5.14). However this means the economy has to accept a depression stage.

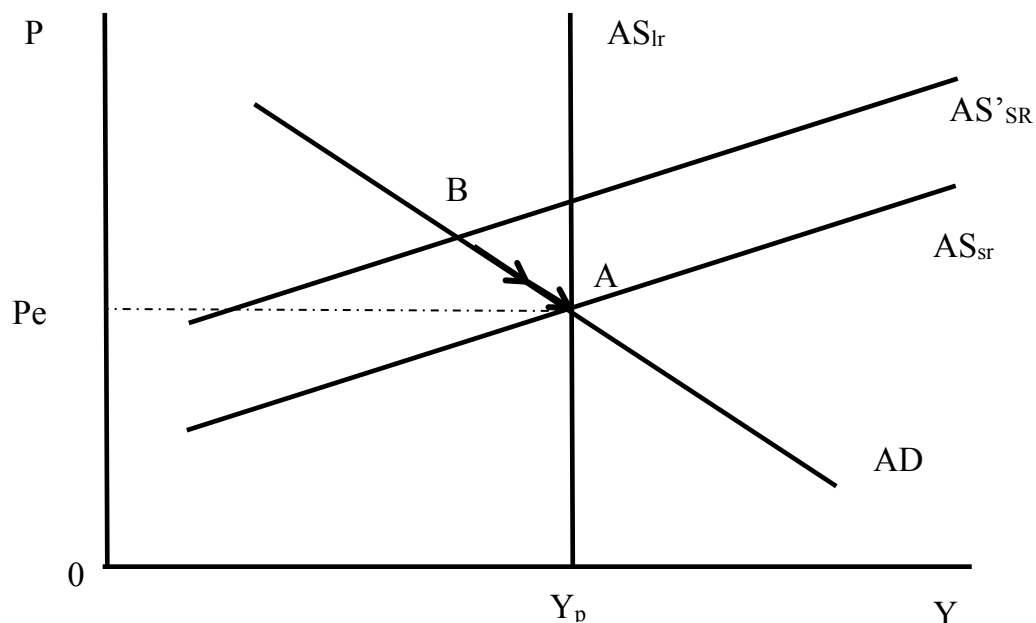


Figure 5.14: Adapt to supply shock

+ Alternative 2: The Government intervenes to raise aggregate demand.
 With this alternative, the economy's natural output will recover faster. However the common price will consistently increase, along with inflation (Point C, Figure 5.15)

Hence, the government must choose between keeping it at full usage, which means preventing depression, and keeping prices stable, which means preventing inflation.

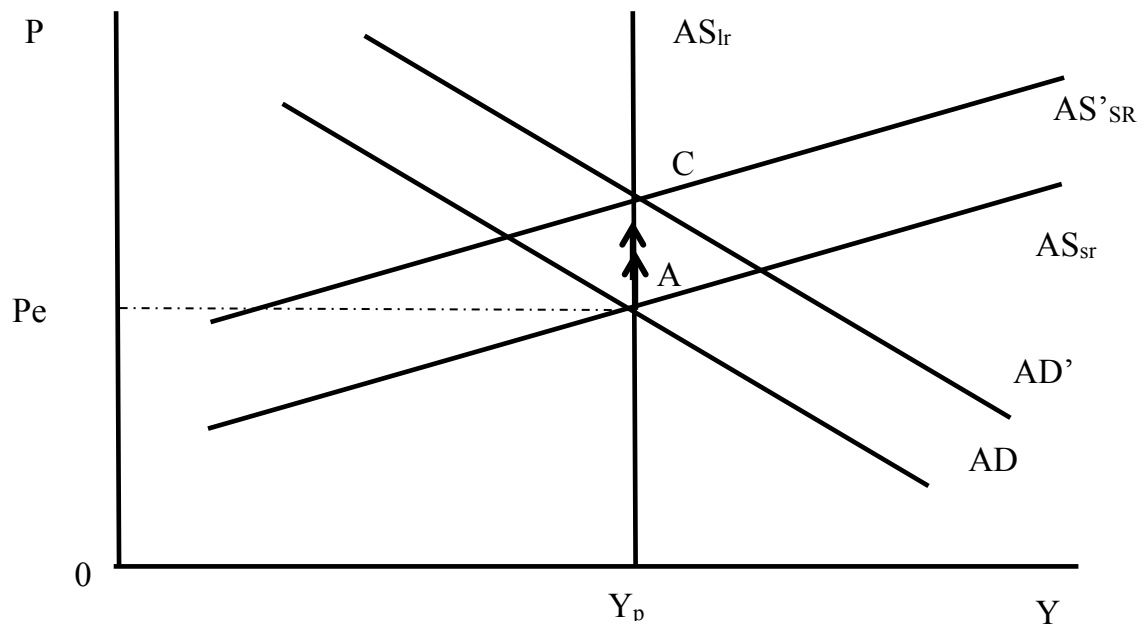


Figure 5.15: Adjustment of total demand Adjusting

Discussion question:

How did the change of oil price affect the Vietnam economy?

Period 35: CURRENCY AND INFLATION

Inflation

Definition of currency

Money is a means that is generally accepted to conduct a purchase or debt payment. It is the means of exchange.

Distinguishing money, wealth and income

- Wealth: is the net value of assets converted to cash at a certain time.
- Wealth of a household includes tangible assets such as houses, land, cars and other long term assets.
 - Besides the above are other financial tangible assets such as cash, saving accounts, securities, and bonds.
 - Debts are also called debit assets. Net asset is equal to the deviation between credit assets and debit assets.

Features of money

- Money is means of exchange of goods and services. Money has 3 features:
 - + Exchange: money is a means of exchanging goods and services. Laborers exchange labor for money, and then the money they make is exchanged for goods and services.
 - + Savings: money is saved to purchase goods in the future.
 - + Accounting unit: money is used as a standard to quote or record debt.

Money demand and income

- The monetary volume in an economy depends on price level, income and its turnover.

$$M \times V = P \times Y$$

M as money supply

V as money turnover

P as price level (adjustment index GDP)

Y as real income

- Monetary demand function : MD

+ is the total money volume that is kept available by all factors of the economy to satisfy the demand of exchange, payment and savings.

- The factors that influence money demand :

+ Real income

+ Interest

+ Price level

Money supply

- Money supply is the total money volume being circulated, including : money kept by citizens, in the banking system, and other businesses.

$MS = mM.H$

MS – Money supply

MONEY SUPPLY SIZE



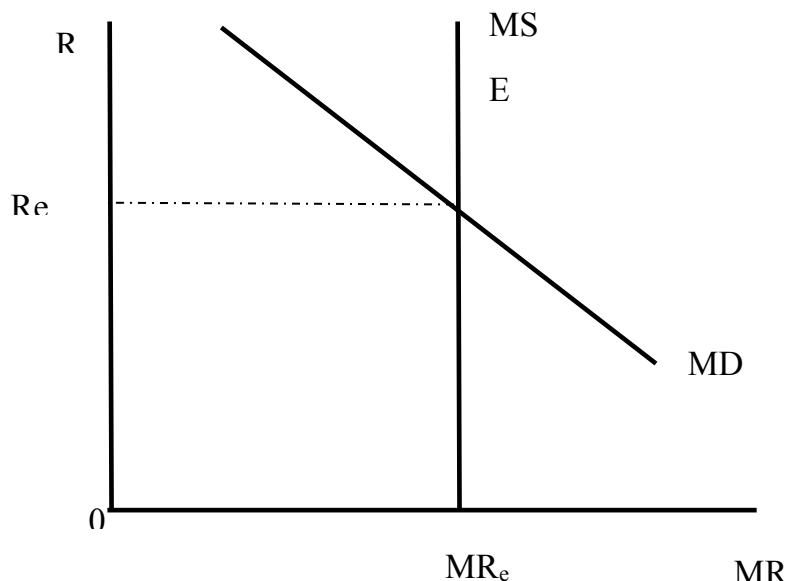
Equilibrium in the Currency market

- The bilateral influence between demand and supply defines the equilibrium interest, which is called market interest.

- At the equilibrium interest, the monetary demand is equal to money supply.

$$MS = MD$$

Figure 5.14: Equilibrium of currency market



Inflation

Definition

- Inflation is the continuous increase of the average price level of goods and services from time to time.

- Indexes to measure inflation

+ Consumption price index (*CPI*)

$$CPI = \sum i_p \times d$$

In which:

CPI: Consumption price index.

i_p : individual price index of each type of good

d : proportion of the consumption level of each type of good

$$\sum d_i = 1.$$

The price index can be calculated with below formula:

$$CPI = \frac{\sum p_1 \times q_1}{p_0 \times q_1}$$

$$CPI = \frac{(5 \times \text{meat price in year 2006}) + (2 \times \text{rice price in year 2006})}{(5 \times \text{meat price in year 1994}) + (2 \times \text{rice price in year 1994})} \times 100$$

Inflation index according to CPI can be calculated with the formula below:

$$g_p = \frac{CPI_1 - CPI_0}{CPI_0} \times 100$$

In which:

g_p : Inflation index.

CPI_1 : Price index of the period studied

CPI_0 : Price index of the period chosen to be the standard period for comparison

+ *Production price index (PPI)*

+ *GDP adjustment index*

GDP adjustment index

$$= \frac{p_{\text{meat 2006}} \times q_{\text{meat 2006}} + p_{\text{rice 2006}} \times q_{\text{rice 2006}}}{p_{\text{meat 1994}} \times q_{\text{meat 2006}} + p_{\text{rice 1994}} \times q_{\text{rice 2006}}} \times 100$$

CPI is calculated as below:

$$CPI = \frac{p_{meat\ 2006} \times q_{meat\ 1994} + p_{rice\ 2006} \times q_{rice\ 1994}}{p_{meat\ 1994} \times q_{meat\ 1994} + p_{rice\ 1994} \times q_{rice\ 1994}} \times 100$$

Inflation index according to D_{GDP} can be calculated as below:

$$g_p = \frac{D_t - D_{t-1}}{D_{t-1}} \times 100$$

In which: g_p is inflation index.

D_t is adjustment index of GDP of year t .

D_{t-1} is adjustment index of GDP of year $(t-1)$

Money, inflation and price

From the formula:

$$M \cdot V = P \cdot Y \quad (1)$$

Assuming that the cash flow speed (V) is unchanged, the change in the amount of money (M) will result in the change of the nominal GDP ($P \cdot Y$). Whereas, real GDP is determined by the production factor and the production and price formula $P = \text{Nominal GDP} / \text{Real GDP}$.

Hence, we have the equation (1) written as a change in percentage: $\%M + \%V = \%P + \%Y$

As the inflation rate is calculated by the change in % of a price, the above price level formula is also the formula which expresses the inflation rate.

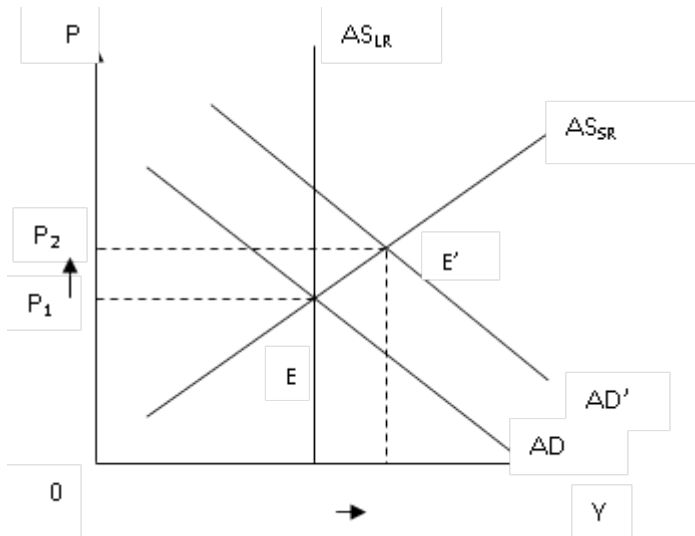
From the formula above we have:

$$\%P = \%M - \%V - \%Y$$

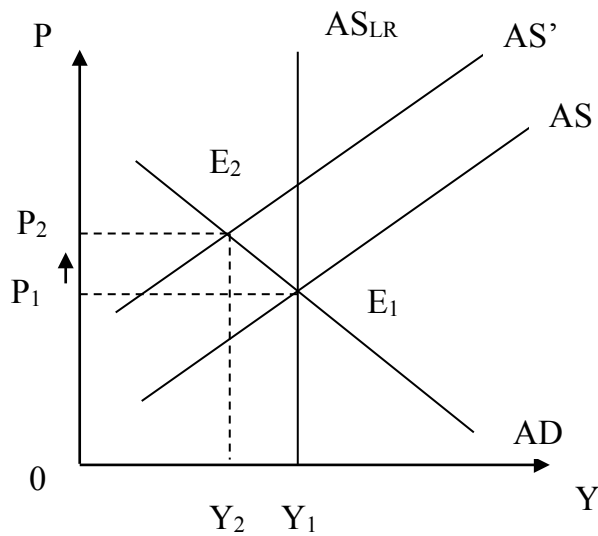
In the long term, yield Y will reach a potential yield while the change of the cash flow speed is assumed to be 0 (as we assumed V unchanged). As a result, inflation in the long term is said to originate from the change of the amount of money.

Different types of inflation

Demand-pull inflation



Cost-push inflation



Damage of inflation

- Inflation reduces the value of money – real incomes of laborers also fall.
- They lead to unstable mental processes
- They lead to inaccurate calculation

Benefit of inflation

- May make the labor market improve

Period 36: Discussion

1. In the present economy, with aggregate demand low, does Vietnam need to apply a policy to stimulate demand, which in turn would stimulate economic growth? Why?
2. The public debt of Vietnam is high. How does it affect other public policies?
3. How does the founding of the ASEAN Economic Community AEC affect the Vietnam economy?

CHAPTER 6: FISCAL AND MONETARY POLICIES

Period 37: Fiscal policy and monetary policy

Fiscal policy

Definition: is the activity in which the Government uses tax (T) and Government expense to affect the economy.

Classification

- Wide fiscal policy: increase G , decrease T
- Narrow fiscal policy: decrease G , increase T

Monetary policy

Definition: Monetary policy is when the State Bank changes the money supply to affect the economy.

Monetary policy tools

From the formula

$$MS = m_M \times B$$

Whereas

- MS : Money supply
- m_M : Money multiplier and $m_M = \frac{cr+1}{cr+rr}$ with cr is the currency rate out of the bank, rr : reserve ratio of commercial banks
- B : base money = $C + R$ whereas C : cash held by the citizens, R : reserve money by commercial banks

From the above formula, there are 3 tools of Monetary policy:

- Open market activity: The State Bank trades Government bonds. When the State Bank buys Government bonds, they have pumped in the market a certain

amount of money, therefore B rises, and MS rises. And vice-versa, when the State Bank sells Government bonds, B and MS decrease.

- Regarding the required reserve ratio of commercial banks, if the required reserve ratio rises $\rightarrow rr$ rises $\rightarrow m_M$ decreases $\rightarrow MS$ decreases.

- Discount interest rate is the rate which the commercial banks have to pay when they loan money from the State Bank. A commercial bank loans money from the State Bank when its reserve fund is so low that the reserve ratio is lower than the required reserve ratio. If the discount interest rate decreases, cost for loans will be cheaper, and more loans will be granted for reservation $\rightarrow B$ rises, MS rises.

Classification

Wide monetary policy: State Bank increases the money supply MS , and lowers the interest rate

Narrow monetary policy: The State bank decreases the money supply MS , and increases the interest rate

Period 38: Discussion

Case 1: In order to deal with high inflation, in 2011, the State Bank of Vietnam had applied the maximum interest rate for money deposits in commercial banks, but did not apply the maximum interest rate for money loaning activities of commercial banks. Please evaluate the effect of the above mentioned policy on the money market.

Case 2: The Great Depression of 1929-1933 caused significant damage to America. Many economists said that one of the main causes of the Great Depression was the extreme decrease of the money supply. In order to deal with the crisis, the Federal Reserve System of America (FED) had found a way to increase the money base by implementing a wide-reaching Monetary policy. However, in accordance with reality, although the money base had improved 18% during this time, money supply still tended to decrease. Therefore many had assumed that the Monetary policy was not effective.

Please explain what the reasons were that caused the money supply to decrease despite all of the FED's efforts in using a wide-reaching Monetary policy to increase the money base.

USING MODEL IS*-LM* TO ANALYZE POLICIES

IN A SMALL AND OPEN ECONOMY

Period 39: Model IS-LM* by Mundell–Fleming*

Hypothesis

- Small and open economy
- Free regulated capital source. This also means that the economy can lend or borrow an amount of capital in the world's finance market. Therefore, the domestic interest rate (r) equals the global interest rate (r^*). Concurrently, because this is a small economy, the domestic interest rate will be decided by the global interest rate.
- Exchange rate can be floating (the State Bank allows the exchange rate to be adjusted based on the change of economic conditions) or fixed (the State bank stipulates a fixed exchange rate between the domestic currency and foreign currencies).

Line IS*

*Establish the equation of line IS**

- Line IS expresses the balance in the product market. Therefore, to be able to establish the IS line, we should start with an equation which describes the product market:

$$Y = C(Y-T) + I(r) + G + NX(e) \quad (IS)$$

+ Whereas total income or total output Y is equal to total consumption C , investment I , Government expense G and Net Export NX . Consumption C depend on the usable income ($Y-T$). Investment is opposite to the real interest rate (r) and Net Export is opposite to the exchange rate.

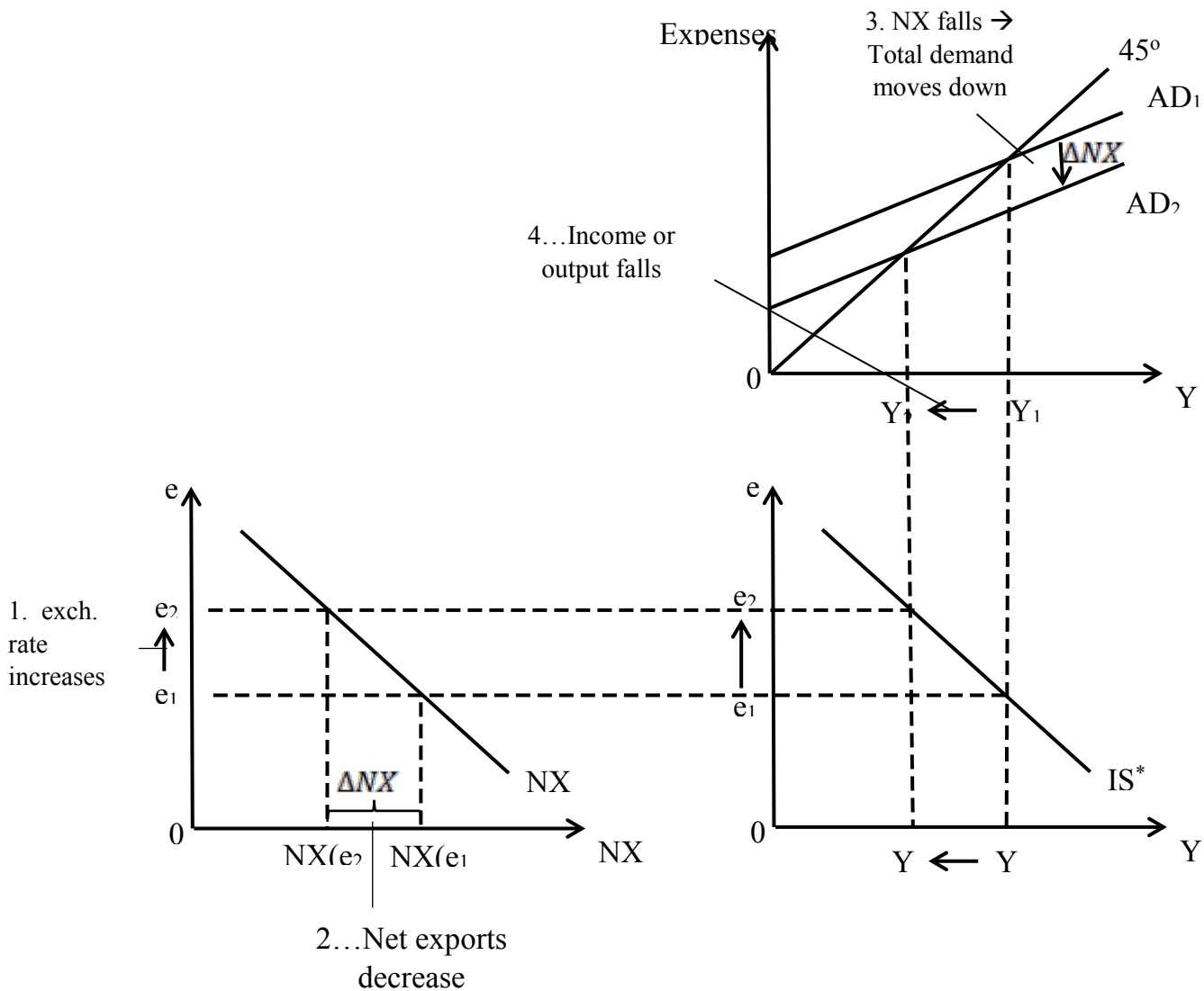
+ Please note that the exchange rate e is the amount of foreign currencies based on a unit of domestic currency and Net export depends on the real exchange rate. If e is the nominal exchange rate then real exchange $\epsilon = \frac{eP}{P^*}$ whereas P is the domestic price level, and P^* is the foreign price level. However, the Mundell-Fleming model assumes that P and P^* are static, therefore the change in the real exchange rate will be proportional with the change of the nominal exchange rate. When the nominal exchange rate increases, foreign products become cheaper than domestic products, therefore exports decrease, imports increase and NX decreases.

+ The Equation expressing product market has 2 variables: interest rate r and exchange rate e . As the assumption of the model, $r=r^*$, or domestic interest rate is kept unchanged at the global interest rate. Therefore:

$$Y = C(Y-T) + I(r^*) + G + NX(e) \quad (IS^*)$$

Graph of IS*

- Axis includes: y-axis expressing exchange rate (e), x-axis expressing output or income (Y)
- When e increases, NX will decrease with an amount of ΔNX , which is expressed in the total supply model by Keynes, and AD moves down and left, which leads to the decrease of output Y . The IS^* line has a steep down and to the right shape.



Line LM*

Equation of line LM*

- Line LM expresses the balance in the money market. From the equation describing the money market:

$$\frac{MS}{P} = MD(r, Y)$$

+ The money market balances when real money supply equals real money demand. Real money demand is opposite to the interest rate and is proportional to income. Real money supply is the external variable and is under control by

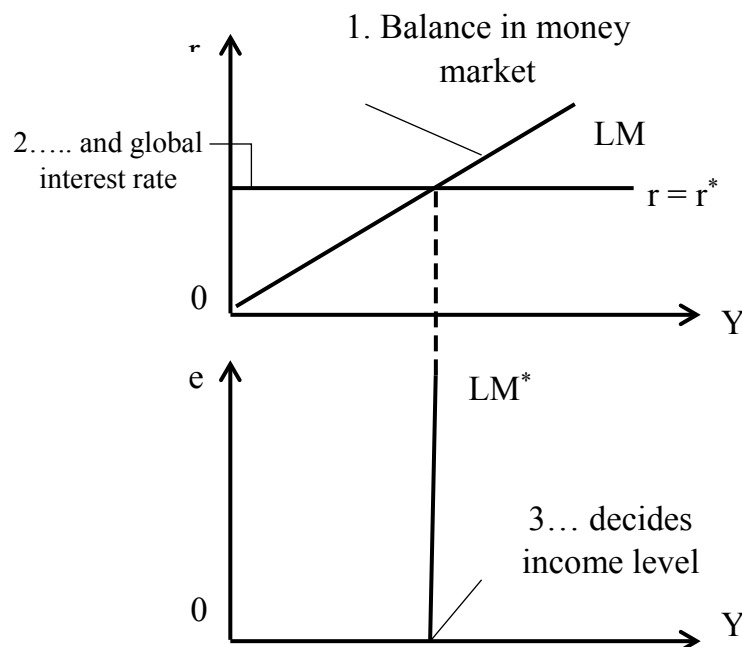
the State Bank. As the Mundell-Fleming model is made to analyze the short-term fluctuation, the price is assumed to be unchanged

+ As $r = r^*$, therefore

$$\frac{MS}{P} = MD(r^*, Y) \quad (LM^*)$$

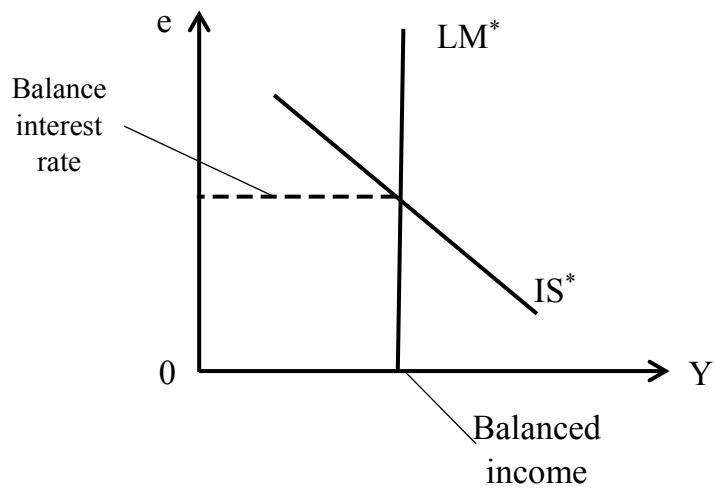
Graph of line LM^*

- As exchange rate does not appear in the equation of LM^* , LM^* is vertical. With the given global interest rate, the equation LM^* decides total income no matter how much the exchange rate is.



The economy's balance

- The balance of the economy is the intersection of line IS^* and LM^* . This intersection shows the exchange rate and income where the product market and money is all balanced.

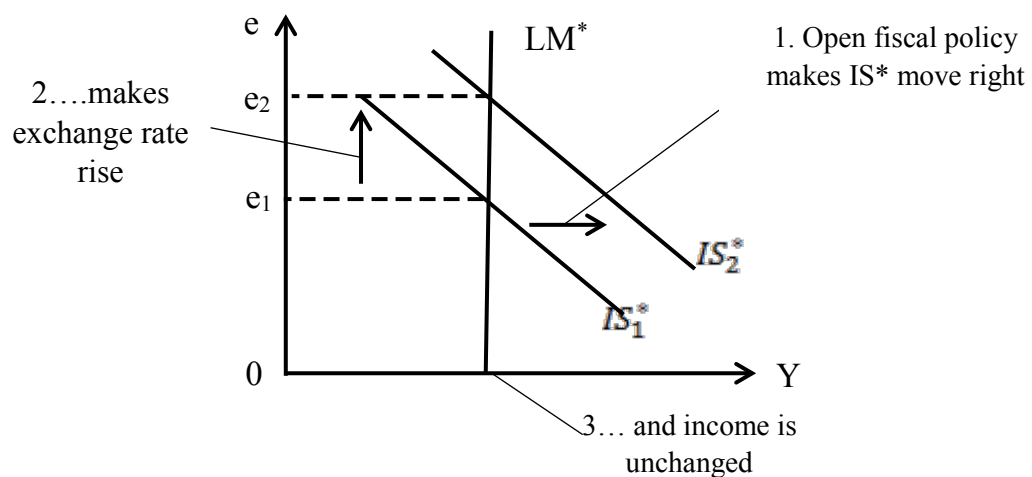


Period 40: Analyze policy by using models IS^* and LM^*

A Small and open economy with a floating exchange rate

Fiscal policy

- Assume that the government wants to improve domestic consumption by improving Government expenses (G) or lowering tax (T). In a closed economy, this will result in an increase in interest rate and output. However, with a small and open economy and a floating exchange rate, the result will be totally different. Under the effect of an open fiscal policy, IS^* moves right. And depending on the model, we have the increase in exchange rate with an unchanged output.



- Explaining reasons leading to the above result depends on 2 variables of the model, interest rate and exchange rate.

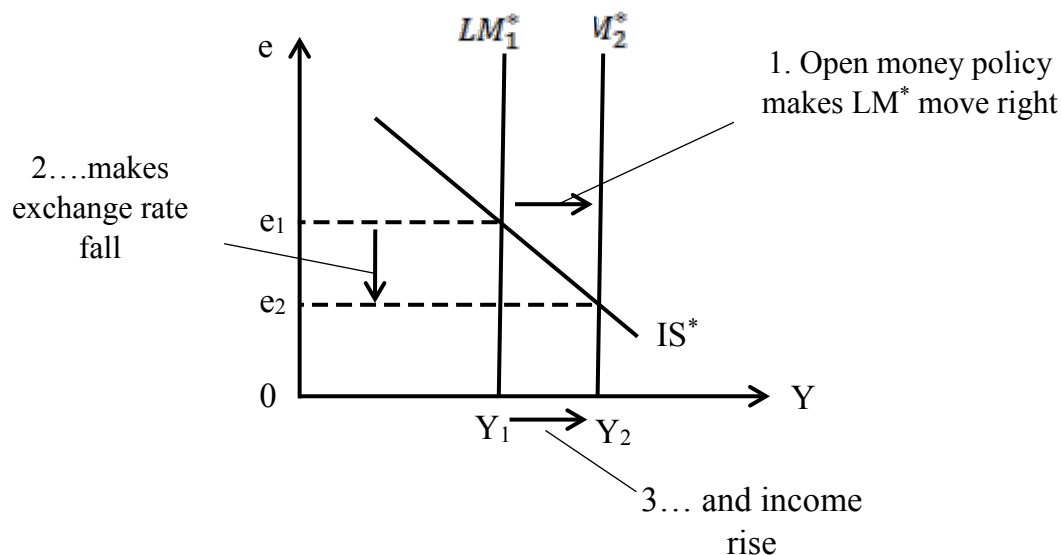
+ In a closed economy, when the output or income Y increases, money demand changes, which leads to the increase of the interest rate. However in an open economy, this cannot happen because right when the domestic interest rate (r) exceeds global interest rate (r^*), overseas investment capital sources will then pour into the country, which creates the pressure to lower domestic interest rates down to the global interest rate.

+ Additionally, due to the increase of the overseas investment, the domestic currency demand will increase in the domestic market, which leads to an increase of the domestic currency exchange rate.

+ Finally, due to an increase of exchange rate, domestic goods will be relatively more expensive compared to foreign products, leading to a decrease in exports, and an increase in imports -> NX decreases. Increase G, decrease T will increase Y; however due to the decrease of NX, Y also decreases. Therefore we can see that it is due to the decrease in net imports and exports that affects the expansion of the fiscal policy to income.

Monetary policy

- Assume that the State Bank increases money supply. As P was assumed to be fixed, when nominal money supply increases, real money supply increases also. Line LM^* moves to the right. This results in a lower exchange rate, income or higher output.



- Explain the above mentioned reasons:

+ Increasing money supply will create pressure to lower domestic interest rates to a level even lower than the global interest rate; this leads to the investment capital pouring of the economy. Therefore once again pressure is

created to increase the domestic interest rate until it is equal to the global interest rate.

+ Due to the increase of foreign investment demand, foreign currency demand increases, and the exchange rate decreases.

+ Finally, due to the decrease of the exchange rate, domestic products become relatively cheaper. Therefore exports increase, imports decrease, and net exports increase. As a result, total output or income increases.

Period 41: Discussion

Case 1: In the financial crisis of 2008, how did the Vietnamese Government apply Monetary policy and fiscal policy to overcome the crisis? Explain with model IS*-LM*.

Case 2: In the Early 1980s, America applied an abnormal combination of two fiscal policies and Monetary policy to reach 2 goals. FED President Volker's goal was to cut high inflation – which was inherited from 1920. At the same time, President Reagan also wanted to fulfil his promise during his election to cut taxes and national defense expenses.

In your opinion, how did America combine fiscal policy and Monetary policy to achieve both above mentioned goals? Use the Mundell-Fleming model to predict how the combination will affect the value of USD.

USING MODEL IS*-LM* TO ANALYZE POLICIES IN A SMALL AND OPEN ECONOMY

Period 42: Analyze the policy by using model IS and LM* (cont)*

Small and open economy with fixed exchange rate

Operating mechanism of the fixed exchange rate

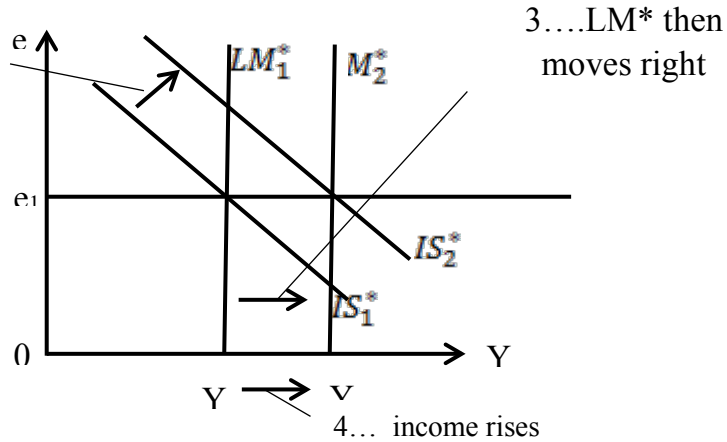
- Under the fixed exchange rate mechanism, the State Bank has to be willing to buy and sell domestic currency for foreign currency at a pre-decided rate.
- E.g.: The State Bank of Vietnam announces it will fix the exchange rate at 1/20.000 USD for 1 VND. The Bank is always willing to sell 1/20.000 USD to get 1 VND or vice versa.
- To achieve this, the State Bank must have its VND reserves (the State Bank can print money) and USD (currency reserves from previous trades).
- In this case, money supply will be adjusted to guarantee that the balanced exchange rate in the market must be equal to the stated exchange rate.

Fiscal policy

- Assume that the Government wants to increase domestic consumption by increasing Government expense (G) or lowering Tax (T). The open fiscal policy makes IS* move to up and to the right. Then, the exchange rate will rise. To keep the exchange rate unchanged, the State Bank will increase the money supply so line LM* will move to the right. As a result, the interest rate remains unchanged, and output or income rises.

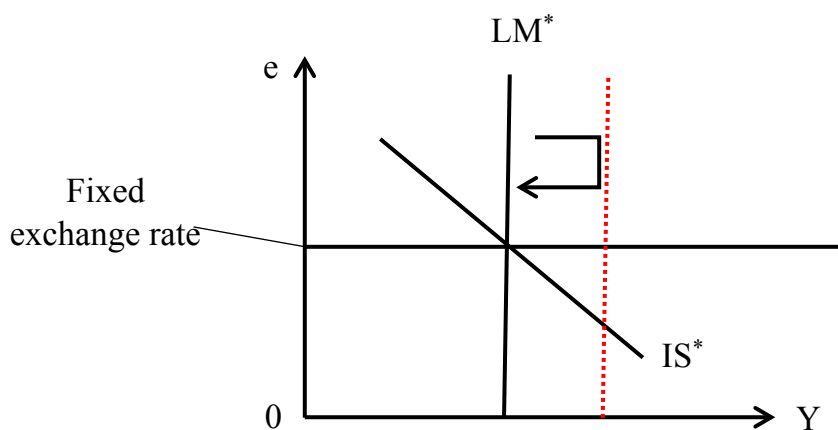
2... Open Fiscal policy makes IS^* move right

1. with fixed exchange rate e_1



Monetary policy

- Assume that the State Bank wants to increase money supply (e.g.: State Bank buys Government bonds). Line LM^* first moves to the right, exchange rate decreases. But as the State Bank promised to trade foreign currency at a fixed rate, investors will then sell domestic currency to the State Bank. This will make domestic money supply decrease. Line LM^* will then go back to the first place. Therefore we can see that the Monetary policy is not effective in an economy operating under a fixed exchange rate.



Period 43: Practicum

1. Use the Mundell-Fleming model to explain the effect of these shocks on total income, exchange rate and the trade balance in both cases: floating exchange rate and fixed exchange rate.
 - a. Consumer confidence about the future is declining, which makes spending fall and saving rise.
 - b. Joining the ASEAN economic community in 2015 will allow the people to buy more foreign cars than domestic cars.
 - c. The birth of ATMs lowers the demand for cash.
2. A small and open economy, operated under a floating exchange rate is having an economic crisis with the balance of trade. If the policy makers want an economy to reach full employment status but do not want to change the balance of the national budget, how should they apply fiscal policy and Monetary policy? Use the Mundell-Fleming model to explain.
3. The Mundell-Fleming model assumes that global interest rate r^* is an external variable, determined outside model. Now let us find out what reasons made it change and what will happen with the variable change.
 - a. What factors can increase the exchange rate?
 - b. Assuming that the exchange rate is floating, what will happen to total income, exchange and the balance of trade when the global interest rate increases?
 - c. Assuming that the exchange rate is fixed, what will happen to total income, exchange rate, and the balance of trade when the global interest rate increases?

Period 44. Discussion

Case 1

The Great Depression of 1929-1933 was a global event. While the crisis of the US economy pushed the degradation, all global economies had to overcome a big decline in output and employment. However, each country's government had their own reaction when facing the crisis.

At that time, almost all big economies in the world applied the Gold Standard policy. Each country had a certain of reserved gold and agreed to exchange their currency into a certain amount of gold. These economies could keep their exchange rate stable thanks to the Gold Standard policy.

Back to 1929-1930, in some nations such as France, Germany, Italy and Holland, the government decided to keep the old exchange rate between their own currency and gold. Other countries like Denmark, Finland, Norway, Sweden and England stated they would decrease by 50% the amount of gold that they would pay for every currency unit.

In your opinion, in the two mentioned solutions, which decision would have helped these big economies escape crisis faster? Use the Mundell-Flemming model to explain.

Case 2

Firm leaders and policy makers always pay attention to Vietnam products' competitiveness (Vietnam's economy sells Vietnamese products and receives a profit from the global market). Advise to policy makers about:

a. How will the change of the nominal exchange rate affect the competitiveness of Vietnamese products?

b. How to apply fiscal and Monetary policy to improve the competitiveness of Vietnamese products without affecting total income?

Case 3

Assuming that money demand depends on usable income Y_D ($Y_D = Y - T$).

The equation of the money market is:

$$MS/P = MD(r, Y_D)$$

Analyze effects of tax cut policy for a small and open economy on exchange rate and total income in the case of a floating exchange rate or fixed exchange rate.

Period 45: Revision

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公共政策修士養成課程

(国家行政学院および政策研究大学院大学の協力)

専門科目講義

科目：公共政策における哲学

1. 講師情報

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2. 講義に関する情報

- 講義名 : 公共政策における哲学 (英語名 : **Philosophy in Public Policy**)

- 講義コード :

- 単位数 (出席/実習/自主研究) : 2

+ 理論に関する授業を聴講する : 15 コマ (1.0 単位)

+ クラス内での課題、ディスカッションを行う : 6 コマ (0.3 単位)

+グループ実習を行う：10コマ（0.3単位）

+自習を行う：12コマ（0.4単位）

（備考：1単位＝理論15コマ、1コマ＝45分、理論1単位＝
ディスカッションか実習2単位）

- 養成学部／専門への応用：公共政策
- 養成レベル：修士
- 養成形式：正規、ノンフルタイム
- 講義の類型：（必修または選択）
- 前提となる講義：哲学、公共政策
- 事前に受講すべき講義：
- 同時進行の講義：
- 講義に対するその他の要求（ある場合）- 講義を担当するコース／専科：
基礎理論コース

3.講義の目標

3.1.講義全体の教育目標

- 知識について：政策プロセスに応用が可能な、また応用が必要とされる哲学の方法論的原則を提示する。
- 技能について：政策の策定、分析、実施における各哲学的理論の応用を実行する。
- 態度について：政策プロセスにおける哲学の方法論を、常に自覚的に主体的意識を持って応用する。

3.2. 知識についての具体的な教育目標

- 科目の必要性を明確にする；公共政策における哲学と科学に関する科目への新たなアプローチ手法（公共政策における哲学上の障害および哲学の応用）

- 政策プロセスにおける哲学的課題の指摘および分析：政策課題の発見および解決のための哲学；政策策定における制限的条件

- 公共政策設計における基本的方針（哲学的理論）：マルクス哲学の概念による哲学的理論；マルクス以外の哲学概念による哲学的理論

- 公共政策における公務員の倫理性：政策設計および公共政策プロセスの各公務活動における政府首脳、公務員の倫理性

4. 講義内容の概要

* *基本的概念・観念*について：哲学、哲学的理論、哲学の方法論的原則；公共政策、政策課題、公共政策の策定・実施・分析・評価；政策の構築と実行において応用可能な哲学の概念、方法論的原則；公共政策における哲学的方法論応用の実践と効果；

* *基本的議題*：公共政策は、上部構造が経済的・社会的な生活に対し最も直接的に作用を及ぼすための方法である。これは、確かな情報に基づき、論理的で、かつ哲学的な方法論に依拠していることを前提として設計されたときにはじめて可能性と有効性を持つ。

* *研究方法*：公共政策の策定と実施に密接に関連した哲学の方法論的原則を分析し、政策の成功または失敗の各種要因を指摘する（社会学的観察や調査を行うこともある）。

5. 講義の詳細内容

	内容	理論	課題	ディスカッション	実習	グループ活動	自主研究
1	科目のテーマに関する紹介	2		2		1	2
2	公共政策の設計における哲学	4		3		2	2
3	公共政策設計における基本的方針(哲学的理論)	6		4		3	6
4	公共政策における公務員の倫理性	3		3		3	5
		15		12		9	15

5. 講義の詳細内容

第1章：科目のテーマに関する紹介

(3コマ)

1.1. 科目の必要性

公共政策とは、共同体の生活における共通の利益を実現するために、それぞれの時代における政治的態度に基づき、国家によって選択された行動の方向性である¹。公共政策は、社会共通の利益を追求するため、人民の権力の特別な主体であり代表者である国家が定めた政策であると言える。公共政策は、国家的範囲および社会生活のすべての領域における全対象に深く広く作用するものである。これは政治体制による方向性を有する運用に密接に関係する、国家のマクロ的管理方法である。公共政策は人民の国家への信頼を強化し、かつ国家の管理意志（政策目標において実現される）と人民階層の希求との間に統一性を実現するものでもある。

そのため、公共政策は、上部構造（主要かつ最重要なものとしては国家）の下部構造に対する作用において、とりわけ重要な役割を担う。現実の生活に対する政策の是非、適合不適合や政策の実現可能性の有無はすべて、人民レベルから各国家機関レベルにおいて、社会生活の全領域に直接的かつ長期的に影響を及ぼす。

しかしながら、公共政策は各公的機関におけるある特定の人物（政府首脳、公務員）によって（策定、設計、推進、実施が）行われ、彼らは十分な可能性、能力、必要、希求、渴望を有する人物であるが、同時に正当な、そして正当でない利益への無数の要求をも有し、限界、弱点、未熟さも持ち合わせている。こうした理由から、非常に多くの政策が、実行、実現の

¹ 科目書け大学院向による行政学院『公共行政』、2008、科学技術出版社、ハノイ、年112頁

段階になって初めて実行可能性の欠如と非現実性が明らかとなり、ひいては深刻な過ちをも露呈し、人民の生活、ひいては国家の安全保障にまで影響を及ぼすこととなる。

公共政策の実現可能性の欠如、過ち、非現実性等には多くの要因要因があるが、そのうち極めて基本的な要因として要因、哲学的概念や方法論的原則の欠如（あるいは欠如ではないが、うわべだけの形式的、教義的理解）がある。ベトナムでは政府首脳や公務員らの哲学的知識は少なくないにもかかわらず、その多くが身につけているのは理論のみに限られの、応用、応用、実行の機会が少ない。

現在、国家行政学院は「公共政策」大学院の養成学部の開設を推進しており、そのなかには「公共政策における哲学」という科目がある。その本質は、公共政策の最も適切な形での策定と実施のために哲学の各概念、方法論的原則の応用について研究するという面からのアプローチである。これらの理由から、本科目の開設が必要かつ喫緊の課題であると言える。

1.2. 科目の目標

- 公共政策の策定と実施領域に応用可能な哲学の各概念、方法論的原則を提示する。
- 学習者が、公共政策における哲学的知識の応用の重要性および必要性を認識できるようになる。
- 学習者に対し、公共政策の構築と設計のプロセスにおいて哲学の各概念や原則を自覚的に応用できるよう、スキルアップと習慣化の訓練を行う機会を提供する。

1.3. 公共政策における哲学と科学に関する科目へのアプローチ手法と新たな気づき

公共政策の策定と実施における哲学の各概念、方法論的原則の応用を分析するための**基本的議題**：公共政策は、上部構造が経済的・社会的生活に対し、最も明確に最も直接的に作用する手法であり、実現可能なものである。これは、確かな情報に基づき、論理的哲学的方法論に依拠していることを前提として策定されたときに初めてその有益性と可能性を発揮する。

哲学科目との違いとしては、純粋な哲学の規則や原理、または思想、観点、観念、概念について研究する科目ではない点で、学生は応用のために必要な項目事項を事前に学習し、認知し、把握していなければならない事項。言い換えれば、本科目は国家についての理論と結合した応用哲学であり、下部構造および社会生活一般に対する国家の役割である。

公共政策科目との違いとしては、政策および公共政策についての基本的知識を提供する科目ではないという点である。政策、中でも公共政策の策定と構築の領域に用いられ、社会生活において、人民や組織が憲法と法律を遵守しながら暮らし、働くために最良の条件を作り出し、その生活が充足し、全面的発達のための多くの条件を有することを目標として応用され、それが最も実現可能で有益性があるかどうかを研究するための各哲学的方針、哲学的理論である。

1.4. 研究方法

公共政策の策定と実施に関連した哲学の各方法論的原則の分析。政策の成功または失敗の各種要因の指摘（社会学的観察や調査を行うこともある）。

1.5. 研究範囲

哲学の各概念、方法論的原則の内容。実際に施行された複数の公共政策。

第2章：公共政策の設計における哲学

2.1.政策課題の発見と解決における哲学

- 経済、政治、文化、社会、思想、宗教、民族等に関する社会生活の実践的探求、研究を行い、国家政策を調整し管理するために何が必要かを発見する。

- 政策課題を特定した際には、政策の作用対象、実現可能性、有効性を考慮して、解決すべき各課題の優先順位を確定する必要がある。

- 作用対象の反応を予測し、肯定的な作用を享受する対象と消極的な作用を負う対象とを比較対照し、その上でその政策を設計するか否かを決定する（哲学＝普遍的関係性、全面的原則に関する理論）

- 政策課題の解決方法は、法的枠組みを構築する政策課題に関わる省庁、部門、政策実行組織による各*国家规定*（法律、議定、決定、通達、案内）の確立である。

2.1.1.政策課題に関する一般概念

*政策課題

課題とは、機関や組織の実際の管理において生じるある事象事項や出来事として理解されるものであり、その事象事項に関連する既存の各データの分析に基づいて解決方法を選択する必要がある。課題には十分あるいは不十分な既存のデータが存在し、多くの異なる側面からそれらを認識することができる。課題はまた、ある出来事により発生し、異なる解決方法により異なる結果、正反対の解決結果につながる可能性さえある。

一般的に、政策課題は発生の原因を有し、経済的、社会的な生活における客観的要因から生じたり、業務解決の結果生じるものである。それらは

一見十分な既存データに基づいているようではあるものの、中には解決を模索する上で必要なデータが不足している課題も存在する。

**政策課題の分類*

政策課題は、課題の重大性や発生時期、あるいは経済、文化、教育、国家安全保障、宗教、国家行政といった課題の領域によって、いくつかの種類に分けられる。

司法および行政活動における課題

経済的課題

文化、教育、医療的課題

民族および宗教的課題

国家安全保障上の課題

一般的には、政策課題は非常に多様な姿で現れる。社会生活は、その数だけ政策課題の種類を有する。単純な課題から、複雑な課題、非常に複雑な課題も存在する。ある一部の人にのみ関連する課題もあれば、非常に多くの人に関連したり、関係者によってある大きなグループが形成される課題もある。

2.1.2.政策課題の特定

**問題の発見*

課題は次のように、様々な異なる原因をきっかけとして生じる。

- 共同体の世論から課題が発見される。
- 上級管理機関の要求から課題が生じる。
- 通知、報告、フィードバックの要求を通して。
- マスメディアから生じる。

発生する課題は通常、個人同士の関係、人民と組織や行政との関係、組織や行政と上級組織や行政との関係といったように、基本的な関係間で認識される。客観的要因（台風や洪水、天災等）から生じる課題もある。課題が生じた際には、それらが時間が経つにつれてより複雑で困難なものにならないよう、迅速に対処しなければならない。

**政策課題の特定において注意を払うべき事項:*

各課題を認識し、誠実かつ正確な方法でそれらを把握し、「課題はどこから発生したのか」「どうすれば要因が明らかになるか」といった問題に常に注意を払う必要がある。通常、適切な対処を行うためには、様々な異なる情報を収集する必要がある。それによって初めてそれらの要因を正確に把握できる。

- 多角的な情報を収集する。
- 現実の事象を注意深く観察し、重要な問題を見過ごさない。
- マスメディア、とりわけ地域や組織から提供される各種情報手段による情報を絶えず収集する。
- 政策に関わる各個人による判断。

2.1.3.政策課題の解決

**一般原則*

政策課題を解決するためには、具体的責任の分担、民主的議論、認識の一致、関係者間の緊密な連携、法律の遵守といった基本的原則に従わなければならない。

民主的議論。

具体的責任の分担。

各個人、組織や機関、団体が連携し、すべての人の参加をめざす。

政策課題の解決に向けた認識を一致させる。

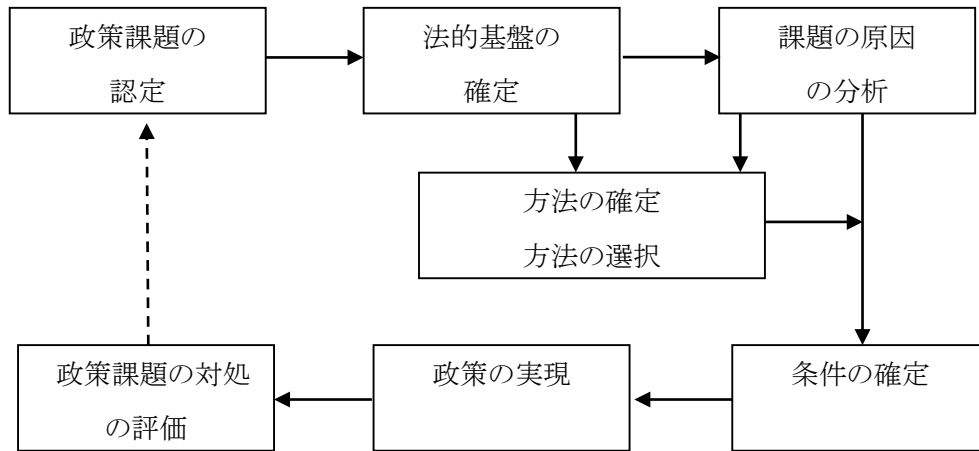
法令法令を遵守する。

***具体的な対処方法**

- 政策課題を特定した後は、政策の作用対象、実現可能性、有効性を考慮に入れ、解決すべき各課題の優先順位を確定する必要がある。

政策、課題を解決するプロセスとしては、通常、研究者らによって設定された以下のような手順が用いられる。手順

1. 課題の特定
2. 課題への対処に向けた法的基盤の確立
3. 具体的な要因の分析
4. 対処方法の確定、対処に適した方法の選択
5. 解決のための条件の確定
6. 確定された方法、方式による課題対処の実行
7. 課題対処の成功体験と教訓に基づき、対処方法を見直し、総合的評価を実施する



*政策課題解決に向けた法的基盤の確立

政策課題の解決に向けては、法的枠組みを構築する政策課題に関わる省庁、部門、政策実行組織による各国家規定（法律、議定、決定、通達、案内）の確立が求められる。

その課題の解決に当たる役割、任務、権限が誰にあるかを特定する必要がある。確定のためには、解決権限を規定した各文書を適切に把握する必要がある（哲学＝国家権力を実現する役割、機能、組織形態）。

*政策課題の発生要因の分析

要因の正確な特定により、適切な解決方法を確定するために必要な基盤を確立することが可能となる。以下はそれぞれの領域において具体性を有するいくつかの要因である。

- i. 経済的要因
- ii. 政治的・社会的要因
- iii. 法認識上の要因

(哲学＝因果関係)

*政策課題の解決方法の選択

発生した一つの課題には多くの解決方法があり、解決方法が異なれば結果も異なる。政策課題の分析の基本的な手順は以下の通りである。

- a. 政策課題はどういった要因（理由、時間、場所、関連領域）を背景として発生したか？
- b. 結果は？
- c. 関係者は？
- d. 管理対策は存在したか？
- d. 関連する法律規定はあるか？
- e. 機関や組織は十分な解決権限を有しているか？

（哲学＝普遍的関係性、歴史的・具体的原則）

**政策課題解決の条件の確定：客観、習慣；経済、政治、文化、風習、伝統、習慣、精神、物質等の各領域（哲学＝客観・習慣の関係、全面的原則）*

**政策課題解決の実行*

作用対象の反応を予測し、肯定的な作用を享受する対象と消極的な作用を負う対象の反応とを比較対照し、その上でその政策を設計するか否かを決定する。*（哲学＝普遍的関係についての理論、全面的原則）*

- はじめに課題および課題の対処方法について十分明確に認識する。
- 実行の責任を分担する。
- 観察し、検証する。
- 細部に何かかの事態が発生した際には追加対策をとる。

**政策課題の対処の評価*

- 達成すべき目標および各指標の設定に注意しなければならない。

- 実現された目標を評価する。
- 課題の対処結果を評価する（経費／利益）。
- 作用の評価。実現された課題対処から経済的、文化的、社会的意義を評価する。

2.2.政策策定における制限的条件（7コマ×45分）

2.2.1.価値に関する概念上の対立

*ある新たな政策を策定するに当たり、その業務に携わる（省庁、部門、地域間の）各グループ、さらには利益を得るグループ間に対立（客観的矛盾）が生じた場合、どのように解決すべきか？

=>それぞれの対立における妥協点を模索し、同時に対立を互いに承認しなければならない。

=>対立する概念は政策設計において調整されなければならない（この部分では対立の具体例と解決方法の実例を挙げる必要がある）。

=> 対立する二つの概念がいずれも妥当だと判断される場合にはどのように解決するか：

+ 法に基づく解決。この場合は「法的な正確性」が最も重要な基準となる。

+ 政策に基づく解決。対立的概念を含む政策は、実現可能性を有し、効果的で、実践において普遍的なものとなるよう見直されなければならない。

=>このように、法と政策は、課題において正反対の側面を有する。

*この二つの手段によって設計されない場合には、その政策については、これに適した設計および調整プロセスを設定し直さなければならない。

*公共政策の施行と推進について言及する際、研究者や行政の実践者からは様々な異なる方策の選択に絶えず直面する。これらの方策は多くの場合、衝突し、対立するものである。これらの衝突を解決するためには、対立する方策間の調整と争議に関する規定を十分に把握する必要がある。

哲学において、対立とは、同じ自然、社会、思惟の事物や現象において、客観的に存在し、正反対の変化傾向を持つ特徴、属性、規則性として理解される。対立の存在は、世界において客観的であり普遍的である。物質世界を構成するすべての事物、事象、プロセスは分散して存在するが、一方で互いに往来し、干渉し、転換する関係性を有する。

弁証法的唯物論の概念では、世界中のすべての事物や現象には、いずれも正反対の側面（対立面）が含まれているとされる。例えば、原子は電子と原子核を含むが、これらは互いに反発し合う電荷を持つ成分である。生物は同化と異化を有し、経済は商品やサービスの需要と供給という二つの対立する需要供給の法則を有する。事物や現象のこうした対立は、正反対の方向から互いに往来し、反発し合う関係や作用の中で認識され、弁証法的矛盾を生む。弁証法的唯物論の概念では、弁証法的矛盾は自然、社会、思惟において客観的かつ普遍的に存在するとされる。思惟における弁証法的矛盾は、現実の矛盾の反映であり、認識の発展の源でもある。

政策策定のプロセスにおいては、政策実施のために応用すべき政策目標あるいは具体的な解決方法の方向性の確定作業の中で矛盾が生じることがある。これらの矛盾は弁証法的矛盾であり、政策の発展を奨励促進する要素として見なされなければならない。これによって政策と実行上の条件との間に摩擦が生じ、結果的には最も適した政策の方案を得られること

となる。政策は、その誕生以前から利害関係を有する異なるグループ間で意見交換がなされ、その交換の結果が政策の妥協点となる。それは、利害関係を有する異なるグループ間の利益を融合させ、内在する矛盾を減少させ、その後の政策の実施上、有益性をもたらすものである。

政策策定グループの思惟に基づいて実現される政策の解決方法を選定するに当たっては、政策課題に内在する矛盾について検討する必要がある。第一に、それは国家が課題解決に対して干渉すべきか、あるいは社会が自ら調整に当たるべきかを決定する。例えば、人民に提供する生活必需品に対して国家が適正価格を調整するために干渉すべきか否かという問題がある。被災地において供給業者が生活必需品やサービスの価格を不当な水準にまで引き上げること（「価格のつり上げ行為」）は「非道徳的」な行為であり、国家による介入を必要とし、こうした状況が引き起こされないよう調整すべきである—と主張する人々も一部に存在する。しかしながら、多くの経済学者はこの考え方には同意しない。アメリカの経済学者、トーマス・ソウエルは、自由市場主義の立場からフロリダの「価格つり上げ防止法」について分析し、被災地におけるいくつかの生活必需品やサービスに対するつり上げによる価格の上昇は、「台風の後で、限られた消費者だけが利益を得ることになり、遠方から生活必需品やサービスの提供を行う各業者に対し、供給の機会を増加させた」と述べている²。すなわちすなわち、この価格は公正不公正を反映したものではなく、売り手と買い手の間で交わされる価値に関する合意を単純に反映したものにはすぎないとするのである。ジェフ・ジェイコビーは、これは「自由な社会における商

² :参照Sandel, Michael (2014), 『Justice、ハノイ、若者出版局、』 2014、年5～15頁

品とサービスの分布方法である」と指摘している。上記の議論は、倫理的価値（他者の困難な状況を利用し、価格をつり上げて業績を拡大してはならない）と市場価値（つり上げ価格が市場の安定に貢献し、非常時における限られた生活必需品を十分に提供することができる）に関する認識間の矛盾を証明する一例である。すなわち、政策策定者らはつり上げ価格を規制するために市場への介入を選択し、彼らは「倫理性」を持つことを願う人々の支援により目標を達成しようとするが、投資家らはこれを自らのモチベーションとすることなく、危機が迅速に解決されることはない—ということである。

「価格のつり上げ行為を防止する」という政策の実行を支持する人々は、介入のための行動を必要とする人間や国家の露骨な欲望を認めず、倫理的観点に従おうとする。それは罪深いやり方で、欲張りな行為は褒められるものではないとし、その政策においては、共同体のための犠牲の必要性を肯定する。しかしながら、その政策に反対する人々の観点は、経済的利益に立脚し、価格つり上げ行為は私有財産権の行使であることを肯定し、経済の回復をより速い速度で促進していると主張する。

2.2.2. 人間の認識の限界

- 政策の設計においては、「既知のもの」と「未知のもの」について検証しなければならない。
- 政策の作用、効果、効力の予測は、実行組織の思惟や知識の有限性に非常に強く依存する。

ある政策を策定するに当たっては、策定者らは未来に実現される政策の置かれる環境を想像しなければならない。未来は原則としては常に未定であり、どの時点であっても予測できるものではない。未来の環境は、非常に多くの変数による影響を受ける。そのなかには、我々がすでに認識でき、それによって比較的正確に予測可能な運動の法則によって展開する要素も存在するが、同時に、私たちが予測不可能な（あるいはいまだ可能ではない）不確実性の要素（uncertainty）も存在する。多くの場合、これらの変数における、非常に小さなある一つの変化により、政策策定者らの予期しなかった施策の実施を促したり、見直しを求められたり、政策を廃止したりすることさえ起こる。哲学においては、このことは人間の認識能力に対する評価に関連するとされる。（唯物論者、唯心論者を含め）大多数の哲学者が基本的には人間の世界認識能力を認めているものの、それらの理解は異なる。唯物主義は「物質が先で意識が後」という認識から出発しており、物質世界を反映することで、人間が客観的世界およびその規則を認識できるのだとする。一方で、唯心主義は意識が先と考え、物質を決定するのは世界の反映ではなく、意識自体における認識、意識にすぎないとする。彼らは客観的世界が認識の根源であるとする考えを否定する。では、人間の認識の限界はどこか？マルクス哲学者たちは、人間の認識能力には限界がない、すなわちすなわち人間がいまだ知らない、いまだ認識していない事象事項や規則が存在するだけで、人間が認識不可能な事象事項があるわけではない、と考える。客観的世界についての人間の認識は、経験を通じた認識（経験的知識）と理論を通じた認識（科学的推論を通じた知識）という二つのレベルから行われる。経験的知識は、事物や現象から離れた

認識対象、運動、表現の外面的関連性、関係性に対する直接的な理解のみにとどまる。このレベルにおいては、人々は事物や現象間の本質的關係性や必然性をまだ把握できない。そのため、高すぎる経験的見識は人々に主観的観念をもたらし、問題の本質を見誤らせる。こうした理由から、真理の認識は経験的認識にのみとどまってはならず、理論的認識レベルまで到達しなければならない。理論的思惟に基づく認識を行って初めて、事実の本質や、事物、現象、問題の弁証法的発展を発見することができるのである。理論的知識は経験的知識と比較してより全体を捉えることができ、事物や現象の本質を正確に体現することができ、それによって、多様に幅広く応用することができる。

未来における政策の作用を予測し認識することは、その大部分を政策策定者の予測能力に依存する。この予測プロセスを客観的に実現するために、多くの具体的な科学的認識方法が統計的手法として使用されてきた。政策策定のプロセスにおいて、策定者らは政策課題における自身の経験に基づいて認識、評価しつつ、課題に関する理論的知識に依拠し、政策の目標と解決方法を設定することが求められる。しかしながら、未来の認識には限界があり、政策に関するすべての予測は絶対的に正確であるわけではない。政策策定者らが行うべき事項は、不確実な要素を捨象し、確定的な要素に基づいて政策を適切な形で施行することである。

第3章：公共政策策定における基本的な哲学理論

3.1. マルクス哲学の概念による哲学理論

3.1.1. 客観性を重んじ、主観能動性を発揮する

- すべての認識プロセスと実践活動においては、客観的事実から出発しなければならず、これは基礎であり最も重要な手段である。第一に、客観的条件を決定する役割を承認し、これを尊重しなければならない。これらの条件は、人間の意識に従属せずに存在する要素、特徴、方法であり、自然、社会生活、さらには我々ひとりひとりの思惟のなかにさえ元来から存在するものである。それぞれの国家や民族の社会生活において、これらの条件は常に存在し、極めて多様である。人間はそれらを発見するだけであり、それらを生み出すことはできないものの、それらは人間の成功や失敗を決定づけるものである。

- 人間によって確定あるいは構築された目的、方針、主張、政策は、主観的意志を純粋な起源とすることは決してできず、現実を起源とし、それぞれの歴史的・具体的段階において物質的生活を充実させることへの欲求や必然性を反映させなければならない。

- 現実から出発し、現実生活における必要性必要や規則、規則性を反映した方針、政策だけが正確に、現実となる実現可能性を有し、生活に浸透していき、社会や人民が自覚的な方法で実現することができ、奉仕的作用を有し、生活の発展を促すのである。

- 目的、方針、主張が正しいものであって初めて、それらが人々の活動を通して推進、実施されるときに効果を発揮する。とりわけ各物質的要素がある物質となるのを発見し、発揮し、実行するための基礎となる具

体的な各政策の策定と設計は、すでに提示された目的、主張、方針を実現することを目的としており、歴史が人々に解決すべき課題を与える時に、その課題の解決のための条件が生まれるのである。

- 主観的能動性の発揮とは、実質は主体的積極性、意識の創造性の発揮であり、すなわち**意識の特別重要な性質の実体化**における人間の役割の発揮である。

+ 時には人間の要因を決定づけることもある重要な役割を認識する：人間の役割は主観的要因に属するが（最終的には客観的条件によって定義されると考えられる）、意識によって指導された目的を持つ活動に非常に強く依存する人間のすべての活動の成功または失敗を決める特別重要な役割を有する。公共政策は人間（公的機関に任職する特定の政府首脳や公務員）によって策定、設計、実施される国家の政策である。そのため、公共政策の質や効果は、最終的にはその人々の認識レベル、能力、本質に依存するとされる。ある政策が現実に応用され、社会や公民の必要を満たすことができるか否かは、政策の策定者や設計者が、現実の必要、必要性、運動規則を把握できたか否かによるのである。すなわち、主観的能動性の発揮は、人間の可能性や能力を超えるものではなく、客観的条件がそろったときに、主観的要因が決定的役割を担うものとして認められる。

+ 科学的知識を尊重する：科学的知識は認識プロセス—現実の運動、発展規則を探求し把握するプロセスの結果であり、人間の意識および思惟活動の結晶である。科学的知識のおかげで、人間は現実を把握し作り変える時間を短縮できる。客観的現実を正確に反映した科学的知識の応用や使用によって、参謀や戦略を検討する指導者、管理者、公務員らは初めて、

実生活に適合し社会や公民の必要に応える政策の提案、策定、設計が可能となる。

+ 科学的知識を大衆に向けた信念に変化させる: 人民大衆は、出自、社会的立場、感じ方において非常に多種多様であり、また基本的には一まとめにされるが完全に同一ではない非常に多くの利益を有している。そのため、ある国家または行政において、すべての人民の利益や必要に応え得る完全な政策を打ち出すことはできない。この状況を解決するために、善良な価値を有する信念を構築し、それによって人民の大部分の同意を得ることは特に重要である。しかしながら、方向性を有する信念は盲目的な信念であってはならず、それは科学的知識の基盤によって構築された信念であり、それによって初めて作用が働き、人民大衆が信頼を寄せ、そこから力を生むのである。

+ 意志の主観的表象を避ける: 主観的能動性の発揮と、主観的意志あるいは主観的能動性の発揮の濫用との間には普通明確な境界がないため、人々が無意識的にあるいは利益のため、個人的動機のために主観的意志を用い、グループ内の局所的な利益に奉仕するためだけの政策を策定し、設計するために意図的に主観的能動性を発揮させることは十分起こり得るし、普遍的であるとさえ言える。そのため、政策の策定においては、無意識的あるいは意図的(目的を有する)な方法で現れる(非常に素晴らしく、非常に情熱的であるが、これらは通常非常に繊細で微細にできている)主観的意志による政策を防止しなければならない。それらは完全に異なる内的実質を持つ形式であり、政策の方向性とは正反対であることさえある。

3.1.2. 全面

政策の策定と設計において、様々な角度や特徴や対立する側面から十分に事物や現象、社会のプロセスを認識し、検討し、評価することは非常に重要である。そこから対象について、多様で深い総合的知識を得ることができ、そうした基盤の上に初めて正確で、適切で、実現可能性を有し、有益な政策を決定することができる。

全面的概念は、すべての公共政策は、経済、政治、文化、国家安全保障、外交、自然環境のすべてに基づき作成されなければならない、とする。これら一塊一そうした体制として作成されなければ、公共政策は互いに独立し、全体目標および個々の目標を解決することはできない。

全面性はさらに、分離せずに総合的効果をもたらす関係性において、公共政策の各部類、領域を検討することを必要とする一方、人間の共同体間で利益と調和を生み出し、社会の安全、社会の安心、社会の融合、社会のサービス、社会の流動性、社会のインセンティブから社会の環境に至るまで相互に作用する。もし全面発達の概念がなければ、遅かれ早かれそれによって招いた結果に対処する必要があるだろう。工業化・現代化のプロセスにある多くの国々では、業務や生活に関する必要に応えるため、政府は外国投資や観光サービス等の発展を促そうとあらゆる手段を使っている。そのため、それらの国々では経済は比較的速く発展している。しかし一方では、ますます深刻になる貧富の差や、環境汚染問題、エイズ、その他の社会悪等、多くの社会問題に各国の政府は直面している。貧富の差やその他多くの社会問題に対して、合理的な社会的政策をもって解決することが政府に要求される。そのため、経済発展の速度を緩め、それらの

社会問題の解決に集中的に取り組むことを主張せざるを得ない政府もいる。これは現在の我々にとっても有益な教訓である。

3.1.3. 発達

社会および世界全体は、客観的状态において常に存在し、永久に続く流れのように決してその動きを止めることはない。世界の極めて多様な動きにおいて、その方向は低から高へ、単純から複雑へ、未完成から完成へと進み、「発達」という単語で称される。これは極めて普遍的で多様な現象であり、発達プロセスプロセスにおいては対象となるものが必ず存在することを意味する。そのため、政策を策定し設計する際には、生活や社会における将来の発達を予測するために必要な洞察力や見通せる力が極めて重要となる。そして政策構築における「先見」的要素を以って、長期的な安定生活のための政策を生み出す必要がある。これを通して、社会の安定、国家の安定に貢献し、人民が最適な状況下で生き、暮らし、働き、享受するために有利な環境、条件を作ることができる。

発達の概念において、公共政策は人間中心とし、経済成長を促進する動力を生み出すことが要求される。このことは、経済的効果や長期的な社会的政策を考慮せず、大衆の集合的目標が第一とした社会的政策とは完全に異なる。発達の概念にはまた、持続可能な発展観念が含まれ、すなわち今日の発展が未来の発展の可能性に弊害を与えてはならないものとされる。現代における発達の概念は「開放的で」「動的な」性質が要求される。すなわち、外的世界や国際的要因の変化、とりわけ人権や公民権の進歩や合理性の変化に対する高い適応能力が常に保証される。

3.1.4. 歴史性・具体性

ある政策が、ある背景、ある歴史段階、ある環境や条件において優れたものであったとしても、それが別の背景、段階、環境、条件においては優れたものとは限らず、時には正反対の作用をもたらすことさえある。そのため、政策を策定し設計する際には、歴史性および具体性を持った各種条件、背景を検討しなければならない。政策の決定や施行の際には、政策が作用する期間がどのくらいか、その期間における現実や社会生活の変動は、政策の作用を失わせるほどの変化かどうか、あるいは少なくとも政策を変形させるものであるかどうかを確認しなければならない。

歴史性・具体性の概念は、公共政策が現実性において作られることを要求する。それぞれの歴史段階、それぞれの具体的な領域や目標は、戦争と平和、経済成長の高い時期と低い時期等、政策において個別の要求を打ち出す。そのため、それぞれの政策は、自らの歴史的役割を有する。

3.1.5 理論と実践の統一。

政策の策定や設計、または単純にある決定は、いずれも一定の理論的基盤（哲学的概念、政治的、法的、倫理的観念等）や政治思想（政治的学説、ある政党、とりわけ政権を握る政党の概念的立場等）に依拠しなければならない。このことは一方で、空間、時間、場所、歴史背景、物質生活の条件、生産方式等についての客観的現実から出発しなければならないものでもある。そのため、公共政策の構築や設計において、（理論と実践の）どちらがより重要であり絶対的であるかという見方をしてはならず、理論と実践間で互いに融合、結合され、統一されなければならない。

理論と実践の統一についての実際の理解は、次のように一貫したものである。実践は認識および理論の基盤であり、目的であり、動力である。

理論は常に実践を根拠としなければならない、実践の動的問題を反映する。実践は発達が必要、内容、方向性を規定するため、実践が変動するときには認識や理論もそれに合わせて徐々に変動する。人間が真理を証明しなければならない実践においては、それは思惟の客観的現実への適合性の証明を意味する。実践を根拠とし、実践によって規定されるも、理論は比較的独立性を有している。理論は、実践を照らし、指示し、導くやり方で実践に再び作用する。科学的理論は常にあらゆる実践活動の羅針盤となる。

政策の設計においては、国家、時代、政治体制の特徴といった現実の条件をしっかりと把握しなければならない。社会政策は国の経済成長速度に適していなければならない、経済の耐久能力を超えず、経済成長に奉仕する再投資能力に消極的な影響を与えないものとする。経済成長が見られない場合には、各社会問題を解決するための物質的条件もない。

3.1.6. 経済が政治を決定し、政治が経済より優先されなければならない

経済と政治は、社会生活の最も大きな2つの側面である。経済と政治の関係性は弁証法的関係であり、ベトナムもまた例外ではない。経済は政治を生みだし、政治の起源である。経済発展の潜在能力は、常にある政党や政府の威信のための前提となる。反対に、政治の安定は経済発展のための条件である。政治が経済構造を変化させるにもかかわらず、その変化は客観的な経済規則に適合するものでなければならない。経済は政治を決定するが、一定の条件下では政治は経済よりも優先されなければならない。政治の優先は、ある社会的グループ、ある階級の成果の優先である。社会的グループや階級が、政治権力を掌握した際には、自分たち自身に最も多

くの利益をもたらし、優勢を作り出すためにその政治権力を使用する必要がある。最初で最も基本的な利益とは、経済的利益である。

3.2. マルクス以外の哲学概念による哲学理論 (これはより多く集中すべき内容であるが、現在は翻訳資料を待っている)、以下に記載されたものは必要な翻訳資料が入手できた際には非常に多くの修正すべき(または変更すべき)箇所がある。

3.2.1. 「正義論」(Theory of Justice)

アメリカ人哲学者ジョン・ロールズ(1921-2002)は、ここ数百年の中で最も重要な政治哲学者の1人である。彼は著書「正義論」-「A Theory of Justice」(引用部分本書からの抜粋) および「政治的リベラリズム」-「Political Liberalism」において自由民主的な発想を擁護している。

これらの著書の中で、ロールズは正義が社会統治の基礎となる原理を追求している。彼によると、我々は、ある仮想条件下(「原初状態」)[the original position]で、我々すべてが合意する原理を受け入れる。我々は自由で理性的な人々であるが、自らの社会的地位(裕福、貧しい、肌が白い黒い、男性、女性など)は分からないと想定する。この認識の制限は無心であることを確保するためである、即ち、もし我々が自らの人種を知らなければ、自分の人種に便益をもたらす原理を支持するよう、他人を動員したり巻き込んだりすることはできない。正義の原理はこれらの条件下で我々が合意する原理である。

ロールズによると、原初状態で我々は、宗教の自由、言論の自由などの自由権は全ての人に平等であるべきという原理、即ち「平等な自由原理」[equal liberty principle]に合意する。我々は、(社会の中で便益の少な

い状態の人々を含む) 全ての人に利益をもたらすための不平等な分配を除き、富の平等な分配と、平等を基礎として全ての人に対して広く開かれた機会の分配を促進する、即ち「格差原理」[difference principle] にも合意する。

この抜粋文を読むと、原初状態は、正義の原理を選択するための合理的な枠組みであるかどうかという疑問が呈される。ロールズによる2つの正義の原理は、説得力があるのか？それがロールズの説いた条件下で我々が採択する諸原理なのか？正義の役割：思想体系における真理と同じように、正義とは社会制度の第一義的徳である。ある理論がどれだけすばらしく、合理的に見えても、正しくなければ、それは破棄されるか見直されなければならない。それと同じように、法律や社会制度は、それがどれだけよく整備され、有効であっても、正義でなければ改革または破棄されなければならない。各人は正義を土台とした不可侵の権利を所有し、社会全体の繁栄を以ってしてもこれを侵すことができない。このため、一部の人の自由の喪失が、他の一部の人にとっての更なる利益を生み出すことを正しいという観点を正義は否定する。真理と正義は人間の活動における第一義的徳であるため、妥協することができない。この立論は正義の優位性に関して直観的な説得を試みている。非常に説得力がある説明であることに疑いがない。また、私は、この立論やこれに類する立論は根拠があるのか、またあるとすればどのように説明されるかということを追いたい。この目的のために、正義に関する理論を概説しなければならず、というのも、その理論の光の下で、この立論は説明、検証されうるのである。原初状態：

私の目的はロック、ルソー、カントによって、よく知られた社会契約説に見出される正義の概念に比べて、より一般的で、高度に抽象化する正義の概念を示すことである。そのために、私は原初契約を、特定の社会に参入したり、特定の行政形態を確立したりするための契約だとは考えない。その代わりに、原初契約の対象は社会の基礎構造に対する正義の原理であるとするのが発想の手引きとなる。それは自分たちの利益をより促進することに関心を持つ自由で理性的な人々が、彼らの連結の土台となる条項を決定する時、平等な原初状態 [an initial position of equality] において受け入れる原理である。

これらの原理は他の諸局面を補正する。それは、我々が参入可能な社会的協働の形、我々が確立可能な行政形態を決定する。このような方法で確立された正義の原理を、私は公正としての正義 [justice as fairness] と呼ぶ。公正としての正義において、平等な原初状態は、伝統的な社会契約説における自然状態に相応する。もちろん、この原初状態は実際の歴史的状況や、多少なりとも文化の原始的状況と見なすことはできない。それは、単に正義についてのある概念にたどり着くために用いられる仮想的状況と理解される。この状況の基本的な特徴の一つは、その人の社会的地位並びに財産、生まれ持った才能、知能、健康などの分配に関する幸運を誰も知らないということである。正義の原理は未知のヴェール[a veil of ignorance] の背後で選択される。これにより、原理を選択する際に、生まれ持った吉凶や社会状況に起因する有利、不利は誰にも分からないということが保障される。皆が互いに類する状況の中で、その人の特定の状況に便益をもたらす原理を誰も設計できないので、正義の原理は公正な合意の

結果となる。これにより「公正としての正義」という名称の特色が説明される。つまり、正義の原理は元々公正な原初状態において合意されるという発想を伝えるものである。私が述べたように、公正としての正義とは全ての人々が共に選択できる全ての選択の中で最も共通する選択から始まる。即ち、社会制度に対するその後のあらゆる批判および改革を規定する概念である、正義の概念の初期原理の選択から始まる。正義の概念が選択された後、我々は全ての人々が初期合意された正義の原理に適する、法の施行のための立法体制および機関の選択にたどり着くと確信することができる。この仮説の合意に続いて、元々その状態で定着している共通の統治規制のシステムに進むことに我々が合意すれば、我々の社会の状況は正義である。その他に、原初状態が一連の原理を決定することを認めることで、社会制度がこの原理を満たしている時はいつでも、それに関する人々は自分たちが合意する局面で協働していると互いに言うことができることは完全に正しく、もし彼らが自由で平等な人々であれば、互いの関係は公正である。こうした共通の認識は、共同体の範囲に相応する正義の原理に対する受容の基盤を作る。もちろん、いかなる社会も、人間が文字通り自ら進んで奉仕する協働システムということはありません、各人は自らが特定の社会の、特定の状況に生まれてきており、その状況が、その人の人生の展望に物質面で影響を与えるということを知っている。しかしながら、公正としての正義の原理を満たす社会は、公正とされる条件下で、自由で平等な人々が賛同する原理を満たしているため、奉仕システムとしての社会により近づく。この意味で、その構成員は自律しており、彼らの認める義務は自らが課したものである。いったん、正義の原理が平等な状態における原初状態

に起因していると考え、功利原理が受け入れられるかどうかという疑問が呈される。答えはノーであるとすぐに分かる。なぜなら自分たちを平等な人として自らを認め、他の人に要求を課す権利を付与された人々は、より大きな全体の利益が一部の人にもたらされる目的だけのために、他の一部の人により少ない展望の人生を求める原理に同意することはできないからである。全ての人は自らの利益を保護したいと思い、誰も他の人により大きな満足をもたらすために永遠に自らが損害を被ることに満足する理由がない。無制限で永遠の寛容は存在しないため、合理的な人は自らの基本的な権利や利益における長年の影響を無視して、利益の総計の最大値に注目するだけの基礎構造を認めることはない。従って、功利原理は互いの利益において平等な人々の社会的協働の発想に明らかに適合しない。それに代わって、私は、原初状態において全ての人は他の2つの原理を選択すると断言する。第一原理は基本的な権利と義務の割り当てに平等を求め、その中で、第二原理は、富と権力の不平等といった経済的、社会的な不平等が正義とされるのは、全ての人への利益、特に社会でより便益の少ない状況の構成員に対して利益がもたらされるときのみであるとする。

***2つの正義の原理：**

先ず、2つの原理について以下のように述べる：

第一原理：各人は、他の人々の同様の自由権の図式に矛盾しない相当の基本的自由権の最も広範な図式に対する平等な権利を持つ。正義に関する理論。

第二原理：経済的、社会的不平等は、それらが (a) 全ての人に利益をもたらすことが（根拠に基づき）期待でき、(b) 全ての人に常に開かれている地位や職務を規定するように配置される。この原理は、主に社会の基本構造に適用され、権利と義務の分配を統制し、経済的、社会的利益の分配を補正する。正義の理論を目的として、それらの記述は、第一原理がある区分に適用し、第二原理を別の区分に適用する別々の2つの区分を有すると見なされる社会構造を前提とする。即ち、我々は、本来基本的で平等な自由権を定義、確保する社会システムの側面と、本来経済的、社会的不平等を指定し、確立する別の側面とを区別する。基本的自由権は自由権のリストから取り出される。そしてこの自由権の中で最も重要なのは、政治的自由（投票の権利、公職に付く権利）、言論および集会の自由、良心の自由および思想の自由、心理的圧迫や肉体への暴行からの解放の自由、個人的な財産を保有する権利および恣意的な逮捕からの自由である。これらの自由権は第一原理によって平等である。第二原理は、所得や財産の分配および別々の権限と責任を持つ組織の設計に適用される。財産や所得の分配は平等である必要はないが、それは全ての人々の社会的便益の分配に対する平等を確保しなければならず、同時に、全ての人々は権力と責任のある地位に近づくことができなければならない。我々はその地位が広く開かれた後、この条件から全ての人々の利益になるよう、経済的、社会的不平等を分配することにより第二原理を適用する。これらの原理は第一原理が第二原理に先行するという順序で配列される。この順序は、経済的、社会的な便益や利益の増大を以ってしても、第一原理によって保護される基本的自由権に対するいかなる違反も正当化、補償され得ないことを意味する。こ

の自由権は最高位であり、それが他の基本的自由権と衝突する場合に限り、制限および妥協される。それは互いに衝突しあう場合には制限されうるので、これらの自由権におけるどの自由権も絶対ではなく、これらの自由権があるシステムの形成のために配置されても、そのシステムはそれらの間の平等の質を喪失させるものである。

この2つの原理は内容において具体的であり、それらを受け入れることは、ある仮定に基づくが、最後に私はそれを説明し、正当化しなければならない。そして今、この原理が、正義に関するより包括的な概念の特殊なケースであるということを知らなければならない。それは、全ての社会的価値—自由と機会、所得と財産、自尊心の社会的基礎—は、これらの価値の不平等な分配が全ての人の利益になるのではない限り、平等に分配されるべきであると説かれる。

よって、不当とは、単に全ての人に利益にならない不平等のことである。

***格差原理**

この原理はロールズの論理が均等原理と見なされる所以である。この原理は、経済的、社会的な不平等が、「便益が最も少ない人々への最大の利益」をもたらす場合に限り道徳的に正当化されうると断言する。「便益が最も少ない人々への最大の利益」を以って、ロールズは何を述べたいのであろうか？彼が述べたいのは、不平等によって、全ての主な社会的便益が公正に分配される仮説状態よりも、恵まれない人々の状況がよくなるということである。仮説状態とは、主な社会的便益（富、所得、権利、責任）

が全ての人に平等に分配される社会の状態を想像する。(ルールはこの主な社会的便益と健康、強さ、知能、想像力などの生来の便益とを区別する。)

主な社会的便益の分配における何らかの不平等が、不遇の人々の状況をよくするのであれば、それは公正な平等である。例えば、高い給与が支払われる医師や事業主の存在は、不遇の人々(病人や貧しい人)を含む全ての人々の生活条件を向上させる。社会における不遇な人々に利益をもたらさない、いかなる不平等も正当化され得ず、よって、政府はこの不平等を軽減するために介入する。

ここで、我々は特に公的課題に関する格差原理について更に考慮しなければならない。それは、一定の限度における経済基盤全体へのプラス作用の合理化であるとされる「トリクルダウン説」の受容がしばしば採択される、大企業に対する優遇である。これは市場主義者には、市場に対する異常な介入を許すことであると批判され、社会主義者には市場が生み出す不平等の甚大な合理化であると批判された。実行可能性においても、多様な批判意見がある。しかしながら、ルールズはこの原理を友愛(ギルド)の観念と呼ぶ。格差原理は連結を導きだすことはないが、連結(ギルド)を維持することはできるとされる。 **社会的平等の実現における国家の役割について**

分配において平等を保証するための課題は、ある適切な社会体制を選択することであり、そのなかには平等原則を運用して主な体制と構造を構築することがある。ここまで見てきたように、ルールズの「公正性と平等」理論の発想は、公正性の概念により具体的な社会傾向における偶然的

要素を解決することをめざしている。ロールズによれば、どんな価格による社会体制も分配された結果が平等となるように設計されなければならない。この目的を達成するためには、適切な政治および法体制の枠組みにおいて経済的および社会的プロセスを経る必要があるという。この基盤に適した構造がないときには、分配プロセスの結果は平等ではない。上記に挙げた体制は、合理的に組織され、資金および自然資源についての個人所有を許可する民主国家において存在する。この構造はすでに親しまれたものであるが、それが平等の二原則にどう適するかを検討する際には有益である。社会主義制度の場合に使用するための調整は、ロールズによって検証され意見が提出されている。ロールズによれば、社会の基礎構造は平等な憲法によって行われ、平等な国民の自由な権利を守らなければならないという。信仰の自由および思想の自由は当然の道理と見なされ、政治的自由も正当な価値として維持される。政治的活動は、政府を選択し、平等な法令を実行するために平等なプロセスにより行われる。ロールズは次のように言う。

私はまた、機会の公正な（形式的均等とは対立するものとして）平等が存在すると仮定する。このことが意味するのは、社会の通常の固定的な資金を維持する一方で、政府は各個人に対し教育および文化について同様の機会を保証する努力をすべきであり、それにより各個人は、私立学校への援助あるいは公立学校の建設への可能性や動機を抱くのである。政府はまた、経済活動および職業選択における機会の平等性を実施し保証する。このことは、各会社、民間組織の行動監査を通して実現され、魅力的な職業的立場に対する制限

や独占的態度を防止するものである。最終的には、政府は社会の最低賃金を保証し、あるいは家族手当や病気や失業時の特別な手当、あるいは分類された副収入（または陰性収入税とも呼ばれる）といった方法を通じてより体系だった方法により保証するものとする。

「小さな政府」(minimal state) という最小レベルにおいて国家を承認するほど市場の役割を絶対化したノージックとは異なり、ロールズは客観的法則による市場を承認しながらも、共同体関係や社会の協力における自由をめざすために、人々は力を持っているのだという立場を取っている。そのため、分配における平等性のためには必ず政府の存在—「大きな政府」(big government) が必要であるとし、彼は政府を、4つの機能的機関を持つ新しい社会管理機能の主体として位置づけた。それぞれの機関は多くの異なる活動に責任を負う多くの部門から成る。

これらの機関や部門は、政府の通常の組織の上に積み重なるものではなく、他の機能として理解され活動する。第一の機関は 配置機関 (allocation branch) であり、常に価格の競争性をもたらす体制を維持し、平等原理の概念により立てられた各平等的体制に適さない市場勢力の形成を防ぐ。配分機能を実現するために、この機関は社会の平等違反を引き起こす偏った市場の傾向を識別し、修正する任務を与えられている。例えば、社会の利益と各経費を正確に測定するため、合理的な税金や手当に関することであり、あるいは財産の各権利の定義における変更である。この目的を達成するために、税金や手当が適切に使用されなければならず、財産所有権の範囲や定義が調整されなければならない。

第二は 安定機関 (stabilization branch) で、十分な雇用をもたらす努力をする機関である。これは、就職したい人が仕事を見つけ、職業を自由に選択できるよう努力し、財政源の効率的な運用を強い要求により支援する機関であると解される。上記二つの機関は共に、市場経済の効果を総合的に維持する機能を有する。

最低賃金は、第三の機関である 譲渡機関 (transfer branch) の責任に属する。この問題については言及してこなかったので、最低限の説明を加えたい。この機関の業務は、様々な需要を検証し、他の要求との相関性において適切な価値を割り当てることである。競争価格体制は、民間の一般的な需要に関心を寄せないため、唯一の分配手段とは成り得ない。生産者や経営者の活動における利益最大化の規則の体现は、ある一般的原則の権利を平等に分配する場合においてのみ有効である。そのため、平等についての最低限の原則に対応するため、社会体制の各部門間での労働力の分配が必要となる。体制が異なれば、応えるべき要求も異なる。合理的に運営される競争市場は、職業の自由な選択を保証し、各家庭に対し力の効果な使用と消費製品の分散とをもたらす。賃金や収入に関連する通常の規則に大きな強制力を持たせる市場では、譲渡機関は一定の生活力を保証し、必要についての要求を即時に実行する。その後ロウルズは、この通常の規則および異なる各体制の範囲における発生のかたについても議論する。ここでの適切な概念は、一定の規則は具体的な各体制に対し関連する傾向を有するということである。基礎体制全体へのその他のことは、どのような方法でこれらの規則が互いに関連し合い、融合し合うかを確定することである。平等原則はすべてこ

の構造で運営されるため、融合は基本的な政治認識に従って変化していくだろう。

明白なのは、(分配の結果) 分化された各部分における平等性は、基本体制、総収入や賃金および譲与財産等のその他収入の分配方法に依存しているという点である。法的観点から、ロウルズは、人々が市場の偶然性、偶発性から逃れ、自分自身や後世のために保険が必要と考えるのは合理的なことであり、その他の原則もおそらくこのことを要求してきたとする。しかし適切な最低収入は譲渡によるものであり、その体系的条件により、相当の効果を有し、独占の制限がない体系的条件、排除された不適切な外からの要素により、総収入の残りは価格体系によって決定される。また、需要に対するこの処理方法は、最低賃金による収入の運用、あるいは同様の対象に対してより効果があるように見える。さらに良いのは、それぞれの機関に機能を与えるだけで互いに関連し合う点であり、そのため市場が無力な際に需要に応えることができるよう、これらの雇用は異なる構造によって実現されなければならない。平等原則が承認されるか否かは、最も不運な人々の総収入を決定づけ(報酬および各種手当)、総収入の最大化が彼らの長い間の展望(自由平等権および機会に関する真の平等)となるかどうかという問題である。

第四の機関は 分配機関 (Distribution branch) であり、この機関の役割は、税金や財産に関する様々な権利が必要な調整事項を道具として分化した各部分における平等を維持し守ることである。この機関の二つの任務は次のように区別される。まず贈与や相続に関するいくつかの種類のを課し、そしてそれを受け継ぐ権利について規制を加える。各種税金やこの

規則の目的は、国庫を発動させる（政府のために力を解放する）ためではなく、財産の分散を徐々に、そして連続的に調整し、政治的権力が、資本の集中によって政治による自由な真の価値と機会による自由な権利とに対して危害を与えることを防ぐことである。これにより財産の分散が促されるため、これは、自由な権利の真の価値の維持が求められる場合における必須条件であると考えられている。財産の不平等な相続は、知識の不平等な相続以外の何者でもなく、相続財産の不平等性は、社会的規制により容易に依存する。しかし必要なことはいつ可能となるかであり、それら二つについての不平等性は異なる原則を承認する。そのため、相続は不平等性を認め、それは最も不運な人の利益のための一定の結果であり、機会についての自由や平等に適合したものであるとしている。それは一定の体制の集合体を必要とする機会についての真の平等であり、同様の動機や業務的立場を保つ人々に対して同等の教育と文化を与える機会を保証し、また、各機関が自らに使命と責任があるとする意識による本質と努力に依拠するすべての人々に開かれる機会も保証する。ロールズは次のように認める。「こうした体制は、財産の不平等性が一定の制限を越える際に危機に陥る。そして同様に政治的自由は、自らの価値を失う傾向を持つ。そのため、代表者としての政府は名ばかりのものになってしまうのである」。そのため、各種税金および条例は、分配機関がこの制限を超えることを防ぐのを促進するものである。当然ながら、この制限がどこに存在するのかは、適切な理論や認識、明確な予測能力によって広範囲に捉えられる政治的評価の問題である。この問いかけに対しては、公正性の理論は具体的な回答を持たない。その目的はいくつかの原則を用いて基本的体制を運営することであ

る。分配機関の第二の機能は、社会的平等に必要とされる国庫の発動のための税体系である。各社会的資源は政府に譲渡され、政府によって公共的製品が供給され、異なる原則を承認するために必要な精算が実現されなければならない。この問題が分配領域に属するのは、税負担が等しく分けられる必要があり、その目的が平等的構造の確立であるからである。そのため、理想としては、第一の平等原則と機会についての真の平等を検討する際に基本的構造の平等性を守るためにそれらが必要とする場合にのみ累進課税比率を適用することであり、そうすることで財産および権力の蓄積を防ぐことができ、各関係機関の拡大を抑えることができる。この規則に従うことは、政策課題において重要な区別を示す一助となる。そして比率に応じた各種税金は、その効用性について承認されなければならない。例えば、それが促進力に多かれ少なかれ障害をもたらすため、実現可能な構造が検討される場合に、それをより明らかにしなければならない。以前は、これは政治的評価に関する問題であり、公正性公正性をめぐる理論の一部とはされないものだった。我々はここで累進比率による税について検証しているが、これは適切な秩序を持つ社会に向けた理想的構造の一部であり、二つの平等原則の内容を彩るものとして検討しているのである。このことは、現行の各体制の不平等により、累進所得税の急激な増加さえもが各要素がすべて検討される際には非合理的である、ということの意味するわけではない。現実においては、我々はいくつかの不平等な構造の中で選択せざるを得ないし、あるいはそれは二番目に良い方案でしかないこともある。その後我々はより不平等ではない構造を探すために、非理想的な理論に頼らざるを得ない。時にはこの構造が、完璧な平等体制が否定する方策や政

策を含むことになる。二つの誤りが一つの正しさを生むことの意味は、既存の最良の構造は、不完全なものの融合であり、不平等を補う形での修正なのである。分配部門のこれら二つの任務は、二つの公正性をめぐる公正性原則から出発している。(必要な際に)累進比率に基づいて相続物や収入に課せられる税、また財産の権利についての法的定義は、民主的財産所有制における自由平等権についての体制およびそれによって構築される真の価値を保証するものである。支出(または収入)の比率によって課せられる各種税金は、公共的商品の資金を供給し部門によって譲渡されるものであり、教育における機会の真の平等の設立などは、第二の原則を体現するものである。支出に課せられる各種税金についての通常の規則に関連することは、副次的な分析である。この指標の範囲は、各平等原則において操作される。公認された各分化部門についての課題は、基本的体制の構築に関する課題であり、慣習的要求はすでに独立した力を持たないが、それらはある一定の場合においては適切とされる。この考え方と異なる意見もあるが、それは適正な総合的観点ではない。分配部門の設計は、個人的利益の観点からの標準的仮定についての以前の条件を設定しない。例えば、相続物および累進収入に課せられる各種税金は、各個人が減少しつつある類似の規則を承認すると同様の利益機能を有するという考えに基づくものではない。分配部門の目的は、当然ながら承認された平等性の最大化ではなく、平等な基本的体制の構築である。利益機能の類型についての疑義はあり得ない。この問題は利己的なものであり、合意された理論にはあてはまらない。

ロールズは、政府における各省庁の目標は民主的制度の構築であるが、そのうち土地および金銭は平等ではないにもかかわらず広く所有されていると仮定する。社会は、ある比較的小さな民間部門が、生産資源の大部分を運営するという方法で分化されてはならない。これが達成され、各分化部分が平等原則を承認した際には、市場経済の社会主義的性質について非常に多くの理解が指摘される。しかし明らかなのは、理論に沿えば、自由社会主義制度は二つの平等原則に対応していると言えることである。例えば、各生産器具が公共に所有され、公的協会あるいは彼らの指定する職員により、各企業において管理される。憲法に従い民主的な形で示される集団的決定は、貯蔵率と社会的生産量の比率が各公共商品に反映されるといったように、経済に共通する特徴を決定づける。こうした経済環境により、各企業は以前のような対処で市場の各勢力によって運営される。基本的体制は異なる様相を持つが、とりわけ分配部門の場合には、原則が平等的分化を行わない理由は何もない。公正性についての理論は、それ自身がいずれの制度にも深い愛情を持つものではない。これまで見てきたように、ある人にとってどの体制が最良であるかを決定づけるのは、彼らの時代背景、体制、歴史的伝統に依存する。ロールズは市場経済の榨割を次のように述べている。

社会主義に従う人々は、資本を良きものとしないうにすべての市場体制に反対し、彼らは人々が広く社会的な関心によって促進される経済に希望を抱いていた。もし第一の原則を検討するなら、市場は本当の意味で理想的構造ではなく、必要な基本的体制、その最も罪深い側面は通常、消えてなくなる貨幣の奴隷と呼ばれる。次の問

題は、実現可能な各法案を比較することになる。公務員・官僚による経済活動の運営は通常、社会的形式で運営される体制において発展する傾向を有するが（集中的に指導されるか各工業協会間の承認により把握されるかだが）、より総合的な平等性は、価格によって実現される運営である（資本はいつも必要な構造と見なされる）。確かに、競争的構造は具体的なそれぞれの活動において人間と機会の性質を持たず、これは各個人の意識を有する決定を反映しないという具体的な結果である。しかし、多くの側面を検討すれば、これはこの構造の際立つ部分であり、市場体制を使用することは、人間の合理的理知についての自治の不足を意味するわけではない。民主社会が価格に依拠した選択を行うのは、その労働による利益を認識するからであり、そのために公正性が要求する基本的体制を維持できるのである。こうした政治決定は、この包括的な構造を運営し、完全に根拠があり明白であるとされる。

すなわちロールズの公正性の理論は、寛容さと社会性から出発する動機の力について明確な制限を打ち出した。それは個人や個人的グループは競争的要求を示すが、彼らが自らの利益を拒否しない形で平等的な行動を取るのである。詳細は不要であろうが、この仮定は通常の意味での人間の利己性を意味するものではない。代わりに、すべての人が完全に善きものを得られる、あるいは矛盾し合う要求が存在しない、すべての人の願いがはめ込まれたような社会には、平和的な行動計画における強制力が存在し、それはある意味では公正性の外に置かれた社会と言える。それはあらゆる傾向を排除する

代わりに、正しさと公正性の原則を必要のものとする。ロールズは言う。「ある人々は、マルクスの概念を、十分な社会主義とはこの方法に従った公正性の外に置かれたものであると解釈した」。このことは、個人の所有と願いとを有する経済という枠組みにおいて、ロールズの公正性の理論を制限するものである。公正性についての理論は、理論の側面についてある重要な地位を有する。それは、強制ではない、あるいは以前から用意されたのではない各個人の目標や願いとの主体的な連結によって条件を確定する。しかしそれは、理想的な善きものに適した融合を反映する。これはまさに、体制に適した平等原則とは非常に異なる点である。[II; 1; pp.249]

3.2.2.理想主義

「理想主義」は、現実とは我々の脳によって完全に制限されたものであるとする学説である。それは、我々の頭の中の事象は事前に感覚を通して知ることのできた辞書うであるとするルネ・デカルトの概念に依拠するが、理想主義の正式な始まりはジョージ・バークリーである。バークリーの理論では、痛みを感じるといった精神状態と各感覚から得る気づきとの間には、本質的に差異はないとされる。例えば、火の熱さとそれによって生まれる我々の痛みの間には、区別できるものはないとされる。我々が感じる「状態」はそのなかに「感じられる」性質を含有し（esse est percipi / 存在するとは知覚されることである）、「人類にとって変わった方法で普遍的である」という意見によれば、誰かが家屋や山川を感じるときにそれらが先に独立して存在している、というのは誤りであるとされる。

理想主義が哲学において普遍化してきたのは、18世紀から20世紀初頭にかけてである。イマニュエル・カントによって支持された超越論的哲学（Transcendental Idealism）によれば、理解可能な事象は、それが客観的条件において評価されなければ制限を有するとされる。カントは著書「純粋理性批判 Critique of Pure Reason」（1781/1787）において、理性主義（rationalism）と経験主義（empiricism）の対立するアプローチの和解を試み、形而上学研究の新たな基礎を設立した。この著作でのカントの目的は、我々が知る物事を捉え、その後我々が知る方法で正しいとされる事象を検証することだった。これは、人間の能力の自然な限界によって、我々の直接的な知識から脱出する現実の基本的特性があるという発想である。カントの方法はユークリッドのモデルに従っており、最後には彼は理論は純粋であり、すべての真実を発見するには不十分であると結論した。カントの各著作は、ヨハン・ゴットリープ・フィヒテ、フリードリヒ・シェリング、アルトゥル・ショーペンハウアーの著作にも影響を与えている。

カントの哲学的理論は、超越論的哲学として知られ、その後、絶対理想主義の一つの様相であるドイツ観念論の風潮において、より抽象的、総合的に現れている。ドイツ観念論は、1807年にゲオルク・ヴィルヘルム・フリードリヒ・ヘーゲルによって出版された著作「精神現象学（Phenomenology of Spirit）」によって普遍化された。この著作のなかで、ヘーゲルは、哲学の目的とは、人間の経験において顕著な矛盾を指摘することである（例えば、我々ひとりひとは主体的な個人である一方で、世界における何かを受動的に証明する者でもあると認識される）とし、そしてそれらが互いに適切な方法でその矛盾を消し去らなければならないと

した。このプロセスは「ヘーゲルの弁証法」(Hegelian dialectic)と呼ばれる。ヘーゲルの系統による哲学者には、ルートヴィヒ・アンドレアス・フォイエルバッハ、カール・マルクス、フリードリヒ・エンゲルスや、理想主義のイギリス人哲学者も存在した。

20世紀の多くの哲学理論には大陸哲学(Continental phenomenology)やイギリス・アメリカの分析哲学も含まれ、理想主義やデカルトの学説の否定に関連していた。

3.2.3. 実用主義

19世紀末には、2人のアメリカ人哲学者、チャールズ・パースとウィリアム・ジェームズが「実用主義」(pragmatism)という学説を唱えた。その後、この学説はジョン・デューイによって「道具主義」(instrumentalism)として展開された。実用主義の哲学者らによれば、観念の真理とは、実在との一致において把握されるのではなく、有益性と効果において把握される。そのため、どんな観念の有益性も、それがどの時点におけるものでも、時代背景に依存するという。パースとジェームズは真理を概念化し、最終的には未来において設定され得るものだけが、すなわちすべての観点によって総括されるものであるとした。批評家らは、証明できるものが有益であり、有益性は真理の基礎であるという考え方は過信であるとして、実用主義は思惟の誤りであると批判した。実用主義を信望する思想家には、ジョン・デューイ、ジョージ・サンタヤーナ、クラレンス・アーヴィング・ルイスがいる。近年、実用主義はリチャード・ローティ、ヒラリー・パトナムによる新たな解釈を取り入れている。

3.2.4. 実存主義

彼らはこの用語を使用しなかったが、セーレン・キルケゴールやフリードリヒ・ニーチェといった19世紀の哲学者が実存主義の生みの親とされている。しかしながら、彼らの影響は実存主義に関する思想以上に広がった。キルケゴールの作品は、ゲオルク・ヴィルヘルム・フリードリヒ・ヘーゲルの理想哲学体系を目指したが、ヘーゲルは人々の心の内側の主観的生活を顧みず、あるいは排除することを考えていた。キルケゴールは反対に「事実は主観である」とし、ある人間に対して最も重要なのは、その人物の内側と存在との個人的関係に関連する問いであるとした。とりわけキルケゴールはキリスト教徒であり、宗教的信仰は客観性を持つ問いであると信じ、人々はそれらと熱心に向かい合わなければならないとした。

キルケゴールによる影響を受けた哲学者はみな宗教哲学者であった。キリスト教を信仰する実存主義者の哲学者としては、ガブリエル・マルセル、ニコライ・ベルジャーエフ、ミゲル・デ・ウナムーノ、カール・ヤスパース（彼は「哲学的性質を持つ信念」という言い方を好んだ）が挙げられる。マルティン・ブーター、レフ・シェストフらユダヤ教徒の文学者もまた実存主義に関連を持つ。マルティン・ハイデッガーは、実存主義の系譜のひとりであり、彼の論説は現在もなお多くの論争を引き起こしている。著作「存在と時間」においては、人間の存在（Dasein）の解説について実存主義（existentiale）の種類に沿って分析されなければならないとし、多くの批評家が彼を実存主義の風潮において重要な人物として見なしている。

彼は間違いなくジャン＝ポール・サルトルに影響を与えた。サルトルはアルベール・カミュ、シモーヌ・ド・ボーヴォワールとともに実存主

義者として有名になったが、彼は自身の最高傑作（magnum opus）である「存在と無」（L'Être et le Néant）においてだけでなく、劇や小説においても実存主義を開拓した。サルトル、カミュ、ボーヴォワールはいずれも実存主義者かつ無神論者であり、現在においては嘔吐（nausea）や偶発性（contingency）、悪の信念についての彼らの発想は関連し合い、キルケゴールの不安（angst）の宗教性を持つ発想よりもさらに奇抜とされる。しかしながら、人間個人に集中し、彼らの存在の真実に対し宇宙の前で席にを負うことは、すべての哲学者に通じる共通点である。

3.2.5. 分析哲学

分析哲学は、ヘーゲルと彼の理論を受け継いだ哲学者らを批判するために発展した。1921年、ルートヴィヒ・ウィトゲンシュタインは「論理哲学論考」（Tractatus Logico-Philosophicus）を出版し、言語と哲学の問題について堅固な論理的体制を示した。当時、彼は哲学的問題の多くは言語のパズルにすぎないとし、明確な推論により容易に解説できるとした。長い年月の後、彼は「論理哲学論考」において示した自身の立場を一転させるが、その姿勢は2冊目の著作である「哲学探究」（Philosophical Investigations）（1953）において示されている。「哲学探究」は「平民言語哲学」の発展を促し、ギルバート・ライル、ジョン・L・オースティンやその他の哲学者らが発展させた。「平民哲学」に傾倒する人々は、以前の多くの哲学者（ジェレミ・ベンサム、ラルフ・ワルド・エマーソン、ジョン・スチュアート・ミル）と同様の視点を持ち、20世紀半ばにおいて英語哲学を形成することを理由に研究を行った。しかしながら、意味の明確さが最も重要だと理解されていた。

3.2.6. ジェレミ・ベンサムの功利原理

ベンサムは*道徳および立法の諸原理序説*を以下の象徴的な冒頭文で始めている。「自然は人類を苦痛と快楽という二人の主権者の支配下に置いた。我々が何をしなければならないかということを示し、また我々が何をしようかということを決めるのは、ただ苦痛と快楽だけである。」苦痛と快楽への従属は、我々皆が知っている事象であり、我々が快楽を求め、苦痛を避けようとするのもまた一つの事象である。だが、ベンサムによる明確な説明のないこのごく短い文章で、彼は、我々がじつに快楽を求めるといふ事象から、我々が快楽を探すべきかという判断に到達し、また利益についての心理的事象から、道徳原理に到達している。功利原理を用いて、彼が言いたいのは「それは幸福を増大させるか、減少させるかの傾向によってあらゆる行為を是認し、または否認する原理である」ということである。ベンサムの言うところの、是認と否認とは、行為の善悪、正邪を指すのと同義である。人々は快楽を求めると述べている箇所から、人々は快楽を求めなければならないと述べている箇所には、ベンサムの注意深い立論を以って埋められていない空白がある。しかしベンサムはある行為だけが「功利原理に適合していれば、人々は、それはされるべきである、それは正しい行為であるといつも言うことができる」と述べる。

「すべき」が「快楽」と結びつくのは、「すべき、正、邪のそれぞれの言葉が意味を持つ」唯一の方法であり、「そうでなければ、それらはなんら意味がない」。ベンサムは幸福が「善」と「正」の基礎であることを証明していないことを知っているが、それは彼がそのことを忘れたからではない。彼によれば、実際のところ、功利原理の本質こそが、その確証を示せなくさせ

る。「それを証明できるか？おそらく無理である。というのも他のものを証明するものは、それ自身が証明され得ず、一連の証明はある起点から出発しなければならないからである。それは証明が不可能であり、また証明する必要もない。」

ベンサムは功利原理の確証を示すことが不可能であったが、少なくとも、彼が「上位の」道徳論と呼んでいるものが功利原理を簡略化する、もしそうでなければ、それはあいまいか、合理的でないのだから、この原理より下位であると察していた。ベンサムは社会契約説を以って法律への服従義務の例としている。このような契約や合意があるかどうかを決定する難しさとは別に、ベンサムは、契約説の中でも功利原理に基づいて、現に法律に従うことによってのみ最大多数の最大幸福を達成しようとして、法律への服従義務を論じている。もしそうであれば、不服従は利益より害の方が多いため服従したほうがよいとただ述べれば、簡単に問題が解決できるのに、面倒で、科学的に疑わしい理論を展開する必要があるのか？我々の道徳観、まっすぐな感性や理性、神のご意思における神学的原理により決定され、他の人が、善かつ正であるとする場合にも同様に適用できる。ベンサムによるとこれらは全て同等で、功利主義を簡略化することができる。従って、快樂と苦痛だけが我々に行為の真の価値を与え、結局のところ、私的人生や公的生活において我々は幸福の最大限の増大に関心を持つのである。

***刑罰に関する法律**

ベンサムは法律および刑罰の問題において功利原理を特に印象的に用いている。法律家の役割と、一部の行為の推奨およびその他の行為の

防止において、我々は避けるべき行為とすべき行為をどのように分別するのであろうか？

a) 法律の対象

ベンサム立法は先ず、「行為の害悪」、結果における害悪、行為に起因する苦痛や悪、妨げられるべき悪を引き起こす行為を計測する。ベンサムによると、法律家は主要な悪と副次的な悪の両方に目を向けなければならない。強盗が被害者に害を及ぼし、被害者は金銭を失う、これが主要な悪である。しかし強盗が成功し、強盗は容易であるということを示唆したことで、強盗は副次的な悪も生み出したことになる。財産権の尊重が損なわれ、財産権は脅威にさらされるので、この示唆は悪である。法律家の観点では、副次的な悪は主要な悪よりも常に重要視される。例えば、先の例では被害者の実際的な財産の損失は、一般的な社会的な安定の損失や、共同体の安全の損失よりも重要ではないかもしれない。

法律は共同体全体の幸福の増大を目的とし、悪の結果をもたらさうる行為を防ぐことでこれを成し遂げなければならない。一部の犯罪行為や違反行為は本質的に共同体に対して明らかに損害を引き起こす行為であり、特定の行為が個人や集団の快樂を制限し、苦痛を生み出すが、その行為だけが法律の関心の対象となるべきである。大部分の行政は、社会の功利原理が明らかに悪とする事柄に違反した者を処罰することで、社会の幸福を生み出すという任務を実施する。法律家はどの行為を「違反」とするべきかの決定においてのみ功利原理を用いるべきで、彼の時代に統制されていた多くの法律行為は、世論の判断のみを根拠としなければならない個人的な道徳的問題と見なされるとベンサムは確信する。このように功利説は、

どの行為が行政の立法の対象か、対象外かを決定するために、行為の再分別を求める。更に、功利原理はベンサムに刑罰についての新しく、単純な論理をもたらし、彼は前の論理よりも容易に正当化できるだけでなく、より効果的な刑罰の目標を達成することができると考えた。

b) 刑罰

ベンサムは、「すべての刑罰はそれ自体としては悪である」なぜなら刑罰は苦痛をもたらすからであり、同時に「全ての法律に共通する目的、それは共同体の全体的な幸福を増大させることである」と述べた。刑罰が功利の観点において正当化さなければならぬとすれば、ベンサムによると、刑罰がもたらす苦痛が、より大きな苦痛を予防するか排除することが証明されなければならない。このように刑罰は、より大きな快樂と幸福の総数を達成するために「有益」でなければならず、その結果が共同体にとって苦痛な部分、単位を増進するだけであれば、正当化され得ない。功利原理は、純粋な「報復」(retribution)は社会の苦痛を増進させるだけで、どんな有益な目的にも向かわないという理由で、明らかにその排除を勧めている。これは、功利説が刑罰の範疇を排除しているのと同義ではなく、功利原理は、なぜ社会が違反者を処罰しなければならないのかという問題提起を勧め、処罰に「見合う」または「見合わない」ケースの分類を促進すると述べているに過ぎない。以下の場合には刑罰を科すべきではない。(1) 刑罰の根拠がない。例えば、違反それ自体が賠償を要する場合、おおよそその賠償がおおよそ実施される場合。(2) 確実に刑罰の効果がない、つまり悪の行為を予防できない、行為の後に立法される遡及的な法律、立法されたが、公表されていない場合。(3) 刑罰に利益がないか浪費しすぎる。「刑罰が生み

出す悪が、それが防ぐことより大きい場合」(4) 刑罰の必要がない、つまり「悪の行為が予防されうるか、それ自身で終わり、刑罰の必要がない、つまりより安価な方法である。」特に強制より説得のほうが効果がある場合。

3.2.7. 「増分主義」 (翻訳資料待ち)

3.2.8. 「総合的合理化」モデル (翻訳資料待ち)

3.2.9. 「ゴミ箱」モデル (翻訳資料待ち)

3.3. 現実における政策プロセスは体制面について検証可能である

政策プロセスとは、政策課題が選択されたときから政策の結果が評価されるときまで、互いに関連し合う各段階の一連の流れである。

公共政策のプロセスにおける各段階

プロセスを、関係し合う多くの手順に区分する方法により、公共政策の施行の複雑さを単純化するという発想は、ハロルド・ラスウェル³によって次のように分けられたものである。

1. 情報収集
2. 提案
3. 決定
4. 案内
5. 応用
6. 終了
7. 評価

³ Harold D. Lasswell, *The Decision Process: Seven Catalogues of Functional Analysis* (College Park: University of Maryland, 1956).

ラスウェルの考え方によれば、この7つの手順は各公共政策が実際にどのように策定されたのかを説明するだけでなく、それらが策定されたプロセスを説明するものでもあるという。政策プロセスは、情報収集、情報の分析や統合、また政策を作るプロセスに参加する人々への情報共有をもって始まる。その後、決定に参加する人々によって実現される具体的な各方策の提案が行われる。第3の段階として、決定を出した人々が実際に行動方針を施行する。第4の段階として、政策の実現を推進していく。国家規定を遵守しない人々を強制するために設立された法的強制措置を集合させる。その後、政策は行政において維持され、その使命を完了するあるいは消滅するときまで、政策の方向性に基づいて運用される。最後には、政策によってもたらされた結果が、当初の政策施行主体の目標に基づいて評価される。

ラスウェルのモデルは、1970年代初めにおけるガリー・ブルワーズ⁴の公共政策プロセスについてのモデル、1970年代および1980年代のチャールズ・O・ジョーンズとジェイムス・アンダーソン⁵の有名なモデルの基礎を形成した。このモデルに基づく政策プロセスは次の5つの段階を含む。

1. *政策の論議計画の設立*は、各公的課題が国家にとって重要なものとなり、論議計画に組み込まれるプロセスである。

2. *政策の形成*は、公的課題を解決するための異なる政策法案の確立プロセスである。

⁴ Garry D. Brewer, "The policy Science Emerge: To Nurture and Structure a Discipline", Policy Science 5 (1974):239 - 244.

⁵ Charles O. Jones, An Introduction to the Study of Public Policy (Monterey, CA: Brooks/Cole, 1984).

3. *政策の決定*は、権限を有する国家機関がある政策による具体的な行動方針を決定するプロセスである。

4. *政策の実現*は、政策を現実に導入し、各対象が共に実現に参加するプロセスである。

5. *政策の評価*は、各対象への政策の作用結果や、質的および量的指標に基づく経済的・社会的プロセスの検証である。

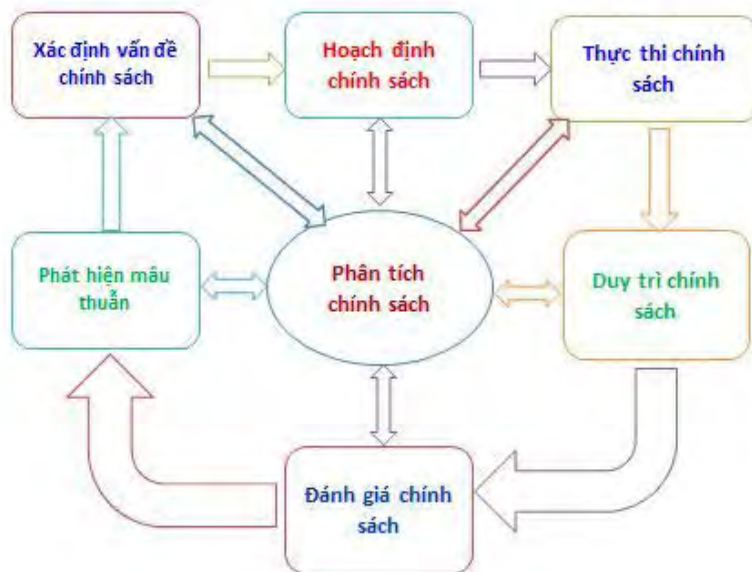
品質を保証するため、各政策の評価は権限を有する国家機関および社会活動家らによって監査される必要がある。評価結果に基づき、国家は政策課題、目標、解決方法を再確認しなければならない。このプロセスによる各段階の判定方法は、政策活動ごとに具体化され、これによって段階ごとに独立して、あるいはプロセスにおける1つまたはすべての段階とある段階との関係性を検査、検証することができる。同時に、異なる各段階についてケーススタディや比較研究を多く実施し、理論の確立の一助とする。また、このモデルでは、政策の実行任務を担当する各政府機関だけでなく、政策プロセスに参加する各主体や、ある政策に関連する各機関の役割を検査することができる。

このモデルの限界は、政策実行機関が体制的、直線的な方法で公的課題を解決するために努力する際に、誤った説明を引き起こす可能性がある点である。実際には、課題を確定し、目標を選択し、政策の解決方法を実施するのは独自の方法による独立したプロセスであるため、この問題は生じないだろう。通常、ある主体が決定したり時代背景を反映したりするが、それは彼らの頭の中には常に自らの利益を守るために何をしたらよいかという発想が並んでいるためである。さらに注意すべき問題は、このモ

デルにより、政策プロセスが理論的には満足いくものであるが、実際の活動段階になると躓いたり、調整されたり、設定された課題の解決体制により確定されたのとは異なる、ある秩序に従わなければならないことさえある。そのため、政策プロセスは単純に行き来をする円ではなく、より小さな多数の循環であり、例えば過去の決定において実行された結果が、未来の政策を形成するために大きな作用となることもある。すなわち、モデルにおいて考えられたある政策についての直線的な流れというのは存在しないと理解される。現行の各モデルにはいまだ、達成すべき目標の確定や、この段階から別の段階へと政策を実行する主体が不足している。

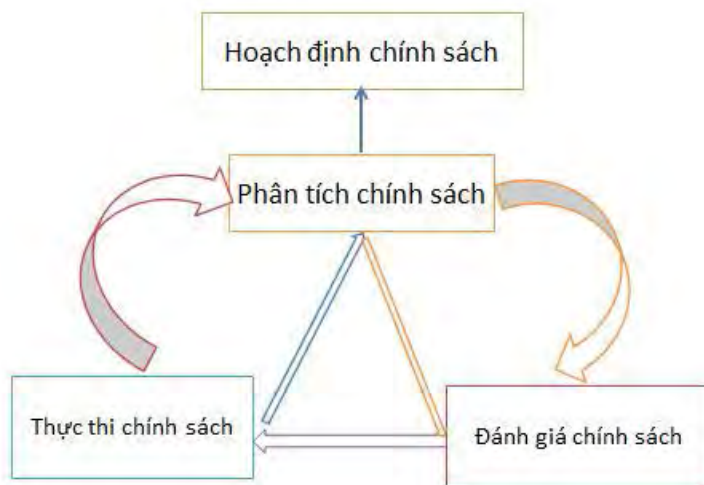
実際に、これは政策プロセスを研究する人々にとって主要な関心課題である。現在、世界における公共政策の策定者たちは、次の図において示される共通の政策プロセスを提案することで統一している。

図表：3.1. 公共政策プロセス



ベトナムにおいては、政策の形成段階と政策の決定プロセスが、国家領域において統一、推進され、各公的機関により実行されるため、この2つの段階は次の図のように政策策定段階として1つにまとめられる。

図表 3.1 : ベトナムにおける公共政策プロセス



このモデルによれば、プロセスの最初の段階は政策の策定である。これは政策の草案を形成し、政策の決議を提出する段階である。この段階を完了するためには、各活動の実行責任を与えられた国家機関が、政策課題を確定し、政策の施行のための議論に課題解決を提出するために、実状を分析する。政策課題の確定は、国家機関によって実現されるのみならず、とりわけ祖国戦線やその構成組織等の各人民団体といった社会全体からの広い参加がある。公共政策の策定段階において重要な内容は、政策目標とその目標を達成するための解決方法の確定である。これを実現するため

には、各主体が解決方法ごとに作用を分析し、それぞれの解決方法を比較対照する必要があり、最後に決定権を有する機関が政策の決定を行う。

続いては、政策を実施する段階であり、社会生活において政策が現実化する段階である。これは選択された政策の解決方法を実施し、その実施を検証する段階である。この段階は、ある政策の成功または失敗を決定づける意味を持つと言える。

最後は、公共政策の評価である。これは政策実行の経費、結果、政策目標の実現プロセスにおける政策の実際の作用を測定し、そこから現実における政策の効果を確定する。政策の評価結果に基づき、各国家機関は必要であれば政策の調整を行うことができる。これらの機関は、目標を追加したり、解決方法を変更あるいは調整したり、目標を引き続き追いかけるか、政策自体を取りやめるかを決定することもできる。

政策の分析は、政策プロセスの独立した段階ではなく、政策プロセスの各段階に密接に関連した一つの活動である。これは公共政策の策定、実施、評価の各主体の決定により行われる基本的な活動である。この業務の専門性および重要な役割により、現在では多くの国家が政策分析活動を職業的活動、またこの業務の従事者を政策分析家として見なしている。政策を評価したければ、当然ながら政策を分析しなければならない。新たな政策を構築したり、既存の政策を調整または変更したければ、やはり実行されている政策の分析と評価は必須事項である。

第4章：公共政策における公務員の倫理性

4.1. 政府首脳、公務員の倫理性

国家従事者の倫理性を研究することは、個人的倫理、社会的倫理のすべての要素から出発する。しかしながら、国家によって規定された人々のグループであるという彼らの特性により、彼らの個人的倫理、社会的倫理に属する各要素の傍らで、彼ら自身が就業環境からの非常に大きな影響を受けざるを得ない。

国家従事者の倫理性は、彼らによって請け負われる業務（職業倫理または公務倫理）に密接に関係している。社会において、国家従事者は次のことを必要とする。

- 社会法律を厳正に執行する。
- 社会によって尊敬されるような社会的倫理的文化の表現を、自覚的に実行する。
- 業務を実施する際には、奉仕の精神を要求される。
- 彼ら自身のために彼ら自身によって倫理性についての基準を施行された公的な法による個別の調整を受ける。

4.2. 職業倫理

職業倫理とは、職業の対応、実施方法に関連し、その職業に従事する者が遵守しなければ（法律によって規定される）性質を有するものであり、（各協会の執行による職業倫理規則を）自発的、自覚的に執行されるものである。

今日の社会においては、それぞれの職業がその分野において彼らが従うべき一定の価値基準を示す努力をしており、それは国家によって規定

された法律の枠組みの外にある「強制的に遵守しなければならない」事項である。それは各職業組織、職業協会によって誓約された規定であり、競争を欠かすことができない活動となっている。

「職業倫理は、ある組織の職員や労働者に適すると見なされるすべての行動の集合体である。ある職業の実施者のすべての対応や行為、関係性は、共通の規定、決定権を有する機関の規定および雇用側の組織による規定に従って遵守されなければならない」。

多くの種類の職業が、独立性、顧客性、平等性、客観性、正当性を要求し、秘密を保持し、慎重性を必要とする。また「柔軟で、人文的で、人道的な」種類の職業もある。

専門性に関わる（専門性に適合する）要素も倫理的要素である（専門的能力、専門のプロセス、基準）。

専門レベルについて言えば、専門性を必要とする業務の実施プロセスを遵守し、倫理的側面だけにとどまらず、業務のための法令による法的側面も必要となる。

4.3. 政府首脳、公務員の業務

公務員が担当する業務業務（公務）は、その他の各組織において担当され、実現される労働者の各種業務とは特別に異なる意味を有している。最も一般的なのは、国家組織を通じた国家による業務であり、公務員はその直接の実行者であるという点である。それは、ある個人、個人的グループのための業務ではなく、社会、共同体、すべての人のための業務である。それは、国家を管理し、公的サービスを提供する性質を持つ業務であり、社会全体の秩序を維持することを目的とする。そのため、公務員の活動は、

原則として、その他の組織における活動に比べ、より文化的、人道的、奉仕的な性格を有する。

公務員の業務（公務）の実施について研究する際、研究者、管理者らが通常検証を行うのは、以下の2つの内容についてである。

- 誓約 (belonging) : 国家や公務員が実現を誓約する価値のことである。
- 信条 (believing) : 関連する各主体（社会、共同体、公民）の、公務員および政府、各省庁による地方行政の業務の実現に対する信条である。
- 実際の対処方法 (behaving) : 業務を実施する際の公務員の対処方法である。具体的な条件ごとに判定される。

これら3つの要素は、公務員が実現する業務（公務）について「良い、あまり良くない」といったイメージを創出し、また社会や共同体が公務に対して「苦情を言う、不満を訴える、褒めるまたは批判する」ことでもある。

これら3つの要素は、公務員によるサービス提供活動がどのようなものか、「公務員の精神」として見なされるかどうかを示すものである。公務員が実施する日々の業務は多岐にわたる。専門性の水準は、業務の質によって制限される。このことは、公務員の活動の検証を非常に多様なものとしている。公務として奉仕しなければならない多くの問題、多くの対象がある。そのため、ある「絶対的な基準」を設定することは難しく、実施時に一定の「リスク」もない。実際には「定められた枠組みの外にある業務を解決しなければならない」という場合が少なくない。管理モデルは

一般的には管理活動の「環境」的性質を承認する。公務は、各環境的要素に基づいて実施されなければならない。

4.4. 公務倫理

公務員に求められる職業倫理は、大臣、組織の代表者、組織や公民へのサービス提供の倫理である。サービスの提供という公務の実施において、公務員による不誠実、不公正公正な行為は、社会に非常に大きな影響を及ぼす。政策は、管理者や参謀チームの意見の分析および評価を基礎として決定されなければならない。公務員は複数の情報について考え、正確に適切な計画の立案を検討する役目を有する。

公務員の社会倫理は、公民への公務の実行における民主制を体現するものである。公正さ、無欲さ、清廉さは人民に政府の思想を感じさせることでもある。一方で、異なる多くの作用による不公正さは、公務の性質を変化させる可能性がある。これこそが公務員の職業倫理の記しである。

公共サービスや公共管理の提供において初めて、非常に基本的な認識によってサービスの市場性が承認される。通常、民間事業体の領域においては、公的領域よりも効率的に、またより良質で適切なサービスが提供される。この変化の基本的な3つの目的は次の通りである。

1. 公的領域（政府）の活動費の削減。
2. 国家領域および国家が実行する領域の各活動における従事者の削減。
3. 公的領域組織の価値の変化。

公務の実行における私的領域の職業倫理へのアプローチ手法を学ぶことは、「顧客満足」の向上に向けたアプローチの一つである。多くの

経済的集団の職業倫理モデルは、その集団に利益をもたらし、公務倫理の確立時に検証すべき「職業倫理モデル」となり得る。

公務員の公務実施における倫理性は、法律と常に密接に結びついている。しかしながら、法律が特別な境界である一方、倫理性や行為に属する各要素は法令法令のようにはいかない。多くの国では、行政改革プロセスにおいて法体系に手を加えてきたが、公務員の行為や対応は、法による「新たな規定」と同時に変更できるものではない。これもまた、公務（職業）倫理を確立する上での課題の一つである。新たな基準や新たな行為の枠組みが、改善され、また新たに構築される必要がある。

職業倫理は、人間を評価する上で非常に重要な基準である。そして国家領域においては、職業倫理の基準および公務員が担当する各種業務の職業基準を確立することが求められる。

法令の枠組みにおいて、公務員の倫理的行為はいつも社会に共通する目標、利益をめざすものである。しかし、実際には、公共の利益と個人または集団の利益との間には衝突が存在する。公務員自身が、公務員の職業倫理を悪化させている代表なのである。それは汚職行為である。どんな国家でも、法によって規定された公務員の公務実施の価値基準が侵され、それが非常に重大な汚職であることがある。仮に厳密に規定された公務員の公務実施基準（職業、公開手順、明白性等）があれば、浪費、横領、賄賂、汚職は規制されることとなるだろう。

公務員の公務実施における職業倫理規定を侵害することは、多くの異なる活動を通して体現される。しかし、倫理違反に共通する特徴は、個

人または少数者の利益をもって公共の利益にかえることによる侵害だという点である。

国家行政機関体系においては、多くの人が共に業務に当たるが、それぞれに異なる役職に就いている。そのため、公務員の各チームごとの倫理規定が必要とされる。管理する立場にあるチームに対しては、個別の倫理行為についての具体的規定が必要である。恒常的性質を持つ部門や階級に属する国家機関の従事者に対しては、彼らのための倫理行為について規定が必要である。行政機関、中でも選挙体制に属する従事者には、独自の規定が必要である。言い換えれば、「職業的性質が全く異なる」チームが存在し、それぞれに異なる個別の「職業倫理基準」を定めることが求められるということである。

公務実施に対する責任：公務員の公務実施の倫理は、国家領域の業務に対する責任という側面から認識される。

国家の法律の具体的な条件下にいるひとりひとりの公民は、法律を厳正に執行しなければならない。すなわち国家の法律が規定し、彼らがしなければならない、してはならない、することができるそれぞれの事項事項を遵守しなければならない。

- 行うことが強制される（義務）
- 公務員に多くの権利が与えられた法律によって規定されたことを行うことができる。
- 行うべきである：これは公務に関連する法律が制限を示さない種類の業務であるが、公務員が合理的だと感じ、法律によって禁止されずに社会により高い利益をもたらすために業務を行うことであ

る。これは、行わなければならない法的基準の「より高いもの」でもある。

- 行うことが認められない: これは禁止され、または制限された公務に関する法的事項事項である。この事項事項は、禁止し、してはならないことと公民に正確に認識される必要がある。公務員に対して「禁止、制限」される業務は、公民に対するそれよりも多い。

国家の管理機関において公務員の組織、個人ごとに「行うことが強制される」事項事項を規定することは、公務員の倫理違反行為を防ぎ、汚職を防止するために必要な要求である。それぞれの公務員が、自らの業務上の役割を得たときには、自分が何をしなければならないのか、またそれらの業務に責任を負っているということを極めて明確に知り、理解する必要がある。しかし、人間の性質により、もし違反に対処する十分な法的措置がなく、「行うことが強制される」業務を行うことができない場合には、従事者は業務を得ることに「無私無欲」となり、彼らが知っている役職を就き、行うことが強制される事項をできなかつたとしても「致し方ない」とされる。「行うことが強制される業務を担当する」者への具体的な対応方法を規定する必要があるものの、これは実際にはできていないのが現状である。これは多くの方法がある選挙や人事体系において、ベトナムの国家管理機関体制が現在抱える課題の一つである。

公務規則は、このことについて詳細に規定する必要がある。責任は通常、非常に軽いものと見なされるが、誰が責任を負うかの構造については議論していない。これらは「行うことができる」規定である。法的に定められた方法に則り、公民は、法律が禁止せず、行うために十分な条件を

有する事項を「行うことができる」権利を有する。第二に、国家は禁止をしないものの示された各要求を保証しなければならない事項を行う際に、公民を強制する目的で行う十分な条件を有する。国家は生産や経営を禁止しておらず、個人ひとりひとりが、国家の規定する法的枠組みのなかで生産、経営活動を行うことができる。このことは、公民や各組織を保証し、国家が禁止しない事項を行う限りにおいて、国家、その他の組織、各公民の利益に影響を与えない。

国家管理機関体制において、「行うことができる」という概念は、国家が各公務員組織、個人に対して一定の行うことができる事項（法の規定による）を定め、上記のような「行うことが強制される」各任務を実現することと同義である。法的文書において、それは組織（共通の権利を有する）および個人（個別の権利を有する）に関する権限である。しかし、実際には「義務」と「権利」という2つの語句は「大臣、局長の義務と権利」という項目に一般的に記載されているにとどまる。このため、何の義務を実現するために何をしなければならないのか（行うことが強制される—強制的）を判断できない管理者が数多く存在するのである。

それは、国家機関の特権的な「行うことができる」うちのひとつの種類であり、公務員個人に付与されるため、公民、各組織がその特権を知らないことが少なくない。また、組織および個人が自らの「行うことができる特権」を利用し、公民が「行うことができる」事項の実現において、公民に困難を与えることも少なくない。これはまさに不正な利益、個人的利益をもたらすための嫌がらせや、傲慢な態度、職権の濫用を引き起こす要因となっているのである。

国家の法律は、国家機関の「行うことができる特権」について言及するときには、個人は、組織や個人が個々の利益をもたらす機会を得てはならないということであり、これは国家共通の利益を保証し、公民が、行うことができる事項であるとの保証を約束されていない事項を行うのを阻止することを目的とする。家を建設することができる際には、多くの要素間の関係性が保証されなければならない。

公務員は彼らに個別の「行うことができる特権」の規定を正確に認識させず、適切に執行していないため、彼らはこれを利用しようとするのである。一方で、国家機関は、その「行うことができる特権」をどのように使うべきか具体的に規定していない。すべての規定は、平等に監査する関係性において、国家機関の強固な監査を受けなければならない。

いくつかの規定は「行うことが認められない」とされている。これは国家が組織や公民に対し、行ってはならないと規定する法的領域である。行うことが認められない、および行うことができる事項を規定する手法は、経済的・社会的発展プロセスにおいて、すなわち民主性が増加し、国家が公民により多くの権利を徐々に付与してきたプロセスにおいて、あるいは国家による介入が減少したプロセスにおいて変化してきた。この2つの傾向を示したのが図8である。これまでの構造(写真a)においては、公民、各組織が行うことができる事項が示されていた。彼らが知り得るのは、自分に何ができるかということだけだった。一方で禁止事項については、公民は具体的には知らされていなかった。そしてそれは国家機関の態度であり、公務員個人が国家から付与された権利は、組織および公民が自らが行うことができる事項を実行するために利用していた。

公務員に対する「行うことが認められない」事項は、公務員を守り、彼らが職権を濫用したり、個人や家族、彼らの機関に個々の利益をもたらさず、国家や公民の利益を侵害しないようにするためのものである。

「行うことが強制される」「行うことができる」「行うことが認められない」という3つの領域は、互いに密接な関連性を有し、公務員が自身の義務をより良く実現できるように互いに補完し合うものである。

責任とは、公務員や管理者が、彼らに行うことが強制されると規定する国家の法律の通りに厳正に実行させる事項である。これは、それぞれの立場、役職ごとに与えられる義務である。

しかしながら、責任の実現はまだ本当に「価値のあるもの」とはなっていない。一方では、公務員は法令に従って義務を遂行するための十分な能力を有していない。この現象は、人事管理の側面（募集、採用、教育訓練）に起因する。一方で、公務員の責任を規定する法律は具体性や明確性が不足し、どの機関にもどの立場にも当てはまってしまうことが少なくない。多くの分野においてこのことは非常に明白である。不動産管理の曖昧さを例に挙げると、多くの管理者が、「それは誰が担当する業務なのか」と指摘し、その弱点、限界、曖昧さを批判する。管理者たちは批判をし、弱点について指摘もするものの、それが自らの責任に属するという認識はないのである。

公務員の責任は、その公務員が担当するそれぞれの立場に結びついている。留意すべきは、地位が高ければ高いほど、その責任も大きくなるという点である。そして任務を達成できない場合には、規則に従い責任を負わなければならない。しかし責任の、この2番目の側面については、まだ

関心が寄せられていない。それは国家が彼らに（任務を）遂行するよう命じても、遂行しなかったり、遂行の方法が悪かったりした業務について、誰も責任を負わないためである。自らの過ちについて誰も責任を負わないのである。過ちのために極めて多くの問題が発生するが、その誤りに対して誰も責任を負わないのである。

公務員の倫理性に関する規則全般への違反は、経済発展のための健全な環境を生まずに、不平等性を生む結果となった。規則基準に則らずに入札され、一部の個人や集団にとっての個人的利益となり、過ちによる入札が行われるという現象につながっている。これらの現象により、公民の国家に対する信頼は、少なからず損なわれている。国家の毎年の税収は、基礎建設への投資予算とされる。人々が法令を遵守せずに税金を使用するという倫理的墮落により、公民は国家に対する誤解を生んでいる。それは彼らの大きな罪である。国家の法律は、そうした人々の経済に関する罪だけでなく、人民が国家に対して信頼を失ったという罪にも対処するものでなければならない。こうした場合に我々が厳正に対処しなければ、彼らによる信頼の失墜は引き続き起こり、別の信頼を失わせてしまう。

- 怠慢
- 浪費は深刻な病気であるが、誰もそれを病気とは見なさない。
- 賄賂は現在ではかなり普遍的な現象である。
- 公務員の権限を濫用して個々の利益を求めることは、公務倫理への違反のしるしであり、公務の根本的価値への違反でもある。
- 汚職が何であるかはすでによく知られている。多くの人が汚職の根源を追及しようとするもののが、発見できる場合は少ない。

4.5. 公務の遂行における利益の対立

市場経済においては、常に買い手と売り手との間の矛盾に関する衝突が生じる。そしてこれは市場構造を通して解決される。市場とはすなわち「マーケット」であり、買い手と売り手が対面し、情報を交換共有し、値段交渉をして売買を決定する場である。売買プロセスが、どちらの側にどれだけの利益をもたらすかは、両者の相互関係によって決定される。買い手と売り手の間には、原則として「利益」をめぐる衝突や矛盾が生じるのが常である。もしどちらかが「より多くの機会」を得れば、その分多くの利益を生む。市場経済においても、利益関係は同様の原則において決定される。しかし需要と供給の関係は、双方の利益を均等にすることを困難にしている。すべての組織においては、組織の業務を任せられ実行する者と組織とが、常に「利益の対立利益対立」をめぐる問題を抱えている。このため、公務の実施プロセスにおいては公務員の個人的利益の側面から検証することは不可能である。したがって、以下のことが要求される。

- 公務員の個人的利益の具体的確定は公務の実施において受け取られる。
- 公務員と公務員の任務。

これら二つの内容が具体的に確定される際、「利益の対立」は最高レベルにまで制限され得る。

公務員とは、「公衆のための従事者」であり、国家から賃金を受け取る者であり、国家の業務と国家の名において業務を実施する者である。そのため、公務員の名において国家間の利益の対立を食い止め、公務員および関係者の利益を実現する。公務員が公務を行うときには、常に「人民

の希望であり、信頼である」ことを自覚しなければならない。彼らは「公務員は専門性のあるサービスを提供してくれる」「個人や個々の利益は彼らの公務の実施に影響を及ぼさない」という期待を生むための行動をしなければならない。もし人民の希望や信頼が一度でも失墜すれば、公務員の清廉性や忠実性までもが低い水準にあると判断されてしまう。

もし一度でも人民の希望や信頼に基づく公務員の「清廉性」が失墜してしまえば、公務員の業務の実施は彼ら個人の利益の影響を受けることとなる。

理論的には、個人的利益の共有に関する行為基準は、法的性質を有する倫理基準でなければならないとされ、さらに「通常の倫理基準」を上回るものとされる。

他方で、非常に多くの種類の利益対立が「影響力のある形で」確認されている。彼らは、自らが利益を追求できる組織に座り、そのために別の組織との関係性を有していることを知っている。

それぞれの個人、組織に個々の利益をもたらすための国家職員の賄賂は、賄賂を防止する公約「贈賄防止条約」(Anti-Bribery Convention)にとっての課題である。多くの方法によって利益対立が甲斐性されるが、そのなかには、次の項目についての提案がある。

- 内部検査
- 行動基準
- 命令の遵守

公務の実行における国家と公務員との間の多くの利益対立は、非常に普遍的な汚職現象に発展する可能性がある。公務のために、公務員が国

家予算を使用する権限を有する際、彼らは管理の隙間をかいくぐって、自らの目的のために、あるいは特定のグループ（管理者、経理、会計など）や彼ら自身の組織の利益のために、国家予算を横領するのである。

利益対立を発見するために、ひとりひとりが任務に関する報告書や、業務の詳細表、業務実施の契約書によって公務員個人を自ら評価しなければならない。そのことにより、その業務の中で個人的利益の対立が生じているかどうかを容易に定められる。

4.6. 公務倫理および公務員の社会的責任

公務の実施プロセスにおける公務員の社会的責任は、倫理性を包含する行動基準でもある。しかしながら、社会一般の責任および公務員の社会的責任について議論する際には、非常に複雑な問題が存在する。社会的倫理と個人的倫理に関連した社会的責任の概念について論じた、社会的責任に関する多くの研究が存在し、社会的責任は「共同体とそれぞれの個人の生活に結びついている。そして自分は、自分自身のためにのみ生きているか、共同体や他者のために生きているかを評価してみるとよい」として

いる。もし公務員が彼らの活動に責任を負うのであれば、公務か社会の外側かに限らず、自らの行為についての社会的責任を負うのであり、それは非常に必要な行為である。

4.6.1. 賄賂を受け取ってはいけない（なぜ？）

4.6.2. 政策の構築と実現において、上級機関の命令が適切でなく、従いたくない場合にはどうすべきか

4.6.3. 政策における国家の命令を国民が実行しようとしな

いとき、どのような態度で望むべきか

5. 学習資料（教科書、講義、参考文献）

1. 教育訓練省、「教科書・哲学」（哲学科に所属しないが医学院生および研究生向け）、政治理論出版社、ハノイ、2006
2. Nguyen Huu Hai（グエン・フー・ハイ）、「公共政策—いくつかの基本的問題」、国家政治出版社、ハノイ、2014
3. トーマス・R・ダイ、「公共政策についての理解」（翻訳資料）、国家行政学院、2014
4. 城山英明、細野助博、鈴木寛「日本の中央省庁の政策形成プロセス」（翻訳資料）、国家行政学院、2014
5. Truong Quoc Chinh（チュオン・クオック・チン）「マルクス思想による法治国家ベトナムの建設」、国家政治出版社、ハノイ、2013
6. Duong Phu Hiep（ズーン・フー・ヒエップ）、「哲学と刷新」、国家政治出版社、ハノイ、2008
7. Ngo Thanh Duong（ゴー・タイン・ズーン）、「ベトナムにおける唯物論的弁証法と刷新事業」、政治理論出版社、ハノイ、2007
8. Tran Phuc Thang（チャン・フック・タン）、Le Quoc Ly（レ・クオック・リー）、Pham Anh Hung（ファム・アイン・フン）、「社会生活における哲学の役割についてのいくつかの問題」、政治・行政出版社、ハノイ、2013
9. Bui Huy Khien（ブイ・フイ・キエン）、Nguyen Thi Van Huong（グエン・ティ・ヴァン・フーン）、「公的管理」、政治・行政出版社、ハノイ、2013
10. マイケル・サンデル（2014）：「Justice」若者出版社、ハノイ、2014
(これらの参考資料は、各図書館または書店にて確認できるが、3番および4番を所蔵するのは国家行政学院のみである)

6.教授形式

- 学生と講師間で意見交換をしながら、理論についての講義を行う。
- 講師は課題を提示し、政策設計プロセスにおける哲学の方法論的原則の応用傾向を分析する（現在課題を抱える具体的な政策に関連付ける）。
- 学生は自習、自主研究の時間で事前準備を行い、その後、教室で発表やディスカッションを行う。

7.試験および学習結果の評価方法と形式

総合点を10点とし、試験・評価の形式ごとに各目標を定め、以下を含むものとする（各項目の評価比率は講師の提案によるものである）。

- 中間小論文1つ、20%
- 学習意識、10%
- 期末試験1つ（120分間）、70%

**PROJECT NAPA-JICA
MASTER'S DEGREE TRAINING PROGRAM IN PUBLIC POLICY**

MODULE

PUBLIC POLICY EVALUATION

Hanoi 2015

Professional Advisor:

Prof. Tanaka Hiraki - Shizuoka University of Art and Culture, Japan

Chief Editor:

Assoc. Prof. Nguyen Huu Hai, PhD

Members:

Dr. Hoang Mai

- Other requirements for the module: Combining theoretical learning with case study exercises

- Allocation of credit hours for the following activities:

+ Listening to theoretical lectures: 15 theory sessions (1.0 credit)

+ Doing work assignments, class discussion: 35 discussion sessions (1.0 credit)

+ Practice: 40 facts sessions (0.5 credits)

+ Group activity:

+ Self-study: 20 hours of self-study (0.5 credits)

- Faculty / Department in charge of module: Administrative Sciences Faculty

3. The goal of the module

3.1. The joint training goal of the module

- Knowledge: Mastering the basics of public policy evaluation, supervision and evaluation of public policy enforcement, the impact evaluation methods and results of implementation of public policy.

- Skills:

+ Ability to set the basis for evaluation, supervision, and assessment, and establish a results report of the implementation of programs, projects, or public policy;

+ Ability to apply appropriate methods to assess the results of the programs, projects, or public policy.

- Attitude: Recognizing the important role of supervision and evaluation of public policy to use the results of policy evaluation on program administration and projects of the levels of government.

3.2. Specific training objectives of knowledge of the subject (written for each important element of each chapter or issue).

4. Summary of the module content

"Evaluation of Public Policy" is a compulsory module in the training program for the PhD level in public policy. This course systemizes the basics of public policy evaluation; monitors and assesses the results of public policy implementation;

moreover this module introduces the economic approach to assess the cause-effect impact of public policy.

The main purpose of the module is to equip students with the knowledge and skills to monitor and assess the results of implementation of public policies; and assess the impact of public policy. It provides students with the fundamental concepts of the theory and methods of evaluation and how to apply these methods in the evaluation of public policy, particularly the impact evaluation of public policy. Also, while taking the course, students will be instructed to apply the methods learned into practice through the discussion of testing evaluation studies and practice of the evaluation exercises.

5. Forms of teaching – learning organization

- Lecturing by means of presentation of chapter 1, chapter 3
- Combining presentation and discussion, homework chapters 2 and 4
- Students self learn and write essays for chapter 5

6. Method and form of inspection and checking of learning results of the module:

- Employing a 10 point scale, dividing targets for each form of inspection and evaluation including the following:

Mid module test: 20%

Class discussion (in groups): 20%

Personal essay: 20%

Module end exam: 40%

CHAPTER 1: GENERAL KNOWLEDGE OF PUBLIC POLICY EVALUATION

1. FUNDAMENTALS, NECESSITY AND CLASSIFICATION OF PUBLIC POLICY EVALUATION

1.1. Fundamentals on policy evaluation

Policy evaluation is the process of examining and commencing on the value of the results achieved when issuing and enforcing a public policy. Public policy is brought about by institutionalizing its precepts into legal regulations. Therefore, the recognition and evaluation of the policy are often associated with the evaluation of legal regulations to determine if they conform to the real life requirements and how they are operated in real life. However, not only is public policy present in the legislation, it is also included in the programs, plans and operations of the state. Therefore, public policy evaluation will encompass the overall review of the decisions made by the state (central government and local governments) in solving an urgent problem posed in practical state governance. Assessing the policy allows for consideration and comments not only on policy content but also on the process of policy implementation, so as to utilize measures adapted to the actual requirements to achieve the desired goals. Policy evaluation means learning about the effects of public policy. Another more complex definition is given as follows: "Evaluation of the policy is to assess the overall efficiency of a national program on the intent of goal achievement, or to evaluate the relative efficiency of two or more programs on the level of common goal achievement". "The study for evaluation of the policy shall be objective and systematic, and the determination shall be practical on the impact of current policies and public programs on their target groups through objectives that such programs and policies are directed towards".

Certain definitions are associated with identified goal evaluation of the program or policy. But since we do not always know what the real goal is, and as certain

programs and policies pursue conflicting goals, it would not limit the concept of policy evaluation to the results we acquire. Instead, we study all the effects of the policy, also known as "the impact of the policy".

The impact of the policy is its overall impact on the conditions of the real world, including:

- The impact on target group or status
- The impact on statuses or groups other than target groups
- The impact on future conditions as well as conditions ahead
- Direct costs, in the form of resources used for programs
- Indirect costs, including loss of opportunity and other things.

It should be noted that all costs and benefits, both in the past and future need to be measured and evaluated in the evaluation of public policy.

Conclusion

1. Policy evaluation is to assess the impact of the policy on target and non-target groups, and the impact in the future as well as the immediate impact, as well as direct and indirect costs.

2. Systematic policy evaluation can be conducted by before-and-after comparing, the expected trend compared with the post-program results, and comparison between the case that the government conducts the program and the opposite case that the government does not conduct the program.

3. Traditional study design includes a comparison between the group conducting the policy and the control group both before and after program implementation.

4. There are many political and administrative factors obstructing effective policy evaluation.

1.2. The necessity of policy evaluation

Today, the need for public policy evaluation is increasing for both State agencies and organizations and individuals. It seems that whenever a policy is launched there is immediately a common question to arise: What impact does the policy have on social life? Managers and researchers often don't have much to say about, and no scientific answer to, this simple question. In recent years, the evaluation issue has become the focus in policies of the state. People are aware of the need to evaluate the impact of a significant amount of funds spent on developmental aid amid the cynicism of whether the policy has been implemented effectively, to what extent the policy has been successfully implemented, whether there is the need to redirect the aid to other areas, and whether the methods of implementation and disbursement are appropriate.

The evaluation work is emphasized in new international initiatives such as the millennium development goals or the strategic goals for hunger elimination and poverty reduction. This initiative is supported by the community of international donors and almost 70 developing countries, as well as the economically disadvantaged countries of the world. Therefore, the evaluation work has become part of the implemented policies, and instead of being considered merely another option, will be affirmed right from the beginning as an essential part of the policy cycle.

From an outside perspective, all of this is located in the discussion content on the efficiency of official development aid (ODA) and the principles of allocation of aid according to the criteria: is there a need to choose to support nations according to institutional quality; on budget support: whether the sponsors fund the budget in general or for separate programs, or other criteria.

The requirement for efficient evaluation of resource allocation is essential for public policies in general, but this requirement has become especially vital in developing countries, because the resources are more scarce than in developed countries, and the demand is of course higher. Therefore, the application of the methods of resource allocation evaluation becomes increasingly critical in developing countries. Moreover,

a number of new areas are being launched, such as regional trade agreements or multilateral trade negotiations. A good example is the case of Vietnam joining the WTO, and prior to that, the signing of a bilateral or regional agreements between ASEAN and the United States. These agreements affect the distribution of income in the economy. The evaluation aims to determine the relationship between micro-economic policies and the issue of income distribution, standard of living, the relationship between trade agreements and poverty reduction and hunger elimination policies. Finally, considering other aspects which are more of a national nature than international, one of the important arrays of applications is social policies, and on a broader scale, poverty reduction and hunger elimination policies. When assessing the impact of policy, we do not only measure government operation. For example, the money spent on each member of the target group, the cost of education per student, welfare costs per capita, and health costs per capita do not really measure the impact of policies on the group. This only measures government operation - the output of the policy. Many government agencies only provide output - just like paid welfare, the number of criminals arrested, medical expenses and the number of schools built. But these statistics tell us very little about the results achieved for improving poverty status, crime, health and education. We can not be content with how many times a bird flaps its wings; we need to know how far the bird has flown. In describing the policy, or even in explaining the elements of the policy, it's important to measure the policy output. But when evaluating policy impact, we need to determine the social changes associated with measures of government operation, so it is necessary to distinguish between "policy impact" and "policy output". And policy evaluation should focus on determining policy impact.

1.3. Classification of policy evaluation

1.3.1. Evaluation of policy process

Evaluation of a process means considering the methods of organization, including regulations and operating procedures, used for implementing the program. The objective of this evaluation work is to determine whether the process can be organized and implemented more effectively or not. Towards this goal, the implementation of a public policy has always been divided into separate missions, such as strategic planning, financial management, or reviewing customer complaints, and then evaluating the implementation of the missions according to efficiency, validity, or accountability.

1.3.2. Evaluation of policy impact

Impact evaluation is the study to determine whether the changes in benefit levels are actually a result of the program intervention rather than of the other elements. These evaluation methods can be done by quantitative methods (such as collecting survey or simulation data) before or after the program begins. Priori evaluation is to predict the impact of the program using the data prior to the program intervention, whereas retrospective evaluation studies the results after the program has been implemented. Self-comparison is a type of retrospective evaluation, which reviews the impact of the program through the difference in the results in the objects before and after implementing the program (or between the participating and non participating elements).

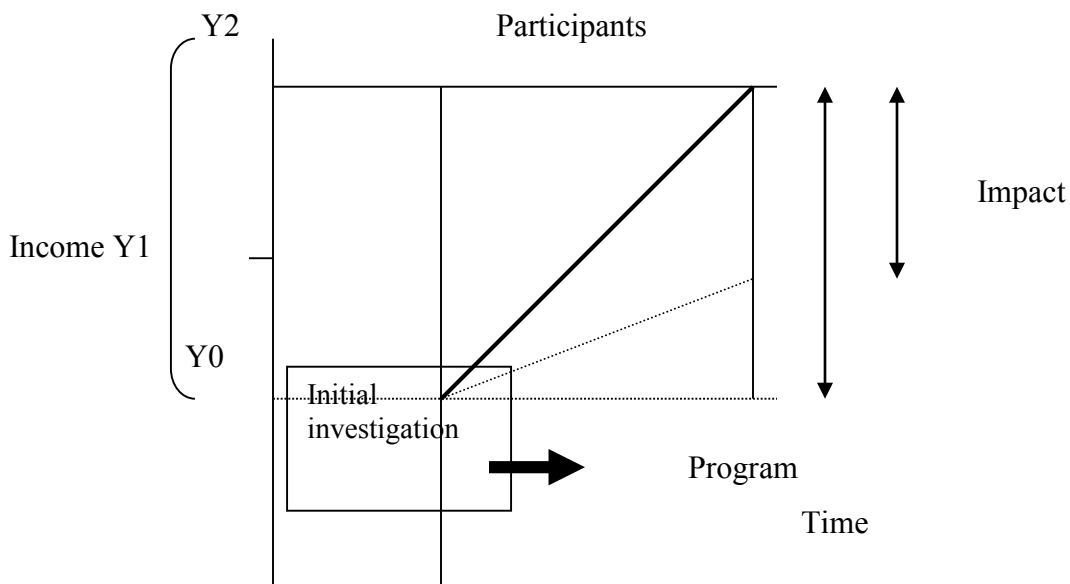
These types of evaluation need to use many different techniques. In the 1970s and 1980s, the program planning and budgeting system (PPBS) was first developed by the Ford Motor Company and later applied by the U.S. Department of Defense and finally applied throughout the U.S. Federal Government. Another technique is zero based budgeting (ZBB), a variation of the PPBS, applied in the United States and many other countries. The next technique is management by objective (MBO), which replaced the PPBS and was developed at the Xerox Corporation and applied by the Carter administration. These techniques are used by many governments in the world at

different levels. In addition, different countries and governments have developed their own evaluation systems. Therefore in the 1980s a policy and expense management system (PEMS) was established at the federal level in Canada, and a General Control Office (OCG) was established, dedicated to performing evaluation research. In addition, the Canadian Federal Reserve Committee employed an Overall Performance Measurement System (OPMS). Today, international organizations and many countries in the world apply quantitative and qualitative methods to evaluate the impact of public policy.

1.3.3. Before-and-after evaluation

There are a number of studies commonly applied in program evaluation. The research design is often used for before-and-after comparison, comparing the results at two different points of time – one landmark is before the program is implemented and the other is after the program is implemented. Typically, only the new object group is reviewed. This before-after comparison is designed to indicate the impact of the program, but it is difficult to know whether the changes that are observed, if there are any, they are a result of the program, or a result of another change taking place in society right at the same time.

Figure 1.6 Evaluation of before-and-after comparison usage



The implementation method of before and after comparison is to compare the results in the program participants before and after the program. We can compare the retrospective results in the beneficiaries against the data about the results before any intervention, or with comparable survey data before the implementation of the program, or with retrospective data, for cases in which there is no appropriate evaluation design. As can be seen in Figure 2.3, we have two observation points inside the beneficiaries in an intervention: pre-intervention income (Y_0) and post intervention income (Y_2). So the efficiency of a program can be computed with $Y_2 - Y_0$. Research literature calls this method the reflexive of the impact, in which the results in participants before the intervention are the comparative or control results. So does this method allow an authentic measurement of the results of the program? Perhaps it doesn't. The time sequence obviously helps obtain a reasonable conclusion, but perhaps doesn't make a conclusion about the program's impact. For example, looking at the picture we can see that the impact level can be $Y_2 - Y_1$. Indeed, such a simple comparison cannot be evaluated accurately because of other factors (outside the program) that have changed during this period. By not collating this with other elements, we will assign the wrong results in the participants when there is no program Y_0 , while it might be Y_1 . For example objects participating in a training program can improve employment opportunities after the program. Even though this improvement is created by the program, it may also be due to the economy having recovered from the crisis, leading to a further increase in the indices. If not done carefully, the reflexive comparisons cannot distinguish between the efficiency of the program and the other external efficiencies, thereby affecting the reliability of the results.

Reflexive comparison will be useful in evaluating interventions with comprehensive coverage such as national programs and policies in which the entire population participates in the program and there is no control group size. Even when the program

is not so large, if the results are observed in the participants over a few years, it is still possible to check the changes in the structure of the result (Ravallion 2008).

Therefore this study situation needs a broad initial research approach covering the many typical characteristics of the families at the time before the program was implemented, in order to control as many factors that are likely to change during the period as possible. Detailed data about the level of participation in the program before the intervention is implemented is also essential. The following programs will discuss some examples with a before and after comparison, related to reflexive methods or Yes and no methods.

1. OBJECTIVES AND ELEMENTS OF POLICY EVALUATION

2.1. Objectives of policy evaluation

Reality has shown that policy programs often prove very promising before deployment, but do not create the desired impacts or benefits. Therefore, the evaluation will tell whether the program has achieved the desired effect or not, thereby enhancing the sense of responsibility in the allocation of resources among public programs. In doing so it also adds unknown things about effective and ineffective activities, meanwhile maintaining an awareness of the identifiable changes about how benefits relate to a certain project or policy intervention.

2.2. The elements of policy evaluation

2.1.1. Participating level of the elements

The State conducts policy evaluation to predict and assess the impacts of policy measures on society when the policy is put into execution. When the policy is

announced and implemented, the state must regularly conduct analysis to assess the actual impacts of the policy on society, and provide a basis for the improvement of the policy in terms of both objectives and policy measures.

Under state decentralization, the National Assembly and Government are authoritative bodies to enact public policies on the basis of policy submission by the sector management agencies and the local governments. Also, the Government and the sector management agencies at the national level are also responsible for organizing the policy at the macro level. To effectively manage the policy at the macro level, the state should establish a system to analyze and evaluate the macro policy to monitor and assess the development and issuance of public policy; the situation of policy implementation organization at the macro level as well as general evaluation of the results of public policy implementation.

The major objects of state policy system are located in localities across the country. The closer the policy reaches to the localities, the closer it reaches to their objects. At the localities is the meeting between the policy and its objects, so it seems that all the "contact" happen here. To see if the policy actually works, one should monitor the situation of policy implementation analysis at its base.

In fact, there are many localities, distributed over large geographical areas, with differences in economic conditions, society, and the environment, so the policy implementing organization is not the same. To supervise the process of policy implementation at the localities requires more than a central policy evaluation analysis system. The localities are capable of managing social activities in the area through the local government according to law. Therefore, they are active in defining objectives and specific measures to implement the policy.

The entities that analyze the professional policy evaluation are often departments specialized in analyzing policy evaluation by political and social organizations, trade

union organizations, non-governmental organizations and advisory organizations, and advisory experts. They become the entities to analyze policy evaluation because:

- They are responsible for protecting the common interests of their organization from the state government by submitting a policy evaluation to demonstrate the impact of a policy that the state will enact or is implementing on the interest of the group they represent.

- These organizations are the basic components constituting society, so a negative social outcome would also harm their interests. Therefore, the organizations should regularly evaluate the public policy to identify the negative impacts caused by economic and social problems and to propose state intervention policy in a timely manner.

- From a professional perspective, the policy analysis organizations often have relationships with departments specializing in evaluation of state policies. Together they are responsible for supplementing analysis results to each other, making the work of policy analysis more complete.

2.2.2. Elements of policy evaluation

2.2.2.1. Analyzing entities

The entities analyzing policy evaluation are individuals or organizations conducting policy analysis and evaluation. Public policy was enacted to address public issues that involve many different entities in society, so there are many different entities that directly conduct policy analysis and evaluation activities, in order to enact good public policies, or to protect their various interests or those of the people they advise. The entities conducting policy evaluation analysis can be classified into two basic categories: state entities analyzing and assessing policy, and entities analyzing and assessing policy who are individuals and nonstate organizations.

a. State entities analyzing and assessing policy

The State is the entity for planning, implementation and evaluation of the major and most common public policy. The State proactively builds policy evaluation analysis systems and assigns them to the state agencies responsible for implementing policy analysis activities from central to local levels. Also, the state enacts regulations to create a legal framework for policy analysis and evaluation operations.

Thus, we can see that the state is an entity with sufficient jurisdiction and reason to analyze and assess public policy, while also establishing the legal framework for policy analysis and evaluation of other entities in society.

b. Entities analyzing and assessing policy who are individuals and organizations

Public policy affects one or more different population groups in society, and can bring benefits to these groups, and may also deprive the interests of other groups. Therefore, in addition to the state being the entity conducting policy analysis and evaluation, individuals and organizations can become entities which conduct policy analysis and evaluation, both as professionals and amateurs.

In addition to organizations with legal status being policy evaluation entities, there are scientists. As individuals who study policy, scientists can assess the impacts of policies by applying their knowledge and experience. Their research results are only individual policy initiatives, but if they can catch the public's attention, the policy will have a chance to become the state policy or that of social organizations. The public policy analysis and evaluation entity is presented in the upper part of the curriculum. Moreover, apart from professional policy analyzing entities, there are also amateur ones. These are often the recipients of social benefits of each group. Usually they are less interested in public issues, because they believe their interests could not be affected because it is in the common interest of the group on the principle of "you get it, I get it too". But when a major problem occurs that has a large and direct impact on their benefits, triggering strong emotions, it draws their attention and their will to conduct

impact analysis of the current policy in order to offer some specific requirements to the state. The informal policies analyzing system includes:

- Policy evaluation departments in social organizations. A social organization is the subject of public policy, thus it is affected by public policy. The benefit obtained from the public policy of social organizations is affected by multiple factors such as the policy area, the organizing activities by state agencies, and the participating spirit in policy implementation among the members of the organization. Therefore they have to assess the policy to understand what positive and negative influences public policy can have on their members, and make operational adjustments, or recommendations to authoritative state agencies to settle the problems of the organization. Policy evaluation activities of social organizations do not occur regularly as in state agencies, as they are the passive objects of public policy. They only care about policy evaluation when there are special issues, seriously affecting their interests, in which case they set up a temporary analytical department which will be dismissed after accomplishing the mission.

- Policy evaluation departments of trade unions. Trade unions are organizations of members who are engaged in production, business and social services in areas of a similar nature. Trade unions are established to protect the interests of the member organizations amid changes in society and the impacts of public policy, hence the unions pay more frequent attention to policy analysis than to social organizations. In addition to the task of assessing public policy to determine the impact of the policy on the interests of the organization, the unions must also conduct regular analysis of internal policies to adjust their activities under a market mechanism to achieve profit targets.

- Individuals - citizens of society, are regularly affected by government policy. However, public policy analysis activities by individuals in society have a temporary, spontaneous and irregular nature. With the development trend of the modern age,

policy analysis and evaluation departments of informal systems are growing both in quantity and quality, as seen in the establishment of policy research institutes, and policy advisory organizations...

2.2.2. Subjects for evaluation

Target groups

The target group is a target population that the program aims to, such as the poor, the sick, or the homeless. The target group must first be identified and then the desired impact of the program on the members of these groups should be identified as well. For example, the effect may be to change their materialistic and economic circumstances, the percentage of minorities or women used in professional work and the management and income of the poor, or the infant child mortality rate; or can we change their knowledge, attitude, awareness, interests or behavior? If multiple impacts are targeted, what are the preferred impacts among them? What is an unanticipated impact that may affect the target group?

Non target groups

All programs and policies have different impacts on different parts of the public. Determining that the non-target group is important for a policy is a difficult process. For example, what impact does welfare reform have on low-income people - government officials, social workers, local political figures, families of the working class not entitled to welfare, taxpayers, and others? The impact on the non-target group may be in the form of benefits and costs, such as benefits for industrial construction and public housing projects.

2.2.3. Evaluation methods

A program or project always requires an evaluation of its impact in order to help policymakers know if the program has achieved the desired effect or not. There are several methods being used today in the world in which each method has its advantages and disadvantages and whether the implementation of impacts is successful or not

depends quite heavily on whether the sampling for the project implementation is good or not.

2.2.3.1. Random sampling method

Concept and application

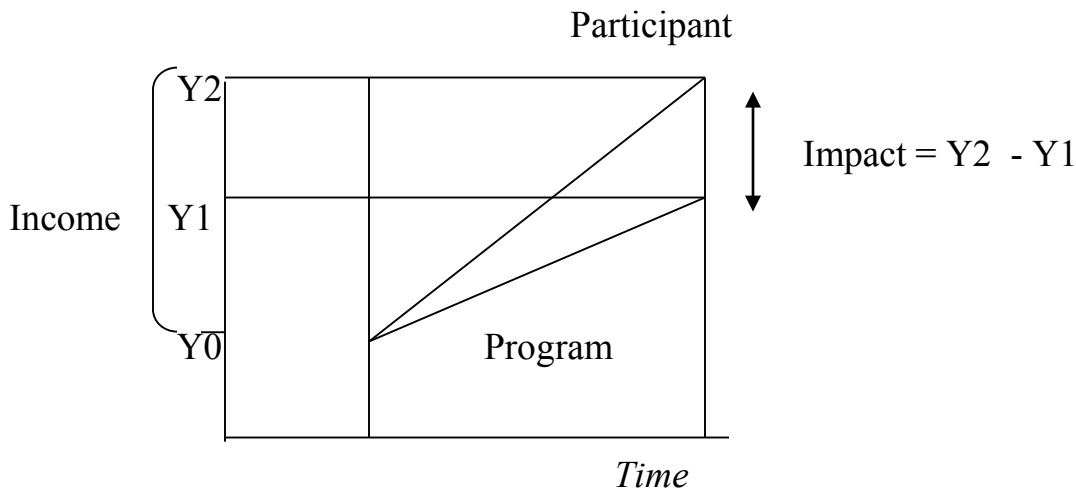
Random sampling is a scientific method of determining the impact of the program. This is the method that gives ideal results with the fewest discrepancies in impact evaluation among existing methods. However, random sampling still has some drawbacks that will be mentioned in the following sections. This method helps to determine which orientation or program among the programs, projects or policies is truly effective, thus enabling investment diversification. This is a random distribution activity on the object sample (such as a community or an individual); the intervention process and the control subject have characteristics prior to program implementation which will be monitored during the entire period.

How to proceed

In the process of random sampling, two kinds of sample groups will be considered to perform impact evaluation of project 1 or a public program: the group participating in the project (affected group, intervention group), and the non-participating group (the group not affected, non-intervention group). There are many different names for these groups, and within this protocol, it can be referred to by other names: treatment group, and control group...

By looking at the model below we can figure out the steps to assess the impact by the random sampling method.

Figure 1.2. Ideal experimental with equivalent control group



Two steps that usually exist in the selection of the comparison group when assessing impacts:

Step 1: Creating a sample group through statistical design in a totally random way

Step 2: Modifying the object selecting method of the program to eliminate the possible differences between the intervention and non-intervention groups before comparing the results of the two groups.

The following equation expresses causality, which is also the nature of the impact evaluation of a project when comparing different Y results, the Y of the intervention group (also known as project-involved group) and non-intervention group (non-participants):

$$Y_i = \alpha X_i + \beta T_i + \epsilon_i \quad (1.1)$$

In which T is the false variable equal to 1 which corresponds to participants and 0 corresponds to non-participants. X is the other observed characteristics of individuals and maybe families and the local environment. Finally, ϵ is the tolerance limit representing unobserved characteristics which also affects Y. Equation (1.1) reflects a

commonly used method in impact evaluation, which is measuring the direct efficiency of the program T and the result Y.

Issues in random sampling

Internal validity and External Validity

+ Internal validity:

Impact evaluation methods are considered effective if they meet two criteria, internal validity and external validity.

Internal validity tells whether the evaluation method can control the problems that will affect the causality in the intervention impact. System errors (which are the problems caused by inappropriate group choice, objects abandoning intervention, spurious noise in the target area, from a non-participating sample (control sample) or the changes in the tool used to determine the progress and results of the experiment process), as well as the impact of the sampling itself, for relevant selections and results in the participants, in the selected sample that can cause consequences: the evaluation method has no internal validity.

+ External validity: In the first phase, the policy-making authorities should clearly identify not only the random sample that will be selected for analysis but also the populations used for sampling. Particularly, the experimental activity must have external validity, which means that the achieved results could be common for other objects or conditions (such as intervention through other programs).

Estimating intervention intention and calculating spillover

In the random sampling method, it's important to ensure that the participating area and non-participating area are not mixed together if one wants to determine the impact of the program in the most precise and objective way. In the experimental design, some methods can help reduce the possibility of contamination in the project areas. For example, choose the participating and non-participating areas at locations relatively far away from each other, and avoid the possibility of migration between the

two regions. Therefore, intervention area contamination occurs more often in large-scale projects. Examples of area contamination: People want to assess a project of installing traffic cameras on the streets of a city to see if they can really reduce crime. In this case, area contamination means that the number of criminals does not go to the area mounted with cameras and the fact is that the criminals flee to nearby areas (where there is no camera) to avoid being tracked.

Despite the efforts in random sampling in program intervention, sometimes the program participants are not random at all. Individuals or families in the control area may move to the project area, and ultimately affect the program and the results obtained. Similarly the households of the project may not participate in the project but are indirectly affected by the project. If the program with the selected object also affects the entire control group, it will cause contamination when calculating program impact.

Assessing random impact in reality

The random sampling method is becoming more and more common in some countries, partly because if implemented well, random sampling will give reliable results about the impact of a program. Also, after the survey step has been set and the data has been collected, the experience-based techniques to determine the impacts of the random experiments are usually quite direct. Random experiment in particular is a method that is easiest to explain or initiated when starting the evaluation program. This phase often allows random sampling before program expansion. This is the occasion when partners implement the program and seriously evaluate the program effectiveness and is also the opportunity to finalize the program design.

Obstructions in random sampling

The implementation of random experiments in developing countries often also raises ethical issues. For example, it may be difficult convincing government officials not to perform a certain program on a group of randomly selected objects and there is always poverty and limited opportunity to earn income in the randomized group. The

implementation of random designs is often politically unfeasible and the cost is too large due to difficulties in the design explanation process for those that benefit from it.

b. Method of propensity score comparison

Concepts and application

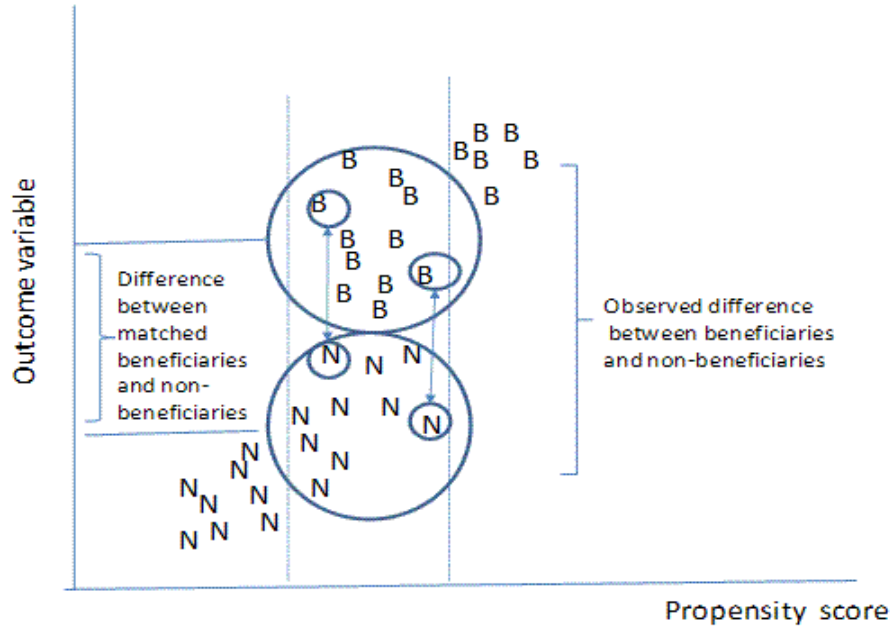
Propensity score matching (PSM) is a method that is highly praised for its delivery of a convincing result in the impact evaluation of a project on the participants. This method is often used in the fields of communication and education, policy, medicine and epidemiology, psychology, economics and sociology. This is a non-experimental method, used by researchers when the random sampling method is not suitable in the situation.

The way PSM works is to make pairs to create **two similar groups** between the intervention and non-intervention groups. Once two similar groups have been identified, the researcher can easily determine the impact of the program when comparing the output value between the two groups. Failure to create two similar groups will lead to higher or lower results than the real impact and the result becomes inaccurate. In fact, most researchers often use such traditional evaluation design by time (before-after comparison), or by space (comparison between intervention and non-intervention group), or a combination of both. It is undeniable that if a design can combine both space and time, the intervention impact evaluation will definitely produce the fewest errors. To do this, however, the researcher must face many difficulties due to the complex nature of sample selection, therefore, to choose a group having similar characteristics as the intervention group is not an easy task.

How to proceed

The following figure shows how to proceed with a PSM

Figure 1. A graphical representation of matching on the propensity score



In which:

- “N” represents non-beneficiaries group
- “B” represents beneficiaries group

PSM will calculate the difference between the beneficiaries group and non-beneficiaries group by calculating the **average** of all the differences of all groups brought upon for comparison

More specifically, the steps of PSM are as follows:

Step 1: Sampling for 2 groups: between the beneficiaries and non-beneficiaries groups, it's important to ensure similarities. For example: Select 100 families participating in the project to reduce poverty and 100 households not participating.

* Things note when selecting similar groups:

- The quality of the samples is very important
- The sample selection process should be established in detail
- Use the same survey form, same question system, same area, region or context,

living in one locality, the same survey slip, same survey time...

Step 2: From data obtained, build a logit model in which the dependent variable is 0 for households not involved in the project and 1 for households involved in the project, while the independent variables are factors that can affect the ability to participate in the project of the two groups; for example independent variables may be the household's livestock characteristics, demographic characteristics, or whether there are few or many people.

Step 3: Conduct a regression for the logit model and calculate the predicted value or predicted probability for each household in both groups.

Step 4: Eliminate households whose predicted probability is too low or too high compared to samples.

Step 5: Corresponding to each household in the group involved in the project, look for one or more households not participating which have the most similar predicted probabilities and compare them with each other. For example, a total of 93 comparisons will be performed because 7 participating households were excluded from comparison for having predicted probabilities too high for samples.

Step 6: After the evaluation, we see that per capita income of the participating households is VND 300,000 higher than that of non-participating households.

The validity of PSM depends on two conditions: a) conditional independence (the unobserved factors do not affect the intervention condition), or b) large general support or coincidence in propensity score between beneficiaries and non-beneficiaries.

Example: Australia conducted a study on how the use of tap water will impact the rate of gastrointestinal diseases in children under 5 years of age in this country, and the evaluation program was conducted in 1993 -1994. The data collected includes:

- 33,000 households in rural areas from 1,765 villages in 16 states in Australia took part in the project.

- 24.8% of the households use tap water
 - The proportion of children under 5 suffering from intestinal diseases and the disease duration
 - Health history of the households, income, and other characteristics.
- => Conclusion: Access to tap water reduces the risk of intestinal diseases in children under 5 years old

Many methods are used for comparison between participants and non-participants in the PSM method, including nearest neighbor comparative method (NN), comparison in scope and radius, comparison of stratification and spacing, and nuclear comparison and linear least motion (LLM).

- *Nearest neighbor comparison*: One of the most widely used comparative techniques is nearest neighbor comparison (NN), in which each intervention unit is compared with a collation unit with the nearest propensity score. We can also choose the nearest objects n to perform a comparison ($n = 5$ is often used). The comparison can be done with or without alternatives. Alternative comparison means to use the same non-participating object for correlation with many different participating objects.

- *Comparison in scope or radius*: One problem in NN comparison is that the difference in propensity scores between the nearest participants and non-participants may still be very high. This situation leads to a poor comparison and should be avoided by setting thresholds or levels of "tolerance" on maximum propensity scores distance (within scope). Thus, this process will simply be an alternative comparison between the propensity scores *in a certain range*. However, a large number of excluded participants may lead to an increase in sampling errors.

- *Comparison in stratification or period*: This process divides general support into various intervals and calculates the impact of the program in each period. Specifically, in each period, the effectiveness of the program is the average difference in results between the intervention and control observations. The average of the impact estimates

in this time period will show the common program impact.

Advantages and disadvantages of PSM

- The effectiveness of the PSM method depends on how much it affects the program participation status of observed groups. If the selected *errors* in the unobserved properties are *not insignificant*, the PSM will allow effective comparison with random calculations. And if the variables involved is not complete, the PSM result may be unreliable.

Another advantage of PSM is that this method does not necessarily require initial or general investigation, although in the subsequent cross-sectional study, simultaneous variables observed in the logit model on propensity scores will have to satisfy the assumption of conditional independence by demonstrating that the observed attributes X are not affected by the program participation status. In this case, the initial investigation prior to program implementation would be more favorable because the unobserved X variables that are covered do not depend on the participation status.

PSM is also a method with few errors because it increases reasonable comparability between the participating and non participating groups, thereby reducing the errors in program impact. However, this result is only true when the general support range is large; one should have enough data about the non-participating group to ensure there is a sample large enough to select a symmetrical pair. Errors may also stem from the removal of the observations in the non participating group which has systematic differences for the remaining objects; This problem can also be solved by collecting data on large nonparticipating samples, which have sufficient variability to achieve representative samples. On the other hand, by surveying the properties of the nonparticipating sample that has been excluded, the explanation ground for intervention effectiveness is improved.

- **Weakness:** Because the PSM method helps determine and compare objects with similar features, a relatively large observation sample is needed. To conclude that

there are few errors, it is necessary to explore the factors which are independent variables and which may have an impact on the ability to participate and not to participate in projects by the research groups.

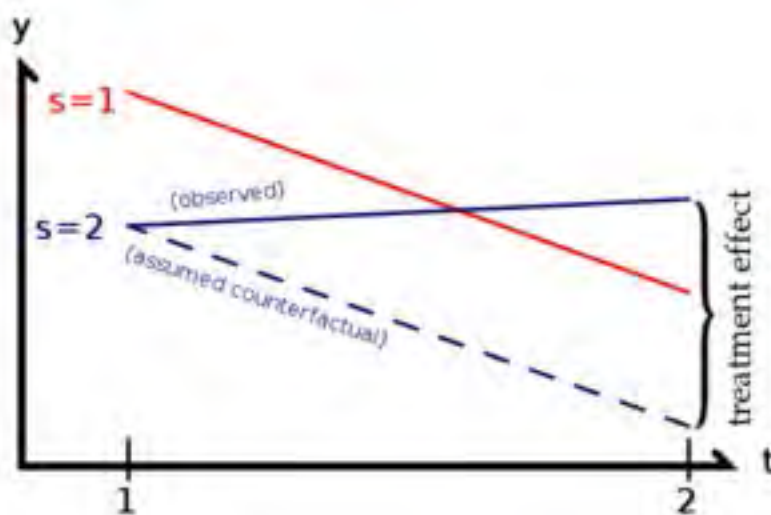
c. Difference in Difference method

Concepts and applications:

The Difference in Difference (DID) method is based on comparisons of participants and non-participants before and after the intervention. For example, after an initial investigation of both participants and non participants (subsequently), we can perform a subsequent investigation in both groups after the intervention. From this information, we can calculate the difference between the median results observed in the intervention group and control group before and after the program intervention.

The difference in difference method is performed as in the table below:

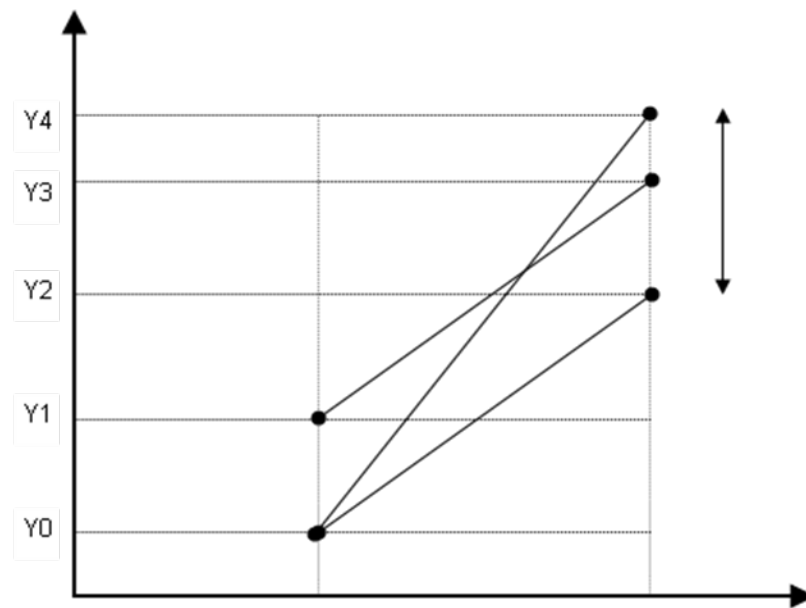
y_{st}	$s = 2$	$s = 1$	Difference
$t = 2$	y_{22}	y_{12}	$y_{12} - y_{22}$
$t = 1$	y_{21}	y_{11}	$y_{11} - y_{21}$
Level of change	$y_{21} - y_{22}$	$y_{11} - y_{12}$	$(y_{11} - y_{21}) - (y_{12} - y_{22})$



How to proceed and apply

To use the DID method with general data, we need to collect initial data on areas participating in the program and perform control before implementing the program. Postproduction inspection after program intervention should also be performed on the same object units. Calculations of the average difference in the results separately for participants and non-participants in the period and then calculations of the supplemental difference between the average changes in outcomes in the two groups will produce the DD impact result. Figure 1.1 is an example: **DID** = $(Y_4 - Y_0) - (Y_3 - Y_1)$.

Figure 1.3 Example of DD



This assumption says $(Y_3 - Y_2) = (Y_1 - Y_0)$. If using this equality in the DID equation above, we get $DID = (Y_4 - Y_2)$. According to the DD method, the unobserved characteristics raises the gap between the controlled results measured and the result that reflects reality is assumed to be constant over time, provided that the difference between the two trends is the same in the period.

For example, one survey conducted in a program in Indonesia applies random selection of iron supplements food distribution for individuals in households living mainly on agriculture, in which half of the objects receive the intervention, while the control group receives a placebo. Before the intervention there was an initial investigation. By means of DID, the study finds that an iron deficiency in males before the intervention has improved in medical outcomes, while the effect in women is less visible. Initial investigation also helps solve the problem of errors in intervention compliance by comparing the changes in the results of the objects included into the intervention group against the changes in the objects included into the control group.

Pros and cons and some things to note about dual difference method D

The critical assumptions of the DID method is that if there is no public policy, the participating group and the non-participating group will have the *same mobility trends over time*. This may be right or may be wrong in reality. This assumption is called parallel assumption. Only when this assumption is true can we apply the DID.

For example, we can study the impact of telecommunications on the income of fruit growers. There are two villages by the two canals in the province of Vinh Long. The fruit growing families in one village have a telephone connection while the other village does not. The two villages grow the same kind of fruits, are subject to the same climate impact, and receive the same government support. Therefore, it's reasonable to assume that without telephones, the change in average income of a fruit growing family of the two villages will be the same over time. We can use the DID method to verify with statistics to see if those households with telephones have better information about the market and therefore will have a higher income than those without telephones.

In another example, one may wish to use the situation with farmers in Ba Ria – Vung Tau being hit by a Durian Storm while farmers in Dong Nai did not get hit, in

order to estimate the impact of the storm on farmers' lives using the DID method. However, there are many reasons to assume that without the storm, the trend of income change over time among farmers in Dong Nai and Baria Vung Tau is still different. It's not suitable to apply the DID method in this case.

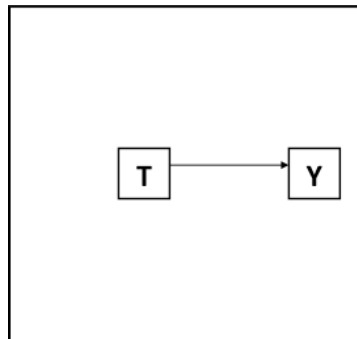
One way to verify a parallel assumption is to gather more statistics at another point in time prior to policy enactment. In this case, we have two points of time prior to public policy enactment where neither the processing group nor the control group is affected by public policy. Based on these statistics, we can calculate result changes for both groups and verify if these changes from the two groups are the same.

2.2.3.4. Calculating the variable for IV tool

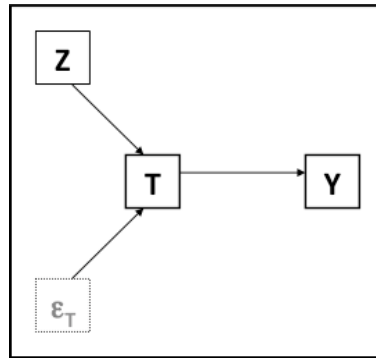
Concept and application

The IV model is used with cross-section data or general data and in a general data case, will allow selection errors about unobserved characteristics that vary over time. The following figure will help us figure out what the IV method is:

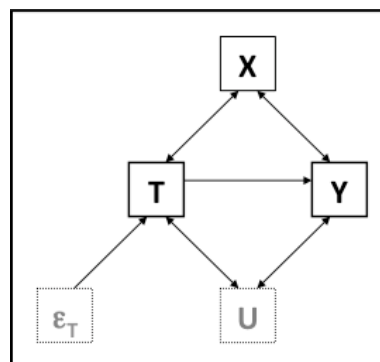
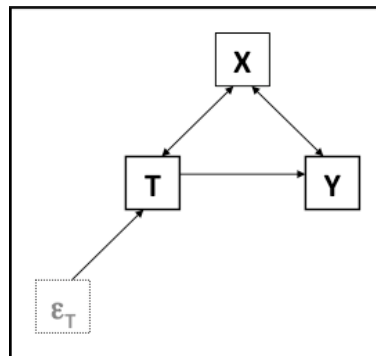
For example, we want to assess the impacts of T on Y



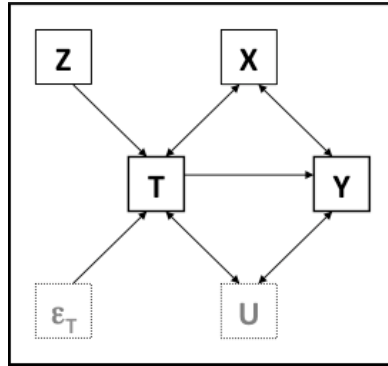
But T can be affected by other factors, for example, Z (the factor that can be observed), and ε_T (cannot be observed), as in the model below:



If T is only affected by factors that can be observed, Z, then at this time assessing the impact on Y is very simple and can give quite accurate results. However, T can also be affected by the element X, which may also impact Y (the key factor we need to assess the impact on), as shown below:



Or T is not only affected by the X factor as above (observable) or even U (not observable). Given this, we can not give accurate Evaluation results. Therefore we need to use an element Z that meets the requirements of affecting T but not at all Y, to assess the impact => and this variable Z is called Instrumental Variable.



The method to calculate IV by using square IV of two smallest stages

As noted above, to separate the part of intervention variables unrelated to unobserved characteristics affecting the results, we must first calculate intervention regression on **factor Z (instrumental variable)**, and other simultaneous variables in equation 4.1 and jamming parameters. The calculation is based on the following formula:

$$Y_i = \alpha X_i + \beta T_i + \varepsilon_i \quad (4.1)$$

$$T_i = \gamma Z_i + \phi X_i + u_i \quad (4.2)$$

From the two formulas above we get: $Y_i = \alpha X_i + \beta(\gamma Z_i + \phi X_i + u_i) + \varepsilon_i \quad (4.3)$

Result IV (also known as two-smallest-phase square, or 2SLS) on the impact of the program which is β IV. Specifically, when looking at $Y_i = \beta T_i + \varepsilon_i$, a simplification of equation 4.1, given that under the assumption $\text{cov}(Z, \varepsilon) = 0$, we can also get the intervention impact in IV (β) which is $\text{cov}(Y, Z) / \text{cov}(T, Z)$:

$$\text{Cov}(Y_i, Z_i) = \text{Cov}[(\beta T_i + \varepsilon_i), Z_i] = \beta \text{cov}(T_i, Z_i) \quad (6.4)$$

$$\Rightarrow \frac{\text{Cov}(Y_i, Z_i)}{\text{Cov}(T_i, Z_i)} = \beta \quad (6.5)$$

This derivative formula will play an important role when examining the effectiveness of the quality of the tool over the estimated program impact in IV. So, through the tool, T is cleared from its correlation with the tolerance limit. If the assumptions of $\text{cov}(T, Z)$ and $\text{cov}(Z, \varepsilon) = 0$ maintain their values, IV will determine

the median impact of the program associated with the tool, as follows $\beta = \beta_{IV} + \text{cov}(Z, \varepsilon) / \text{cov}(Z, T)$

Difficulties will arise with conventional IV calculation if individuals know more about the benefits expected from the program than does the assessor or researcher. That is, individuals estimate the benefits obtained from the program that the assessor or researcher can not observe. At that time we have a situation of an unobserved selection in participants, because individuals who benefit more than the program, based on their characteristic X , also have a higher ability to participate. Because the Z tool affects participation levels, the unobserved characteristics affecting participation levels will also correlate with Z , and the IV result will have errors.

Issues on IV

Sources of IV

In order to choose the appropriate IV instrumental variable, we must understand the factors affecting the object selection and the program participating level. For example, collecting information on methods to determine the object and program implementation will indicate the source of exogenous variation in program progress. This information can be collected by both initial and postproduction quantitative surveys and quantitative information (such as through interviews with program officers). Random sampling can also bring the IV source for evaluation, but sometimes this is not the ideal way to identify participants. Even when random sampling is done at the gross level (such as regional level), selection errors persist. Random sampling does not guarantee that any target objects will be involved. However, considering the process of selecting the objects of the program under this mechanism, if it correlates closely with the participation rate, then random sampling (by definition of satisfying the excluding rule) can still play a IV role.

And in non-random conditions, the sources of tools are usually geographically different, the correlation of the program with other policies and exogenous mutations

affect the program site selection. The tools can also be determined from the program design as the provisions on eligibility or the nature of the intervention.

2.2.3.5. *Regression discontinuity method*

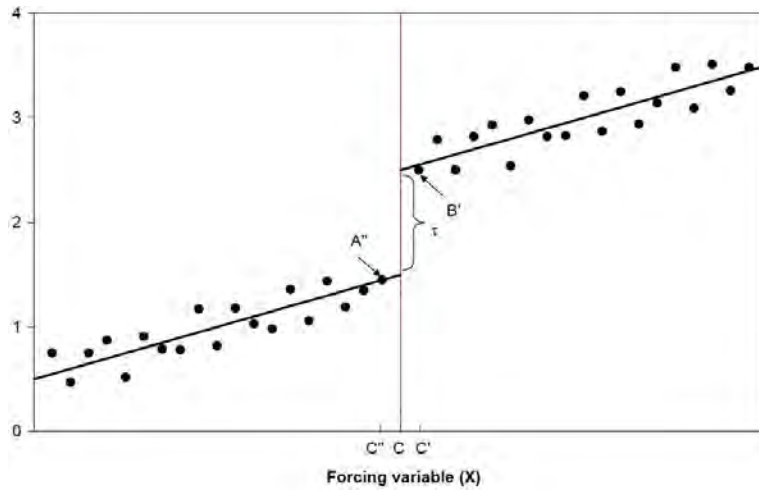
Concept and application

To perform an evaluation, we can use participants and nonparticipants within a certain standard threshold as an appropriate sample. Referred to as regression discontinuity (RD), this method identifies limit points or participation standard threshold in the form of nonparameters, but in reality, the limit point is usually determined through the instrumental variable. Disruptions and delays in implementing the program, based on the participation criteria or other exogenous factors, may be useful in evaluating non-experimental programs. We can distinguish objects above and below the participation threshold according to the results with the assumption that they have similar observed characteristics.

However, the **comparison samples must be close enough to the limit point** on eligibility to ensure comparability. Furthermore, the unobserved inconformity could also be a factor to consider if the objects in the range of eligible objects show the variation in the level of actual participation in the program, leading to selection errors. In that case, the eligible and ineligible samples located near the eligibility limit point will be used to compare the average effectiveness of the program. Therefore, discontinuity methods are similar to instrumental variable (IV) methods, in that they deliver an exogenous variable that has a high correlation with the participating sample.

For example: The micro-credit program of Grameen Bank selected households owning lands of under half a hectare as its objects; Retirement programs have populations of certain ages; Scholarship programs select students with high standardized test scores. By examining the narrow unit strip lying under and above the limit point and comparing the results of these units on the threshold, the results are very similar.

How to proceed



Step 1: To modelize the efficiency of a specific program on each of the γ_i results through the RD method, we need an S_i variable to determine program eligibility (such as age, property ownership or similar factors) with the eligibility limit point s^* . For example: The scholarship program for poor students overcoming difficulty is only for students with an academic ranking of 8.0 or higher, and here we have 8.0 as the eligibility limit point s^* .

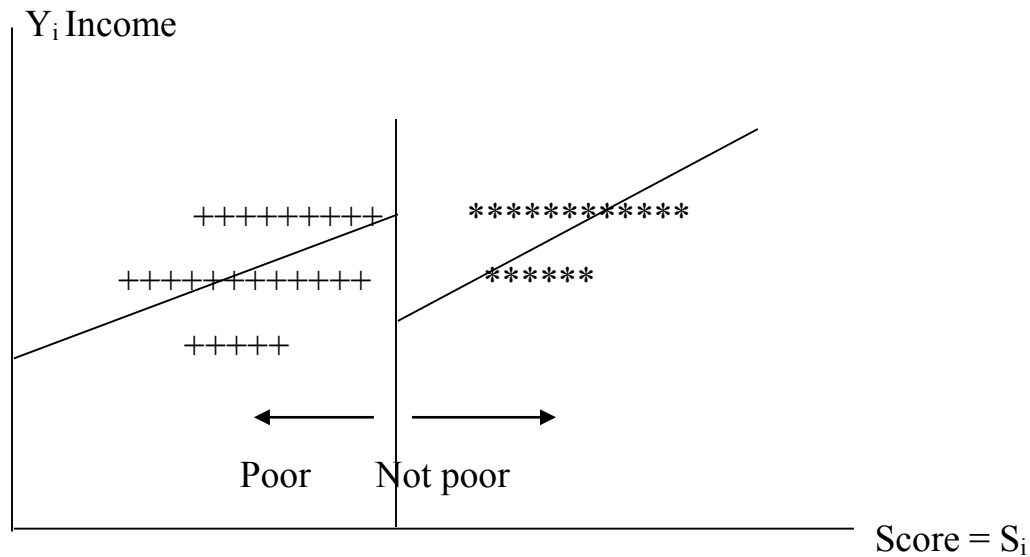
Our equation then will be $y_i = \beta S_i + \varepsilon_i$ in which individuals with $s_i \leq s^*$ are admitted, and those with $s_i > s^*$ are not eligible. The individuals belonging to range of objects located on s^* must be "comparable" because they are expected to achieve the same results before any program intervention. Figure 7.1 gives an example of this attribute, in which individuals under s^* are considered poor, while those above this threshold are considered not poor.

Step 2: After the threshold s^* has been determined, the equation calculating the impact will measure the difference in the samples around s^* . However, this result may not be accurate if the provisions on eligibility are not strictly followed, or when certain geographic areas were selected as subjects but the boundaries are not clearly defined and mobility is still common. If the standard threshold for participation is exogenously

determined by the program and has a close relationship with the intervention, we can also use the s^* in IV about participation rates.

We may use normal non-parametric regression to calculate intervention effectiveness in clear or opaque regression discontinuity conditions.

Figure 1.5 Results after program intervention



Result

For clear discontinuity cases, intervention effectiveness may be calculated by comparing the median in the individual on the left and right of the threshold. Namely, we should run linear regression for the y result, with a simultaneous variable x given on both sides of the threshold to calculate the difference $y^- - y^+$.

For cases of vague discontinuity, we need to use a 2-step process. We can use linear regression in place for the outcome of the objects located on both sides of the threshold to determine the difference level (or discontinuity) of the results. Similarly, it is possible to use linear regression in place with intervention indicators in order to find discrepancies or discontinuity that indicator. The resulting discontinuity rate on interventions discontinuity is the intervention effect in discontinuity design.

Step 3: Charting on the predictive intervention effect also shows a useful opposition between eligible and ineligible populations, as well as objects located in the narrow range around the threshold. Charting of the density of variables to determine the standard around the threshold also shows whether the RD design is valid or invalid: Will the members of the ineligible sample finally become participants or not? This can occur in cases such as when the objects know the threshold and adjust the declaration value about the standard variable in order to be eligible to participate. Plotting the average value of the simultaneous variables around the threshold also shows issues about identifying objects, using both clear and vague discontinuity methods.

Pros and cons of the RD method

- Advantages of the RD method:

+ At discontinuity point s^* , error-free result.

+ It's possible to take advantage of the known interest mounted rule which is common in social policy design.

+ No need to exclude the eligible individuals or household groups from the program.

- Disadvantages:

+ This method gives results that are not always general.

+ Efficiency is calculated in multiple phases so in general there will be fewer observations than in a randomized experiment with the same sample size.

+ The 4th drawback is the behavioral factor; the program manager does not always know exactly what the criteria for participation are, therefore the behavioral response to program intervention can be confused with the actual object selection rules.

+ This method only focuses on individuals or units close to or around the threshold s^* .

It's necessary to determine if this group has a significant interest in the assessor or not; for example, if the program officers are interested in determining the efficiency of the program around geographic boundaries and want to decide whether to expand the

program beyond those boundaries or not, the restriction in the sample may no longer be a big problem. A similar example is that of the poverty reduction program related to households near the poverty line.

If the rules on eligibility are not followed or there is a change in the period, we need to examine more carefully the validity of the discontinuity method. It is possible to perform a reliability test to examine the validity of discontinuity design, including sudden changes in other control variables at the limit point.

2.2.4. Tools used for evaluation

Policy evaluation requires various engineering and equipment factors. But upon mobilization for use in the analyzing process, policy analysts should consider the specific requirements and practical conditions for appropriate equipment when assessing policies. Usually policy evaluation activities require the following equipment:

- Real estate factor. Including the structures and the factors associated with it.
- Movable equipment factor. Includes vehicles, machinery, supplies, raw materials, fuel, materials used for evaluation activities
- Technical factor - the technology used in policy evaluation.
- The structure of technical equipment used for policy evaluation is not fixed and varies with the level of development of the times. According to the current motivating trend, technical technology factors have the highest pace of change and occupy most of the structure of technical and technology equipment.

Policy evaluation activities take place regularly and continuously so the requirements for the supply of technical equipment are quite stable. Real estate factors are steadily provided at the outset. Architectural structures are associated with the legal status of the policy analyzing agencies. This factor only changes when there is a change in the legal status of the system. The factor that changes greatly in the supply of technical equipment is technical - technology factor. The policy evaluation work faces

increasingly high requirements in terms of quantity, quality and duration of the analysis, while the ability of personnel is limited, so frequent innovations of technical equipment and technology is indispensable. The higher social living standards, the more requests and wishes they have for state agencies. There is more and more information in terms of quantity, type, and transfer rate; and they exist in many forms ... Therefore policy evaluation analysts must constantly change the methods of analysis, information processing techniques and other modern technology to keep track, analyze and assess policies to meet development demands.

2.3. Public policy evaluation standards

2.3.1. By the purpose, requirements and orientation of the policy

The purpose, requirements and orientation set out in the public policy can be quantified, but also qualified, and that is expressed in many different scopes and levels. The purpose and requirements set out for each policy is merely the detailing and materialization of the general purpose of the state and society, and therefore the purpose and requirements among the policies should not be contradictory or hinder each other. Each policy has specific requirements and purposes that are described in different ways, but they are all the constituent parts of the basic objectives of society as a whole. Therefore, the impact of any single program or policy can only be evaluated accurately when it is considered in mutual interactive relationships with the other policies of the system. These relationships include the horizontal relationship between the policies in the system of national policies and the vertical relationship between national policies and industry, sector, local, or regional policies.

When studying the purpose, requirements, and orientation set out for the policy, one should pay attention to the conditions that guarantee their implementation. The purpose, requirements, and orientation set out in the policy should be in line with the actual conditions of social life in which the policy is implemented. However, one also needs to note that the purpose, requirements and orientation set out in the policy not only

convey the nature of reality, but in many cases also embody a political agenda, which means they can convey future trends.

2.3.2. By the social relationship status before and after policy impact

To evaluate the impact of a policy, one needs to determine the status of society (the environment) when no policy is present. An accurate evaluation of the original status of the objects and the socioeconomic process is the basis for a possible comparison of their status after the policy has had its impact, in order to determine the transformation of social relationships, thereby accurately evaluating the results of the policy.

This evaluation will consider:

- The degree of order and the stability of social relationships; legal status in social life; behavior and awareness (including legal awareness and behavior) of the organizations and individuals involved in the social relationships;
- The physical and mental benefits created in society, such as the extent and pace of economic growth; the level of political stability; the development of culture, education and the resolution of social problems;
- The quality of life for people of different classes; the political climate and the morale of the society; the reality of values such as justice, democracy, humanity, and other kinds of social benefits; the ability to defend social values and interests; the implementation of the rights, obligations and legitimate interests of organizations and individuals in society;
- Social problems and how they are handled;
- The different processes and phenomena of social life under the impact of the policy and the policy adjustment process; the result of this process.

There are many social relationships and they are regulated by many different tools, so one should focus only on the consideration of social relationships that belong to the object of adjustment of the policy.

Reviewing the status of social relationships also allows the identification of the need of whether or not to make adjustments with the policy for that social relationship. The awareness needed in order to determine the correct objects, and social relationships that need adjustment according to the policy is one of the necessary requirements of the impact evaluation process.

Social objects and relationships can at the same time be subject to the impact and adjustment from various policies, so the review also allows us to determine not only the demand, but also the demographic that needs to benefit from the policy for the social objects. Meanwhile it is also fundamental to analyze the situation and answer questions such as how the amendment or enactment of new policies influences the other adjustment tools such as ethics, customs, etc; these tools will either promote or hinder the achievement of the purpose and requirements of the policy in the future.

If the social objects or relationships have already been adjusted with the policies prior to the amendment, supplement, or replacement with the new policies, then the quality and actual impact of the old policies should be studied; as well as the cause for this policy to be effective or not.

2.3.3. The results obtained due to policy impact

This is the most complex criterion; because the impact of public policy has a wide range, the variables due to this impact usually do not arise directly, but instead through the behavior of the subjects and through the processes of other socio-economic activities that are very diverse and abundant. Therefore the determination of the results yielded by the impact of the policy needs a specific and comprehensive perspective, as well as the proper methods to collect, analyze, and consolidate the different sources of information and data. The results due to the impact of the policy express themselves in the transformation of the status of the objects or social relationships when the policy goes into effect.

How can the status of the social relationships be determined when the impacting policy is implemented the same way as mentioned in the above criterion? Comparing the original state of the social relationships when the policy has yet to impact their status when the new policy is present will produce the results, and specific adjustments. In addition, all the new processes and phenomena recently arising in social life due to the impact of the policy should be identified (positive and negative alike).

The results of policy impact are evaluated according to the basic areas of socio-economic life such as: economic, political, socio-cultural, environmental, security and national defense; in construction activities, implementation of public policy; inspection, supervision of policy implementation; the work of fighting and preventing crime, etc. Policy impact results can be quantified, but also can be determine only by the common indicators reflecting the quality (level).

Also worth noticing is the transformation of the objects or social relationships are in fact not entirely due to the impact of the policy, but also the general impact of other factors such as law, economics, politics, ethics, religion, etc. Therefore, we must clearly determine which results are due to direct policy, and which results come from the impact of other tools. If the results achieved are completely without the impact of that policy but with the impact of the other factors, then that cannot be regarded as the basis for evaluating public policy. If the positive results achieved thanks to the impact of the policy reflect the purpose, requirements, and orientation set out upon enactment, then that policy should be considered effective.

The purpose, requirements, and orientation set out upon enactment of the policy and the results due to its impact need to be determined with the same standards, in the same scope, thus the correlation comparison between the actual results due to the impact of the policy on the purpose, requirements and orientation will be accurate.

When considering these results due to the impact of the policy, one needs to consider both the positive and negative changes. When evaluating the results due to the impact

of the policy we must take into account the correlation between the basics achieved (the benefits) with the nonbasics (the limitations and negative things that may arise) from the expectations of the policy.

When building the policy, the makers have already anticipated the positive and negative changes that will take place due to the impact of the policy to consider whether or not they should enact that policy. However, in reality there are many cases where the policymakers fail to anticipate the bad results or consequences.

The results from the impact of the policy also vary over time and space. A policy can impact well in one time and place of the country but can be limited in another. This difference depends on the circumstances, conditions, characteristics, the organization of implementation, and many other elements of each moment or territory that the policy impacts. Typically, the effects of the policy will decrease along with the change of objects and social relationships over time. When the useful effects of the policy decrease to a certain extent, it needs to be adjusted, supplemented or canceled in accordance with the socio-economic development.

Trên cơ sở xác định chính xác những kết quả đạt được do sự tác động của chính sách mang lại kết hợp với các tiêu chí khác cho phép chúng ta có thể đánh giá về mức độ hiệu quả của một chính sách.

Determining exactly the results achieved due to the impact of the policy in combination with other criteria allows us to evaluate the effectiveness of a policy.

2.3.4. The cost to achieve results

The effect of public policy on the one hand expresses the accomplishment of the prescribed purpose and requirements, while on the other hand the cost to achieve that purpose must be taken into account. Therefore, to evaluate the effectiveness of the policy's impact, we also have to consider the costs to achieve the results in reality. This criterion also reflects the economy and the usefulness of each policy. The costs to achieve the purpose set out for each policy usually includes the material and emotional

costs of the individuals and society, the cost for the force involved, the time needed to maintain the policy and other costs related to such activities as:

- Setting the program and agenda for policy building;
- Surveying and researching domestic and foreign information and materials related to the policy draft; summarizing, analyzing, and evaluating the status of policy implementation (if any) and policies relevant to the policy draft; studying the political, economic, and social conditions and other conditions related to policy issues that need to be addressed; the funding for the delegation directly involved in the construction of the policy draft to conduct studies or surveys in the country and abroad (if necessary);
- Developing the content of the draft policy (building protocol, writing topics, etc.) discussion, consultation with the agencies, individuals and units related to the content of the policy; taking public opinions;
- Assessing, evaluating the draft policy of the competent authorities;
- Reviewing, modifying, ratifying, and enacting the policy;
- Advocating, mobilizing, training on and implementation of policy
- Inspecting and supervising the implementation of policy

So, the construction as well as implementation of the policy require various costs and those financial budgets are essential to ensure that the policy maintenance process is conducted normally and efficiently. The costs for achieving practical results in the course of maintaining policies can come from: the state, the state bodies; the social organization, the groups; individuals, citizens; other entities. Such costs can also be the expenses, the damages caused by the impact of the policy itself to the state, society or the people. Usually, besides the benefits that they bring, policies can also bring losses to some entities. Therefore, when considering the benefits brought about by the policy and the harm it causes, we need a general view between the benefits and costs to society and the benefits and costs to individuals, while at the same time expressing the spirit of economy at all stages of the policy cycle. Saving means not wasting, rather than to

cut those necessary costs. For example, to protect the health and save the lives of people we must pay whatever it costs. The criteria of efficiency in this case is compliance with the law, respect for the human dignity and protecting the people, and not to take the material costs for comparison.

The effectiveness of public policy also requires choosing the least expensive policy options for achieving the desired objectives. The respect for public policy efficiency also allows to us to predict the feasibility of the policy in practice. Given that, the state will anticipate whether to enact policies or choose the favorable time of enactment to achieve the highest results.

The economics of public policy are closely related to the usefulness of the process of adjusting the impacting objects. If in order to achieve a certain objective, the policy measures contain cumbersome and complicated administrative procedures and no tangible benefits to the people, then that is a sign of waste and inefficiency.

2.3.5. Some other standards

In addition to the above mentioned standards, scientists and managers also use many of the value scales to build a set of policy evaluation standards such as:

The validity of the policy reflects the level of achievement of the policy objectives;

-The impartiality in policy is embodied in the reasonable allocation of resources, the rights and obligations between the participating entities in the policy cycle and related groups;

-The level of addressing the policy is embodied in the evolution of the social situations or the satisfactory degree for the needs of the people and organizations due to the impact of the policy;

The above are the basic criteria to evaluate the impact of public policy in reality. The review of this evaluation work can be performed at different scopes and levels, so in

each specific case, the criteria should be specified to suit the purpose, requirements and the necessity of the evaluation.

2.4. Factors affecting policy evaluation

2.4.1. Awareness of the subject

The subject's awareness plays an important role in the outcome of policy evaluation. The subject here may be in the government, in immediate divisions such as the ministries or committees, interest groups, the committees and subcommittees of the National Assembly, experts or subjects outside the government like voters, people and the media...

2.4.2. The institution for evaluation

Any system has the characteristics to be decided upon depending on the connection of the initial period. The uniqueness of the formation process as well as policy evaluation process by the different sectors is interpreted depending on things like the historical period since establishment of the service sector or departments or affairs, leaders etc... Time will recognize diversity, while also effectively limiting diversity.

2.4.3. *Objectives of policy evaluation*

Policy analysis and evaluation mean to conduct analysis while the policy is being implemented in order to determine whether the policy implementation meets the policy objectives or not. This is the phase to measure the cost, the results of policy implementation and the actual impacts of the policy in relation to policy objectives, thereby determining the validity and effectiveness of a policy in practice. Based on the results of policy evaluation, state agencies may make policy adjustments if necessary. The state agencies may adjust the objectives, change or add new solutions, or decide whether to pursue or terminate the policy.

2.4.4. Relationships between the stakeholders in policy evaluation

Industrial officials, through a process of "cross-industry adjustment", create an interaction, or in some cases there is a complicated game between many classes and stages in different entities such as between ministries and legislatures, between ministries and overseas, between bureaucrats and politicians, or bureaucrats and the people. There is a big difference in the affirmative action of the independent subject and affirmative action on the topic of "social interaction". When the game is deployed among entities with only unrestricted validity, the "non-reciprocal property in information" and time will have an intervention in the role of an important variable function.

2.4.5. Costs prescribed for evaluation work

All policies require financing for mobilization and evaluation. Lacking financing, policy can die young. Right from policy approval, the US Congress is usually only interested in the budget, the budget appropriation process, or additional budget for a very cumbersome policy, undergoing at least 3 steps:

- 1) Ratified by the budget commission of each of the two Houses of Congress. These Commissions set the spending ceiling, including supplemental or reduction standards.
- 2) Legal Committee reviews and adopts the budget ceiling for the program.
- 3) Finally, the conference of the financial committees of the two Houses (each committee has 13 subcommittees) meet for a final review of how much money can be accepted.

3. APPROACHES TO PUBLIC POLICY EVALUATION

Now let us research policy evaluation approaches: the normative approach and the positive approach.

3.1. Normative approach

This is an approach favoring the evaluation of macroeconomic policies in order to study the potential impact of policies to be implemented. This method is based on

macroeconomic models or rules when determining the representative agent groups, the structural policies, trade policies, fiscal policies or solving macro scale shocks. Sometimes it is combined with the experimental simulation model to conduct analysis at a deeper level.

The pre-evaluation of the overall impact of economic policies requires the use of a macro-economic model.

There are two types of macroeconomic models which are econometric models: equations of behavior, econometric equations calculated based on time data and accounting equation. The principle of this model is to represent in the future the behaviors observed in the past with the assumption that these behaviors are always valid. These models are not really suitable for evaluating the impact of income distribution of economic policies like the well mentioned policies today. Therefore, we will not introduce these policies. These models are more general in nature, especially for households, and therefore they are not often used to evaluate the impact of income distribution of economic policies. Compared with the general equilibrium model, a limitation of these models is their lower level of theoretical links.

The general equilibrium model is an economic model based on the theory of economic agents "seeking to maximize their interests". Households maximize their interests and enterprises maximize their profits. These models are built based on the neoclassical theory. A general equilibrium model is based on a social accounting matrix (SAM). This matrix shows the economic transactions over a period of one year between the agents, households, enterprises, the state and between the economic sectors. The model includes the accounting equation and the equation of behavior – for example a consumer function expresses the relationship between household income and consumption. These models are often used to simulate economic policies, and here we have conducted a control analysis, which is a policy reform activity. We compared the two economic statuses, or comparing the gross domestic product, benchmark

production, consumption, employment, income, prices, and exports against the simulation level, and the model.

3.1. Positive approach

This is the review and evaluation of the policy after it has been implemented. This approach is based on the micro-economic data and econometric techniques. It applies an experimental or semiexperimental method simulating other sciences and applies them to the "minimum service provider" programs, occupational integration programs, micro-credit programs, etc.

Literally, this approach seeks to verify whether the objectives of an implemented policy have been achieved thanks to the quantitative and positive approaches rather than the normative approach. To decide which social policy is to be implemented, one needs to understand the cause and effect relationship between the intervention and its result. This cause and effect relationship can be accurately evaluated only when we have a "counterfactual": what will probably happen for the beneficiaries of the program or of the policy if this intervention does not take place. Our questioning approach is very similar to what takes place in pharmaceutical research, when a new drug is studied to see if it has any effect.

Assessing the process means to examine organizing methods, including the rules and operating procedures used to implement the programs. The objective of this evaluation is to determine whether the process can be logically organized and carried out more effectively. Toward this goal, the implementation of a public policy is always divided into separate tasks, such as strategic planning, financial management, or consideration of customer complaints, and then assessing tasks performance by efficiency, validity, or accountability.

3.1.2. Policy Impact Evaluation: Brief introduction of purposes, requirements, contents and evaluation methods

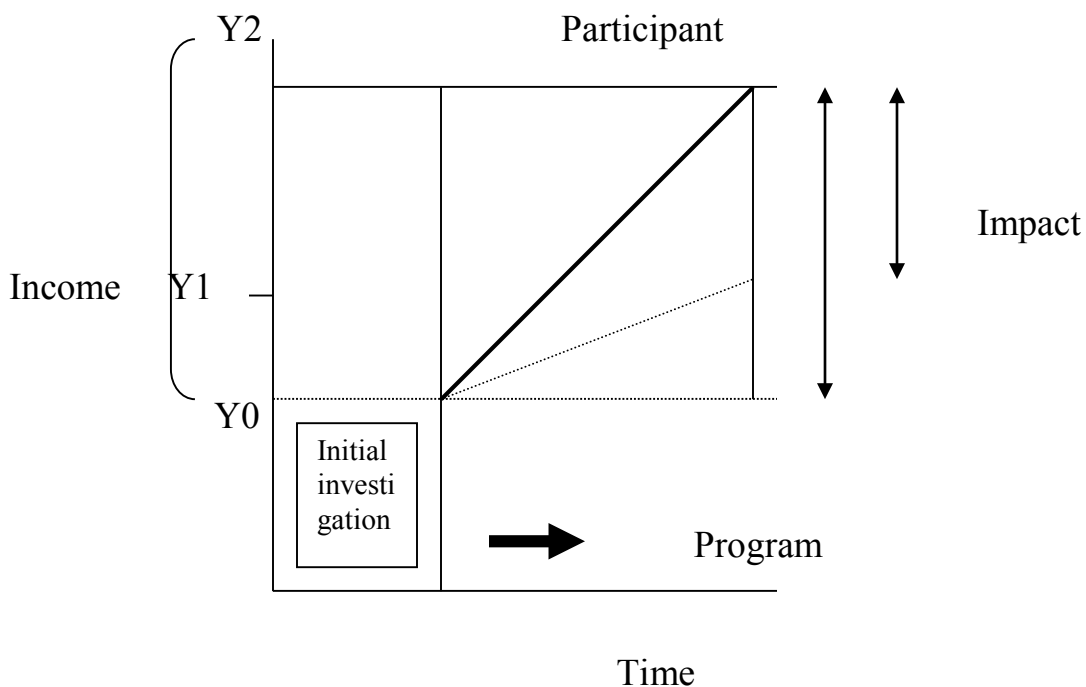
Impact evaluation means to determine if the changes in the level of welfare may actually be the result of program intervention rather than of other elements. The evaluation method can be applied as quantitative methods (collection surveys or simulation data) before or after the program starts. Priori evaluation means to predict the impacts of the program using data available before program intervention, and also retrospectively assessing survey results after the program has been implemented. Self comparison is a form retrospective comparison, which considers the impacts of the program through the difference in the results in the objects before and after program implementation (or between participants and non participants of the program).

These types of evaluation require many different techniques. In the 1970s and 1980s, budget systems and program planning (PPBS) was first developed by the Ford Motor Company and then applied by the US Defense Department and finally applied across the entire US federal government. Another technique is budgeting on the basis of O (ZBB), a variant of PPBS, which is applied in the US and many other countries. The next technique is management by objectives (MBO), replacing the PPBS and was developed at Xerox Corporation and the US administration under President Carter. These techniques are used worldwide by different governments at various levels. In addition, many countries and governments have developed evaluation systems of their own. So in the 1980s, a new policy and expenditure management system (PEMS) was established in Canada at the federal level, and the Office of the Comptroller General (OCG) was established in charge of performing evaluation and research. Furthermore, the Canadian Federal Treasury Committee created the Over-Pressure Measurement System (OPMS). Today, international organizations and many countries worldwide apply quantitative and qualitative methods to assess the impact of public policies.

3.1.3. Before-and-after policy evaluation: General introduction of purpose, requirements, content and evaluation methods

Some studies are often used in program evaluation. The most commonly used study design is to compare before and after, to compare the results at two different time points - one milestone before program implementation and the other after program implementation. Typically, only new groups are considered. This before-after comparison is designed to indicate the impact of the program, but it is difficult to see the changes observed, and if there are any, that is a result of the program or of other changes taking place in society at that very moment.

Figure 1.6 Evaluation of before-after comparison



The method for before and after comparison is comparing the results of the program in participants before and after the program. We can compare retrospective results in the beneficiary with the data about the results prior to the intervention, or by comparison survey data before program implementation, or using retrospective data, if there is no appropriate evaluation design. As seen in Figure 2.3, we have two observation points on the beneficiaries in one intervention: pre-intervention income

(Y_0) and post-intervention income (Y_2)... Thus, the efficiency of program can be calculated using $Y_2 - Y_0$. The study literature calls this approach reflexive methods of impact, in which the results in participants before intervention is the comparison or control results. So does this method allow authentic measurement of the results of the program? Perhaps not. The time sequence clearly makes it easier to have a logical conclusion but it probably does not give a conclusion about the impact of the program. For example, looking at the picture we see the impact could be $Y_2 - Y_1$. Indeed, such a simple comparison can not be accurately assessed because other factors (outside the program) have changed during this period. Failure to compare this with other factors means that we will assign the wrong result in participants when there is no program Y_0 , while it may be Y_1 . For example the participants in a training program can improve employment opportunities after the program. Even though this improvement is created by the program, it may be because the economy has recovered from the crisis and the indices have gone up again. If not done cautiously, reflexive comparisons can not distinguish between the effectiveness of the program and other external effects, thereby affecting the reliability of the results.

Reflexivity comparison will be useful in evaluating interventions with comprehensive coverage such as nationwide policies and programs in which the entire population participates in the program and there is no control group size. In cases where the program is not so large, if the results are observed in the subjects involved for a few years, it is possible to check the changes in the structure of the results (Ravallion 2008).

Therefore this study situation requires a broad initial research covering many characteristics of the families before the program to be able to control as many factors likely to change as possible during the period. Detailed data about participation rates in the programs before intervention deployment are also essential. The following

programs will discuss some examples of before-and-after comparison, relating to the reflexive method or yes or no method.

3.1. Criteria for policy evaluation

3.2.1. Policy objectives

Perhaps the most difficult step in any policy analysis and evaluation is to decide which analytical objectives are appropriate. Nonetheless, in most cases, the analyst will have to set one or more objectives to be achieved. The analysis objective is also the output of the analysis. It is the value used as a standard to evaluate different policy options. Set analysis objectives to be as abstract as possible. Bear in mind that the ultimate objectives must be the norm, reflecting the values that people pursue, such as validity, efficiency and fairness. Objectives can be divided into real objectives and instrumental objectives. Real objectives show such values as efficiency, fairness, and validity of the proposed policy solutions, that the society wants to protect for its own purpose. Instrumental objectives are the conditions to achieve real objectives more easily. In general, instrumental objectives often include political feasibility, public perception, budget feasibility; technical feasibility; and administrative feasibility. Instrumental objectives are often called obstacles. An obstacle is simply an objective to be achieved.

3.2.2. Measures to achieve policy objectives

A measure to implement policy objectives, also known as a solution to implement policy objectives, is a way to solve the problem in order to achieve policy objectives. On the basis of policy objectives, the state defines the appropriate solution to achieve these objectives. In other words, policy solutions must fit with policy objectives. Like objective, like solution! This is the relationship between goals and means. However, policy objectives are reflected in different levels from general objectives to specific targets. Therefore, the solutions range from common solutions to specific solutions. Joint solutions oriented on how to solve problems, and specific solutions contain specific ways to achieve specific objectives. Specific solutions must

specify the tools used to enforce the policy, necessary resources (financial, material and human), and schedule for implementation. Simply stated, state agencies, departments responsible for policy implementation must develop regulations and procedures, establish organizations, design programs, schemes and specific projects. For example, one common goal of the current ethnicity policy is to reduce poverty. This objective is abstract and qualitative, rather than quantitative and specific. The state cannot determine the time necessary to complete this general goal, because the poverty problem will change over time. Therefore, this general goal is concretized into specific objectives for each period, presented in the form of targets such as lowering the poverty rate from 16% in 2011 to 14% in 2012, or dropping the average poverty rate by 2% per year. These objectives are both specific and quantitative. To achieve these objectives, the state can define specific solutions such as creating jobs for the poor, job training for the poor, giving loans to the poor... and these solutions are deployed through specific procedures and programs such as the program to create jobs for the poor, job training programs for the poor, or programs to give loans to the poor to develop production with preferential interest rates. Each of these specific programs should specify the objective of the program, the beneficiaries, the target objects, the activities of the program, program budget, implementation procedures, timeframes, location, and agencies responsible for implementation.

So, the structure of a policy comprises of two unified components: objectives and solutions. The relationship between them is a logical relationship between goals and means, the relationship between cause and result.

3.2.3. Policy maintenance period

3.2.4. Financial expenses for the implementation of policy objectives

3.2.5. Decentralization of policy management

3.2.6. Policy uniformity and policy implementation

Chapter 2:

MEASURING RESULTS OF PUBLIC POLICY PERFORMANCE

1. OVERVIEW OF RESULT MEASUREMENT

1.1. Purpose, requirements and objects of public policy implementation results evaluation

1.1.1. Purpose of public policy implementation results evaluation

Measuring results is one of the attributes of management, because if the managing entity wants to know whether the implementation of policies can achieve the policy objectives, it is necessary to measure the results of policy implementation, and these results will be the base from which to make the appropriate adjustment measures. The purpose of measuring results is to provide information on the actualization process of policy purposes and whether the objectives have been achieved from all perspectives and the costs of resources spent towards achieving the objectives. Evaluating policy implementation results is a process of collecting, analyzing and reporting information on the results of public policy enforcement, to help determine the conformity and the degree to which the stated objectives have been achieved. Also, policy implementation evaluation indicates the situation.

1.1.2. *The requirements for evaluating the results of policy implementation*

Measuring the results of policy implementation is a necessary requirement because:

- Strengthening accountability: measuring outcomes of policy enforcement allows the policymakers and citizens fully assess the validity and effectiveness of policy interventions being implemented.

- Improving policy implementation: information on policy implementation results indicates whether the policy interventions are being operated as scheduled, have

achieved the desired goals or not, thereby helping management make adjustments to improve policy implementation.

- Providing a basis for allocation of resources: when the allocation is being created for policies, programs, or projects, information on performance helps managers analyze what is or is not happening in an effective and efficient manner. This information can assist the budget allocation process, especially when the state is setting the budget system according to performance results.

- Information on efforts to enforce the policies of the institutions: Information on the results of policy enforcement provides an evaluation of the rate in which goods or services can be produced with the known resources.

- Information for the people: Information about policy enforcement results explains to people what is being done and created with taxpayer money.

When conducting an evaluation of public policy results, the assessor should meet the following requirements:

- Ensuring the purpose of evaluation to answer the question: What is the result of the measurement used to do?

- Determining the evaluating entities: Who conducts the results evaluation? The main entities who evaluate policy enforcement results are agencies whose duty includes policy implementation. Moreover, to ensure objectivity and diversity in the evaluation, the entities may be external agencies and organizations.

- Determining the subjects of evaluation: The question is: Evaluate what? The answer to this question depends on the objectives or desired policy outcomes achieved, and logical model of the results of a public policy.

- Determining the user of evaluation results: Answer the question: Who will use the evaluation results? By and large, users of evaluation results are management

agencies of policy enforcement, policy enforcement entities, policymakers and stakeholders such as sponsors or beneficiaries.

- Determining the time of evaluation: Answer the question of when to conduct the evaluation. It's very important to choose a suitable time for the evaluation of policy enforcement results, otherwise the information on results may be unsuitable or insufficient.

1.2. Model for policy implementation results measurement (Logical model)

One recent criticism against policy evaluation suggests that it tells us little about the achievement of policy objectives. This is a problem when policy implementation does not achieve the desired goal, because policy evaluations provided little information on the process of policy implementation. The logical model was developed as an extension of the target oriented evaluation and was designed to align the policy implementation process with policy objectives. Typically, a logical model requires the policy implementation designers or assessors to determine the inputs, activities, outputs and outcomes, in which the outcomes must reflect the long-term goals or objectives of the policy and the outputs show the direct result of the policy. The logical model of policy implementation results are presented in a diagram to describe the logic and causality of the policy.

The elements of this model include:

- Inputs: budget, personnel, equipment, fuels and raw materials needed for policy implementation.

- Activities: are the actions taken or the work performed to create the outputs, such as: conferences, seminars, meetings, recruitment and staff trainings, and all major activities to generate outputs.

- Outputs: are the products, goods and tangible services created by policy enforcement activities. Outputs are under the direct supervision of policy enforcement agencies.

- Outcomes: are the results that can be achieved when policy beneficiaries use the outputs. Outcomes are always achieved in the short term to medium term period.

- Impacts or final results: policy impacts are the purpose of the policy or the final impact of the policy. Final results may be affected by many factors and are often achieved in the long term.

The chain of policy results belong to three main areas:

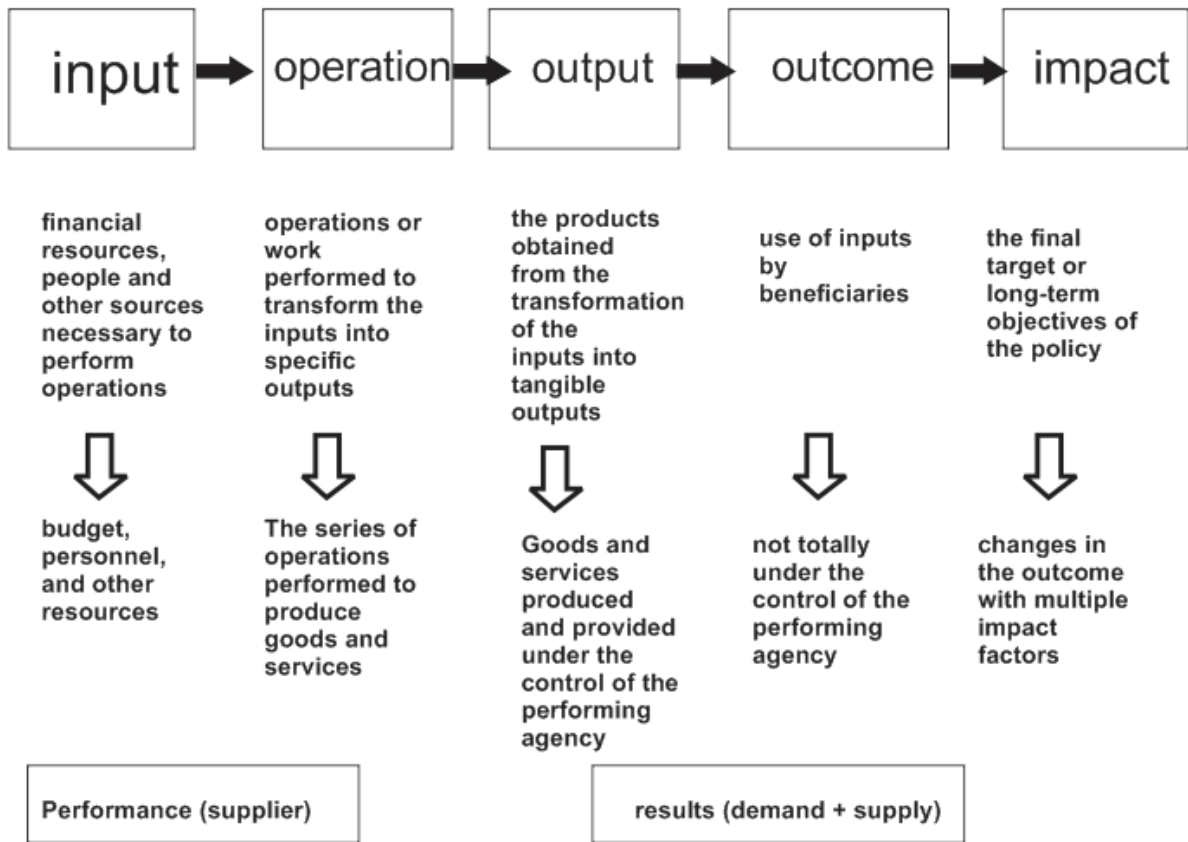
- Implementation: includes inputs, activities and outputs. These are areas where policy enforcement agencies can directly monitor to measure performance results.

- Results: the desired results include outcomes and final outcomes or impacts. These results are not under the direct supervision of policy enforcement agencies and depend on the behavioral changes of policy beneficiaries. In other words, these results depend on the interaction between the supply side (implementation) and the demand side (the beneficiary). These are the areas belonging to impact evaluation in order to measure the policy effect (will be presented in Chapter 3).

- Assumptions and risks: are the external factors that affect the achievement of policy results (outputs, outcomes, and impacts) that require policy managers to anticipate and take measures to minimize them.

The logical model on the results of policy implementation is illustrated in Figure 2.1 below:

Figure 3.1: Logical model on the results of policy implementation

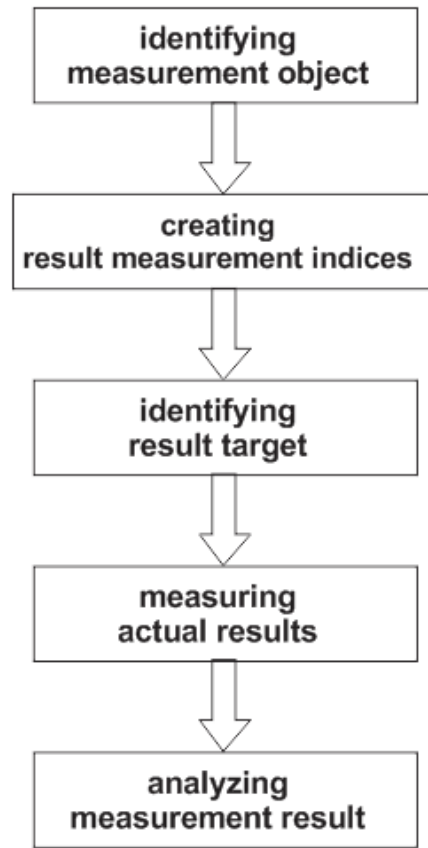


source: Impact Evaluation in Practice, The World Bank, 2011, p. 25

2. PROCESS AND METHOD OF RESULTS MEASUREMENT

The process of measuring policy implementation results includes 5 steps as described in Figure 2.2.

Figure 2.2: The process of measuring policy implementation results



2.1. Defining measurement objects

This is the first and most important step of result measurement, because defining the wrong measurement object will lead to the incorrect implementation of the following steps and measured results will not match the purpose of evaluation. In this step we have to answer exactly what needs to be measured. To give the correct answer to this question, the assessor must understand the purpose of evaluation and the chain of results in the logical model - that is, to clearly define the elements of the logical

model about policy results, including clearly defining the outputs and outcomes of the policy.

Typically, the expected results of policies, programs, or projects have already been identified during policy making, program or project design. However, in cases where the results are yet to be determined, then the assessor must establish a logical model for the results of the policy, program, or project as described in section 1.4.

The establishment of the results of a policy, program, or project is carried out as follows:

- **Identifying representatives of specific stakeholders:** The process of setting up and adoption of the results of the policy is a political process. Therefore, in this step we need to fully and accurately answer such questions as: Who are the key parties involved with a policy issue area? What category do they belong to (NGO, government, sponsors, etc)? Whose interests and points of view are a priority?

- **Identifying the benefits of the stakeholders:** The assessor uses such techniques to collect information as brainstorming, representative groups, surveys, and interviews to discover the interests of stakeholders.

- **Transforming problems into statement about the results:** A result-oriented statement allows us to predefine our path and destination. We need to ensure that the results are expressed in a positive way instead of negative, because stakeholders will react and reinforce themselves better to positive statements. For example, the statement "we want to improve the health of babies and children" is a positive statement, while the statement "we want fewer babies and children to get sick" is a negative statement. The positive statements about the results seem to be more legitimate, and they are easier to achieve political consensus from stakeholders.

- **Separation to capture the major desired results:** The results should be adequately separated to only capture a single field of improvement in each result statement. For example, one result could be an increased employment rate. To see if

this result can be achieved or not, we need to answer the following questions: For whom? Where? How much? When?

We need separate the results by target group, sector, percentage change, and timeframe. For example, the separated results may be "increased employment for the youth in rural areas by 20% in the next 4 years." Only by separating the results and describing clearly the details can we then know whether we have achieved it successfully.

Simplifying and filtering the results can eliminate the hassles when we build a system of indicators, baseline data, and result targets. By separating the results into sub-components, we can set the indices to measure the results.

2.2. Building result measurement index

- **Definition of result measurement index:** Result measurement indices are not like results. Result measurement indices are qualitative or quantitative variables providing a simple and reliable means to measure achievement, reflecting changes related to a policy intervention, program or project, helping us assess the results of policy implementation against desired results that have been announced.

- **Meaning of measurement index:** Result measurement indices help answer two basic questions: How do we define success or achievement? Are we aiming to achieve the desired results? These are the questions posed to governments and organizations worldwide. So setting appropriate result measurement indices to answer these questions has become an important part of supervising and assessing results. The development of result measurement indices allows managers to assess the level of achievement of the desired results, and is the main activity in supervision and evaluation. It directs all the data collection, analysis and reporting of results.

- **Expressions of result measurement indices:** result measurement indices can be expressed as a total number (for example number of unemployed people), the changing rate (percentage of increase or decrease in the number of unemployed people),

rates (such as unemployment rate), a measurement of equivalent units (such as number of students/class), comparative indices (such as consumer price index, satisfaction index).

- **Types of result measurement indices:** There are a number of of result measurement index types used to assess the progress towards result achievement:

+ Direct statistical results measuring index: Direct statistical results measuring indices show the progress when the results are expressed as short-term changes that can easily be quantified.

+ Indices measuring indirect or delegate results: These indices that measure indirect results is often quantitative, but not directly related to the result. An index measuring the indirect result is used to prove evolution, which is used when we have to take plenty of time to get the complete data, or the timeliness of data is totally beyond evaluation needs. However, there must be a connection between the delegate results measurement index and the result.

+ Indices measuring reported results: When the results are not easily quantifiable (attitude change, ability, ...) over the two year period, and the number of beneficiaries is not too large, then it may be possible to use the non-statistical approach to build a progress index called reported index. Reported indices focus mainly on the process of change, allowing the exploration the complex relationship among factors without having to perform statistical analyses that are too costly.

- **The standard of a result measurement index:**

A result measurement index is built to meet the following criteria:

+ Validity: the result measurement index must be able to measure the object.

+ Reliability: result measurement index must be used accurately and consistently over time.

+ Understandability: the meaning of a result measurement index should be easy to understand, and unlikely to generate misunderstanding.

- + Conformity to policy objectives: result measurement indices must reflect the objective or the result of policy implementation.
- + Comprehensiveness: the system of result measurement indices must reflect all the important aspects of the results.
- + Timeliness: users can obtain the calculated values of the result measurement index at a useful time.
- + Feasibility of data collection: information on result measurement indices are available and accessible.
- + Economical: the cost of collecting data on result measurement indices is not too high, within an allowable budget.
- + Useful for decision-making: the result measurement index provides useful information for decision making.
- + Simplicity: easy for collecting and analyzing information.

- How to define result measurement indices:

When considering the measurement of results, we measure the outputs and outcomes. However, we must convert these results into a set of result measurement indices that is measurable. Through regular measurement of major result measurement indices, we can determine whether the results are being achieved or not.

Usually the result measurement indices have been determined in the policymaking stage, or in the program or project design phase. However, if these result measurement indices have not been determined, the evaluator should determine the system of result measurement indices of the policy.

The process of selecting result measurement indices should reflect the concerns of the stakeholders. For example, one result is to improve the academic results of students, is a direct stakeholders are students. However, in setting up a system of result measurement indices to measure academic results, educators and government officials should pay attention to the result measurement indices consistent with the concern from

teachers, student parents, as well as access to school and learning materials for students. Therefore, the additional result measurement indices could be the number of qualified faculty numbers, or the access to relevant training materials. This does not mean that there must be a result measurement index for each stakeholder. The selection of result measurement indices is a complex process in which the interests of some relevant stakeholders need to be considered and conditioned. At the minimum level, there should be a result measurement index to directly measure the desired results. In the example of improving the academic results of students, there must be a result measurement index for students, and the scores of the tests are a specific index.

The development of result measurement index takes plenty of time and effort. Therefore, it's necessary to have the involvement of policy experts with technical capacity, and independence in the process of developing result measurement indices. All of the points of view from the parties need to be considered in an independent, technical and accurate manner when reviewing the result measurement indices. Result measurement indices need to be viable in the long term, technically feasible, and in accordance with the policy.

+ ***Outcome measurement index:***

The outcome measurement index measures what beneficiaries changed. This index shows the level to which the policy, program, or project meets its desired goals. It measures the impact in the short and medium-term of the policy, program, or project on the people or the beneficiaries. Examples of outcome measurement indices are: The percentage of residents breathing fresh air; The percentage of reduction in traffic accidents on highways; The percentage of people receiving vocational training, etc.

Intermediate outcome measurement index: For policies whose impacts can not be measured in many years or do not show a single outcome: In this case, we use the intermediate outcome measurement index to assess progress. For example, the outcome of the trade promotion program is to increase trade and create jobs. However,

because these are long-term results, we use intermediate outcome measurement indices such as: The number of companies that decide to export; The number of companies that sign export contracts; The number of companies selling to international markets; The number of companies offering new jobs related to exports.

Alternative measurement index: In some cases where it is difficult to measure real outcomes, we use alternative measurement index. For example, the initial purpose of fire fighting service is fire and explosion prevention. But it may not be feasible to measure prevention, so instead of using outcome measuring indices such as the amount of loss from fire or the spread of fire after the fire engines arrive, as alternative measuring index.

+ ***Output measurement index:*** The output measuring index represents the number of services or products provided or how much work is done. In simple form, this index describes what extends beyond the process and how much is provided. This index is limited because they are not indicators of policy objectives achievement, the quality of services or products, or the efficiency of the supply of goods or services. The comparison of current output against the output from the previous period only reveals the changes or stability in operation. Examples of output measuring indices may be: The number of licenses issued; The number of kilometers of roads made; The number of people trained; The number of hospital beds created; The number of apartments built, etc.

+ ***Efficiency measurement index:*** The efficiency measurement index shows the amount of work done in correlation with the amount of resources used. Typically this index is expressed as the ratio representing information on unit costs. For example: the cost per trained worker; the cost per kilometer of highway made, etc.

Productivity: Normally productivity is related to lost labor time. The efficiency measuring index to evaluate productivity could be: the number of output units per labor

hour; the number of records to be processed per hour worked by office workers; the number of clients receiving services per processors, etc..

+ ***Service quality measurement index:*** The service quality measuring index reflects the effect of satisfying customer expectations. These indices often include reliability, accuracy, politeness, competence, responsiveness, and the adequacy relating to products or services. Usually a service measuring index requires surveying target customer groups, but it is possible to use other techniques such as focus groups, observation, interviews, feedback form, etc.

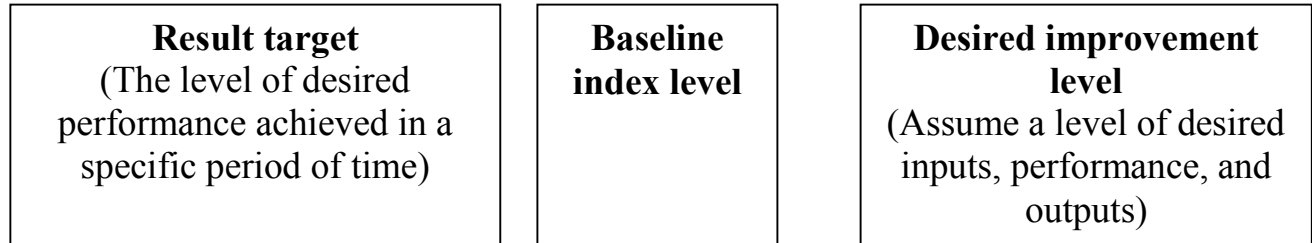
Some other indirect indices to measure the quality of service may be the number of debugs, number of edits, or number of complaints.

2.3. Determining result targets

After collecting baseline data on result measurement indices, the next step is to establish result criteria - what can be achieved in a specific time towards achieving results. The determination of the desired level of results of the project, program or policy requires us to select specific target performance criteria. The establishment of result criteria is based on the results, result indices, and database.

- ***Definition of result criteria:*** A result target is a determined goal indicated by numbers, time and location where that goal is met. Basically, a result target is the level of quantitative outcome index that a country, society, or organization wants to achieve at a specified time. For example, one result target is "decrease the number of poor households by 1.5-2.0% on the average annually in the period of 2015-2020".

- ***Method to establish result target:*** Usually the result targets are identified in the policy planning period, or program or project design state. However, in a case in which the result targets have not been established, the assessor should establish these targets. The method to establish result targets starts with baseline index result level, and the desired improvement level (considering the available resources over a specific period of time, for example 2 -3 years), allowing us to obtain result targets.



When building result targets, we should refer to the level of results or trends in the past, or result targets of other localities, agencies and organizations.

- Basis to determine result targets:

When determining performance targets, they should be based on the following factors:

+ *Baseline data*: Baseline data is the status before a policy, program, project or activity begins. To determine the result targets we must have a clear understanding about the baseline starting point. For example, the average performance results of the last three years, results of last year's implementation, the average trend, data of last 6 months, etc... In other words, past performance results should be considered in anticipating new performance result targets. We can observe a policy, a program or project which has been implemented during the last few years before expecting future performance result targets.

+ *Resources for policy implementation*: Result targets are transitional steps on the path to a result and eventually, a long-term goal. Result targets are defined on the basis of known resources (financial and organizational) plus reasonable anticipation for available resources in a fixed period of time. When setting up result targets, we should consider the expected financial and resources level - existing capabilities, budget, personnel, financial sources, facilities, etc., in the entire target period. This may include both internal and external financial resources, from bilateral and multilateral

sponsors. The result targets should be feasible with all the known resource consideration and organizational capabilities to provide activities and outputs.

Most of the result targets are set annually, but some may be set quarterly. Some other result targets can be set for longer periods. However, we should not set result targets for longer than 5 years, because there are too many unforeseen risks related to resources. In short, we should be realistic when setting result targets, and they should be established as short-term goals on the way to achieve a result.

+ *Political nature of the process of establishing result targets*: The people expect the State to implement what has been committed in the policy that has been announced, so when setting result targets, one must meet part of the expectations from the people and the support from politicians. Therefore, setting result targets is part of the political process.

+ *Result measurement index*: If a result measuring index is new, it is necessary to be cautious in setting fixed result targets. In some cases, a result target should be a set (for example, the poverty reduction target is 2 -3% annually, instead of setting a target of 2% annually).

2.4. Measuring actual results

Once we have determined the result targets, our next step is to conduct actual result measurement corresponding to the determined result measuring indices. Of course, in order to measure the actual results we need to collect data reflecting the current status of the results.

When gathering information about the results we need to fully answer the following 8 major questions: (1) What is a data source? (2) What is the method to collect data? (3) Who will collect the data? (4) The frequency of data collection? (5) The cost and difficulty in data collect? (6) Who will analyze the data? (7) Who will report the data? (8) Who will use the data?

- **Data source:** When determining the data sources one should consider such issues as: is a data source accessible? Can the data source provide quality data? Can the data source be accessed regularly and timely? Is data collection feasible and cost effective?

It is important to collect only essential data. Information on the result will be a management tool and there is no need to collect information that managers do not use. Only collect information directly relevant to the issues and result measurement indices that have been determined. Do not waste time collecting other information.

The data sources for the indices may be secondary or primary data. Primary data is collected directly by the organization concerned, and may include administrative, budget, or personnel data; investigations, interviews, and direct observations. Secondary data is collected by other external organizations, and is done so for purposes other than that of the organization concerned. Secondary data have advantages such as being less expensive to obtain, and is used in cases where it is impossible to collect primary data regularly, and in cases where the work of investigating households is costly and on a large scale. However, the use of secondary data must be careful, because it is collected with the purpose or the work of other organizations. When using secondary data it is necessary to answer questions such as: Is the data valuable? Is it reliable? The data collection tools are valid for how long?

The actual data sources may include administrative records (written or computerized) from the state agencies and non-state organizations; interviews and investigations with target groups, officials and officers in charge of policy implementation, service providers; reports from supervisors, etc.

- **Data collection method:** If the data source is known, then what will be the methods and tools for data collection? A suitable method of data collection is chosen depending on the availability of resources, accessibility, needs, time constraints, etc.. The methods and tools for data collection are: talking with concerned individuals,

community interviews, visits, considering official records (management information systems and administrative data), interview with key informants, participant observation, interviews with the representative group, direct observation, questionnaires, group surveys, census, experiments.

2.5. Analysis of measurement result

The findings on the results of policy implementation will be used to help improve projects, programs, and policies. Data analysis and reporting provide continuous and important information about the status of projects, programs and policies; meanwhile they also provide evidence about the problems arising during the program implementation process, and create opportunity to improve the implementation process. A continuous data stream provides meaningful information about trends and aspects of time.

The more regularly the measurement results are conducted, the fewer the conjectures concerning what has happened between the specific periods. The more data points, the more it allows managers to track trends and understand the dynamics of the project, program, and policy. The bigger the time gap between measurements, the bigger the ignored events and changes that occur in the system. For example, if the time gap between the measurements is 1 year, then there are many things that could have happened and it may be harder to draw a causality.

To promote the value of the result measurement, the analysis of the actual measurement results is indispensable. Analyzing the results means using the data or information obtained from the result measurement and drawing conclusions in order to support decision making.

When analyzing the measured results, the assessor may use the following methods:

- Comparing to standard:
- + Comparing the result obtained to the result level in the past;

- + Comparing achieved results with result target;
- + Comparing results with the results of other agencies and organizations
- Comparing group categories:
 - + Determine result difference between stakeholder groups;
 - + Identify disparities among beneficiary groups.
- Analysis of causality:
 - + Comparing the status of policy beneficiaries between the points of time after and before policy enforcement;
 - + Comparing the status of policy beneficiaries between different time periods of policy enforcement;
 - + Comparing policy beneficiaries with non beneficiaries.

3. POLICY IMPLEMENTATION SUPERVISION

3.1. Fundamentals and nature of public policy implementation supervision

3.1.1. Fundamentals of public policy implementation supervision

The supervision of policy implementation can be understood as a continuous function, including systematic data collection about the determined indices in order to provide to the manager and major stakeholders regarding a program, project, or policy that is underway with signs about the scope of the progress and the achievement of objectives and progress in using the allocated financial resources.

Supervision is a continuous process to keep track of what is happening in a program and use the data collected for information regarding program implementation and for daily management and decision-making. Supervision primarily uses administrative data to compare the program implementation against the expected results, compare the programs against each other, and analyze trends over time. Typically, supervision monitors the inputs, activities, and outputs, but sometimes the supervisor can track the output results such as the progress towards national development objectives.

3.1.2. The nature of policy implementation results supervision

The supervision of policy implementation must be able to answer the following questions:

- Was the result achieved fully or partially? (Compared to the implementation results criteria);

- Did the implementation follow the right direction or is it necessary to proceed with adjustment measures?

- What outputs have been generated until that time? Have they been generated as planned and effectively? If the answer is yes, then did they contribute to achieving the results?

- Were there any unidentified partners involved in the implementation? Were there any identified partners not involved in the implementation? Did they participate in the implementation as assigned?

- What were the challenges or risks encountered during implementation? If yes, then did they have any impact on the implementation of the activities? What measures can we apply to solve or overcome these challenges or risks?

- Among the issues to be handled, which ones were actually done?

Who really benefits from the implementation? Were the beneficiaries the same as specified? Were they involved in implementation as anticipated?

- Are there any difficulties in collecting data on indicators of the implementation results?

- How much money has been spent? Was it spent exactly as estimated? Is there a need for additional resources?

- Were there enough people to ensure proper implementation? Did more people have to be hired?

- Were there any opportunities in facilitating the implementation?

- What lessons of experience were learned? How can these lessons help in the future?

- Did the achieved results contribute to achieving better results during the implementation period? Did the predicted results maintain the appropriateness and effect for achieving better results?

- Is it necessary to add more regulations, projects or activities?

- Are there any results that could be achieved more effectively using another method?

- What conditions are needed to help achieve or maintain the interests of the program, activity or project?

3.2. Principles for building the policy implementation evaluation and supervising system

The construction of a system for evaluating and supervising the policy implementation needs to adhere to the following key principles:

- To collect information on results of the project, program, and policy levels;

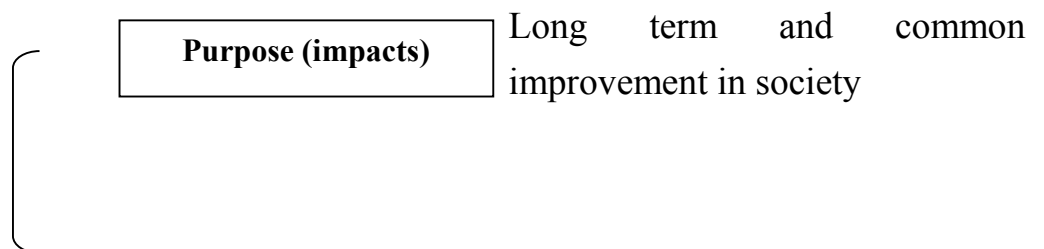
- Information on results must go both vertically and horizontally in the organization;

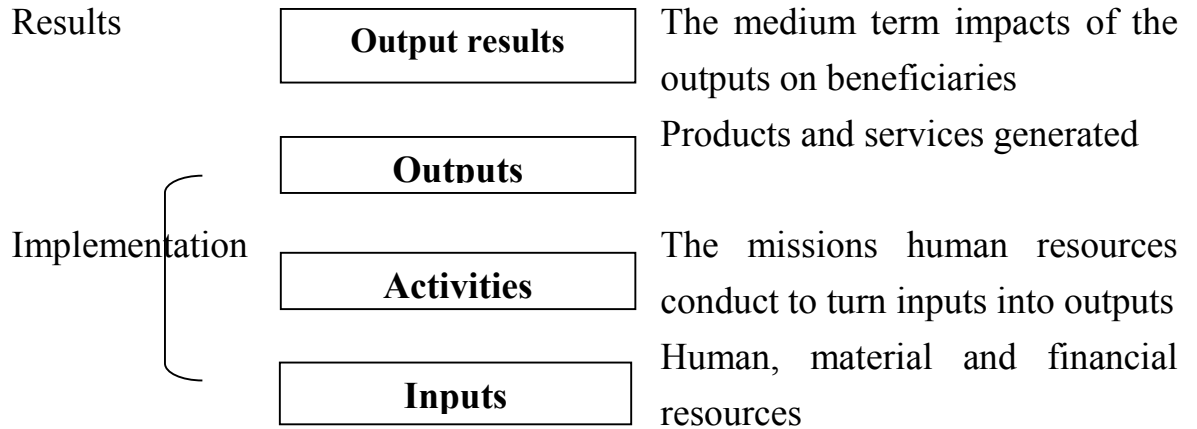
- To clearly determine the needs for information on results at each level;

- The responsibilities at each level must be clarified: (1) what data should be collected (source); (2) when the data is collected (frequency); (3) how the data is collected (method); (4) Who collects the data; (5) Who reports the data; (6) For whom was the data collected.

All the concerned organizations and agencies should coordinate and cooperate with each other in sharing information about the results of implementation, particularly when it is necessary to develop partnerships to achieve specific targets. It is important to clearly and accurately answer 6 questions about the responsibility for the supervising system. If these six questions are not answered, the information will be incomplete and the system can malfunction.

3.3. Types and levels of supervision





Source: Bimendijk 2000

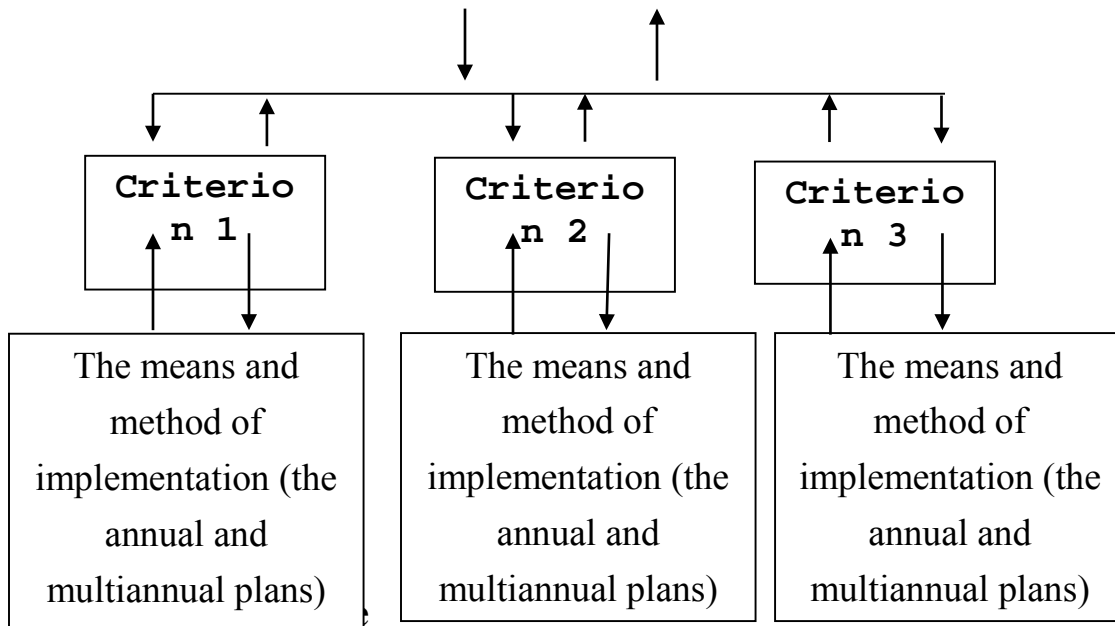
Figure 2.3 indicates that there are two levels of supervision: implementation supervision and results supervision. implementation supervision monitors the means and methods of implementation (meaning the outputs, activities and results found in the annual or multi-annual plans) used to achieve a defined output result. These means and methods of implementation are supported by the use of management tools including budget resources, personnel placement and operational planning.

It should be noted that there is an interaction between the means and the method of implementation (inputs, activities and outputs) and the output results criteria. The criteria are set according to the potential means and method of implementation. Implementation supervision needs to measure the outputs achieved by using the inputs and how well it works. Next, the link between the output results and the desired results achieved over time should be checked. This takes us closer to the concept of budget frame according to the implementation results.

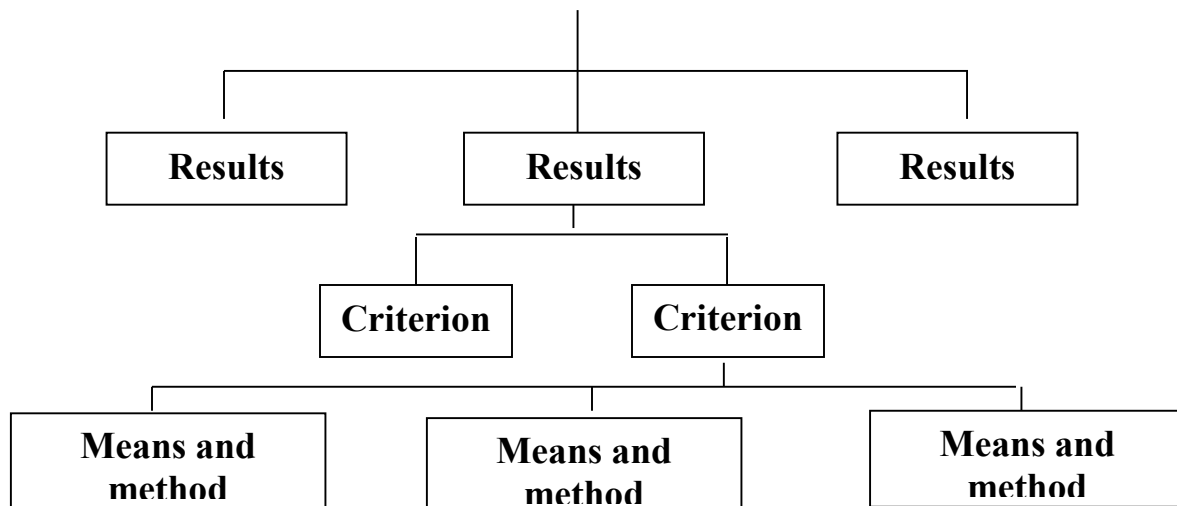
3.4. The link between implementation supervision and results supervision

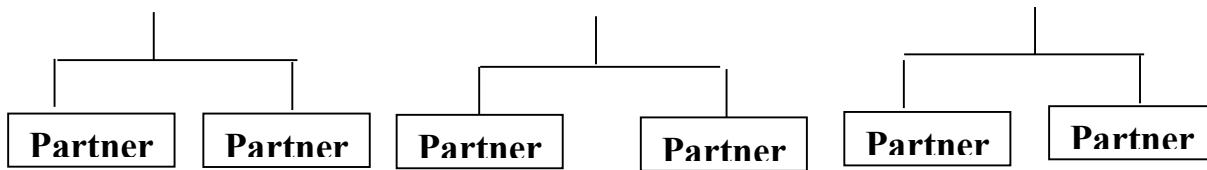
The connection between implementation supervision and results supervision is illustrated in Figure 2.4. According to Figure 2.4, the output results and the criteria are connected with the annual plans, as well as the continuous information flow downward and upward. Based on the annual plans, the implementing agency uses the inputs effectively to achieve the outputs and finally achieves the output results and the impact.

Each criterion is a transitive effort to achieve the output results. Therefore, the annual plans should be implemented to help reach every criterion.



If there are multiple partners involved in implementing the policy, it is necessary to supervise the implementation results of the partners involved. Figure 2.5 describes the results achieved through the partnership.





3.5. Use of policy supervision and evaluation results

Using the policy supervision and evaluation results to improve the implementation results is the main purpose of the construction of the supervision and evaluation system, in terms of management by results. The main point of the supervision and evaluation system is not just to create the information from the ongoing results, but also to provide information for the appropriate users in a timely manner in order for the feedback on the implementation results to be used for better management.

The supervision and evaluation results are used for the following purposes:

- To meet the needs of politicians and the people for accountability;
- To make the presentation clear and accurate, and to justify the budget requests;
- To help make decisions on operation resources allocation;
- Starting in-depth examinations of the issues of remaining implementation results and the necessary adjustments;
 - To help mobilize human resources to continue creating program improvements;
- Clearly and precisely presenting and supervising the implementation results of the contractors and the beneficiaries;
 - Providing data for deep and special program evaluation;
 - To help provide more effective services;
 - Supporting strategic planning efforts and other long term efforts (by providing basic information and tracking the subsequent progress);
 - Better information for the people to build public trust.

4. POLICY EVALUATION PLAN

4.1. Setting up the policy evaluation plan

Policy makers can delegate an evaluation through the various types of contracts. For the first type of contract, the state administrative agency signs a contract about the entire evaluation operation. For this type of contract, the state administrative agency is responsible for building the first draft evaluation plan, including the main objectives, policy questions, expected methods of policy evaluation, data that needs to be collected, and the budget ceiling. This plan provides basic reference conditions to call for technical and financial proposals from the external evaluating organizations. The terms may specify a minimum component of the evaluating group. Through the preparation of technical proposals, the external evaluating organizations have the opportunity to propose improvements in the evaluation plan of the state administrative agency. After the evaluation contract is signed, the external evaluating organization manages the evaluation and appoints an evaluation manager. In this model, the state administrative agency implements the supervision. For the second type of contract, the state administrative agency can directly manage the evaluation activities. This kind of contract includes building the impact evaluation plan and then signing the components. In this contract, the evaluation manager is still from the state administrative agency.

Whatever the form of the contract, one of the most important jobs of policy evaluation is its planning process. A policy evaluation plan should fully identify the constituent elements of a policy evaluation, and the process of making an evaluation plan should involve policy makers, the evaluating group, the agency responsible for policy enforcement and other stakeholders.

A policy evaluation plan includes the following elements:

1. Introduction
2. Description of the intervention
3. Evaluation Objective
 - 3.1. Hypotheses and theories of change, the sequence of results
 - 3.2. Policy questions

- 3.3. Main output result indicators
4. Evaluation design
5. Sampling and data
 - 5.1. Sampling method
 - 5.2. Calculating the minimum sample size
6. Data collection plan
 - 6.1. Base survey
 - 6.2. The next survey
7. Necessary products
 - 7.1. Base report
 - 7.2. Impact evaluation report
 - 7.3. Policy summary
 - 7.4. The data files are fully documented
8. Popular plan
9. Ethical issues
10. Time limitation
11. Budget and funding sources
12. The composition of the evaluation team

4.2. The process of organizing and implementing a policy evaluation

The process of implementing a policy or program evaluation consists of five steps as follows:

- Step 1: Preparing for the evaluation. This step includes the following major tasks:

- + Deciding on the object to be evaluated – Which policy to evaluate.
- + Identifying the objective and policy questions
- + Developing hypothesis/theory of change/sequence of results
- + Choosing evaluation indicators

- Step 2: Organizing evaluation design. This includes the following major items:
 - + Choosing the evaluation design
 - + Claiming that the evaluation design is morally proper
 - + Establishing the evaluation team
 - + Specifying the time of evaluation
 - + Specifying the budget for the evaluation
- Step 3: Selecting the evaluation sample
 - + Determining the type of data to be collected
 - + Determining the evaluation sample size
 - + Conducting sampling
- Step 4: Data collection
 - + Hiring the data collection group
 - + Designing the questionnaire and testing the questionnaire
 - + Conducting a field investigation
 - + Treating and confirming the validity of the data
- Step 5: Generating and announcing evaluation results
 - + Data analysis
 - + Writing reports
 - + Discussing the findings with policy makers
 - + Announcing evaluation results

4.3. The relationship between policy supervision and evaluation

The supervision system provides continuous information (through the selection of indicators) on the trend of change, the pace of change, and the scope of change. It can also identify unpredictable changes. All those are necessary for us to know whether the projects, programs and policies are taking place in the right direction or not.

We also need to recognize that the supervision data does not provide a basis for attribution and causality on the change. In addition, such supervision data does not

provide evidence of *how* the changes are happening either. Rather, it only tells whether or not the changes will occur. Similarly, supervision data can not point out the advantages and limitations in the design of the project, program, or policy. Therefore, to solve these problems and other important issues related to the generation of the appropriate results, it's critical to have evaluation information.

Evaluation means a review of an intervention (activity, project, program, or policy) which is being implemented or has been completed to determine its suitability, effectiveness, efficiency, impact and sustainability. The aim is to integrate the lessons learned into the decision making process.

The evaluation and supervision have their mutual complement to each other, even if they solve different problems and are used for different construction analysis purposes. The system supervising and evaluating by management results requires the building of an analysis and information system with the two components – supervision and evaluation.

Between supervision and evaluation there are some mutual complements. The first is a continuous complement in which the supervision information may pose some questions to be answered later by the evaluation, or the evaluation provides information about the need to supervise the new area or areas. Second is information addition, in which both the supervision and evaluation can use the same data, but answering different questions and the layout of the analyses are also different. Third is a mutual complement, in which managers use both supervision and evaluation to guide their initiatives.

The evaluation function in the supervision and evaluation system of the management according to extended results is beyond what is understood as the traditional evaluation method (after-evaluation). The evaluation is not limited to the evaluation of the causes and changes after an intervention or initiative has ended. The after-evaluation method is limited because this kind of information does not respond

to the continuous management of organizations and government agencies in order to achieve public results. The emphasis on the after-evaluation tries to achieve the unidentified answers on the attribution and the causality relation necessary to prevent the use of evaluation in real time by the managers.

The step by step evaluation process goes from the design and choice of methodology, collecting and analyzing of data, to reporting and dissemination. Good evaluation information can provide answers to many questions related to the performance and the achievement of output results.

The results of the evaluation and supervision can also be used to provide important feedback information on the progress as well as the success or failure of the projects, programs and policies in their entire cycle. The supervision and evaluation system establishes a continuous and strong public management tool that managers can use to improve performance results, and explain the accountability and transparency of the results. The results of supervision and evaluation can increase knowledge and learning in the public sector, and in the policy enforcement agencies.

Information about performance results is used as a management tool. Therefore, information on performance results is obtained from supervision and evaluation. Both supervision and evaluation can provide important continuous feedback in real time about the progress of a project, program, or policy.

5. EVALUATING RESULTS OF POLICY ENFORCEMENT AT THE CENTRAL AND LOCAL LEVELS

5.1. Evaluating the enforcement of policy enforcement documents

Under Decree 24/2009/ND-CP dated March 5, 2009, the ministries, ministerial-level agencies, and government agencies are responsible for annually evaluating the execution of the documents that they have prepared or enacted in order to promptly urge or organize the implementation of the documents or propose the other competent authorities to modify, supplement or reject provisions that are no longer appropriate.

The ministries, ministerial-level agencies, and government agencies are responsible for sending the report evaluating the implementation of the laws, ordinances, decrees, and decisions by the Prime Minister to the branches or areas under their responsibility to the Ministry of Justice in October of each year for further consolidation before submission to the government.

Under Decree No. 59/2012/ND-CP dated July 23, 2012, evaluating the enforcement of documents focusing on the following issues:

- The progress of issuance of the detailed document, including the timeliness and completeness of the issuance of the detailed document; the consistency and uniformity of the document; and the feasibility of the document.

- The status of ensuring the conditions for the implementation of the documents, including: timeliness, completeness, conformity and effectiveness of training activities, communicating documents; the suitability of the organizational structure, the level of fulfilling human resources needs for the implementation of the document; the level of funding response and infrastructure necessary for ensuring implementation of the document.

- The progress of document compliance, including: timeliness and completeness of document execution by state agencies and competent people. The accuracy and consistency in the document application guidance and in the application of documents by state bodies and competent people; the degree of document compliance from agencies, organizations and individuals.

Under Decree 24/2009/ND-CP, after 3 years from the effective date of the document, the document drafting agency (applicable to the government decree) is responsible for evaluating the impact of documents in practice, with reference to impact evaluation during the drafting stage to determine the feasibility of the regulations. Based on the results of impact evaluation, the organizing agency will draft recommendations to the competent authorities suggesting solutions to improve the

efficiency of the document or for a complete document. The content of this impact evaluation report includes: analysis of costs, benefits and other impacts; the degree of document compliance by the object groups who implement the document and proposals for solutions to implement or modify the document, or eliminate it when deemed necessary.

5.2. Program and project implementation evaluation

The regulation on the management and operation of the national objective programs was issued with Decision No. 135/2009/QD-TTg dated November 04, 2009 (hereinafter referred to as Regulation 135) regulates: (1) the monitoring, supervision and evaluation of the national objective programs (NOPs), and the projects under the program is the regular activity of management bodies and executing agencies of the NOP; (2) all the information related to the progress of the NOP should be periodically updated, categorized and analyzed in order to promptly propose options to serve decision making at all levels of management to ensure the program is implemented on target, on schedule, with high quality and within the budget and resources that have been allocated; (3) The agency responsible for managing the NOP is responsible for establishing a system to monitor, supervise and evaluate the program with the following steps: (a) establishing a system to monitor, supervise and evaluate the program and the results of implementation of criteria of the plan (inputs, activities, outputs) and evaluating the results and the impact at the levels of programs and projects; (B) developing indicators to monitor and supervise the performance results and outcome evaluation indicators, the impact of programs and projects, ensuring the information is consolidated from management and the agencies implementing the program or project; (c) communicating the system monitoring and supervising the performance results of the plan (inputs, activities, outputs) and instructing the evaluation of the results and impact to the management bodies of NOP and the agencies implementing the NOP; (d) consolidating reports, and communicating information on

program and project implementation, to relevant authorities at the central and local levels.

Meanwhile, Regulation 135 stipulates that: (1) every year, the NOP authority selects one third (1/3) of the program implementation units (at both the central and local levels) to generate reports on program impact evaluation; (2) the selected agencies are responsible for: generating reports on related program impact evaluation with the regulated form for submission to the NOP authority; the report should reflect the impact of changes in socioeconomic life of the beneficiaries (especially the economically disadvantaged and women); the participation of beneficiaries in the activities of the program; the sustainability and effectiveness of the program. The report should also highlight the possibility of implementation progress, the quality of operation, the weaknesses and shortcomings to be overcome, and the advantages that need to continue developing in order to ensure the program is implemented effectively and sustainably.

Decree 12/2009/ND-CP stipulates that the investment decision maker or the appointing person for investment decisions is responsible for implementing the supervision and evaluation of investment. With respect to the investment project decided by the Prime Minister, the ministry in charge of the industry shall implement the supervision and evaluation of investment. For projects whose investment is supervised and evaluated by the ministers or heads of ministerial-level agencies, or provincial people's committees chairmen, they must be reported on the progress of implementation of investment projects to the Ministry of Planning and Investment for their subsequent consolidation and reports to be submitted to the Prime Minister. The Ministry of Planning and Investment shall guide the supervision and evaluation work for investment projects; consolidating the work of supervision and evaluation of national investment, for periodic reports submitted to the Prime Minister.

Decree 38/2013/ND-CP dated April 23, 2013 stipulates that: (1) the responsible agency shall establish and operate the program and project supervision and evaluation system at the responsible agency level; administering the inspection of programs and projects at least once per year and allocate the necessary resources for supervision and evaluation work, administering impact evaluation of programs and projects under their authority according to the plan; (2) The project owner is responsible for establishing and operating the supervision system at the project owner level, and allocating all the necessary resources for this work; appointing the responsible department to regularly perform the tasks of supervising and evaluating their projects, administering supervision and evaluation implementation as planned; (3) The project authority is responsible for establishing an internal information system, collecting and storing all information, data, records, documents, books and documents from the project, and reports from contractors, changes in policies and the laws of Vietnam and the provisions of the sponsors related to the management of programs and projects; assisting the project owner in the work of supervising and evaluating programs and projects.

PRACTICAL EXERCISE

Evaluating results of implementing a specific policy (social welfare policy, population policy, public investment policy)

Chapter 3: ASSESSING IMPACTS OF PUBLIC POLICY

1.1. 1. OBJECTIVES, REQUIREMENTS AND OBJECTS OF POLICY IMPACT EVALUATION Objectives of policy impact evaluation

Impact evaluation is an indispensable tool to consider whether a policy has achieved its the target, as well as how the policy impacts beneficiaries as compared with cases in which policy is not applied.

Policy impact evaluation comprises of two types. (1) Pre-policy evaluation, or impact evaluation before policy enactment, means the analysis and forecasting of the impacts of the policy about to be enacted; and (2) Post policy evaluation, or assessing the impact after policy enactment, is the review and consideration of the impact of policy implementation after enactment. If the impact evaluation is conducted before the policy is enacted (pre-policy), that will be the basis for decision-making, policy design and enactment, then the impact evaluation of the policy after it is enforced will be the basis for policy adjustment or enforcement method, improving the effectiveness of policy interventions.

The goal of policy intervention is to seek to make the change in the welfare level of the expected beneficiaries. *So the goal of policy impact evaluation is to study whether or not the changes in the welfare of the beneficiaries is indeed the result of policy intervention rather than of the other elements.* Impact evaluation tries to answer the following questions: What would happen if the policy did not exist? What was the level of welfare of the beneficiaries (residential communities, households and individuals) without intervention? In pre-policy evaluation the results of intervention in the expected objects are observed to assess the expected impact of intervention. As for post-policy evaluation, the actual results and the impact on the policy object group are observed to determine if these changes are directly related to the intervention policy. In fact, if only to observe the results after policy intervention, it is impossible to come to an immediate conclusion; it is only possible to tell whether or not the intervention target has been achieved.

1.2. Requirements for policy impact evaluation

Effective evaluation of policy impact means to be able to assess accurately the feedback mechanism of the beneficiaries against policy intervention. These mechanisms could be relationships through the market or social networks, as well as connections with other existing policies. This is especially important because accurate

impact evaluation will help policymakers at all levels understand the effectiveness of an intervention, as the basis for orienting the impact evaluation of the current time or later to the related interventions. Because of that, the benefit of a good impact evaluation is well-designed, has a long-term effect and an ever growing impact.

For the evaluation process to achieve efficiency and gain useful feedback, the following requirements should be met:

- Determine the importance, objectives and plan of the evaluation activity. To verify that the effectiveness of the policy does not depend on other factors, we must determine the time and impact evaluation design in advance to help evaluation program managers update information on the subject, as well as the deployment guides in the intervention process.

- Collect sufficient data for evaluation activity. Data is the input material, an indispensable factor, determining the quality of policy impact evaluation. Data requirements will depend on whether the assessor uses a quantitative, qualitative method, or both, as well as whether the evaluation framework is before or after, or both. To collect data, a number of other issues should be taken such as time, design and sampling, and selecting appropriate survey tool. In the mean time it is necessary to implement a pilot survey in the field to review and complete the questionnaire. Collecting economic and social data at the beneficiary level and community also helps to better understand the behavior of objects in their economic and social context. Data collection must constantly be a condition of information update for managers on progress and any arguments regarding the program that should be adjusted to suit the circumstances of the program or related trends to the program. Data needs to be analyzed thoroughly and presented to policymakers at all levels as well as other key partners in the program to get a valuable solution. Apart from the results obtained from the results of the evaluation, inputs will also contribute to the direction for policy development in the future.

- It is also important to recruit and train field staff as well as apply management practices and facilitate data access. During the implementation of the evaluation program, based on management perspective, the evaluation team should be carefully selected to ensure they have enough technical and management expertise to ensure data reporting and accurate and transparent results in deployment in order to accurately describe the data.

1.3. Objects of policy impact evaluation

The subjects of policy impact evaluation consists of two groups: targeted and non-targeted groups.

1.3.1. Target group

The target group is part of the population that the policy targets - the poor, the sick, the homeless. It is necessary to identify the target group and then the desired impact of the policy on the members of this group. This impact for example may be the change in material and economic circumstances, the percentage of minorities or women to be used in professional and management positions, the income of the poor, or infant child mortality. Those may also be the change in knowledge, awareness, interests or their behavior. If multiple impacts are directed towards, then what is the impact of priority among these impacts? What is the unanticipated impact that may affect the target group?

1.3.2. Non-target group

All policies have different impacts on different parts of the public. Identifying the important non-target groups for a policy is a difficult process. For example, what impact does welfare reform have on the groups outside the poor group, such as government officials, social workers and local political figures, families of the working class not entitled to benefits, taxpayers, and others? The impact on the non-target group can be represented in the form of benefits or costs, such as interests for industrial construction projects specialized in public housing.

2. RANDOMIZED TESTING METHOD IN POLICY EVALUATION

2.1. Concept and application

Random testing is the method used to survey the causality between the variables through the arrangement to observe study subjects and the progress of that object, in which the study subjects will be randomly assigned into two groups to be observed and compared, including the survey group (the group affected by the policy intervention), and the control group (the group in a normal condition, not affected by the policy intervention). The goal of a randomized testing design is to compare the difference in results between the survey group and the control group to see if this difference is actually caused by the policy intervention or not.

Method description:

- Random testing is conducted from a practical theory or a prediction by thinking about policy solutions to assess it. That means random testing is always carried out under the direction of a certain scientific idea. Thus, to conduct random testing requires scientific knowledge and material conditions.

- In this method, the data is obtained through observing, monitoring and measurement through experiments. The results obtained will be compared and collated with a group of subjects in normal condition without applying test methods to make necessary conclusions.

- A random testing plan requires the description of a system of variables regulating the policy progress, including independent variables and the dependent variable. The independent variables can be controlled and verified. These are experimental factors that make the events occur differently, regulated by the independent variables called dependent variables, which is the consequence after the impact of the test method.

- The subjects to perform the random testing method are divided into two groups: the survey group and control group (also called the verification group). The survey group and control group are randomly selected and are equal in number, capability, and this equal is confirmed by examination.

The survey team will be organized by the impact of independent variables also known as experimental factors, to see if the progress of the phenomenon is according to the theory. The control group is one that does not change any of its unusual aspects, and is the basis for comparison to verify the effectiveness of the changes in the other group. Thanks to this, we have grounds to confirm or deny the hypothesis of the experiment.

- In the random testing method, in many cases the modelization method is used when the object of study does not allow direct experimental observation. The basis to apply the modelization method is the similarity of the characteristics, functions, and nature that have been firmly established among the phenomena and processes that occur in social nature and thinking. Based on this, from the research results for the model, a scientific conclusion about the object of study is drawn. In this method the synthesis method of analysis, interpretation induction and historic logical methods are also utilized.

Application of the method:

This method is used to verify the hypotheses on policy impact, to confirm or reject the hypotheses, methods, practices or solutions to policy issues. Thus, if random testing is successful, the solution to the policy issues will be verified and evaluated in practice.

Random testing may not be suitable for evaluating intervention solutions whose results are too rare or effects that takes too long to develop. Random testing also may not be feasible in many cases of financial difficulty or if the dropout rate of participants in the control and survey groups is high. In many other cases, random testing cannot

be done, such as when it is impossible to choose the random sample. In these cases, the analyst would utilize the semi-testing methods that will be presented in later sections of this chapter.

1.4. How to proceed

The implementation of random testing methods to assess the impact of public policy consists of 5 steps: (1) hypothesis development, (2) experimental design, (3) experimental arrangement, (4) collection, processing and analysis of results, and finally (5) Confirmation or rejection of hypothesis.

Specific ways to do each step:

- Step 1: hypotheses development

This is the first step and is also extremely important for this method, determining the success of the method. The hypothesis when performing a randomized trial is usually a prediction about the causal relationship between the two variables. These variables may be issues related to policy solutions. The hypothesis is built based on the purpose of the policy evaluation.

For example, to assess policy solutions: the quality of university education infrastructure is not good, which can be the basis for building random controlled testing study "Learning in a large lecture hall is not as good as learning in small classes". Conduct a random test to prove if the hypothesis is right or wrong, which means to affirm or deny that class size determines the quality of student learning, to assess the solution of breaking the classroom into smaller classes to enhance the quality of education. Or with solving the problem of poverty, the hypothesis that can be built is "Low education level is a major cause of poverty", and then use the randomized controlled testing method to verify the hypothesis. Thus the above hypothesis surveys the causal relationship between poverty and educational level to see how the impact of education on poverty looks like. Finally it is possible to verify if the solutions to solve the problem of poverty by improving education levels is right or wrong.

- Step 2: Testing design

a. Determining the variable

The first thing to do in experimental design is to identify variables in random testing. The variables can be determined based on the causal relationship of the hypothesis. Random testing always includes two variables, an independent variable and a dependent variable.

+ Independent variables (also called solutions) are the factors and conditions that when altered on the object of study, will affect the test results. Thus, the object of study contains one or more factors, or changing conditions. In other words the statistical result of the obtained dependent variable varies according to the independent variable. In the independent variable in particular, there is often a level of control or control solution containing the elements and conditions at normal levels or a determined solution whose influence the researcher does not need to predict. The remaining solutions will be compared with control solutions or pairs of solutions will be compared to each other.

+ An dependent variable (also called collected target), is a measurement target that is affected during the experiment, or in other words, the result of measurement depends on the change of independent variables.

For example, the hypothesis "discussion is an effective learning method" has the following variables. Independent variable: the class applies the method of discussion, in which the control solution is "the class does not apply the method of discussion". Dependent variable: the learning attitude of students, opportunity for students to enter lessons ... Or the hypothesis "low education level is the main cause of poverty," has variables. Independent variable: People have not finished elementary school or junior high, in which the control solution is: The people have completed primary school or junior high. Dependent variable: the income of the people, the people's ability to find jobs...

b. Setting up a template

+ Determining experimental objects

To select survey objects in the test, the first task is to define the population in which the researcher wants to gather measurement results. It is a community comprised of individuals bearing various characteristics and components that we want to examine.

The test objects are usually divided into 2 groups to ensure the objectivity of the experimental results. The groups are survey group and control group, in which the survey group is the object set in the hypothesis, subject to the impact of test methods, and the control group is to be compared with the survey group, affected by normal measure.

+ Determining sample size

The sample size is determined depending on the object and purpose of experimental research. It should be noted that the survey group and the control group must be equivalent in quantity and quality at the starting time. Sample size determination is an extremely important step. Inaccurate sample size determination will affect the study results. There are three cases where wrong sample sizes are created. If the sample contains too many individuals, there may be individuals who do not belong to the target population. If the sample contains too few individuals, there may be individuals located within or outside the target population. Or if sample size is not determined, the sample may contain a collection of incorrect individuals or the template does not lie within the target population.

+ Random sampling

Random sampling can be done in the following ways: excessive selection, randomly and step by step, randomly within a group, or incentive design.

- Excessive selection: If the program has limited resources, it may be possible to randomly allocate the deployment activity for part of the qualified objects, while the remaining qualified objects not receiving the program can be considered the control

group. It is necessary to make some budget survey, considering how many objects can be examined versus the actual selected objects, to obtain a control group large enough compared with the beneficiary sample.

- Random step by step: This method gradually enters the program on a series of eligible regions, while the control groups representing the eligible regions are still waiting to receive the program. This method will minimize the problems of equality and improve the regions' ability to participate in the program and control the similarity of characteristics that need to be observed.

- Randomly within the group: In the step by step random method, if there is a significant delay from program start until actually receiving the benefits, more debates may arise about which region needs to receive the program first. In this case, it is still possible to use the random factor by implementing the program in small groups in each selected region. Thus, this method is similar to the random step by step method on a small scale. One problem here is that the spreading effect would likely occur more often than in this case.

- Incentive design: instead of intervention random selection, researchers randomly assign objects to a statement or initiative to be eligible for the program. Some notices about the program will be provided in advance (during the initial investigation in order to save costs or at a certain point of time before implementing the program) to a random small group of eligible beneficiaries. This notice is considered a tool to participate in the program. The spreading effect can also be calculated easily in this case if there is data collection on the social networks of families receiving the notice, to see if there is a difference in participating rates between related and unrelated households. However, this type of experiment will require more effort.

- Step 3: Testing arrangement

In this step we need to determine how the experiment will be carried out. Specifically, we need to determine the time, place and means of support to conduct

testing. In addition, it is important to define the criteria for obvious measurement to help carry out the experiment.

Then the experiment is conducted by transforming the independent variables from the survey group to the control group to compare test results. We may proceed with testing steps with appropriate repetitions to handle statistics.

Returning to the example of the theory built in the previous part "Discussion is an effective learning method" with the independent variable being the class applying the method of discussion, in which the "control" solution is "the class does not apply to the discussion method"; the dependent variable is the attitude toward learning of the students, and the opportunity for students to join the lesson. To arrange testing of the discussion method, we need to determine the time, place and means of support and criteria for measurement. Then we may proceed with the test by transforming the independent variable from the survey group to the control group to compare the result of the learning attitude of students, and the difference of the opportunities for students from the two groups to join the lesson.

- Step 4: Collecting, processing and analyzing results

Data is collected regularly during the experimental arrangement period. First record the change of dependent variables of the survey group. Then change the independent variable and changing data recorded for the control group.

After the data is collected, it must be processed carefully by analyzing, classifying, and mathematical statistics. These statistics will be the results to be compared to find out the variation of the dependent variable, to see the difference between the two study groups, hence to see the impact of the test method on the study objects.

- Step 5: Affirming or denying the hypothesis

From the experimental results obtained in step 4, return to step 1 to affirm or deny the hypothesis and suggest the possibility of practical application.

1.5. Advantages and disadvantages

It can be said that random testing is the most common and powerful tool of the policy impact evaluation methods because it helps make factual bases to affirm the impact of policy measures on beneficiaries. The random testing method has the following advantages:

- The population of the individuals involved is clearly defined.
- Random sampling ensures objectivity in observation.
- Controlled observation ensures accuracy when assessing the impact of intervention.

However, random testing has the following limitations:

- Long experiment time
- High cost
- In many cases random group division is not feasible.

SEMI-EXPERIMENTAL METHOD FOR POLICY EVALUATION

Academically, random testing is the ideal method to assess policy impact. However in most cases it is not achievable due to difficulty and high cost, and encounters some problems such as the cases where the testing program is aborted leading to inconformity of participants, thus affecting final observation results. Moreover, in reality it can be very difficult to ensure that the control group will be entirely consistent with the survey group, that the interventions in the universal sample will be effective, and that the impact on policy objects is only caused by policy intervention.

In case random testing cannot be used, analysts can design semi-experiments as an alternative in policy evaluation. The semi-experimental method builds the control group similar to the survey group but it is not random selection. Semi-experimental method can use existing data, which requires the existence of a survey for both beneficiaries and non-beneficiaries of the policy. Although this method may not ensure

the same level of reliability of results because the sampling cannot be fully controlled, this method is generally less expensive to implement.

This section introduces some forms of semi-experimental designs that can be used to assess the policy: propensity score matching-PSM, and Difference in Difference -DD.

The semi-empirical method also includes 5 steps similar to random testing methods: (1) Build hypotheses, (2) Experimental design, (3) Experimental arrangement, (4) Collecting, processing and analyzing results, and finally (5) Affirming or denying the hypothesis. However, in step (2), instead of the experimental design method as in random testing, the semi-experimental method conducts semi-experimental design. The content of semi-experimental design will be presented specifically for each method in the next section. In addition, other steps may be applied similarly to the random testing method.

3.1. Propensity score matching-PSM

3.1.1. Concept and application

Propensity score matching is semi-experimental design, and building of a control group based on probabilistic models affected by the intervention (*also known as propensity scores*) with the observed statistics. The survey group is then compared with the control group based on this probability. The average intervention effect of the survey team is then calculated using the median difference in the result between the two groups.

Method description

Theoretically, random testing is a method of assessing complete impact. However, when random sampling is impossible in intervention then the next optimum solution is to try to simulate random sampling, i.e. find a similar alternative observed in random testing. For comparison methods, people will seek to build a control group as similar as possible to the intervention group regarding observed characteristics. The

problem here is how to identify the similar groups in a reliable way. Format is a problem, because even when the households are matched with the different characteristics it is rarely possible to find two completely identical households on multiple characteristics. Because many different characteristics exist, there is a way to compare households: propensity scores comparison.

The theory of the propensity scores comparison method is to find a way to determine the effectiveness of different simultaneous variables observed on the state of participation in a propensity scores or a single index. Then, the results of the participating and nonparticipating households with similar propensity scores are compared to determine the effectiveness of the program. Households with no comparison objects will be removed because there is no basis for comparison.

In the propensity scores comparison method, each participant is matched with a nonparticipant based on a single propensity score, indicating the probability of participation, depending on the different characteristics observed. Therefore, this method helps avoid the "combination explosion" associated with the matching of participants and non-participants on all possible characteristics when different characteristics observed are very large in size.

Application of the method

Propensity scores comparison is performed when random sampling is impossible. This method is appropriate in the following two cases:

(1) When the unobserved factors do not affect the state of participation or are affected by intervention, or not. Propensity scores comparison is a useful method to indicate the observed characteristics believed to affect the state of participation in the program. Whether or not this observation is accurate depends on the particular characteristics of the policy itself, as well as the sampling mechanism and individual receiving level for the policy, the initial data on the heterogeneous characteristics prior to policy enactment will allow the existence of participation probability based on

observed characteristics that are defined more precisely. It is possible to perform an inspection to assess the selection or participation error level on unobserved characteristics.

(2) When there is a coincidence in propensity scores between samples of participants (affected by intervention) and non-participants (not affected by intervention).

How to proceed

The key in semi-experimental design when making propensity scores comparison is to seek in a large group of non-participants for individuals with similar characteristics observed with participants based on characteristics not influenced by the policy (which may be the properties prior to policy enactment, because obviously these properties are not affected by the participation in the policy later).

Propensity scores comparison builds the statistical control group by modeling the probability of program participation based on the observed properties not affected by the program. The participants are then matched based on this probability, also called propensity score; nonparticipants in a variety of different methods will be discussed later in the chapter. The average intervention efficiency of the program is then calculated by the median difference in the results between the two groups. Each participant is matched with a corresponding non-participant observed, then the average differences in the result between the two groups are compared to determine the intervention effectiveness of the program. If we assume that the difference in participation status is based solely on differences in the observed characteristics, and if there are enough nonparticipants for comparison with participants, then the respective intervention efficiency can be calculated even when the intervention is not random.

To calculate the intervention effectiveness of the program, we must first consider the propensity score $P(X)$ based on every variable and meanwhile observe X which

also affects participation status and outcomes of interest. The purpose of the matching is to find the nearest control group from the non-participant sample with the participant sample. "Nearest" here is defined according to the observed characteristics not influenced by the status of program participation.

Many methods are used for comparison between participants and non-participants based on propensity scores, including nearest neighbor comparison (NN), comparison in scope and radius, stratification and spacing comparison, nuclear comparison and linear least motion (LLM). The regression methods are based on samples of participants and non-participants, using a propensity score as a weighted point, and allow more efficient computation.

Advantages and disadvantages

The advantage of the propensity scores method (PSM) is that this method does not necessarily require initial or general investigation, although in the subsequent cross-sectional study, simultaneous variables observed in the logit model on propensity scores will have to satisfy the assumption of conditional independence by demonstrating that the observed attributes are not affected by the program participation status. In this case, the initial investigation prior to program implementation would be more favorable because the unobserved variables that are covered do not depend on the participation status.

The PSM is also a semi-experimental method that creates few limits in the types of functions in the intervention model, as well as fewer assumptions about the tolerance limit distribution. Although the observations are removed to achieve the general support area, this approach increases the reasonable comparability between the respective intervention and control entities, thus reducing the errors in program impact. However, this result is only true when the general support area is large; one should have enough data about the non-participants to ensure that there is a sample large enough to pick symmetrical pairs. Error may also come from the removal of the

observations in the nonparticipating group which has systematic differences for the remaining objects; This problem can also be solved by collecting data on the large nonparticipant sample, including sufficient variability to achieve the representative sample. On the other hand, by surveying the properties of the nonparticipant sample that was removed, this also helps improve the basis to explain the effectiveness of intervention.

The main disadvantage of the PSM depends on the degree of influence on the status of program participation of the observed features. If the selection error in the unobserved properties is not insignificant, then this method will allow for efficiency comparison with the random calculations. And if the participant variables are not complete, the PSM results may be unreliable. This circumstance is not a criterion that can be verified directly, instead it is necessary to closely examine the factors affecting the status of the program (such as through surveys).

3.1.2. Difference in difference-DD.

The difference in difference method is based on the comparison of participants and non-participants before and after the intervention. For example, after an initial investigation of both the participants and nonparticipants (later), we can perform a subsequent investigation about both groups after the intervention. From this information, we can calculate the difference between the median results observed from the intervention group and control group before and after the program intervention.

Description of the method

This method examines the difference in the results of the participants related to the difference in the nonparticipant results. In other words, it will be in the difference in the indices in the two groups at the end of the program related to the difference in the initial index. Let X be the only concerned index, and T and C be in the control group, and the times indices of 0 and 1 indicating the time before and after the program implementation, then this method calculates the double difference.

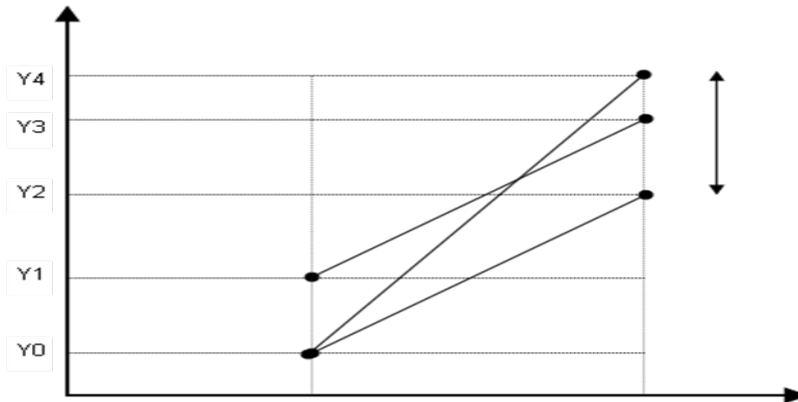
Application of the method

Dual difference can be used to reduce the potential selection difference (when the unobserved individual characteristics are assumed as constant time) and the impact of other exogenous factors on the program can be observed. Unlike PSM, the dual difference method assumes there is a heterogeneity not observed in the participation status, but this factor is constant over time. With data on controlled observations before and after the program intervention, we can calculate the difference in these fixed components. Combining the PSM with dual difference method will help solve the problem of possible selection error source by comparing the units in the area of general support. Comparing this with the conditions in the original area can also solve the problem of non-random site selection that can lead to errors in program efficiency.

How to proceed

To use the dual difference method with general data, we need to collect original data on program participation regions and make comparison before implementing the program. Both quantitative and qualitative information in these areas will be useful in identifying participants. Postproduction investigation after program intervention should also be performed on the same object units. Calculate the average difference in separate results for participants and non-participants in the period and then calculate the additional difference between the average changes in results in the two groups will give impact results of dual difference.

According to the dual difference method, the unobserved characteristics raise the gap between the comparison results measured and the result reflecting reality which is assumed to be constant over time, provided the differences between the two trends are the same in the period, as illustrated below.



$$(Y_3 - Y_2) = (Y_1 - Y_0) \rightarrow DD = (Y_4 - Y_2)$$

Advantages and disadvantages of the dual difference method

The advantage of the dual difference is that it minimizes the assumption about the observed extrapolating factors, and provides an intuitive, easy to use method, to calculate the choice of unobserved characteristics. However, the main drawback is also located in this very assumption: the concept of selection error that is constant over time is the lack of basis for more many target programs in developing countries. In fact, priori heterogeneity that varies over time and unobserved can be calculated by designing appropriate programs, which ensure the project region and control region have the same characteristics before the program. If the comparison region is not similar to objects capable of participating according to the observed and unobserved characteristics, then the changes in results in the period is likely to be a function of this difference. This factor also causes errors to the dual difference.

Chapter 4: WRITING POLICY EVALUATION RESULT REPORTS

1. WRITING POLICY EVALUATION RESULTS REPORTS

1.1. Requirements for evaluation report

An evaluation report should clarify the following questions:

- What activities are being implemented to solve the problem?
- What new or adjusted policy options have been need to be considered as measures to solve the problem?
- What are the results of policy intervention?
- How is the impact of policy interventions on beneficiaries?
- Which plans are more appropriate for the identified purposes and objectives?

To complete the report, the analyst must have knowledge and skills in report writing policy evaluation. Such knowledge and skills become an indispensable part of the training programs of the specialized schools for public policy. The knowledge and skills are developed from social sciences, but are different from this field because it aims to improve and understand the policy process. In this regard, policy analysis has the characteristics of a an "applicable" policy subject rather than a fundamental policy subject. Analysts need to have the knowledge and skills provided in the basic policy subjects, but the purpose of policy analysis is still "application".

1.2. Structure of an evaluation report

How a policy evaluation report is finalized depends on the time and information available. A policy evaluation report should explore the issues at a level deep enough to give the reader the conclusions or recommendations defined about outcomes and the impact of the set of policy solutions, to provide a basis for decision makers to make decisions or decide not to do anything further, or adjust certain policy actions.

Most evaluation reports need to have these standard elements:

Introduction:

1. The purpose of the evaluation report
2. Background of the problem or question

3. Major findings or conclusions
4. How to proceed with analysis
5. Recommendations

Contents:

- I. Background of the problem
 1. Description of customer request
 2. Overview of the problem status
 3. Description of past problem solving efforts
- II. Problem announcement
 1. Problem diagnosis
 2. Description of major stakeholders
 3. Defining common and specific targets
- III. Analysis of policy interventions
 1. Description of policy interventions
 2. Analysis of policy outcomes
 3. Analysis of policy impact and external applications
- IV. Conclusions and recommendations
 1. Selecting criteria or decisive rules
 2. Clear presentation of conclusions and recommendations
 3. Listing of limitations and unintended consequences.

References

Appendix

1.3. Guidance for evaluation report writing

An evaluation result report is a kind of text, a normal administrative document, prepared by analysts to present the policy evaluation results achieved during the analysis process.

To write an evaluation report one must meet the following requirements:

- Write the report in accordance with the guided structure of a policy evaluation result report;
- The description part must have enough evidence for all content (connotations) of the criteria;
- Figures and tables must specify the source and address of the provider, the provider/author, and time;
- Based on the evidence, analyze and comments on the strengths and weaknesses within the criteria;
- The evidence has been encoded on the principle of unity;
- The improvement plan must be time specific and feasible;
- To ensure consistency, no contradiction is allowed between the parts;
- The writing style must be bright and clear, and all misspellings and grammar errors must be cleaned up.
- All technical information, the design matrix and investigative tools must be put in an appendix.
- Take time to edit, edit and edit.
- Ask someone with knowledge and experience but has not read a document in the report to read and look for errors in the draft report. Suggest that the reader find mistakes or point out anything unclear.
- If possible, find an independent reviewer with expertise in content analysis and knowledge of analytical methodology to review the draft and propose amendments to the report if necessary. If that's impossible, ask a colleague not involved in the analysis to review the report.

2. EVALUATION REPORT PRESENTATION

2.1. The crucial points when preparing the presentation

For a successful presentation, you should note the following key points: (1) Identify the situation, (2) Analyzing the audience, (3) Determine the purpose, goals, (4) Practice.

(1) Identifying the situation

When preparing a theme, we usually have very much to say. However, if we try to say all those things, the presentation will become rambling and not focused. To avoid this, we must analyze it to see: where is the key point, where is the sub point, what is "forced" to be said, what needs to be said and what should be said. Normally we tend to say "mandatory" items first, and if there is still time, the "needs" and the "should" will be added to be spoken last.

(2) Analyzing the audience

The more we understand about the audience, the more we feel confident giving a presentation and meeting audience needs. The information that needs to be collected for analysis: personal information (age, occupation, level of education and expertise, job position), point of view, concerns, values of each person or group, etc. It's best to prepare audience classification tables in advance for easier access.

We also need to determine who will be the people directly listening to us, who will not be listening directly and who is the one making the final decision. If you know some listeners who have a tough stance, be careful and only raise the controversial issues, while having enough good evidence and arguments in hand. Also keep in mind that humor is essential, but sometimes humor at the wrong time has a negative effect. Therefore, only use funny stories and jokes at the right time to get the best result.

Audience size also affects the structure of the presentation. If there are only a few people listening, you can answer the questions of the audience in a particular way, or ask them for ideas on the issue being presented. If there are many people listening, the presentation is largely one-way. In this case, the clearness, accuracy and what's

easy to understand are key factors to maintain the attention of the audience during the presentation.

(3) Identifying targets and goals

Usually during a presentation, it is obvious that we must know the purpose of the presentation, and the specific target to be achieved after the presentation. However, sometimes we overlook those obvious things, and after the end of the presentation the audience does not understand clearly what we want, what they are asked to do, why it is so, etc. The more fundamental things there are, the more we have to define them clearly, carefully and we should not be subjective. A presentation is considered good if it meets the following basic objectives:

- It doesn't waste the listener's time.
- The presentation is well-structured.
- The presentations is alluring and attractive.
- The important points are emphasized.
- A friendly relationship is created with the listener.

(4) Practice

The most important and final step, and most often overlooked, is practice before the presentation. For basic moves and gestures, we can practice in front of a mirror. But to be more confident and effective, we should practice in front of a few people, a small group, and then practice with the same conditions as the actual presentation. That process will help us gather many opinions and ideas from other people as well as new ideas arising during our practice. The more sweat in the practice field, the less bloodshed on the real battle field. Practicing gradually in small steps is the biggest secret of success of the presenter. Learning how to speak loudly, clearly, slowly, not too fast, not too slow, with accents and intonations, and stops, etc., in such a way that attracts listeners to be on our side is key.

It is best to use a video camera to analyze and adjust your own behavior. The exercise process will help us turn our movements, gestures, and styles into habits. When all the movements have become a natural reaction, we just need to focus on the content in order to have a vivid presentation.

2.2. Rules to follow during presentation

- *Rules for presenting the content:*

When presenting the content, the presenter must thoroughly understand the following 3T rule:

1. Introduction: “***Briefing what will be presented***”
2. Body: “***Detailing what needs to be presented***”
3. Conclusion: “***Briefing what has been presented***”

(1) The introduction:

The introduction part is like a nail. The nail needs to be sharp in order to puncture the wood. So the introduction should be cutting-edge in order to:

- Attract the listener right from the start of the presentation.
- Create an original atmosphere.
- Help listeners change from an inattentive state to a listening state.

(2) The body:

The body is like the body of the nail. The nail body needs to be tough, with just enough length and suitably small or big to fit the object being penetrated. Thus the body of the presentation should be designed in accordance with the qualifications and experience of the audience, and time and context of the hall. A presentation that is too short in a period of time that is too long is like taking clog nails to punch them into a boat. In contrary, a presentation that is too long, with complex content conducted in a short time period is like taking boat nails and punching them on a clog. So the need is a suitable length and content fitting for the listeners.

(3) The conclusion part:

The conclusion part is like the nail cap. Two pieces of wood cannot be sintered together closely if the nail has no cap. So at the end of the presentation, the audience will not remember its content if there is no conclusion. The conclusion helps listeners understand the main points of the presentation and saves the impression of the speaker and the presentation.

Once we have built the basic outline, what we need to do next is to present the parts in a sharp, interesting, and compelling way.

- *Rules for presentation:*

(1) Reasonable timing. Planning, preparing and practicing before the presentation so that it only takes 75% of your estimated time. An early finish is fine but a late finish is not. If you want people to listen to your presentation, only spend 50% to present and spare 25% for the listeners to join your discussion.

(2) Appropriate content. When preparing presentations, define what "must", "should" and "can" be brought to the listener. Restrict the content according to presentation time and the interest of the listeners.

(3) Make the presentation more attractive. Bring into the presentation some stories, anecdotes, and metaphors to make them more persuasive instead of just giving simple data.

(3) Outline your own. Use line indentation instead of using the whole sentence. Highlight important places.

(4) Learn to speak loudly. You will speak naturally when you practice a lot. Learn to speak loudly before the presentation.

(5) Eliminating anxiety. Trembling in fear is not a good thing during the presentation. No football team captain tells his team to be calm right before the game. Instead, control your fear by breathing deep from the diaphragm and imagine you will finish the presentation successfully. Well prepared, you will be more confident.

(6) Be vibrant and excited. An enthusiastic and dynamic attitude during presentations will bring amazing results. If you have an expressive voice and lively gestures, you will look more confident and excited.

(7) Think about all the questions that can be asked. The session of questions and answers after the presentation is sometimes even more important than the presentation itself.

2. METHODS OF INFORMATION DESCRIPTION

3.1. Charting method

A chart indicates the relationship between two or more sets of numbers and variables, helping us understand and explain the relationship between the variables. Today, with the help of computer software, analysts easily set up charts of policy analysis quickly. The presentation of information by using images often gives analysts, decision makers or the analyst's customers a deeper understanding - which is gathering information in the form of tables. Some chart types commonly used are: pie charts, column charts, line charts, dot charts.

Basically, the process of preparing the charts consists of four main steps: building a hypothesis (identifying the variables and the relationship between the variables), selecting the metrics, arranging the data and drawing the chart, and completing the chart with the work of writing titles, scales, annotations, and document source. Specifically the steps are:

- *Building a hypotheses:*

In social life there are so many variables that have relationships with each other (proportional, or inversely), which means a change of one variable can change another variable (called the dependent variable), which can be in the same or reverse direction. Therefore, if the impact of a public policy will change a certain variable, that would entail a change of other variables. In other words, there is a causal relationship among the variables. Also, if an analyst knows this relationship, he or she can predict the

change of variables when another variable changes, or can even determine the scale of the change. For example, the per capita income has a relationship with the proportion of hungry or poor households, the price of a commodity has a relationship with the supply and demand of that commodity in the market....

- *Measurement system selection:*

Each of these variables is quantified according to a certain measurement system. For example, the variable of per capita income is shown by the amount of money/person/year, and time is measured in seconds, minutes, days, weeks, months, quarters, years, etc. Length is measured in centimeters, decimeters, meters, kilometers, etc. So to represent variables on the chart, the analyst must determine the appropriate measurement system for that variable, or specify a common unit of measurement showing the magnitude of variables (section, or percentage). A measurement system is also the basis to conduct information collection and process information on policy issues. The selection of proportion for the measurement system significantly affects the conclusions about the reflected content of the chart. One should not impress by creating lines that are too steep or peaks that are too sharp. One purpose of the chart is to bring an understanding. After arranging the data, the analyst should not only be interested in confirming the relationship between the variables that he gives, but also informing people about the explanation. Let's find the highest and lowest points, or the intersections or the largest deviation when there are two or more dependent variables.

- *Drawing charts:*

First, choose the chart and expression convention, and then determine the appropriate distances, writing signs, and sort the data. The selection of the chart depends on the relationship between the variables and analysis purposes. If the work only represents the size of the components making a whole, represent it with a pie chart (the parts are shown by percentages, and the total is 100%). When determining the expression convention, the analyst should refer to the type of chart to make the

convention. For example, in a graph showing the social inequality index (GINI), the analyst may prescribe the horizontal axis to represent the income variable, with the vertical axis representing the population variable, or the opposite. A denotation stands for a certain variable that the analyst has to express on the chart. What are often used are abbreviations in English for the name of that variable. For example, population is denoted P, income denoted I; prices denoted P, the supply of goods or services is denoted S and demand is denoted D. Of course, all these denotations should be annotated below the chart. Next is how to arrange and express data on the chart.

- Completing the chart:

All kinds of charts can be formalized in writing. This will ensure that the chart user has no misunderstanding, and that analysts can respond to emerging issues at the charting time or some later time. This means that each chart itself contains a content that can explain itself. The name of the chart may also give a clear and full explanation of what the chart reflects. The name should be short, easy to remember and able to attract attention. The denotations, source, and annotations and date of chart creation can help the user answer many questions.

Components of a chart

Component	Description
Chart name	Every chart has a name so that the reader immediately knows the content of the chart.
Horizontal or X axis	This is the horizontal straight line of the line chart or column chart, representing a variable (time for example)
Vertical or Y axis	This is the vertical straight line of the line chart or column chart, representing a second variable (price for example)
Origin	Is the intersection of the two axis

Gridline	Many charts use grid lines to compare data at specific levels. Use just a few coordinate lines to avoid making a confusing drawing.
Axis name	X-axis and Y-axis names are very important. They determine what is measured, and measurement unit (years, meters, kilograms, square meters, volume, VNĐ, etc)
Axial ratio	X-axis and Y-axis need appropriate lengths to present values. Select the length carefully to be able to cover the entire values of the data. The ratio between the axes and should be chosen to best illustrate the relationship between the variables
Real value	Many charts also show the real values of the quantity in the form of text in the image. These real values help the reader understand the particular context that the chart shows
Coordinate	This is the point on the graph where X and Y values meet. The presentation of coordinates (points, top, tip, column) depends on the type of chart used.

- *Pie chart*. Is a type of round chart divided into several parts, each part representing the size of each group, often illustrated by a percentage. Pie charts are used to show the scale of the components of a certain whole, when there are few component groups, and should not be used when the number of component groups exceeds eight or is less than three.

- *Column chart*. Is a type of chart using a horizontal or vertical rectangle to represent and compare quantities. The rectangles should be named clearly to ensure that readers understand which factors are being expressed. The line of numbers along one side of the chart is called the scale (size).

There are two types of column charts: a single column chart and multi-column chart. A single-column chart shows the information about a variable. A multi-column chart provides information on a variable. The columns can be drawn horizontally or vertically.

Use multi-column charts to compare two or more groups of data on the same variable. For example, analysts who want to compare the answer rates of the questionnaire by boys and girls may use a two-column chart.

Column charts are often used to express the identifying scale or hierarchical scale, which do not have a hierarchical order, and the numbers assigned to the group are merely to distinguish (1 = east, 2 = South, 3 = north). These groups must be clearly explained in footnotes.

- *Line chart*. Is a kind of chart presenting information when a series of data points are connected together by straight line segments. This is the basic chart type commonly used in many fields. It is created by connecting a series of data points together into a straight line, often used to indicate the change over time. This chart is often used to describe trends in data of periods, so a straight line is drawn in the order of time.

Line charts often describe the variability of a variable or multiple variables over time. For example, analysts can use line charts to present the rise or fall of rice price in the months of the year, or the change in population over many years.

A line chart can show a unit or multiple units that change in the same period. The line chart is an effective method to present a continuous scale, for example a range scale or ratio scale. A range scale is divided into intervals in which the distance between the intervals has a meaning. Examples of range scales include income, and number of school years. Ratio scale is a range scale with an absolute zero point.

- *Dot chart*. Is a diagram showing the relationship of the data points by marking it on the vertical axis and horizontal axis. If the values are related with each other, they

will be represented as lines or curves. The clearer the relationship, the closer the value points to the line or curve.

Statistical charts are drawings or geometric lines used to conventionally describe the statistics.

Unlike statistical tables using only numbers, statistical charts use numbers combined with shapes, lines and colors to present an overview of the figures and basic development trends of the phenomenon. Statistical charts can have a strong and vivid attraction, helping those with little knowledge of statistics perceive the problem quickly and easily. Statistical graphs also help us quickly use images to check the accuracy of statistical information.

The statistical graph method is widely used to visualize the status and development trends in terms of quantity of phenomena and social economic processes. Some statistical graphs commonly used are:

- Chart of the structure and structural variation in texture and of phenomenon.
- Chart of the development of the phenomenon over time.
- Chart on the plan implementation.
- Chart to compare the levels of phenomena, etc.

Based on the reflected content, statistical charts are divided into the following categories:

- Structural chart.
- Development chart.
- Comparison chart.
- Contact chart.
- Distribution chart, etc....

Based on expressive form, statistical charts are divided into the following categories:

- Column chart

- Area chart (square, rectangular, circular)
- Hockey stick chart
- Statistical chart, etc.

Thus, the qualitative and quantitative information processing methods have advantages and disadvantages, but to ensure a quality research process, reflecting the nature of the phenomenon, and meeting initial research purposes, researchers are required to know how to use and combine the two methods in the processing, consolidation and analysis of information.

3.2. Tabular method

Tables are used to present information that has been reorganized. There are two types of tables that can be used in analytical reports: a data table and a sorting table or matrix.

- *Data table.* Data tables are used to present numerical information in the table. They are only used with small data sets, while large data tables use line graphs or column charts for presentation, and are usually brought into the appendices.

The data table should have a title so readers know where to look and how it is related to the content of information. A short description of the content of the data table should be presented in the report. When using data tables, one should always quote the source of data and year of data collection.

When creating a data table you must:

- + Round to two decimal places, so the reader can compare and reconcile;
- + Give total value and average values in the columns and rows (if appropriate) so the reader may compare each group;
- + Put the most important figures in the columns so that readers can compare easily;
- + When formatting tables avoid using too many columns as it is difficult for the reader.

- *Classification table (matrix)*. A classification table, also known as matrix, has a format showing information that is organized according to the different characteristics. There are at least two characteristics showing similarities or differences between the classified groups. Classification tables help present complex information.

Statistical tables are a method to present statistical data in a systematic, scientific and logical way to describe the quantitative characteristics of the phenomenon in research clearly and in detail.

Statistical tables have significant effects in social economic research in general and statistical analysis in particular. The data in the statistical tables are arranged in a scientific way that can help you compare reconcile, and analyze data in many different ways to profoundly reflect the nature of the phenomenon in research.

In appearance the structure of a statistical table includes:

- The vertical columns and horizontal rows reflect the size of the table. The more horizontal rows and vertical columns, the larger the size of statistical tables, and and more complex it is. The vertical columns and horizontal rows intersect to form cells for filling out stats. The horizontal lines include the common lines (total row); vertical columns also include the common column (total column). The column is marked with symbols or sequence numbers for easy presentation and tracking.

- The headings reflect the content of statistical tables, including common headings and individual headings (titles). Common headings are the name of the statistical table, which is often written short and clearly, is easy to understand, and is put at the top of the table. The titles are the name of each row and column, reflecting the content of each row and column.

- The numbers reflect the quantity side of the phenomenon in research, and are filled in the table cells. The numbers have relationships with each other, including the common numbers and part numbers.

In terms of content the structure of statistical tables is:

- The topic part (also known as the subject) reflects the whole and all components, and can also be the names of regions, localities or various study time series of the phenomenon, etc. The subject part is often placed on the left side of the table.

- The explanation part (also called the object) consists of criteria explaining the characteristics of the study objects. The object part is often placed at the top of the table. In some cases, depending on the purpose of research it is possible to swap the locations of the two parts.

Based on the complexity of the subject, statistical tables can be divided into three categories: simple, divided and combined.

- Simple tables are tables in which the subject part is not divided, and overall units are arranged by name, by location or by study time.

For example: In the Annual Statistical Yearbook of the General Bureau of Statistics, the simple table types are: Average population table by locality; average male population table by locality; average female population table by locality; average urban population by locality; rural population table day (July 1st) by locality, etc.

- Group division tables are tables in which the objects of study written in the subject part are divided into groups according to a certain criterium.

For example: In the Annual Statistical Yearbook of the General Bureau of Statistics, the group division tables are: Gross domestic product table, Actual price (according to 1994 comparative price) by industry; Table of industrial production value at constant 1994 prices by economic sector; Table of industrial production value at constant 1994 prices by industry; Average labor table in the state sector by economic industry, etc.

- A combination table is the kind of table in which the objects of study written in the subject part are divided into groups of two, three, or more criteria put together.

For example: In the Annual Statistical Yearbook of the General Bureau of Statistics, the types of combination tables are: A table showing the number of businesses on December 31st annually by capital size and economic sector ... combination tables are commonly used in the consolidation of statistical survey.

When building statistical tables we should note that:

- The scale of statistical tables should not bear too many targets and too many combined divided groups (there should not be too many rows and columns).

- The titles and headings in the table need to be written accurately, concisely and easy to understand.

- Rows and columns are usually denoted by letters or numbers for easy presentation and explanation of the content as well as consolidation on the computer.

- The explanation criteria in statistical tables should be arranged in a rational and logical order, and be accessible and suitable for research purposes. Criteria related to each other should be arranged close together.

- The statistical table cells are marked with numbers or alternative conventional symbols:

- + If the phenomenon has no information, the cell will be filled with a dash (-);

- + If the phenomenon is to contain information but the info has not been collected, the cell will be filled with an ellipsis (...);

- + If the phenomenon is not related to the criteria in the cell will then record a cross symbol (X).

- The annotation at the end of statistical tables is used to explain the content of some criteria in the table or other necessary details if needed.

- The data source is noted at the end of the table.

4. USING POLICY EVALUATION RESULTS

4.1. Use in policy planning

Evaluation results are used to serve the decision-making, design and issuance of policies. For pre-policy evaluation and forecast of impact of policy intervention, this will be a convincing basis to choose policy options that are issued. For evaluation of implemented policies, one should consider the impact of the policy in reality to clearly see the positive aspects and limitations of the policy. This will be the basis for amendments, adjustments, additions and improvement of policies in the new policy cycle.

4.2. Use in policy implementation

Evaluation results also serve the activity of policy enforcement organization. Policy evaluation allows for consideration and judgment not only on policy issues, but also on the process of policy implementation. There are problems that have not emerged during the policy planning period or have emerged but not yet been noticed by planners, only to be discovered during the implementation phase. Policy evaluation will provide comments on the results achieved after the enactment and enforcement of public policy, so we can see how the policy operates, which thus helps us adjust, supplement and improve the policy so it is consistent with reality and meets the requirements of life.

4.3. Use in budget creation

Policy evaluation helps measure results of policy implementation and deliver those results into budget preparation and prioritization. Policy evaluation results provide essential information, including that which improves the ability to provide services, use resources more efficiently, use concentrated funds as planned, and strengthen accountability in the implementation policy. The statistics from the previous year about policy implementation will be reconciled and analyzed, leading to changes and additions to the budget plan for the next year, thereby enabling budget planning to reflect the enacted policies and allocated targets.

4.4. Use in social media

Policy evaluation results are used very widely in social media. The media reflects the feedback from the public about the effective implementation of that policy in socio-economic life. On that basis, the state agencies may make policy adjustments if necessary. The policy can be adjusted in the target, implementation method, change in or addition of new solutions, and a decision may be made on whether to pursue or terminate the policy. The media is also the channel to monitor state officials and employees, as well as implement their policy in real life. Therefore the media is also involved in evaluating the effect of the policy when implemented in reality through social management functions. According to the freedom of the press stipulated in the Press Law, the people have the right to any comments, criticism, suggestions, complaints and public denunciations in the press against Party organizations, state agencies, social organizations and members of those organizations.

PRACTICAL EXERCISE

- Students built templates for reports on social welfare policy evaluation
- Students present policy evaluation reports on traffic safety at the national conference on provincial traffic safety

CHAPTER 5

PUBLIC POLICY EVALUATION IN SOME COUNTRIES

1. PUBLIC POLICY EVALUATION IN THE UNITED STATES

1.1. Background for the birth of public policy evaluation

The clear demand for impact evaluation is to help policy makers see whether or not the program has achieved the desired effect; thereby improving accountability in resource allocation among public benefit programs; Adding unknown things about which activity is effective or ineffective, as well as knowing the identified transitions in benefits related to a certain project or policy intervention. In summary, one should perform some steps to ensure that the evaluation process achieves efficiency and gain

useful feedback. For example, in the process of shaping and preparing the project, one should clearly state the importance and objectives of the evaluation. There are also the nature and issues of the evaluation. To distinguish the effectiveness of the program independent of other factors, one must determine the timing and impact evaluation design in advance to help program managers assess and update the information about the object as well as the implementation guides in the intervention process.

The readiness and quality of data are impossible factors in the impact evaluation of a program. Data requirements will depend on whether the assessor uses quantitative or qualitative methods, or both, as well as whether the evaluation framework is priori, retrospective or both. If data collection is necessary, a number of other issues have to be considered such as time, design and sampling, and selecting the appropriate survey tool. One also needs to implement a pilot survey in the field to revise and finalize interview questions. Collecting economic and social data at the level of beneficiaries and the community also helps better understand the behavior of objects in the context of their socio-economic background. Ravallion (2003) also recommended some guidelines to improve the quality of data collected in the survey. These guidelines include understanding the different aspects and the stylized facts about the program as well as the economic context of the participants and non-participants, to improve the quality of sample design, construction of the survey modules, collect additional information (about the participation properties or program object selection) to understand and solve the issue of selection errors later in the process.

The recruitment and training of field staff as well as the application of unified management practices and creating data access conditions are also very important. During project implementation, based on the management perspective, the evaluation team should be carefully selected to have sufficient technical and management expertise to ensure accurate data and result reporting and also transparency in implementation so as to correctly explain the data. Continuous data collection is an

information update condition for managers on progress, and parameters of the program should be adjusted to suit the circumstances of the program or related trends of the program. Data needs to be analyzed thoroughly and presented to policymakers at all levels as well as other key partners in the program in order to get valuable solutions. Apart from the results obtained from the evaluation, these input factors will also contribute to the orientation of policy development in the future.

1.2. Public policy evaluation activity

The fact that a public policy issue is put on the agenda does not mean that the problem will soon become the desired public policy. That problem needs to be formally investigated, which means there should be an entire investigation, with meticulous methods to propose the optimal solution to that problem. The formal study of a public policy should be carried out independently by various agencies before it is combined for comparison and selection. In the United States, the official research entities often include:

- A committee established by the responsible unit.
- Professionals related to the preliminary study and issue initiation
- Professionals from several related localities
- Professionals outsourced under the contract
- Officers operating within the issue scope
- Professionals from interest groups related to that public issue
-

To conduct research and solve public policy issues, i.e. finding the optimal plan for the policy proposals, many different methods are used in the US such as analysis of benefits and expenses, random controlled testing method, time series, dual difference comparison, etc. Policy analysis methods are interdependent. One method cannot be used before other methods are used.

In particular, benefit-cost analysis is the most popular tool for assessing policy solutions in public policy. Two basic principles of this method are: 1) Assume that, if the solution is applied in life, the benefits that it brings to the community must be greater than the cost. 2) In the same issue, there may be multiple solutions with greater benefits than costs; in this case, only the solution in which the biggest gap between the benefits-costs will be selected. The solutions are brought to be quantified on the benefits and costs processes converted to cash. This listing process can use many different tools: prediction and surveys based on prediction, reality simulation by computer, applying the solution by a selected random sample and then statistics of achieved cost and efficiency.

Solution evaluation is a relatively independent work in the process of problem research. Currently many policy options as well as the policy issued in the United States are evaluated with this method. For example, when analyzing the benefits and costs of the policy of the “55 mph Speed Limit”, the Governor of a big state in the eastern United States has requested his professional to investigate the effectiveness of the speed limit of 55 miles per hour in reducing deaths and injuries of people in the state. The Governor will rely on that analysis to decide whether to submit to the federal government the proposal to allow his state to remove its speed limit of 55 or not. After evaluating the solutions of this policy by means of the benefit-cost method, policy analysts recommend maintaining the 55 mile per hour speed limit because this annual limit has saved several hundred lives in the state, and several thousand lives across the country. The Governor accepts this recommendation, and not only him, but nine other states in the northeastern United States have also decided to keep the speed limit of 55 miles per hour.

But economic studies show that the cost of time lost due to driving at a speed lower than the limit of 55 is greater than the economic benefits in terms of lives saved, the number of injured people is reduced, and the amount of fuel preserved. Other

economic analyses that the number of lives saved has been overestimated and most of the decline in the number of deaths from traffic accidents can also be the result of other factors such as the economic recession, and unemployment. However, the state governor rejects those analyses, saying that maintaining the speed limit of 55 mph must be on an ethical basis and not merely on economic grounds. This is the biggest difference between the methods of benefit-cost analysis and financial analysis, concern about public interest and ethics.

After evaluating the solution, the next step is to choose the solution, making decisions and enacting the policy. This is the final stage of the policy design process. Depending on the type of policy, the choice and enactment of the policy may be different in the subject and method. If the policy belongs to a secret agenda and anti-crisis policy, the solutions are normally chosen by a handful of key people, which may be the President or some members of the National Security Council, and sometimes there may be some involvement by the US Congress.

If the policy belongs to the remaining agendas such as public sector agenda, the agenda on people's issues may, upon the birth of the policy, have other names like law, law amendment, program or project, etc., and is decided after a complex process. Congress, the interest organizations, and the court usually participate directly and closely on the process of solution selection, decision and enactment.

For the distribution policy, policy solution options are submitted to the U.S. President to sign and propose a move to Congress. At Congress, after being requested for a hearing, if approved, it is returned to the President to sign an enactment decision. When the solution is selected and presented to the President to sign the proposal, it is worth noting that only the important policies involving many important parts are brought to the cabinet to achieve an agreement, and that's not the case, only the President will sign the proposal himself. Similarly in Congress, only the major laws, programs and policies, related to tax or spending increase or reduction, need opinions

from the House of Representatives. The remaining policies will be ratified by the Senate.

As for the redistribution policy, the President, his Cabinet, and Congress are the entities to select the solutions and make decisions. Options are chosen through fairly democratic votes. The lobbying role of interest groups are especially important in the solution selection process and decided by both sides.

It is obvious that for many decades, public policy in the US has made a lot of achievements, transforming the economy from merely a free market nature into an initial welfare economy, with the construction of the world's largest social security system since 2001. Today, the Public Policy in the US is constantly being adjusted. It is fair to say that it is revised each day to suit the changing conditions inside and outside of society. But besides the inevitable adjustments, many policies and policy designs have been built at the central government level since the 1920s and 1930s. The pivotal management practice or public policy design mentioned above may be considered fixed and has been the major platform in the American administrative system, because it reflects the service of fundamental and constant interests of the United States that the government, the representative of the country is responsible to provide. With similar goals in the national interests, this fundamental design and administration practices can be a good example for developing countries to consider¹.

1.3. The benefits of public policy evaluation

The American belief about what government can do seems boundless. They believe that the government can erase poverty, tackle racism and preserve peace, fight crimes, reform the cities, clean the air and water, etc., simply when the government delivers the right policy. The benefits of public policy evaluation in the United States are represented in many ways:

¹Dr. Le Vinh Danh, United States Public Policy, 1935-2001, Statistical Publishing House

1. Social problems can have many different causes, and may be impossible to eliminate if only one specific policy is applied. For example, vocational training may not affect the unemployed force if the working ability of this group is also affected by poor health conditions. Therefore, impact evaluation helps find the most optimal solution for a certain social problem.

2. Government agencies often invest a lot of organizational, financial, material, and psychological resources in existing programs and policies. They are of course against any attempt to conclude that their policies are ineffective, and the work of public policy evaluation in the United States helps clarify these weaknesses.

2. PUBLIC POLICY EVALUATION IN JAPAN

By relative evaluation system

Horizontal evaluation of competition on the levels in Japan is not an absolute evaluation on the nature of achievement. It is a relative evaluation like "B is greater than A" made by many bosses, or sometimes just depends on ranking results. Such an evaluation is not restricted to one time but lasts for a long period of time. The reason companies or industries use this evaluation system is summarized as follows. (Kata Junko, Aoki, 1988)

1- Performance evaluation costs including job observation cost are kept relatively low

2. Neutral evaluation outside the disturbance of the entire structure can be done

3. Not depending on the absolute coefficient of the evaluation index

4. There is no need for difficult adjustments across the structure.

5. Because the evaluation is done by ranking, ambiguity is also limited.

For those reasons, we can explain that despite having a little variation, it is possible to understand the rationale of the evaluation system commonly used in Japanese organizations.

However, this system also has disadvantages as follows:

1. Due to anxiety for the lack of objective criteria, the evaluation has difficulty and can not be modified, therefore everything will end up at levels based on subjective judgment.

2. As everyone can know the result, competition will decrease, and there is also a case where obstructions are found in horizontal cooperation, an element that makes up the characteristics of the organization.

3. Because of the level of dedication, an independent promotion system and remuneration system may emerge, hence destruction caused by the use of complicity is also likely to happen.

4- Because everyone knows about the levels, the incentive for the losers decreases.

Applying the evaluation system - external evaluation and internal evaluation

The elements constituting the evaluation system are "The assessor" and "The assessed". If the assessor is considered the employer, and the assessed is considered the employee, then a state of "heterogeneous interest and damages" will be created. But the bigger problem is that the assessed will avoid the challenge of the big problems with the risks. The assessed is the passive side so the fact that they try to avoid risk can be quite reasonable. The assessor is interested in reputation so in some cases they just call for attention to the common work that has been practicalized.

2.1.

3. PUBLIC POLICY EVALUATION IN VIETNAM

3.1. *The origin background of public policy evaluation*

As Vietnam moves to develop a market economy with socialist orientation and international integration, the requirement for enacting policies to create the factors and the environment for transformation has become urgent. Therefore, for a long time, the state concentrated on the development and enactment of regulations, in order to create a legal framework for all fields of economic and social development. The enactment

of a series of legal documents in many cases led to overlapping, duplication and even contradiction among the legislations, which ultimately led to their domination on social economic activities in different directions, causing these activities to not achieve the desired objectives. In other words, a series of policies were enacted with effectiveness for implementation, but nobody seemed to care about whether the policies had any practical effect, and to what extent they met the targets set. Sometimes the policies issued not only failed to solve the addressed problems, but also caused side effects to further complicate the problems. For example, the policy to reduce traffic congestion in large cities has been deployed with many different solutions, but in fact the problem of traffic jam remains unsolved, while to make the problem worse, some solutions such as blocking intersections, anticongestion toll fees caused side effects, worsening the current state. Moreover, the policy planing (through the drafting and enactment of a series of legal documents) and the organization of implementing these policies in fact cost plenty of the people's tax money and the energy of many laborers, but most of the time these policies do not bring about the benefits on level with the money spent. Therefore, it is now time to consider policy evaluation as an indispensable phase in the policy process.

3.2. Public policy evaluation activity

Despite being an important factor in the policy process, in our country, many policies do not receive consideration for evaluation. That situation stems from the following reasons:

First, awareness about policy evaluation is still superficial. It is expressed as follows:

- Unifying the policy with a single text. Although the policy was institutionalized in legal documents, it cannot be unified with a single text. Even some major policies are collections of element policies. For example, the policy on hunger eradication and poverty reduction includes a policy to support the poor through the national target

programs, a policy on tuition exemption for the poor, a policy on free medical treatment for the poor, etc. Therefore, the evaluation of policies is often quite complex, requiring a general view.

- Regarding policy evaluation as the work of the policy issuing agency, thus waiting for that agency to have a policy or new specific requirements before implementing the evaluation.

- Separation between policy content evaluation (expressed through text) to policy implementation evaluation: Sometimes, we fall into partial comments: considering the enacted policies to be fair, often mistakes are made at the stage of implementation; but at times covering up the errors made in policy implementation by blaming the nonconformity of the legal regulations.

Secondly, the authorities are often not interested in organizing policy evaluation. In fact, very few policies get assessed seriously. Many competent authorities (agencies issuing policies or chairing the implementation of policies) do not include policy evaluation in its program of activities. There are many causes of this situation: not having enough manpower, having no financial resources for evaluation, because the policy is implemented very "quietly" not causing any problems, due to the fact that these agencies do not want to "self-judge" the policies they have issued and executed ... Of course, policy evaluation is not done by state agencies alone. Policy evaluation may be reflected in public opinion, people's opinion, political and social organizations. However, an evaluation from outside the state will only have real meaning if received, consolidated and learned by experience, by the state agencies. In many cases, sporadic, spontaneous evaluation by people is overlooked. Without the leadership of the relevant authorities, the evaluation also has little impact on decision makers and policy enforcement.

Thirdly, policy review is sometimes only conducted when a problem occurs. In some cases, policies are still "in peace" for a long time, and it's not until there is a

"bumping" into reality, do people realize the loopholes of the policies.

Fourthly, is the lack of criteria to assess the policy in a scientific way. When assessing a policy, people often compare the results obtained with the original policy goals. The policy evaluation will be easy if the policy objectives are expressed as a quantity, such as population growth rate, the percentage of children of school age in school, etc. But, in reality, most of the policy objectives are expressed in terms of quality, with the target unclear most of the time, in that case the policy evaluation according to its set objectives may not fully reflect the value of the policy. To assess a policy, in principle, one should have an evaluation criteria set designed for each type of policy. The lack of evaluation criteria causes the evaluation to be incomprehensive, incomplete, and superficial. For example, looking at an evaluation of policies on hunger eradication and poverty reduction in Vietnam, we can see very positive results with a reduction in the poverty rate from 22% in 2005 to 10.7% in 2010 according to the poverty line set for the 2006 - 2010 period. However, if we get to assess the impact of specific policies on the poor, there are still lots of limitations. For example, even though the program 135 for the period of 2006 to 2010 has spent more than 14 trillion dong, not including the value of the contributions made by the people, by 2010, only 113 communes, accounting for 6% of all communes, were enjoying the program, or whose names were "deleted" from poverty. In some provinces there are many communes with high poverty rates, such as Lang Son: 49%, Dien Bien: 50%, Quang Binh: 49.34%, Quang Nam: 48.78%, Quang Ngai: 49.94%.

Fifthly, policy evaluation can sometimes be one dimensional, only reflecting comments from state agencies without paying sufficient attention to the feedback from society, from the objects to which the policy is oriented. Although the policy evaluation of state agencies has favorable results because they know very clearly about the policy and its implementation process, this approach can lead to the results of policy evaluation being under the control of the people who make and operate the policy;

pointing out their own flaws poses a strong psychological barrier and sometimes gets distorted in a subjective way. Therefore, when it comes to policy evaluation, few organizers of the survey get feedback from people or beneficiaries in a wide and public way. In some cases these authorities have already collected feedback from the media, or held social opinion gathering meetings through cooperation with political and social organizations. However, these comments do not always reflect fully and accurately the practical problems that are posed concerning the policy under evaluation.

Sixth, is a lack of funding for policy evaluation: Agencies often spare their limited funds to implement the new work (to create new results) rather than using such funds to review what has been done.

3.3. Benefits of public policy evaluation

To enhance the benefits of public policy evaluation in Vietnam, we should implement the following solutions:

First, put the policy evaluation into a mandatory content for some important policies of the State. We need to be aware that for the important policies related to the most urgent issues of life, to the benefit of many, policy evaluation is critically essential to the improvement of policies and to avoid the occurrence of risks or waste, especially to avoid reactions contrary to the positive wishes of the Government. There needs to be policy evaluation planning and specific policy evaluation schedule building. The policy evaluation plan should clearly define the objectives, scope, entities, objects, content, methods and evaluation criteria. It's necessary to review the evaluation and publicize the evaluation results to the extent possible. Lessons need to be seriously learned from the errors of policy content and the limitations and obstacles in policy implementation.

Second, develop criteria for policy evaluation fully and correctly. The criteria for policy evaluation will vary depending on the field. Typically, the policy evaluation criteria focus on the following aspects:

- The effectiveness of the policy reflects the level of impact and the effect of that policy in real life, alters or maintains a reality desired by the State. The effectiveness of the policy is reflected in the level of achievement of the set objectives.

- The effectiveness of the policy reflects the comparative correlation between the results brought about by policy and the money spent. The cost-benefit analysis method is often used to determine the effectiveness of the policy. Failure to monitor and calculate the effectiveness will lead to waste and loss of money and funds from the state budget.

- The fairness of policies is expressed in that through the policy, the State implements income redistribution among the classes of people, supports the vulnerable, such as the poor, the elderly, children and people with disabilities to overcome income inequality between social groups. The fairness of the policy is also reflected in the reasonable allocation of costs and benefits, rights and obligations among the entities who participate in the planning and implementation of the policy and groups of objects related to the policy.

- Focus on assessing the impact of the policy on the beneficiaries of the policy. The impact of the policy reflects the outcome or the final result of the policy. This is a very important criterion in the evaluation of public policy. However, evaluation of the policy impact is also the most difficult phase of policy evaluation, because the effects are sometimes very difficult to measure. For example, to assess how poverty reduction policies have an impact on the poor, one needs to consider what benefits poor people receive from the Government's policy and how effectively the benefits have helped them escape poverty. This impact evaluation cannot be based on the subjective opinion of the authorities at all levels, but by the satisfaction of the people on the benefits they have been awarded. We need to organize surveys to obtain opinions from the people and the beneficiaries of the policy. Successful examples of customer opinion surveys about the provision of essential public services in Ho Chi Minh City and Da Nang are

valuable evidence in assessing the extent of the benefit among policy objects.

- The extent policy problem solving. Each policy is built stemming from the determination of policy issues - the social demand or conflicts in society require the State to use its public authority to resolve them in order to achieve the goals of efficiency, stability and social justice. The needs for policy problem solving are often present in the objectives of the policy. However, sometimes the goals are set to be too broad, too generic, and too ambiguous, therefore, whether the policy has been implemented in practice in accordance to its objectives, it is also very difficult to realize how well policy issues are resolved. Moreover, policy issues often affect many different economic and social aspects. Therefore, the level of policy problem solving can be measured by a series of criteria relate to these socio-economic aspects. For example, to assess the level of solving the problems of hunger and poverty, one would not only indicate how low poverty has fallen, but must also consider other aspects, such as how the poor get access to essential public services, such as health, education, and clean water; the facilitation of conditions for the poor in the implementation of citizen's rights.

Thirdly, paying attention to public opinion, the ideas and aspirations of the people to see the limitations in the process of planning and policy implementation. The policy evaluation under the above criteria reflects the reality of the success and limitations of policies. But, only when the organizing authorities assess the limitations of new policies, are the limitations of the policy unveiled. The mass media, public opinion and the inputs of the mass organizations are important feedback channels on the policy. The interest in tracking and receiving this information will help orient the function of agencies to policy evaluation. The opinions above will also provide the basis for the formulation of proposals in order to further complete and strengthen the policy.

Fourth, organizing an independent evaluation team, comprising of members

working as assessing experts, may come from state or non-state agencies, but will all perform the evaluation independently and objectively according to specific objectives and tasks of the group.

Fifth, sparing an adequate budget for the policy evaluation. Sparing a necessary budget and using that budget effectively will bring significant benefits to the next stage of continuous policy operation, overcoming the limitations and shortcomings of the policy and ensuring that the policy meets the requirements of life.

In a developing society in the democratization trend, the evaluation of public policies is increasingly becoming a legitimate and urgent requirement. Public policy evaluation helps the State identify gaps in social economic life and seek to overcome those shortcomings. Public policy most clearly reflects the goals of the State and the solutions that the State uses to reach these goals. Policy evaluation allows the State to recognize its institutional capacity and policy enforcement capabilities one more time. In an ever-changing environment, the evaluation of public policies will create a solid foundation for the development of state management in the next stage towards a true State of the people, by the people and for the people.

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SUBJECT:

COST BENEFIT ANALYSIS (CBA)

Chapter 1:

CBA OVERVIEW

I. DEFINITION AND THE ROLE OF CBA

1. Definition of CBA

The definition of Cost-benefit analysis was firstly introduced by Deput, a French engineer, in his article published in 1848, and later was standardized in pieces by Alfred Marshall. It was then applied to analyze American public policy under the provisions of the Maritime Law of 1936 and Flood Control Act of 1939. Subsequently, this method was applied in common practice of public policy analysis in the United States of America according to Marine Law in 1936 and Flood Control in 1939. Later, this technique was also widely applied in motorway and highway development projects in the UK and US in the 1950s – 1960s. However, not until the 1970s were the theory and practice of modern cost-benefit analysis much improved. Today, the cost-benefit analysis method is used in many countries worldwide to assess public policy proposals.

Cost-benefit analysis is a method that analyzes the impact on the economy and society caused by state intervention by considering the net social benefit resulting from such intervention. The purpose of cost-benefit analysis is to analyze the effectiveness of state intervention by comparing the situation with and without such intervention. The cost-benefit analysis is based on the principle that determines which parties are affected by the intervention and how they are affected with regard to the monetary value.

2. The role of Cost Benefit Analysis (CBA)

According to welfare economists, the State authorities need a policy that intervenes in a public issue in the most effective way. Cost-benefit analysis is a supporting tool that helps the decision maker ensure an effective allocation of resources in related fields by considering net social benefits as the result of such decisions.

Benefits of this tool are:

- Monetizing costs and benefits of a policy option as much as possible, which then allows direct comparison with other options.
- Costs and benefits of a policy option are assessed on the whole economy scale, as well as globally.

According to this method, the most effective option is the one with the lowest cost, and the technique used to define it is cost-benefit analysis. Analysts then can find a way to achieve the most output with the least input, or more output with the same input. The analysis involves the assessment of the cost and benefit of all options and their consequences in cash, and then the plan with maximum benefit and minimum cost is determined.

The scope of application of CBA is very wide. It is applied in all three stages of project development and assessment.

- *Project identification (proposal)*: In this stage, the project initiative agency (the proposing agency) initially identifies the project and objectives that the State wants to achieve, such as projects providing health services, public transport and education. This process provides the basic concepts of the project and background information that enable the State authorities to conduct a pre-feasibility study.

- *Pre-feasibility study*: At this stage, analysts get relatively correct assessments of key elements of the costs and benefits of the project such as amounts of input, output and prices. Using this preliminary data, the analyst starts to conduct financial analysis and economic analysis to determine whether the project is financially and economically implementable. If from the preliminary investigation the project is deemed feasible, it will be moved to the feasibility study stage.

- *Feasibility study*: At this stage, it is necessary to collect more accurate data of all costs and benefits of the entire project in which risk analysis provides important information on the feasibility of the project. Then, an assessment of the economic and financial feasibility will be conducted. If the project is still feasible, it can be approved to move on to the project design stage.

- *Project design*: Project design includes the detailed technical design of the project on the basis of technology already specified in the feasibility study stage. All

requirements on human resources, administrative procedures and marketing must be completed at this stage.

- *Implementation*: At this stage, the project management unit will select contractors and enter contracts to perform the project work. The project management unit supervises implementation of the work by the contractors under the contracts signed.

- *Post-assessment*: Post-assessment is to determine the actual contribution of the project to national welfare after several years of operation. The purpose of the post-assessment is to clarify causes of successes or failures of the project, to learn lessons for future project development, operational procedures and analysis.

Thus, the cost benefit analysis play an important role in the 3 stages so called pre-feasibility study, feasibility study and post-assessment.

3. Applications of CBA

CBA is widely used in the following cases:

- To accept or reject a project;
- To select the appropriate scope and/or time for a project;
- To select one of many mutually exclusive projects;
- To select a few among many projects;
- To assess public policies, especially those related to legal documents of the State;
- To conduct post-assessment or public policies.

In the past, CBA was applied to a project that is large-scale and important enough to offset the resources needed for analysis. However, today CBA has been more widely applied to smaller projects as well, because it has become more and more familiar and data access is also easier, which reduces CBA costs. Also, this method is used to assess public policies because state agencies expecting to maintain them should demonstrate the public benefits from such policies.

II. THEORETICAL BACKGROUND FOR CBA

1. Allocative efficiency

1.1. Definition of allocative efficiency

The concept of allocative efficiency refers to the comprehensive efficient allocation of resources, whether a project can create a set of outputs at the highest level, and whether the inputs can be used to create these outputs at the lowest cost. Allocative efficiency is an economic state in which it is impossible to benefit anyone without anyone else suffering (Pareto optimality). The above concept of allocative efficiency includes the concept of productive efficiency (creating an output at the lowest cost).

In CBA, a set of outputs at the highest level is measured by the maximum amount of money which people are willing to pay for the products they like. Moreover, in order to achieve allocative efficiency, the following production conditions are required:

- Each commodity is produced at the lowest cost compared with the real quantity created;
- Each ceiling price is set equal to the marginal cost of producing a commodity, in which the marginal cost is the cost of producing the end-use product unit.

Allocative efficiency will be the maximum when the benefit which an individual receives from the end-use product unit is equal to the cost of producing it. If the production deviates from this benefit level, the valuation price for the end-use product will not be equal to the cost of producing it, and the welfare may be increased by changing the output level.

1.2. Pareto efficiency

To determine economic conditions to be met for optimal allocation of resources without comparing interests between individuals, economists often use the lessons of new welfare economics to develop a criterion for optimal allocation of resources accepted by all people. The basis of the method used to determine the public welfare derived from personal welfare is the criterion developed by Pareto in 1927, so it is called the Pareto criterion. This criterion is based on the fact that each individual has the ability to make an evaluation by the order of situations set out for them. This can be conducted in two ways: (1) One situation may be preferred over another situation if at least one person benefits from the change, and no one must bear losses (relative

criterion); (2) optimal or effective allocation of resources, and thus social welfare reaches maximum satisfaction; if the adjustment of resources is impossible, then the welfare improvement of at least one person must not make anyone bear losses (absolute criterion).

The Pareto efficiency can be summarized as follows: When both inputs and outputs are allocated in a way which cannot make anyone get more benefits without causing losses to others, then it reaches Pareto's optimal allocation of resources. Upon reaching Pareto's optimality, it is impossible to create any net benefits by reallocating the use of inputs among manufacturing industries exchanging outputs among consumers.

1.3. Optimal allocation and equitable distribution

To determine the only solution which meets the conditions of both optimal allocation of resources and equitable distribution of welfare, collective or social evaluation criterion should be applied. The traditional form selected is social welfare, similar to individual utility function. This concept clearly specifies the welfare which each individual is entitled to. Social welfare function is an abstract expression of community interest in welfare distribution among individuals. This concept is very useful in terms of analysis to present different judgments on the value in welfare distribution. In reality, however, science cannot impose its view on welfare distribution and becomes overshadowed before the interests revealed in the policy process.

1.4. Kaldor-Hicks criterion

In fact, it should be clearly acknowledged that situations of allocation adjustment which negatively affect the welfare of at least one person are not exceptions, but the rule. All public projects or policies inevitably reduce the welfare of some individuals, thus the application of the Pareto criterion is limited, or more accurately, infeasible. Perhaps that is why Hicks and Kaldor (1939) and other authors extended the significance of the Pareto criterion through the application of compensation test. As described by Kaldor, compensation test clearly indicates that Y state of allocation is preferred over X state in terms of society when individuals who benefit from this change have the potential to compensate for the losses and still maintain the benefits. The possibility where people who benefit compensate for those

suffering losses ensures that people who suffer losses do not suffer losses due to a change. Thus, one of the two aspects of the Pareto criterion is reached. The residue (if any) which the people who benefit can get after compensation ensures the second aspect, i.e. to improve the welfare of the community.

The lesson from this test makes sense for all project assessments, whether it is mainly emotional and political assessment or implemented using CBA. It should be recognized that the implementation of a project is necessary when the monetary value of obtained benefits exceeds costs. Therefore, theoretically, beneficiaries are likely to compensate for losers while ensuring their benefits. The basic principle as the basis for CBA is the Kaldor-Hicks criterion, specifically: *A project or policy will be accepted only if the benefits received by some people can compensate for the loss of others and still retain a residual portion.* In other words, when efficiency is the only proper value, the necessary condition for accepting a project or policy is that it has the potential to improve Pareto efficiency. The projects or policies increasing social surplus potentially improve Pareto efficiency and thus meet the Kaldor-Hicks criterion. Moreover, when considering mutually exclusive options, the one creating the largest increase in social surplus will be selected, because if accepted it can be possible to approve the compensation created for everyone, by at least being more beneficial than any alternative. By definition, these exchanges of Pareto improvement are voluntary and benefit certain people more, but do not make anyone else suffer more losses than before.

In fact, two related concepts considered as guidelines for estimating changes in the social surplus and the applying Kaldor-Hicks criterion include: *Opportunity cost and willingness to pay.* These two concepts provide analysts with methods to monetize costs and benefits.

2. Opportunity cost

The implementation of the projects or policies certainly requires resources (inputs) which cannot be used to create other goods. The value of the goods ignored then measures the opportunity costs of the projects or policies. Generally, the opportunity cost is that which is given up for a certain good or service. In particular, the opportunity cost of a project or policy is the value of resources required in their best use option.

3. Willingness to pay

Assessing the results of a project or policy is based on the concept of willingness to pay: *Benefits are the sum of the maximum amounts of money that people are willing to pay to get the results considered to be desirable; the costs are the sum of the maximum amounts of money that people are willing to pay so as to avoid the outputs considered to be undesirable.*

Benefits are valued by the willingness to pay for them as individuals, in which the willingness to pay consists of two elements: Actual spending and consumer surplus (in case there is a market for goods). If there is no market, such as with environmental protection, then there will be an alternative estimate for what margin consumers will pay for the goods instead of actual spending if a market exists. Thus, the concept of willingness to pay helps value the results of a project or policy

4. Cost benefit principle

Cost benefit principle is based on the concept of allocative efficiency, in which the projects which bring positive net social benefits (depending on the financial obstacles and other issues) are accepted. That is, $NSB = (B - C) > 0$

Where: NSB is net social benefit, B is social benefit, C is social cost.

According to this principle, a project will create an efficient allocation of resources when the price is set by the marginal cost ($P=MC$).

Now we will briefly consider two other important premises. The first premise is that prices are set at marginal cost in all markets in the economy. It can be noticed that when this premise does not apply to the Pareto criterion, it cannot be achieved in the target market and that the "second best" Pareto criterion can only be achieved by deviating from a policy of allocative efficiency (in other words, from marginal cost valuation). Because the economy in fact has countless cases of inefficient valuation, this assumption can be considered to be decisive to conceptual basis of CBA. However, CBA is always initiated on the basis that only a small part of the economy is being considered and these things do not depend on everything else in any level of significance. This method is "partial equilibrium". Consequently, the market where price is distorted is supplemented or replaced near the considered market; it may be necessary to consider impacts in those markets (the "general equilibrium" method). In

both cases, the purpose is to measure total changes in consumer surplus and producer surplus with all impacts to a third party.

The second premise is that income distribution in society is fair: To a certain extent, CBA can recognize the fact that the projects create beneficiaries and losers. The rule is that social benefits must outweigh social costs to enable the beneficiaries from the project to share benefits with losers from the same so that in the end both parties get more benefits in the case of there being no project. This rule is known as the Kaldor-Hicks compensation principle, or potential Pareto completion criterion. This principle declares that: A project can be approved if the beneficiaries can compensate for the losers and bring a better result to both the beneficiaries and the losers when there is no project. However, two problems arise with this: First, in fact the compensation may not occur. Second, the valuation under currency measurement and willingness-to-pay criterion is surely affected by the solvency of individuals (depending on their assets and income), and the possibility of unfairly distributed solvency. Therefore, in cases where the fairness of income distribution of the project is important, it may not be appropriate for decision makers to approve or reject the project only on the basis of cost - benefit principle.

5. Other criteria

5.1. Performance

Performance is the result of the relationship between input and output: which means creating the output with the lowest cost or maximizing the output on an input unit.

Performance can be distinguished from allocative efficiency in two ways. First, performance does not relate to the consumer's valuation on output. Therefore, to compare options, it is a less effective concept than allocative efficiency. Second, in some cases, a certain input unit is not necessarily the lowest cost input unit. In a certain competitive market, we can assume that real inputs are the lowest cost inputs. However, the concept of performance can be explained only in relation to the ratio between the output and the input - this is a form of cost-result analysis. CBA aims to fully apply the principles of allocative efficiency in cases where the market structures do not ensure efficient outputs of allocation; cost-result analysis is directed to problems of performance.

5.2. Profit

In a perfectly competitive world, a manufacturing enterprise with an efficient level of output is financially viable. However, many public projects face little or no competition and are characterized by an increase in revenue from their scale, which also means reduction in unit costs. In these cases, the requirement for efficient allocation (when price reflects marginal costs) can conflict with that for financial profits: As the price is set by the marginal costs (or costs of the last output unit), the income cannot compensate for costs of fixed investments, which leads to being far from the marginal cost valuation, and allocative efficiency may be inevitable if the independence of finance is achieved.

5.3. Social fairness

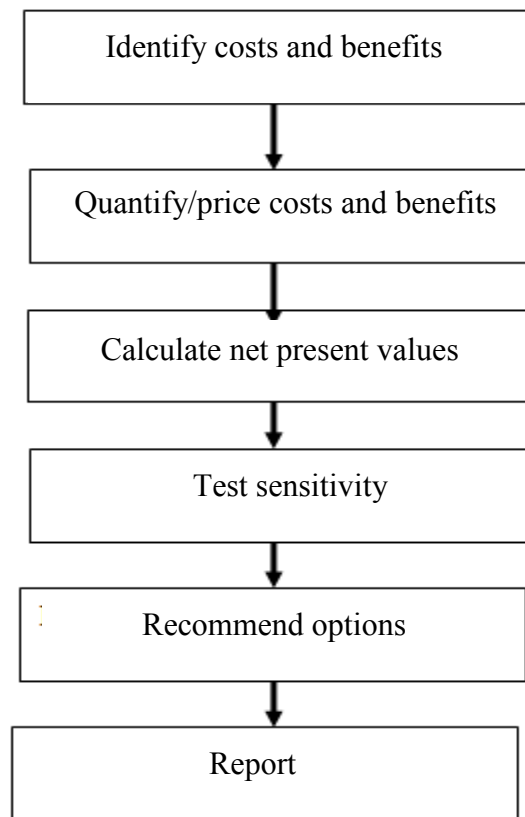
The concept of allocative efficiency can be applied to all the specific income distribution in society. However, to a certain extent, this concept does not provide a basis for assessing whether the income distribution is fair. Moreover, CBA includes costs and benefits to individuals, regardless of fairness or allocation of costs and benefits between individuals. However, the decision makers usually like to consider clarifying beneficiaries and losers of a project (and levels of benefits and losses) in deciding whether to continue or not. This need is best met using the allocative impact range matrix to specify which groups or communities benefit and lose from a program or project, and predicted scale of these obtained benefits and losses. In cases required by the public policy planner, the analyst can assign different weights to the costs and benefits accumulated to specific groups. All weights and bases to determine them should be clearly presented, however, the analysts always have to present an unweighted analysis.

III. COST-BENEFIT ANALYSIS PROCESS:

The purpose of CBA is to assess the effectiveness of policy intervention compared with the status quo. Costs and benefits from impacts of policy intervention are assessed based on the public willingness to pay for benefits or cost avoidance. Input is commonly measured in the form of opportunity cost - value of using the best policy option. The guiding principle of this method is to list all the parties affected by a policy intervention and to assess the monetary value of the impacts on welfare of the parties.

As a process, CBA includes the following main steps:

Figure 1.1: Main steps of CBA process



1. Identify costs and benefits

The first step in CBA is to identify all impacts of a project or policy by reviewing and classifying them as either costs or benefits for different groups of people. To identify the impacts of the project or policy, it is necessary to answer the following key questions: Who are the relevant beneficiaries? This means the subjects whose benefits we need to consider when assessing costs and benefits. For this question, geographical boundaries should be selected, and preferences of relevant beneficiaries or those affected by the project or policy should be determined. Then, a list should be made of the costs and benefits of the project or policy.

Identify geographical scope: When analyzing a project or policy, it is necessary to determine its geographical influence. Depending on the influence of each project or policy, the geographical scope can be defined as: Global, national, or local.

Identify people involved and their preferences: A question has been raised about whose benefits and costs will be taken into account. When conducting CBA, costs and

benefits incurred or received by legal residents should be calculated, while those incurred or received by illegal immigrants will depend upon the nature of the costs and benefits. Identifying preferences of people involved is one of the important details because the preferences determine what is considered a cost or benefit in CBA. The general rule is as follows: What people like is considered a benefit, and what people dislike is a cost.

Identify benefits and costs: First, analysts need to list benefits for each proposed option. To determine benefits, the analysts should fully understand the causal chain of the project.

2. Price costs and benefits

CBA uses a common measure as currency to compare costs and benefits. Therefore, the value of benefits and costs must be monetized. Market price provides useful information to determine the magnitude of costs and benefits. In most markets, consumers at the margin would be willing to pay no more or less than the actual market price. Therefore, the price may be seen as a measurement of the value priced by society for goods or services. Similarly, prices of inputs often reflect values priced by input users. However, actual price sometimes should be adjusted to transfer private cost and benefits into social ones, i.e. costs and benefits that reflect gain and loss of the entire economy, not individuals or groups.

3. Calculate net present value

Projects or policies often have impacts in the distant future. Therefore, the analysts have to consider costs and benefits arising at different times. To do so, the analysts need to apply concepts such as: Present value, expected value.

Present value: The concept of present value serves as a basis for comparing costs and benefits arising at different times. When conducting CBA, we apply discount procedures to transfer benefits and costs to present values. Discount is a standard technique to make costs and benefits arising at different times correspond with each other. The present value of net benefits is the sum of discounted net benefits in all stages.

Expected value: Costs and benefits in the future may never be known with absolute certainty. However, generally, future conditions or certain events will impact

costs and benefits. If we know what events will occur, we can give a more accurate prediction. For resolving unexpected events in CBA, the standard method is the probability distribution for different unexpected events in order to calculate expected net benefits. The general rule is as follows: An uncertain problem is changed to a risky problem by identifying unexpected events and their probability of occurrence.

4. Sensitivity analysis

Sensitivity analysis is a procedure to check the sensitivity of CBA results by different assumptions about the possibility of occurrence of levels of costs and benefits. The first step is to estimate the net present value using "optimistic" and "pessimistic" assumptions about key variables which determine costs and benefits. If the "pessimistic" scenario for the net present value is less than 0, it is necessary to specify variables that make the project outputs most sensitive. This is carried out by accepting the proper pessimistic values for each variable, keeping all other variables unchanged by the average value or the highest possibility.

If the result only shows one or two important variables, the analyst needs to assess the possibility of these variables at above or below the critical value, to present a comprehensive assessment of project risks to decision makers. If there are several such variables, especially if there are more than 4 or 5 variables, it is impossible to assess the uncertainty of the project in this manner. Then it is necessary to conduct a full risk analysis, in which the probability distributions are allocated to values of all important variables, and through the repeated computer calculations, a probability distribution of net present values of the project will be generated.

5. Recommendation for option selection

If a policy intervention has positive net benefits after the proper discount over time and risk and sensitivity analysis, then it satisfies Kaldor-Hicks criteria and will be accepted. Of course, it is assumed that efficiency is the only proper analysis target. This general rule, applied when encountering many policy interventions which may enhance or impede another intervention, is to select a combination of interventions that maximizes net benefits. Of course, this combination depends on physical, budgetary, and other constraints.

The recommendation for option selection should show the following:

- A summary of advantages and disadvantages of the project or policy.
- Expected benefits from the implementation of the project or policy.
- Expected costs to implement the project or policy and negative impacts resulting from the implementation of the project or policy.
- The risks to be considered when implementing the project or policy.
- Providing guidance on processes and procedures for the implementation of the project or policy if it is passed.

6. CBA report

The final step in the CBA process is to report analytical results and make recommendations for decision makers. This report should help the decision makers have satisfactory answers for the questions: What will we do and why? The report should include:

- A written summary and summary spreadsheet of analytical results;
- An introduction describing the reasons for conducting CBA;
- Objectives of the project or policy;
- A description of the options being considered;
- Obstacles considered as conducting analysis and selected options;
- Brief descriptions over time of the costs, benefits and net benefits, and information on the sensitivity of those descriptions by different assumptions;
- Information on the costs and intangible benefits;
- A list of assumptions made as conducting analysis, and how to estimate the costs and benefits;
- A description of allocative impacts;
- A conclusion on analytical results;
- An overview of how to evaluate outputs of the proposed option.

IV. FINANCIAL ANALYSIS AND ECONOMIC ANALYSIS

1. Distinguish between financial analysis and economic analysis

Economic analysis of a project shares a lot of common characteristics with financial analysis. Both of them include estimates of costs and benefits of the project during its life to be put in its cash flow. Then this cash flow is discounted to determine the net present value of the project or other measurements of the project. Both use sensitivity analysis and probability to assess the impact of uncertainty on the net present value of the project.

Financial analysis of a project is to assess whether a commercial project is profitable for the enterprise which implements it. A private company will conduct financial analysis for a potential investment project to determine the impact of the project on its balance sheet. Also, governments and international agencies regularly conduct financial analysis and economic analysis of any project in which outputs are generated to be sold, and therefore, financial analysis is required.

Economic analysis is an extension of financial analysis and also known as CBA. Economic analysis is mainly applied by governments and international agencies to determine whether specific projects or policies can improve the welfare of the community or not. Economic analysis allow the analyst to determine whether a project will make a positive contribution to the welfare of the country or not; therefore, it is usually conducted to assess government-funded projects and policies. Governments also conduct Economic analysis for all private projects funded by governments or support policies, such as tariff protection policy.

Financial analysis checks income and cash spending of a project or program as it impacts a specific organization, which is usually mainly responsible for implementing the program or the project. Such an organization can be a private company, a Ministry, a state-owned enterprise, or even the Government. Therefore, financial analysis assesses the impact of the project or program on the financial results of that organization, and always uses fixed price. Meanwhile, economic analysis considers both non-monetary and social costs and benefits.

Beside such contents as those in financial analysis, economic analysis also includes all or some adjustments as follows:

- Deduction of transfer payments within the economy from the project's cash flow;

- Including all changes in consumer surplus in the net benefits of the project, and not including any changes in producer surplus from costs;
- An estimate of economic prices or shadow prices for project outputs and production inputs (including international exchangeable and un exchangeable goods), to adjust any distortion in their market prices;
- Valuation including all externalities generated by the project;
- Valuation including all non-price outputs or inputs, such as public goods and social services;
- An estimate and use of a proper discount rate to discount the project's cash flow.

The difference between Economic Analysis and Financial Analysis were summarized in Table 1.1

Table 1.1: Comparison between Economic Analysis and Financial Analysis

<u>Issue</u>	<u>Included in Economic analysis</u>	<u>Included in Financial analysis</u>
Pecuniary external effect	Yes	No
Non-market Input and Output	Yes	Market Opportunity cost (real estate for example)
To determine shadow price	Yes	No
Distribution analysis	Yes	No
Interest and Discount cost	No	Discounts not included. Interest not included, except analysis with consideration of borrowing

Source: Reference from Cost-Benefit Analysis, 5th Edition, by E.J. Mishan and Euston Quah, Routledge, 2007, p 98.

It should be noted that Financial Analysis still uses the definition of opportunity cost, however it is the opportunity cost that the organization has to face (government or ministry), not the whole community. The external effects, shadow price and distribution analysis are not included in financial analysis. Also, the non-market costs and benefits are excluded from financial analysis unless they reflect relevant opportunity costs that influence the profitability of the organization itself. For instance, the Ministry of Transport and Communication will eliminate from the financial analysis the estimations that save time for road users of the highway project, but will include the potential revenue of publicly owned land that is planned for acquisition.

It should also be noted that financial analysis, similar to economic analysis, does not generally include the costs by discounts and interest. All spending on these items should be recorded. Hence, the discount of opportunity cost over time must be applied for project capital and resources. In the case of a State funded project, as well as projects that are funded from one integrated income source, the discount of a net income flow including expenditures and interest costs shall lead to the overlapping of project costs. When a project is funded by parts from specific loans, however, the loans and their interest shall be included in financial analysis in order to calculate all cash flow of the project. In this case, the analysis may need to consider inflation. At the same time, the discount costs also include allocations of capital costs through periods of time. Discount is a necessary article in accounting reports but not included in financial analysis (or economic analysis), in which all expenditures are recorded at the time of payment. Thus, the calculation of discount costs will lead to overlapping of costs.

2. Situations to which the economic analysis is applied

Economic analysis is used when the market price does not reflect or inadequately reflects opportunity costs of inputs. This usually occurs in one or more following cases:

- Production of non-market goods, including merely public goods such as national defense, traffic safety, etc.;
- Externalities from impacts of producers or consumers on non-market goods, bringing benefits or generating costs to other producers or consumers, such as pollution costs;
- Cases where the project outputs or the usage of a project input is big enough to change market price in the future;
- Cases where producers, consumers, or both are affected by taxes and subsidies;
- Cases where there are provisions on quantity restriction and price control which impact inputs or outputs of the project;
- Issues of "undivided" investment and monopoly that would make market price deviate from marginal production costs.

As represented above, the principles of cost and benefit valuation are opportunity cost and willingness to pay. In simple cases, benefits are valued on the basis of the amount that consumers are willing to pay for goods, which is measured

according to the price actually paid. The costs are valued on the basis of the amount that other consumers will be willing to pay for resources used (except there are no alternatives, and they are valued on the basis of proper cost elements). However, in all the cases mentioned above, the analysts have trouble valuing, that is the value of a benefit is either not determined by the market (in the case of there being no market) or valued through adjustments of market prices appropriately observed. These values are called shadow prices and the technique used to determine them is called shadow valuation.

One of the first tasks for analysts is to distinguish allocative effects of a project, i.e. impacts from changes in the use of resources (inputs) and outputs, from distributional impacts. Generally, these changes in the use of resources are only related to opportunity costs. The distributional impacts are called "transfer", which means some individuals may receive some benefit, while others may lose them. Distributional impacts do not increase or decrease the net social benefits. However, distributional impacts may affect social welfare if the valuation shows that a group gets value from greater resources than others.

Chapter 2:

VALUING COSTS AND BENEFITS

I. IDENTIFY AND CATEGORIZE COSTS AND BENEFITS

1. Identify and categorize benefits

Analysts need to list expected benefits for the proposed project. To determine benefits, the analysts should fully understand the causal chain of the project. The list may include:

- Output value reflected in the revenue of the project;
- Remaining value of the project;
- Avoidance of costs which would have been incurred in the case of "taking no actions" or "no project";
- Productivity savings - decreases in current spending due to the project;
- All other environmental, social, and health benefits with or without market price reflecting standard - lower values of the benefits;
- Reduced unemployment.

2. Identify and categorize costs

Similarly, for each proposed project, analysts need to list costs. The list may include:

- Capital spending;
- Operating and maintenance costs throughout the expected life of the project;
- Labor costs;
- Costs of other inputs (such as raw materials, materials, transportation and warehousing, etc.);
- Costs of research, design and development;
- Opportunity costs associated with the use of land and facilities in public areas;
- Negative impacts on other parties (including environmental costs such as air and noise pollution).

II. VALUING COSTS AND BENEFITS IN AUTARKY

1. Valuing input costs in autarky without distortions

In economic analysis, the cost of project inputs is valued according to the opportunity cost. This is the value of inputs in its next best use plan. In a free market, the demand for project inputs is met by additional production, so the opportunity cost of inputs will be the marginal social cost of this additional production. In the free market, producers who meet all the demand for the project inputs will not increase the input price because the supply is perfectly elastic, and the economic cost of inputs will be equal to their price of supply (P_s). This is not always true because the project increases the price of production inputs. On the other hand, if the demand for project inputs must be met by replacing the existing users of these inputs, then its economic cost will be the amount of money these replaced consumers are willing to pay for the inputs, or their price of demand (P_d).

- *Measuring the economic cost in a case where the project inputs should be supplied partially from new production and partially from the replacement of existing consumers:* Sometimes, the project inputs are supplied by the combination of new supply and replaced demand. The economic valuation of costs of project inputs in this case is illustrated in Figure 2.2 where the input used is steel for a bridge construction project.

To build this bridge, 5,000 tons of domestic steel/year are needed in a 4-year period of bridge construction. Before the project starts, the domestic demand for steel products is represented by the demand line DD_0 and domestic supply is represented by

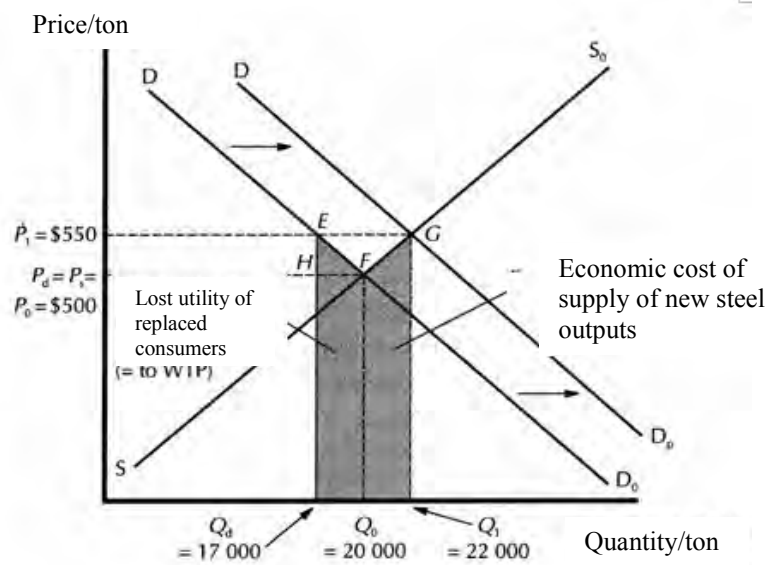
the supply line SSo. The market equilibrium price of steel is P_o (\$500/ton) and the equilibrium purchase quantity is Q_o (20,000 tons/year). Assume that there is no distortion such as taxes or subsidies in the market for steel products, the consumer's demand price P_d and the producer's supply price P_s are equal to market price $P_o = \$500/\text{ton}$.

Due to the commencement of the bridge construction project, the domestic demand for steel products is expected to increase by 5,000 tons/year, which has shifted the demand line for steel to DDd. The equilibrium price of steel P_1 (\$550/ton) and equilibrium purchase quantity are expected to increase to Q_1 (22,000 tons/year).

The increased price makes some existing consumers of steel products reduce consumption, which reduces their demand from Q_o to Q_d . On the other hand, the increased price of steel will increase the supply of steel from Q_o to Q_1 . Because part of the steel products supply for the bridge construction project is from the fact that existing consumers reduce their consumption and another part will be met by the increased supply of steel products, the total economic cost of steel inputs of the project will be a combination of these two components.

The first component of the economic cost of steel inputs used by the bridge construction project is the lost amount of use by the replaced steel consumers, as measured by the amount of money they are willing to pay for this amount of steel (WTP). This cost is represented by the black area under the demand line DDo of the initial consumers (Q_dQ_oFE). The second component of the economic cost of steel inputs is the actual resources used by steelmakers to increase their steel output by $Q_1 - Q_o$. This cost is represented by the black area under the supply line SSo which is Q_oQ_1GF . The total economic cost of the project's steel inputs is the area Q_dQ_1GFE .

Figure 2.2: Measuring economic cost of inputs



This economic cost represents the actual financial cost for purchased steel inputs of the project Q_0Q_1GE minus the producer surplus obtained by the project $PdFGP_1$, plus the loss of consumer surplus due to the increased steel price $PdFEP_1$. The producer surplus is subtracted because it does not represent the actual economic cost for the economy but the amount transferred from consumers to steelmakers. However, the loss of consumer surplus represents the loss of welfare in the economy and can be accounted to the project's economic cost.

The economic cost of project inputs is measured as follows:

$$\text{Economic cost} = AvPs \times Qs + AvPd \times Qd$$

$$\text{Economic cost/input unit} = (AvPs \times Qs + AvPd \times Qd) / (Qs + Qd)$$

Where:

$AvPd$ - average demand price of input, which is the average demand price before and after the project

$AvPs$ - average supply price of input, which is the average supply price before and after the project.

Qs - quantity of inputs met by new supply, which is $Q_1 - Q_0$.

Qd - quantity of inputs met by replacing existing consumers, which is $Q_0 - Q_1$.

In the above example, the total economic cost of steel inputs for the project is:
 $(22,000 - 20,000) \times (500 + 550)/2 + (20,000 - 17,000) \times (500 + 550)/2 = \$2,625$
 million

Cost/input unit = $\$2,625/5,000 \text{ ton} = \$525/\text{ton}$.

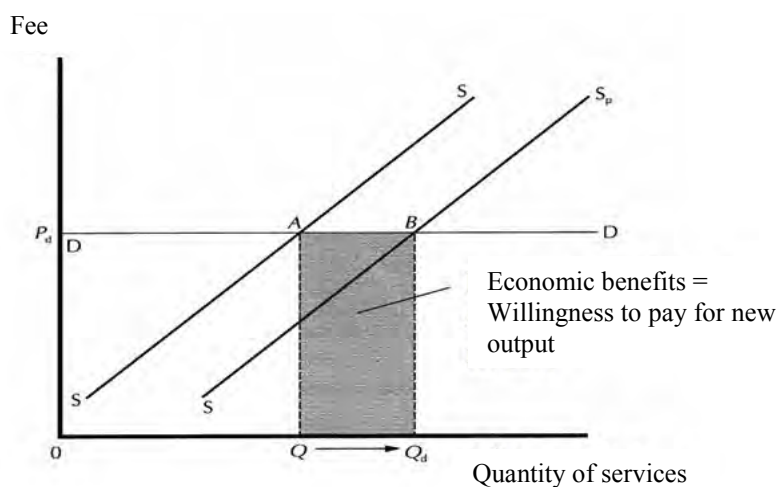
2. Valuing output benefits in autarky without market distortions

2.1. Valuing output economic benefits of projects with new demands

Valuing economic benefits of projects depends on whether the output of the project meets new demands or is only an alternative to the existing supply for such goods or services. If the project increases total supply of a good or service available in autarky, the economic benefits of the project will be measured by added benefits or marginal social benefits that people obtain from this increased output consumption. Marginal social benefits obtained from consumption of a good or service can be measured by the amount of money that people are willing to pay for such goods or service assuming that the distribution of social income is optimal. In a free market where there are no externalities or consumer surplus, the amount of money that people are willing to pay for a good is equal to its competitive price of demand P_d . This case is described in Figure 2.3. As shown in this Figure, a new railway project makes the supply curve of railway services shift from SS to SSp .

Provided that the demand curve on railway services DD is completely elastic for added services, people will be willing to buy all added outputs of the new project at the current market price P_d . The black area QQ_dBA represents the amount of money that people are willing to pay for these new railway services, which will be the economic benefits of the project.

Figure 2.3: Output of the project only meets new demands for railway services

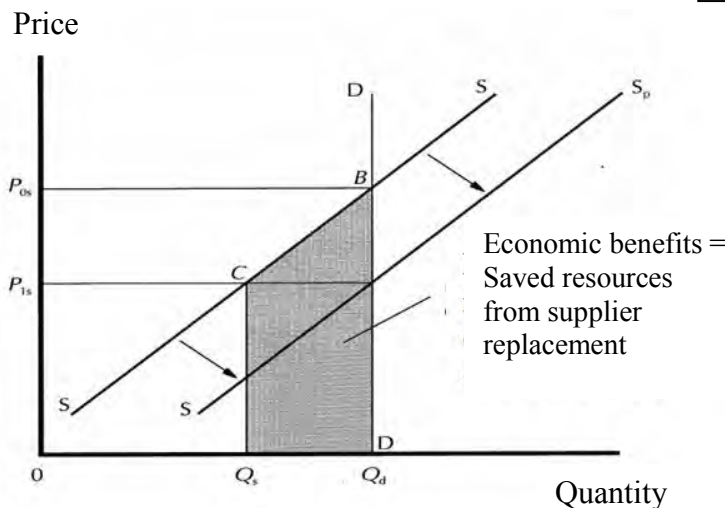


2.2. Valuing output economic benefits of project with alternative supply sources

In some cases, the output of the project is only an alternative to a certain existing supply of services or goods. Because the output is completely available, we do not value it according to the amount of money that consumers are willing to pay for it, i.e. demand price. In this case, the output value of the project includes labor resources, capital, foreign exchange and raw materials saved by replaced suppliers who are forced to stop producing goods due to the project, or at their supply price. For example, the project with its output alternative to the existing supply source is a bread production project. This bread plant has replaced the output of 20 bread plants with a large number of labors on a small scale as illustrated in Figure 2.4.

In this case, the demand for bread is inelastic DD; therefore, added supply resulted from the project only makes the price of bread decrease from P_{0s} to P_{1s} , and force some existing bread producers to stop production. Now the quantity of bread supplied at the lower price P_{1s} by existing producers is shown in the original supply curve SS as Q_s . The economic cost of the bread production, that is the supply cost of replaced suppliers, is the area below the bread supply curve on bread producers using a large amount of labor $Q_s Q_d B C$. Therefore, the benefit of the bread project is not the market value, i.e. the demand price of produced bread, because the bread has been available since before the project started. Instead, the economic benefits of the project are only labor, capital and raw materials cut by the replaced small bread producers, i.e. $Q_s Q_d B C$ area. These cut resources can have a lower economic value versus the economic costs of the project that automatically produces bread, consuming a lot of investment capital. If CBA is correct, it can be proved and the net present economic value of the project may not be positive.

Figure 2.4: Alternative project output for existing bread supply



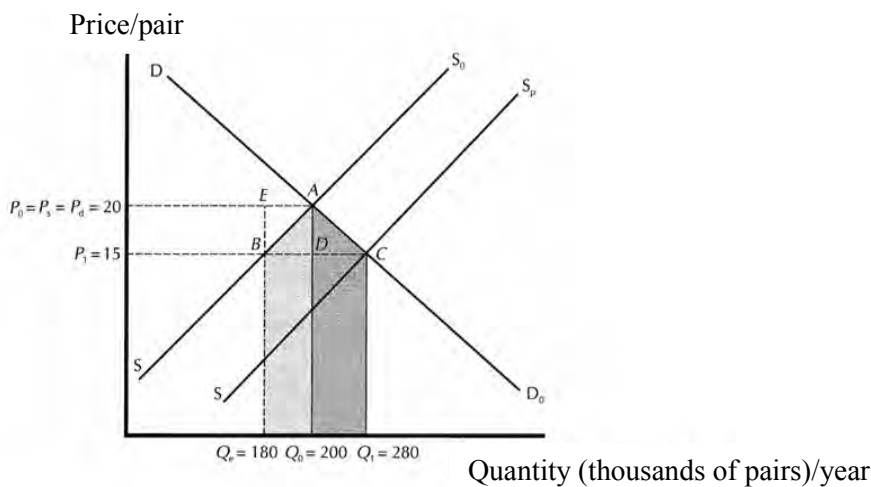
2.3. Valuing economic benefits in the case of project outputs meeting new demands and replacing partial existing supply

Normally, the project output partially increases total available supply which meets new demands and replaces partial existing supply. In this case, valuing the project output is illustrated with an example of a shoe plant project as described in Figure 2.5.

Before establishing the new shoe plant, domestic shoe supply is illustrated in the curve SS_0 , and domestic shoe demand is DD_0 . Equilibrium market price is P_0 (\$20/pair) and traded equilibrium quantity is Q_0 (200,000 pairs/year). Because there is no market distortion, the consumer's price of demand P_d and the producer's price of supply P_s are equal to the market price P_0 .

When establishing the new shoe plant, the domestic shoe supply curve gradually moves to SS_p , so equilibrium shoe price decreases to P_1 (\$15) and the traded equilibrium price will rise to Q_1 (280,000 pairs/year). Benefits of the project come from these two sources. The discount on shoe price stimulates the demand for shoes to increase from Q_0 to Q_1 . Part of the project output (80,000 pairs/year) represents an increase in the amount of shoes available in the economy and economic benefits from this increase are measured by the amount of money that people are willing to pay for such pairs of shoes. These economic benefits are shown by the area under the demand curve, Q_0Q_1CA and include the amount of money that people actually pay for new shoes and financial benefits that the project obtains from the added supply Q_0Q_1CD , plus added consumer surplus that consumers get thanks to the ability to purchase added supply at a cheaper price, DCA .

Figure 2.5: Valuing output economic benefits in markets without distortions



The decreased shoe price forecast by the new shoe factory will force some existing shoe producers to close, reducing the quantity they offer from Q_0 to Q_e (200,000 to 180,000 pairs/year). Therefore, part of the outputs of the new shoe plant (20,000 pairs) will replace the existing supply. Economic benefits of these project outputs are measured by the supply price of existing producers, i.e. economic costs of labor, capital, materials and fuels used by the replaced plants. These resources can now be shifted to other purposes in the economy. These second economic benefits are represented by the area under the supply curve of existing producers, Q_eQ_0AB . They are equal to the lost sales of existing producers Q_eQ_0AE minus producer surplus they get AEB because this surplus is the cost of transfer only, not the economic cost of production of replaced producers.

The total economic benefits of the project are the area Q_eQ_1CAB . These benefits represent the amount of money that consumers actually pay for the outputs from the project Q_eQ_1CB , plus the consumer surplus P_1CAP_0 obtained from lower shoe prices in the economy, minus lost producer surplus of existing producers due to the discount, P_1BAP_0 .

2.4. Harberger equation of valuing economic benefits

Gross economic benefits of the project can be measured by the weighted average of demand price and output supply price of the project, in which weights are corresponding to the outputs that meet new demands and replace current supply.

$$\text{Benefits} = AvPs \times Q_s + AvPd \times Q_d \tag{2.1}$$

$$\text{Benefits/output unit} = \frac{\text{AvPs} \times \text{Qs} + \text{AvPd} \times \text{Qd}}{(\text{Qs} + \text{Qd})}$$

Where:

AvP is the average output price of the project before and after the project, which is $(P_1 + P_0)/2$;

AvPd is the average price of demand (which is $(P_1 + P_0)/2$ in this case)

AvPs is the average price of supply (which is $(P_1 + P_0)/2$ in this case)

Qs is the alternative output for current supply = $Q_0 - Q_e$

Qd is the output meeting current demand = $Q_1 - Q_e$

In the above example, the average price AvP is equal to $(20 + 15)/2 = \$17.5$.

Total economic benefit of the shoe plant project is: $\$17.5 \times 20,000 + \$17.5 \times 80,000 = \$1,750,000$, and economic benefit/pair is: $\$1,750,000/100,000 = \17.5 .

3. Valuing input economic costs in distortive markets

Analysts need to have adjustments in measuring the economic cost of inputs in the case of taxes and subsidies included.

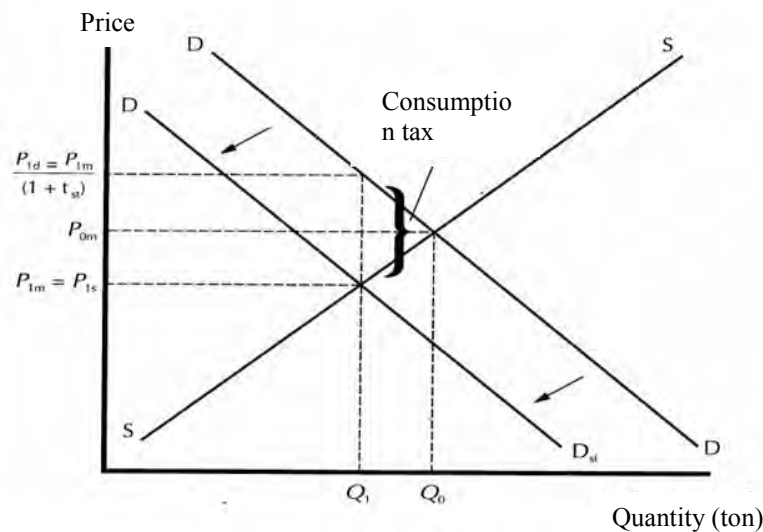
3.1. Government imposes tax on project inputs

In the example of the bridge construction project, now assume that a consumption tax t_{st} is imposed on this steel product. As illustrated in Figure 2.6, when the consumption tax is imposed on the steel product, the steel demand curve falls from DD to DDst. The demand curve DDst shows the amount of money that consumers are willing to pay to steelmakers for one ton of steel. The actual steel demand will remain unchanged at DD, but will include the amount of money including tax that the buyer pays for each ton of steel. The market price of supply will fall to P_{1s} , which is equal to the market price excluding tax P_{1m} . The quantity of traded equilibrium steel will decrease from Q_0 to Q_1 . The pre-tax market price will be equal to the full price of steel supply P_{1s} . However, the price of steel demand that people are willing to pay will include the consumption tax, which is $P_{1d} = P_{1m} (1 + t_{st})$.

If a sales tax is imposed on steel products while the bridge construction project increases demand for steel, how is the economic cost of steel valued? As shown in Figure 2.6, the project shifts the demand curve to DDpst, making the price increase

from P_{1m} to P_{2m} . A portion of increased demand for steel is met by the production increase of the project due to higher prices ($Q_{1st} - Q_{ost}$), and the other portion of demand for steel is met by replacing existing steel consumers due to their inability to buy at higher prices, ($Q_{ost} - Q_{1d}$). Normally, the economic cost of new steel production is its average price of supply, which is equal to the market price $(P_{2s} + P_{1s})/2$. The total cost of this new production will be $Q_{ost}Q_{1st}DC$. On the other hand, the steel used previously by other consumers is valued by the amount of money that such consumers are willing to pay because this is a measure of welfare loss in the economy from these consumers forced to stop steel consumption. This amount of money is measured by the average price of input demand before and after the project, including consumption tax $(P_{2d} + P_{1d})/2$, and the economic cost of steel use of the project is the area $Q_{1d}Q_{ost}BA$.

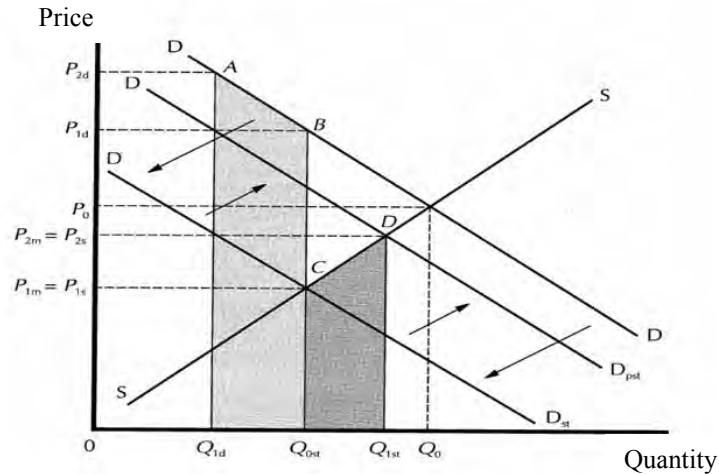
Figure 2.6: Economic costs of steel inputs imposed with consumption tax



The total economic cost of steel including consumption tax is measured by resources used to produce the added amount quantity, i.e. the area $Q_{ost}Q_{1st}DC$ plus usage loss of replaced steel consumers and the amount of money that consumers are willing to pay to use steel $Q_{1d}Q_{ost}Q_{1st}BA$.

Figure 2.7: Cost of steel in the project including consumption tax

Price



3.2. Government subsidizes project inputs

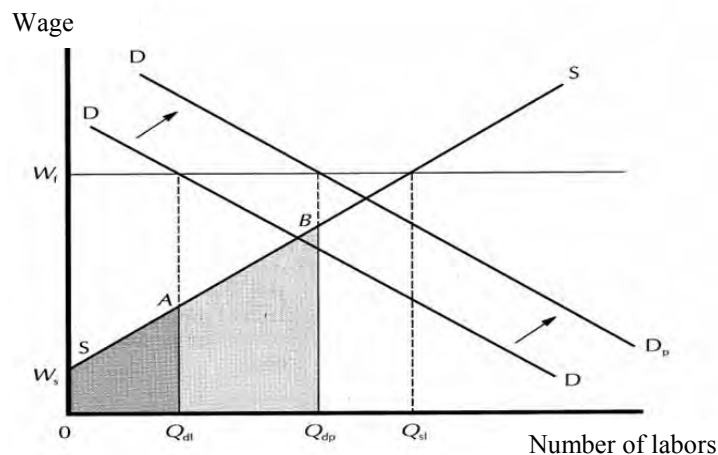
If the percentage of subsidy is S for steel production used by the project, the relationship between the price of supply and the market price of steel is determined as follows: $P_{js} = P_{jm}/(1 - S)$, i.e. the price of steel supply P_{js} will be higher than the market price of steel P_{jm} due to subsidies.

3.3. Government controls price of project inputs

In many countries, the prices of key inputs of the project such as railway, clean water, electricity and telecommunication services, as well as raw materials such as oil, coal and labor can be controlled. The project cost will be measured as follows:

If the controlled price is specified as higher than the market price, like minimum wage, the labor demand increases due to the fact that the project will reduce the excessive labor supply, as illustrated in Figure 2.8.

Figure 2.8: Economic cost of labor in the case of regulated minimum wage

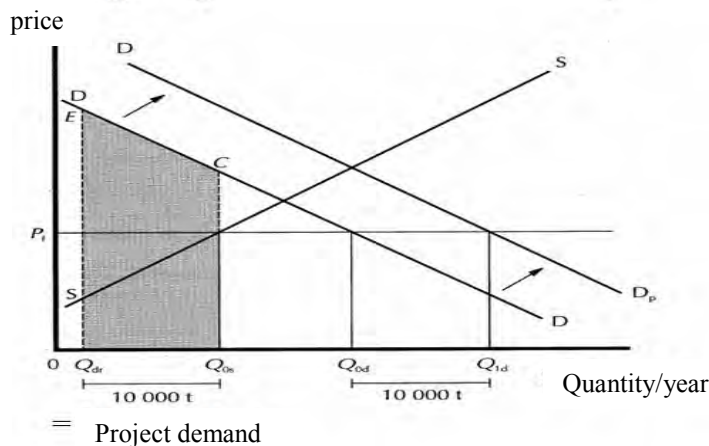


If the minimum wage for unskilled labor is fixed at W_f /day, the initial supply and demand curves of labor are SS and DD . At this dummy high wage, the labor

supply is higher than the quantity demand ($Q_{s1}-Q_{d1}$). The real cost of labor supply Q_{d1} is the area under the labor supply curve $OQ_{d1}AW_s$. If the project increases the labor demand, the economic cost will be measured by the cost of labor supply, i.e. the area $Q_{d1}Q_{dp}BA$, because there is no change in the fixed wage and replaced labor.

If the fixed input price is lower than the market price, e.g. coal price in some countries, the price control leads to increased coal demand. Measuring the economic cost of coal is illustrated in Figure 2.9. Before the establishment of the new coal power plant, there was an excessive demand for coal in the economy as $Q_{od} - Q_{os}$ tons. Because of project investment, the coal demand curve will shift to DD_p and the coal demand will increase by $Q_{1d} - Q_{od}$ tons, e.g. 10,000 tons/year. There is no increase in the fixed coal price, so there is no supply response. All annual coal demands of the project as 10,000 tons will be taken from other consumers. Therefore, the economic cost of these 10,000 tons of coal will be the amount of money that replaced consumers were willing to pay for this quantity of coal, i.e. the area $Q_{dr}Q_{os}CE$.

Figure 2.9: Valuing economic cost of output with controlled price



4. Valuing output economic benefits in a distortive market.

Taxes and subsidies create a buffer between the price paid by the buyer and the price received by the producer. Therefore, there are two sets of prices - the price including taxes or subsidies, and the price excluding taxes or subsidies; so what kind of price should be used in calculating cost - benefit?

4.1. Taxes and subsidies on project output

In general, the answer to the above question depends on the respective significance of ascending impacts and alternative impacts. When a public project makes the current output increase, at least some additional outputs will be always ascending ones. They are valued by the market price which includes tax because it is

the price that marginal consumers are willing to pay (see Figure 2.10 (a)). However, some outputs can replace others being sold. Such outputs should be valued by the value of stored resources shifted to be used for other purposes. In a competitive market, this price is equivalent to the output price minus tax. The accurate shadow price is equal to the weighted average of two values (including and excluding tax), with weights reflecting the output rate that increases consumption and the one that replaces existing consumption.

Figure 2.10 (a): Benefits in the case of taxes on output

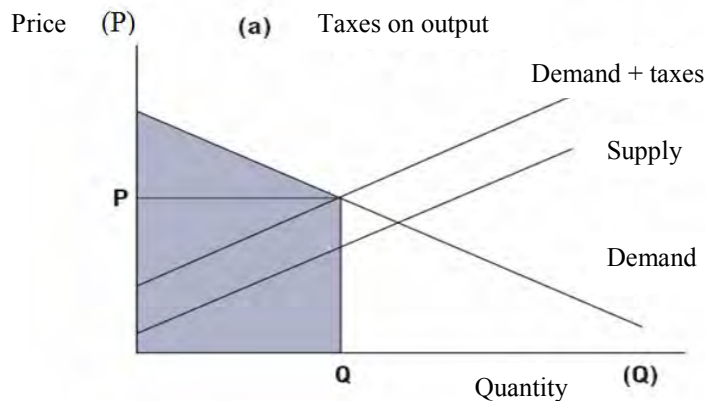


Figure 2.10 (b): Benefits in the case of subsidies on output

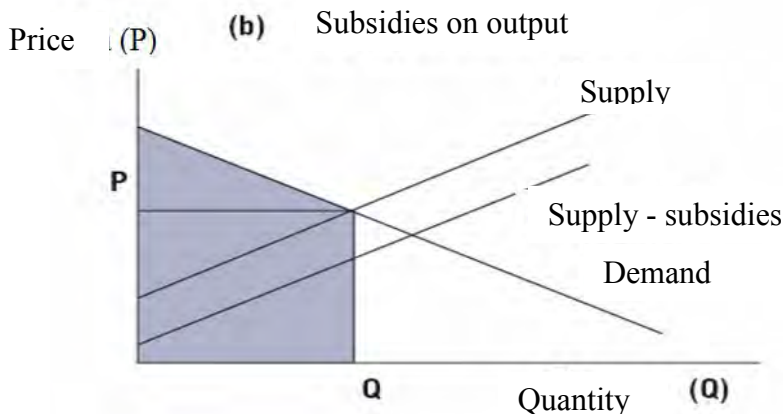
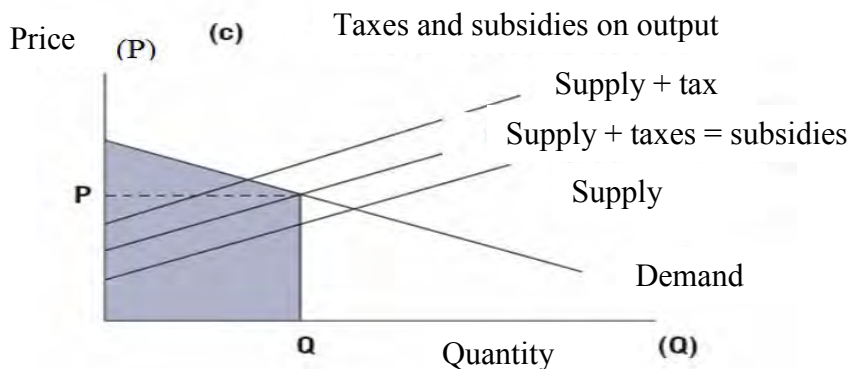


Figure 2.10 (c): Benefits in the case of taxes and subsidies on output

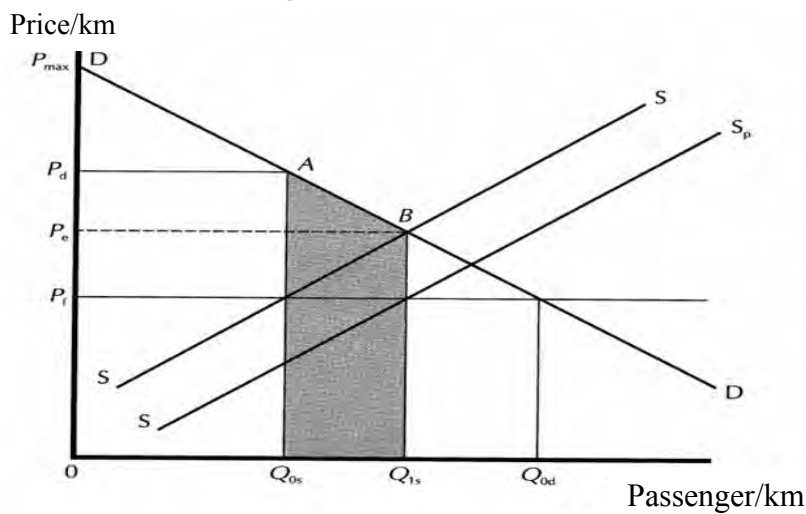


4.2. Price control of project outputs

Many organizations and businesses in developed and developing countries such as railway, clean water, electricity and telephone, postal, and telecommunication service providers cannot spontaneously increase the service price without the permission of State authorities. This is a form of price control. In addition, many countries still maintain control over the price of many basic goods. So how are the project benefits measured in the case of output price control?

Figure 2.11 illustrates a railway project with a fixed price P_f/km which is lower than the equilibrium price P_e .

Figure 2.11: Valuing economic benefits of controlled output price



Before conducting the new railway project, the supply of rail services is represented by the supply curve SS . At this dummy low price, the seat demand exceeds the supply ($Q_{0d} - Q_{0s}$). On the seat demand curve DD , some people are willing to pay more, P_d for the limited number of seats Q_{0s} , and the amount of money that people were willing to pay for the number of seats Q_{0s} is $OQ_{0s}AP_{max}$.

If the State intends to expand railway services to meet this very high demand, the new project will shift the supply curve to SS_p , expanding services provided at a fixed price to Q_{1s} . However, it would be wrong if these services were valued at a fixed price P_f , because consumers are willing to pay a higher price for railway services. Economic benefits of the new railway services would be the total amount of money that consumers were willing to pay for them, i.e. the area under the demand curve $Q_{0s}Q_{1s}BA$. Because there is no discount on railway services with the project and without replaced railway service providers, the supply price of the services is not appropriate to measure its benefits (weight on supply price $W_s = 0$).

The above input and output valuation method with taxes and subsidies is summarized in Table 2.1:

Table 2.1: Taxes and subsidies on input and output

Supply/demand	Output production	Input consumption
Ascending	Market price	Market price – taxes + subsidies
Alternative	Market price + subsidies – taxes	Market price

The relationship between the market price, demand price and supply price when there are distortions is illustrated in Table 2.2:

Table 2.2: Relationship between the market price, demand price and supply price when there are distortions

Type of taxes or subsidies	Supply price P_s	Demand price P_d
% consumption tax	$P_s = P_m =$ pre-tax market price	$P_d = P_m (1 + t_{st})$
Unit consumption tax, T_{st}	$P_s = P_m =$ pre-tax market price	$P_d = P_m + T_{st}$
% subsidies, S	$P_s = P_m / (1 - S) =$ production cost	$P_d = P_m =$ market price after subsidies
Unit subsidies, S_u	$P_s = P_m + S_u =$ production cost	$P_d = P_m =$ market price after subsidies

P_m is market price; P_s is supply price; P_d is demand price;

Source: Jenkins and Harberger (1991), Schedule 9-1, Chapter 9:14.

III. VALUING COSTS AND BENEFITS IN AN OPEN ECONOMY

1. Internationally traded goods and internationally non-traded goods

1.1. Definition of Internationally traded goods and internationally non-traded goods

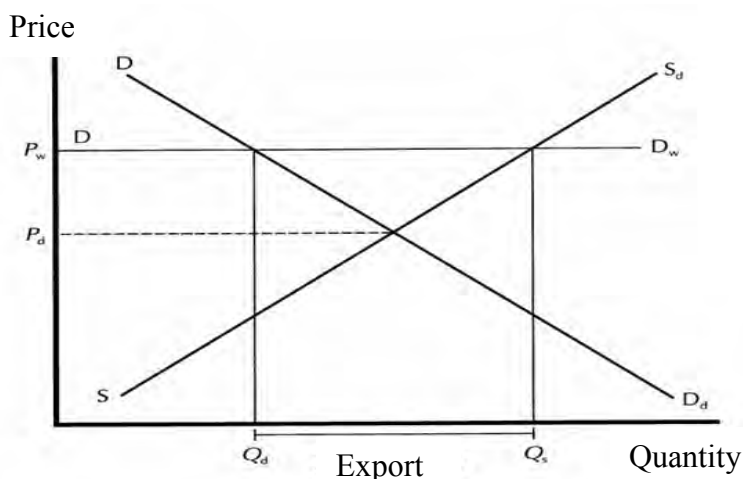
In the previous sections, we have considered the valuation of the projects in internationally non-traded goods autarky. In this section, we will ease this assumption and consider how to value projects in an economy with foreign trade.

In most projects, many inputs are internationally traded goods and many projects also have internationally traded outputs. Internationally traded goods are goods and services of which production or use will cause changes in national net export or import positions. These internationally traded goods produced or used by the projects are not always imported or exported, but must be able to be exported or imported. A certain quantity of internationally traded goods is always traded provided that the trade mechanism of the State is not overly restrictive.

A project that uses internationally traded input has directly or indirectly negative impacts on the trade balance or exchange rate of the country. For example, increased demand for an input to the project requires an increase in importing such input or preventing export of some such input units which are produced domestically. Similarly, the production of internationally traded outputs will have indirectly or directly positive impacts on the trade balance or exchange rate of the country such as internationally traded goods, including all agricultural, industrial, and intermediate goods, raw materials, and some services such as tourism and consultancy.

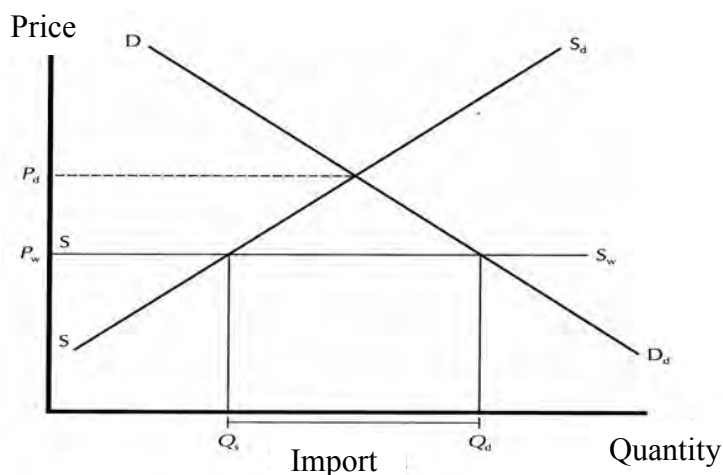
Internationally traded goods are importable and exportable goods or services. Exportable goods are those with domestic production costs that are lower than the fob export price (in other words the seller takes responsibility until the goods are already loaded aboard) and from which domestic producers benefit from the international market. Figure 2.12 shows cases in which the goods or services can be exported. Domestic equilibrium price of TNcoffee is P_d , which is lower than the world price P_w , determined by the world demand curve DD_w . This creates profits for domestic TNcoffee producers to export and obtain a higher world price. Domestic producers will produce Q_s in which Q_d will be sold domestically and $Q_s - Q_d$ will be exported.

Figure 2.12: Domestically produced goods which can be exported



Exportable goods are goods whose import costs cif (costs, insurance and freight) are lower than the domestic production costs of such goods. Figure 2.13 illustrates the cases which goods can be imported.

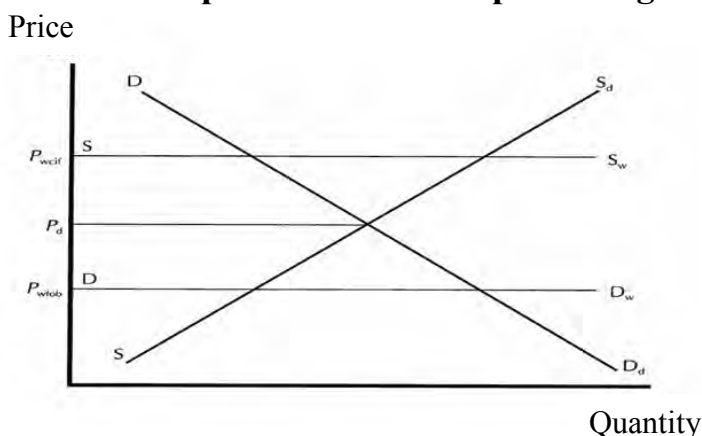
Figure 2.13: Domestically produced goods can be imported



For example, the domestic equilibrium price of automobiles in Vietnam P_d , which is higher than the world price P_w , is determined by the world supply curve S_w . This benefits domestic consumers who import automobiles at the international price. When there are no import taxes and restrictions, domestic producers will produce Q automobiles and $Q_d - Q_s$ will be the import demand.

Internationally non-traded goods are the goods and services of which marginal cost of domestic production is lower than its cif import cost, but higher than its fob export income. There are no profits from exporting or importing such goods and services. Figure 2.14 shows internationally non-traded goods because their freight is too high; the goods are perishable; or because of other causes such as building bricks, stones, domestic traffic, etc.

Figure 2.14: Unimportable and unexportable goods



1.2. Valuing economic benefit of internationally traded goods by marginal price

In most cases, economic benefits of production of internationally traded outputs and costs of using internationally traded inputs are measured by the marginal price of these outputs and inputs.

The marginal price of importable goods is their cif import price, i.e. the price of transporting goods to import countries under impacts of import taxes or quantity restrictions. The marginal price of exportable goods is their fob export price, i.e. the price which exporters obtain after paying all costs to transport the goods to the border, but before imposing export subsidies or taxes.

$$\text{Economic benefits or costs/output unit} = P_i s W_s + P_i d W_d \quad (2.2)$$

$$\text{Where weight on supply price, } W_s = \frac{\epsilon_{is}}{[\epsilon_{is} - \eta_{id}(Q_{id}/Q_{is})]} \quad (2.3)$$

$$\text{Where weight on demand price, } W_d = \frac{\eta_{id}(Q_{id}/Q_{is})}{[\epsilon_{is} - \eta_{id}(Q_{id}/Q_{is})]} \quad (2.4)$$

ϵ_{is} is elasticity by the supply price of goods i

η_{id} is elasticity by the demand price of goods i

P_{id} is the average demand price of goods i

P_{is} is the average supply price of goods i

Q_{is} is the quantity of supplied goods i

Q_{id} is the quantity of demanded goods i.

If the project output can be exported, then the goods demand curve is always a completely elastic international demand curve. In applying the elasticity coefficient of large demand η_{id} to the formulas (2.3) and (2.4), the weight W_s of domestic supply price P_{is} will tend to be 0, and the weight W_d of demand price P_{id} will tend to be 1. Therefore, the demand price of exportable outputs by the marginal fob price is an accurate way to measure its economic benefits.

Intuitively, the marginal price is used to measure economic benefits of internationally traded outputs of the project because it represents the amount of foreign currency obtained directly or indirectly from the project. Foreign currency obtained can be converted freely into goods and services in the international market, then these goods and services can be consumed by people of the exporting country. Because the international market is competitive and not distortive, the international prices paid for goods and services will be a measure of increase in benefits resulting from the use of foreign exchange obtained from the production of

certain internationally traded goods or services. Therefore, the marginal price of internationally traded output well reflects the marginal social benefit received, or marginal social cost saved from the production by the country.

On the other hand, if an input used by the project is importable goods, the goods supply curve is always a completely elastic international curve. As applying the elasticity coefficient of large supply ϵ_s to (2.3) and (2.4), the weight W_d of domestic demand price P_d will tend to be 0 and the weight W_s of supply price P_s will tend to be 1. Therefore, the supply price of importable inputs is its marginal cif price, which is a proper measure of its economic costs.

Marginal price represents the amount of foreign exchange which must be paid directly or indirectly to use project inputs. Because this amount then will not be available to countries to purchase other imported goods which help obtain utility, the marginal price of inputs will be a measure of decrease in benefits due to the use of inputs for the project. Therefore, the foreign exchange costs of internationally traded input reflect marginal social costs to the country from use of such inputs.

After the internationally traded outputs and inputs are valued by the income and foreign currency cost, they will be converted to the local currency at the appropriate exchange rate before being put into the project's cash flow. In many countries, the official rate does not reflect the real value of foreign currency because the foreign currency market is controlled artificially by the State. This issue will be considered in the following sections. This section assumes that the official rate closely reflects the corresponding value of domestic and foreign currencies.

To check the economic values of internationally traded goods in detail, first classify them into three categories:

- The goods which have been exported or imported and of which prices do not change when the goods' demand or supply increases. In these cases, the world supply and demand are completely elastic.

- The goods which have been exported or imported and of which prices are predicted to change when the goods demand or supply increases. In these cases, the world supply and demand are less elastic.

- The goods which are currently internationally non-traded ones but will be traded if the State passes optimal trade policies, called potentially traded goods.

Trade of internationally non-traded goods is prohibited even if the State has optimal trade policies.

2. Valuing internationally traded goods in cases of unchanged price

In most cases, the price of internationally traded goods does not change due to the increase in supply or demand due to the project. The reason is that the world's output demand and input supply have high elasticity. Normally, there is a very large number of relatively small suppliers producing homogeneous goods or similar alternatives.

To value these internationally traded outputs, first it is necessary to divide them into smaller categories as follows:

- Exported goods - project outputs which were actually exported or replaced other exported goods;

- Importable goods - project outputs which replace imported goods;

The internationally traded inputs are divided into the following subtypes:

- Imported goods - project inputs which were actually imported or replaced other imported goods;

- Exportable goods - project inputs which can be exported if they are not used by the project.

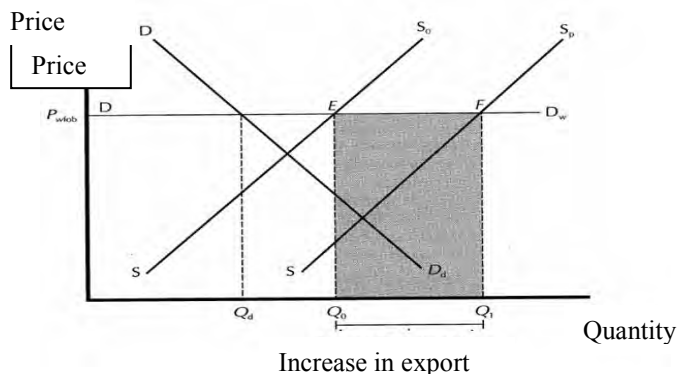
2.1. Exportable outputs

The valuation method for exportable outputs is shown in Figure 2.15. Assume that all the outputs of a bronze mining project can be exported. The project will shift the domestic supply curve from SS_o to SS_p . Because bronze outputs of the project are exported, the demand curve is threatening domestic producers as an international bronze demand DD_w . The increase in the world's outputs produced by the project is relatively small compared with the worldwide demand, so the world's copper demand curve is assumed to be completely elastic to this change of outputs.

Because the elasticity of bronze demand η_d moves towards infinity, in equation 2.4, the weight of demand price W_d tends to be 1 and W_s , whereas the weight of supply price tends to 0. Therefore, economic benefits from the bronze production for export are the world's demand price, while marginal fob price that the project can obtain from bronze productivity is P_{wfob} . Total economic benefits of the bronze mining project will be the added export revenue of the country from bronze, i.e. the area Q_0Q_1FE .

Marginal fob price is the export price accepted by sellers until the goods are completely loaded aboard at borders, ports or airports. This is the actual amount of foreign currency obtained from exports, i.e. the export price less all freights and advertising costs to take bronze from the project to the borders.

Figure 2.15: Economic benefits: project increases supply of exported goods



2.2. Importable outputs

In a case where the project outputs can replace imports, like the example about imported automobiles in Vietnam illustrated in Figure 2.16, the project will shift domestic supply of automobiles to SS_p , and reduce the quantity of imported automobiles from $Q_d - Q_s$ to $Q_d - Q_1$. The proper supply curve of automobiles in Vietnam now is SCS_w . The world prices of automobiles are forecast to be unchanged due to the changes of supply from the expansion of the domestic automobile industry. Therefore, for the quantity of automobiles produced in the project, the elasticity of the world automobile supply curve is assumed to be completely elastic, i.e. ϵ_{is} - the elasticity of automobile supply by price will be infinite.

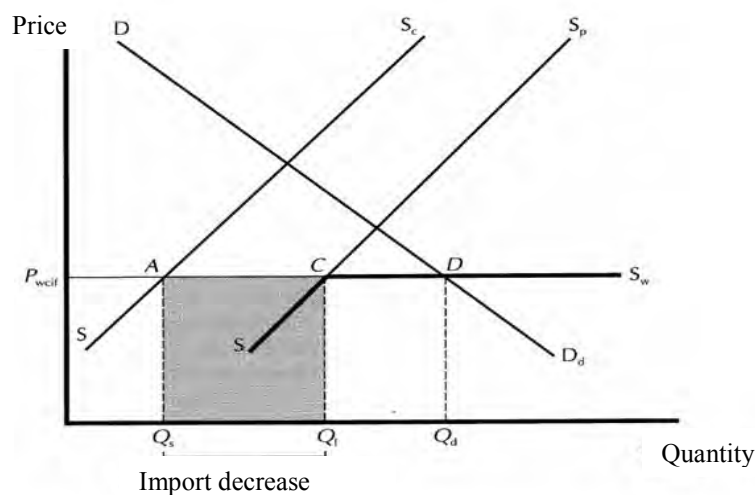
Applying ϵ_{is} to equation 2.4, the demand price weight W_d tends to be 0 and the supply price weight W_s tends to be 1. Economic benefits on a car produced as an import alternative will be the world supply price or marginal cif price, P_{wcif} for imported automobiles that the project outputs replace. This is the amount of foreign currency that the country will save thanks to the project. In Figure 2.16, total benefits of the automobile plant project will be the area Q_sQ_1CA .

In summary, if the project output is an imported alternative, it is valued at the marginal cif price of the imported goods that it replaces. This price represents the amount of foreign currency saved for the country from production of an import alternative; therefore, it is the economic value of the project for the country. Cif

import price will not include any import taxes or impacts of regulations on limiting quantity such as quotas. They are just the amounts of money transferred between consumers of import alternatives and the project, and do not show the economic benefits of the domestic automobile production. Economic costs of marketing and transportation services necessary to get imported automobiles from ports to the domestic market are added to this cif value, and economic costs of marketing and transportation services incurred to get automobiles produced by the project from production location to domestic market are subtracted from these economic benefits.

If the project for producing import alternatives is not designed to meet new demands but replace existing supply, the amount of foreign currency saved by producing these goods and services domestically is their marginal social benefit to the country.

Figure 2.16: Economic benefits: project increases imported goods demand

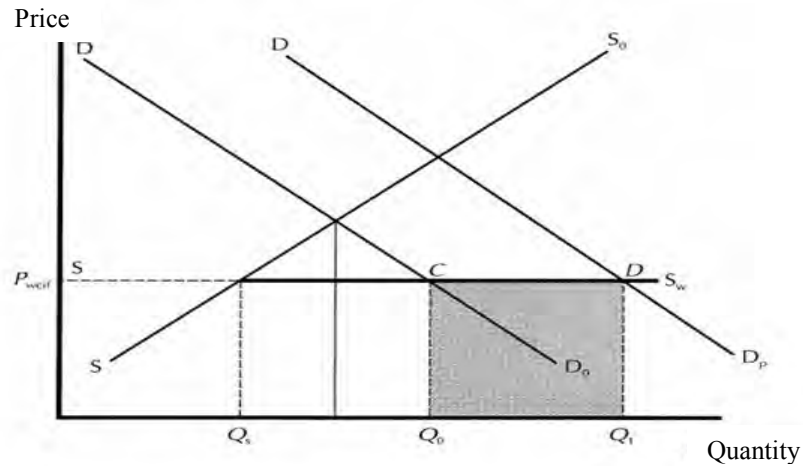


2.3. Imported inputs

Economic value of imported inputs is required for the project. For example, the TV assembling plant project needs picture tubes as imported inputs. In Figure 2.17, the project shifts the domestic demand curve of picture tubes from DD to DD_p . As these picture tubes are imported, the proper supply curve for a supply unit of picture tubes is the international supply curve SS_w with complete elasticity. The picture tube demand increases because the project does not increase the world picture tube price. Because the picture tube supply elasticity ϵ_{is} is complete, in equation 2.3, the weight W_s for supply price (in this case, the cif import price is P_{wcif}) will be 1 and the

weight W_d for demand price will be 0. Therefore, the project inputs as imported goods will be valued at their marginal cif price. In this case, total economic costs of imported picture tubes for the project will be the area Q_0Q_1DC .

Figure 2.17: Economic costs: inputs of the project are imported goods



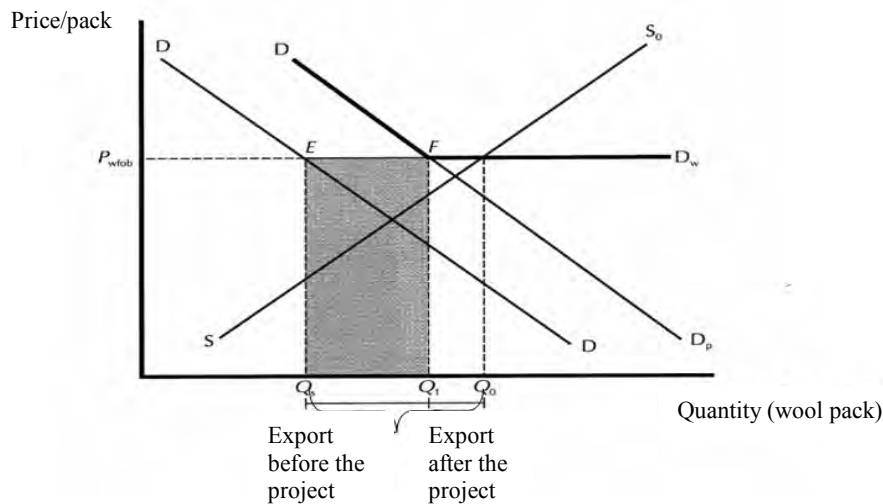
Full economic costs of picture tubes are the cif import price of picture tubes at the border (shipped to the pier or airport), including insurance costs and freight to bring the goods to the country, plus economic costs of marketing and shipment of imported goods to the project. These costs of foreign and local currencies represent the real costs of using imported picture tubes to the economy. All price increases (amount of money added to the cost of goods sold) on the domestic price of picture tubes are caused by taxes or quotas which are not included in the economic costs of using these picture tubes. These are only amounts transferred from the project to the State and do not reflect the real economic costs of using picture tubes.

2.4. Exported inputs

Take an example: the wool textile plant project needs wool as exported input. As shown in Figure 2.18, the wool textile plant project shifts the domestic demand curve for wool to DD_p , and reduces wool supply for export from $Q_0 - Q_s$ to $Q_0 - Q_1$. The proper demand curve for domestic wool producers now is the demand curve DFD_w . This portion of the demand curve is the world demand curve for wool, assumed to be completely elastic, in which a relatively small decrease in wool supply will not increase the wool price. Because the wool demand elasticity η_{id} is complete, from equation 2.4, the demand price weight P_{wfob} (that is fob export price) is 1 and the supply price weight is 0. Therefore, economic cost/wool pack is P_{wfob} (that is the

world fob demand price) and total costs of wool used for the project are the area $Q_s Q_1 F E$.

Figure 2.18: Economic costs: project inputs are exported goods



Therefore, exported goods which are inputs for the project are valued at fob price at the border (pier or airport). This is the amount of foreign currency that can be earned from these goods if they are not used for the project. This price represents the opportunity cost of exported goods; therefore, it is the real economic cost to the economy. Economic costs of marketing and transportation to get the inputs from the production location to the border are deducted from fob price and added with the economic costs of shipping and packaging to get these exported inputs to the project.

3. Valuing internationally traded goods in cases of changed price

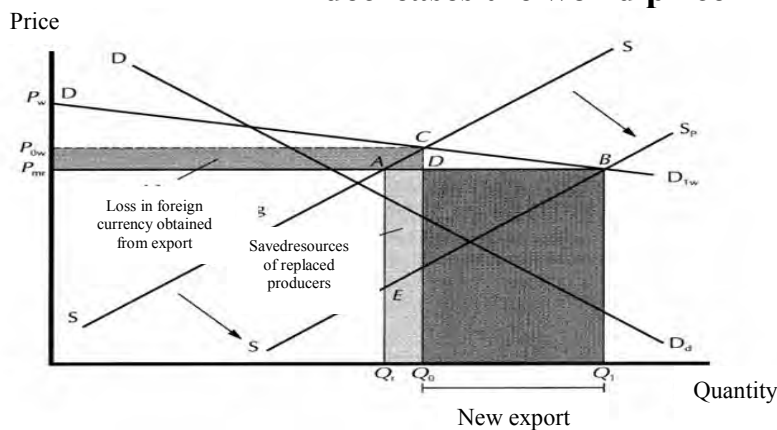
Most countries are too small for their exported and imported goods to have impacts on the international price or marginal price of these internationally traded goods. The reason is that imported and exported goods of a country only make up a small part of the world's total demand and supply. However, some large or highly specialized countries may provide a significant proportion of the world's market for a particular product such as exported silk of China, petroleum of Saudi-Arabia, wool of Australia in the past, etc. In these cases, a project which significantly increases the supply of goods may decrease the marginal price of such goods. If this is the case, the economic valuation of project inputs and outputs should take price changes into consideration.

3.1. Exported output decreases world prices

In Figure 2.19, outputs from a group of silk plantation projects are forecast to shift the silk supply curve from SS_0 to SS_p . The silk plantation projects are forecast to

increase the international supply of raw silk to the extent that they reduce the marginal fob price from P_{ow} to P_{mr} . This means that corresponding with changes in the quantity of exported silk, the world demand for raw silk is lower than $DD1w$, which is the downward demand curve. P_{mr} is the forecast marginal export revenue obtained from an additional kilogram of silk. Therefore, total financial benefits of the project will be the area QrQ_1BA .

Figure 2.19: Economic benefits: project increases exported output supply and decreases the world price



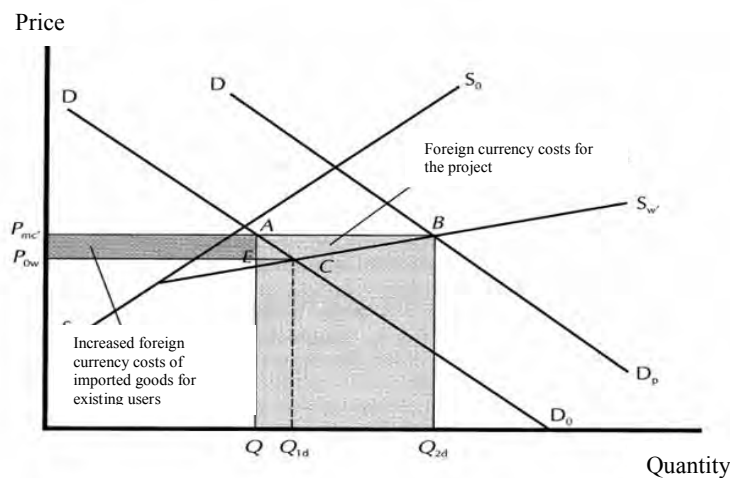
However, the economic value of the output will be very different from its financial value. The first element of economic benefits of the output will be the increased foreign currency revenue from silk exports Q_0Q_1BD . However, because the current domestic exporters will now get less foreign currency/1 kg of exported silk, this foreign currency loss is subtracted from these increased revenues to obtain the net increasing amount in the foreign currency, Q_0Q_1BD less $P_{mr}DCP_{ow}$ (the decreased amount in export revenues of the current quantity of exported silk). This producer surplus loss is not compensated by the increase in the domestic consumer surplus. Assume that now the exported silk quantity may obtain a lower export price, some domestic silk producers will cut productivity, and this process will save the actual resources Q_rQ_0CA . This saving represents another economic benefit of the increased outputs from the project. Whether foreign consumers of raw silk obtain the entire amount Q_0Q_1BC , their net increase in the consumer surplus DBC does not represent the increase in the economic benefits of the project. Therefore, benefits from increased silk outputs from the project are the increased amount of foreign currency which is actually paid by the foreign consumers to the country with the project $Q_0Q_1BD - P_{mr}DCP_{ow}$, plus savings in the real resources of replaced domestic silk producers ACQ_0Q_r . The potential of lost benefits to countries which have dominant positions in

the world market if $P_{mrDCPow}$ is higher than Q_0Q_1BD plus ACQ_0Q_r (subtracting Q_rQ_1BE) for a particular good can lead to the fact that their States apply export restrictions and taxes. Depending on the world demand elasticity of goods, such actions may increase the total benefits.

3.2. Importing input increases world price

In some rare cases, a project can use a large quantity of inputs enough to increase the world price of such inputs. It means that the world supply curve of imported inputs may be upwards for the increased inputs by the project. For example, demand for chromium by a large chromium mill project in the US can make the domestic demand curve shift from D_0 to D_p and increase demand from Q_{1d} to Q_{2d} as well as the world price, i.e. increasing the marginal cif price of chromium from P_{ow} to P_{mc} as shown in Figure 2.20. This implies that the world supply curve tends to be upwards SSW for the project.

Figure 2.20: Valuing economic costs of imported inputs for the project which increase the world price



The financial cost of one ton of chromium input will be its marginal import cost P_{mc} , and the total financial costs will be the area QQ_2dBA . The economic costs will include not only these financial costs, but also increased foreign currency costs arising from existing domestic metallurgists who import chromium $P_{ow}EAP_{mc}$. These two cost elements represent real economic costs of chromium import because domestic producers now have to pay foreign producers this amount of foreign currency for chromium inputs. The area $P_{ow}ECBP_{mc}$ actually represents the increase in producer surplus of foreign producers. In this case, this is not an amount transferred within the

country, but a real economic cost to the country from using chromium because chromium producers are foreign.

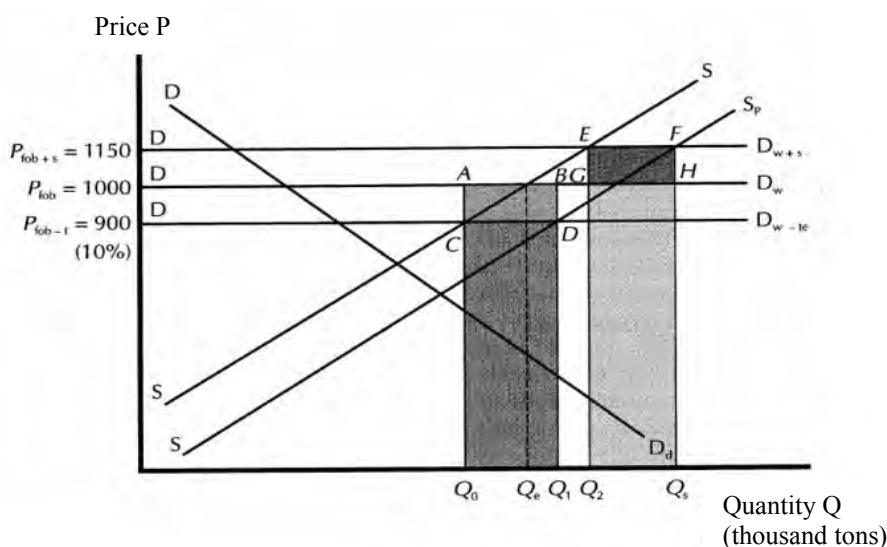
4. Valuing internationally traded goods in distortive markets

Most countries apply a variety of tariff and non-tariff barriers on imported goods and can also impose export taxes and subsidies to encourage exports. These measures do not always completely prevent the trading of goods, but distort domestic prices, making domestic prices different from international or marginal prices. Domestic market prices of imported inputs will include taxes on imported goods. Therefore, in financial analysis, the financial costs of imported inputs will include the impacts of non-tariff and tariff barriers. Similarly, the financial benefits of exported outputs will not include earned export taxes but will include export subsidies. The reason for this is that in the financial analysis, the actually paid price and the price received by the project are put in the cash flow. However, economic valuation of the project shall measure real economic benefits and costs of producing and using internationally traded goods to the economy.

4.1. Exported output depends on tax and export subsidy

- Export taxes: If the export tax t_e 10% is imposed on exported coffee as shown in Figure 2.21, the coffee demand curve for domestic producers will shift from the world demand curve DD_w to $DD_w - t_e$.

Figure 2.21: Valuing exported outputs with commercial distortion



Export taxes will decrease the supply price received by coffee growers from \$1,000 to \$900/ton, P_{fob-t} . This will reduce the quantity of coffee provided by

domestic coffee growers from Q_c to Q_0 tons. This adverse impact on export revenues is the main reason that export taxes today are less popular. If this is the case, a new large coffee plantation project will increase the supply of exported coffee, shifting the domestic supply curve from SS to SS_p , expanding outputs from Q_0 to Q_1 . However, the project will only get the world price less the export taxes, $P_w(\text{fob-te})$ as \$900/ton for $Q_1 - Q_0$ tons of coffee produced and the total financial benefits will only be Q_0Q_1DC .

On the other hand, the economic benefits to the country from these exported goods will be the world fob export price of coffee, $P_w\text{fob}$ as \$1,000/ton including export taxes. The fob export price is the economic benefits/ton of coffee exported by the project because it is the actual amount of foreign currency earned for the country from the export of coffee. Export tax revenue $CDBA$ is just the amount transferred from the domestic coffee producers to the State and represents an element of the total benefits that the country earns from increased coffee production. Therefore, the total economic benefits of the coffee plantation project are Q_0Q_1BA . In this case, when the demand is completely elastic, the supply price weight W_s is 0; the demand price weight W_d is 1; and benefits of increased coffee production are equal to the demand price, i.e. fob export price, including export taxes $P_w\text{fob}$. The domestic coffee supply price $P_{\text{fob-t}}$ cannot accurately determine the economic value of coffee.

- Export subsidies: If the State would like to promote the export of coffee and implement export subsidies s as 15%, the coffee demand curve will shift upwards to DD_w+s as shown in Figure 2.21. Now, coffee growers will receive $P_{\text{fob}+s}$ as \$1,150/ton of coffee, increasing the output to Q_2 tons. If the coffee plantation project is conducted in this case, the coffee productivity will increase to Q_s , and the project will receive an income as Q_2Q_sFE . However, the subsidy $GHFE$ is just the amount transferred from the State to coffee exporters and not the economic benefits of the project. The economic benefits of the project are still the amount of foreign currency earned from the export of coffee only, i.e. the area Q_2Q_sHG . As the world coffee demand curve is completely elastic, the benefits of increased coffee production are the coffee demand price, i.e. fob export price less $P_w\text{fob}$.

- Taxes on import alternatives: Economic value of import alternatives, such as automobiles, is just the cif import price of automobiles, despite their high export tax rate. Economic value to the country, i.e. the cif import price of alternatives, may be

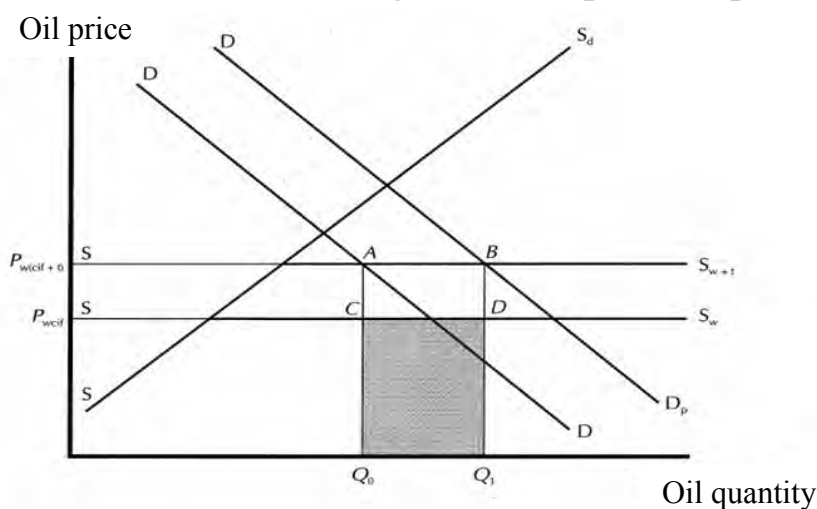
significantly lower than the domestic price (financial) for the same line of automobiles produced in the country which can be sold through high tariff protection and may be not enough to compensate economic costs of resources used to produce automobiles as import alternatives.

In summary, the economic value of exported goods is simply its marginal fob price, regardless of whether the State imposes export taxes or subsidies on such goods. The economic value of import alternatives is the cif import price of imported goods for alternatives and does not include any tariff or non- tariff ones.

4.2. Imported input is taxable

If Vietnam launches an oil refinery project and imported oil is taxable at t as 10%, the oil supply curve of domestic refineries is not the world oil supply curve SS_w , but the supply curve including a higher tax rate SS_w+t as described in Figure 2.22. The increase in demand for imported oil for the oil refinery project will shift the domestic demand curve to DD_p . Although imported oil is taxable, the economic costs of an oil barrel to Vietnam are still the cif price, i.e the oil supply price P_{wcif} . Therefore, the economic costs of imported oil will be equal to its foreign currency costs, i.e. the area Q_0Q_1DC . Tax revenue $CDBA$ is just the amount transferred from the refinery project to the State. Because the international oil supply curve is completely elastic, the oil supply price weight P_{wcif} is 1 and the domestic demand price weight $P_w(cif+t)$ is 0. Therefore, only the area Q_0Q_1DC represents the foreign currency costs of oil, i.e. the real cost to the economy.

Figure 2.22: Valuing taxable imported inputs



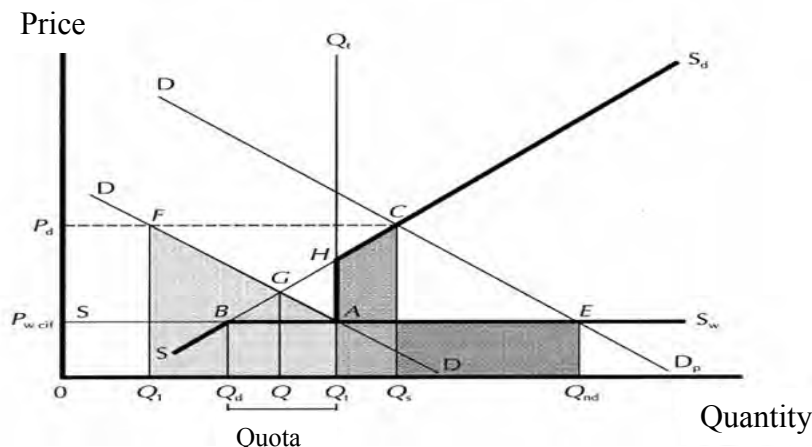
5. Valuing potential internationally traded goods

In some countries, distortions in the trade regime are so large that they can prevent the trade of internationally traded goods. The potential internationally traded goods include all goods and services which are currently not traded by one country, but will be traded if that country pursues the optimal trade policy. Many countries impose strict import quotas, an import embargo, very high import taxes or an export embargo on some imported and exported goods. The main reason is to protect inefficient domestic producers. An example of an import embargo is the rice import ban in Japan to protect Japanese rice growers who are selling domestic rice products at a price almost 6 times higher than international prices for rice. Export bans are usually rare and are applied for such reasons as protecting an extraordinary competitive advantage, for example the export ban on Merino sheep by Australia in the past. In addition, export bans can be applied to protect a resource that is deemed to have a limited supply, such as the export ban on bronze by Australia in the 1950s. Natural valuables, endangered substances and antiques are often subjects of export bans. If the project uses goods with trading potential as inputs or produces these goods, it is necessary to clarify the manner to measure its value to the economy.

5.1. Potential internationally traded input

The way to value potential internationally traded inputs of synthetic fibers for the garment plant project if they are imposed with quotas is described in Figure 2.23. International price of synthetic fibers is cif (P_{wcif}) and equal to the domestic price before the beginning of the project. Project demand of synthetic fibers shifts the domestic demand curve to DD_p . If the project developers are successful in extending quotas to meet new demands of synthetic fibers from $Q_t - Q_d$ to $Q_{nd} - Q_d$, these inputs can be imported and valued at marginal cif price of fibers P_{wcif} . In this case, the economic costs of imported inputs will be the area $Q_t Q_{nd} EA$.

Figure 2.23: Valuing potential internationally traded inputs



However, if the quotas are not extended in the project life and the project has to purchase domestic inputs or tender quota allocation from other users, it is necessary to value these inputs of synthetic fibers. In this case, while the potential fiber supply curve is the international and domestic supply curve folded SBSw, the real supply curve is the combined international and domestic supply curve SBAHSd. If all demand of fibers in the project can be met from production expansion (the domestic supply curve is completely elastic), the inputs will be valued at the marginal social production costs. If the outputs cannot be expanded, the domestic supply curve is completely inelastic, and fiber inputs will be valued at the marginal social benefits, or in the amount of money that current consumers are willing to pay for them. In Figure 2.23, the domestic supply curve is upwards SSd. Though the project cannot get the quotas eased from Q_t to Q_{nd} , inputs will be taken from both expansion of the domestic supply curve and replacement of some current consumers of imported fibers. Domestic market prices of fiber inputs will increase to P_d because the project increases demand. The economic costs of synthetic fiber inputs are measured by the economic costs of domestic producers for providing increased fibers, i.e. the area Q_tQ_sCH , plus the amount of money that replaced users were willing to pay for the quantity of fibers $Q_t - Q_1$ as the domestic price increases from P_w to P_d , i.e. the area Q_1Q_tAF . From equation 2.2, the economic costs of synthetic fiber inputs will be the weighted average of the marginal social costs, the supply prices and marginal social benefits, and demand prices.

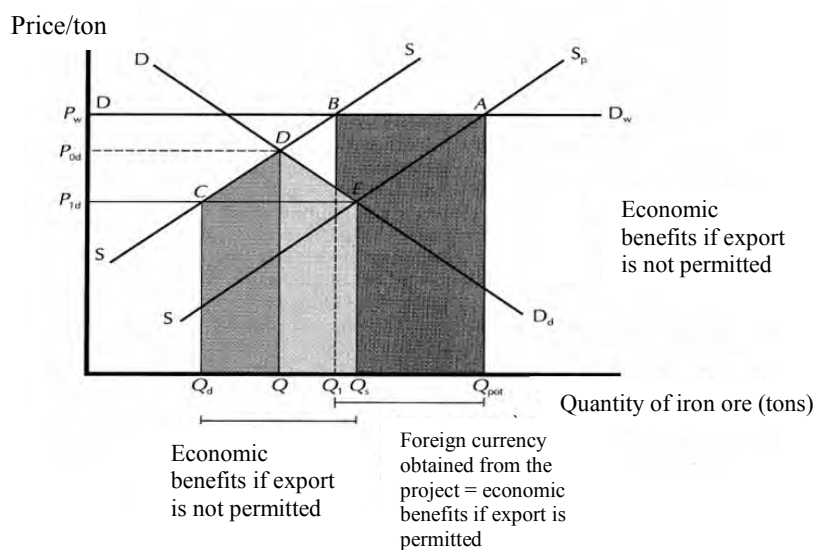
5.2. Potential internationally traded output

A similar problem will arise if the project outputs are potential internationally traded goods. As shown in Figure 2.24, a mineral corporation is considering a new ore

mining project in the case of an iron ore export ban. In this situation, the domestic iron ore price P_{od} is lower than the marginal fob price P_w ; therefore, the project may conduct exports if it is permitted by the Government. To value outputs of the project, it is necessary to determine whether the export ban can be lifted or whether the ban is likely to remain throughout the project life. If the export ban is forecast to be lifted, the outputs will be considered internationally traded goods and valued at the marginal fob price P_w . Economic benefits of the project outputs are the area $Q_1Q_{pot}AB$ in Figure 2.24.

On the other hand, if the iron ore export ban is forecast continue throughout the project lifecycle, the demand curve for iron ore producers will be the downward domestic demand curve D_d and prices will decrease to P_{1d} . Iron ore production will have no impact on the commercial position of the country and iron ore outputs are considered internationally non-traded goods. Therefore, iron ore produced by the new project will be valued at the price that domestic consumers are willing to pay for the increased iron ore supply from the project, i.e. the area Q_qS_eD , plus the economic value of saved resources because the domestic iron ore producers are no longer competitive at lower price P_{1d} , i.e. the area Q_dQDC . Obviously, the total produced iron ore quantity and related export revenue will be lower if the export ban is imposed. But the beneficiaries of such policies will be domestic steel producers, only because they will be able to buy iron ore at prices lower than the world prices.

Figure 2.24: Valuing potential internationally traded outputs



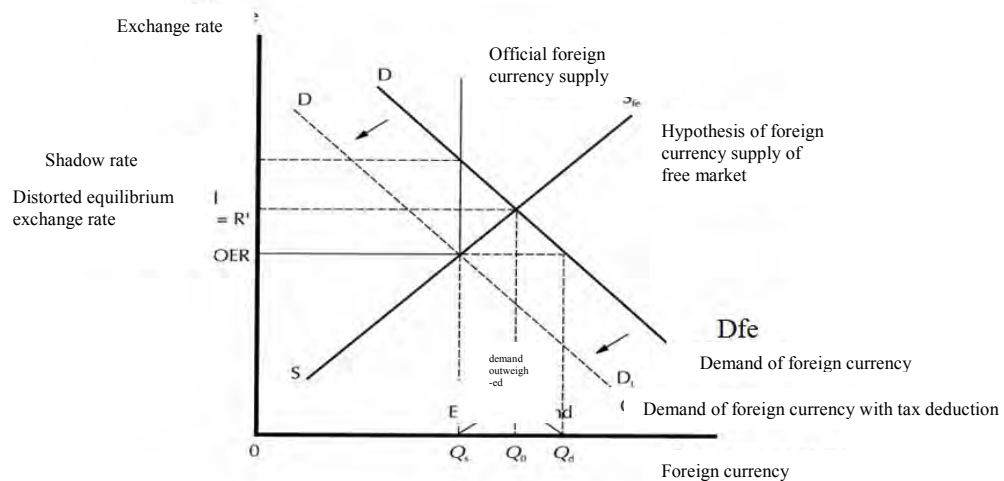
6. Economic valuation of foreign currency

6.1. Currency exchange fee

When evaluating a project with internationally traded outputs or inputs, foreign currency revenues and costs are always converted to local currency to put into the project's cash flow together with internationally non-traded outputs and inputs. In most countries, the State has a significant degree of intervention in internationally traded goods and foreign currency market. The official exchange rate (OER) will be equal to the real economic value applied to the foreign currency if it is freely convertible without any State intervention or control, restrictions on foreign currency, tax or tariff barriers on imports, and without taxes or subsidies on exports. In many countries, these conditions govern the market value of foreign currency, so the exchange rate will be a good measure of the people's willingness to pay for foreign currency needed to buy imported goods and economic benefits that the economy receives from foreign currency revenues brought by the project.

In many developed and developing countries, there are many distortions in the foreign exchange market and internationally traded goods. The foreign currency market may be subjected to strict control and foreign currency may only be bought for permitted purposes. The controls are imposed because the fixed official rate is overvalued, resulting in a foreign currency demand outweighing supply. A currency is overvalued if its official rate reduces the amount of domestic currency which local people are willing to pay for a unit of foreign currency (such as one USD) if they can freely spend it on duty-free goods which are sold at their marginal price. In most countries, people will pay more for foreign currency if they can freely spend it on duty-free goods. Therefore, most currencies in the world are overvalued by this recognition. Consequently, commercial distortions such as tax and import quotas cause the currency of a country to be overvalued, as illustrated in Figure 2.25

Figure 2.25: Shadow rate overvalued currencies



In addition, governments usually fix the rate over the equilibrium, enabling individuals to buy foreign currency at an artificially low price. In Figure 2.25 DDfe shows the amount of foreign currency local people need at each rate without tax and import quotas on imported goods or without foreign currency restrictions. SSfe is the hypothetic curve of the foreign currency, showing the amount of foreign currencies exporters can obtain at each rate in cases of there being no subsidy or tax on exported goods or import inputs. The non-distorted equilibrium rate R' is reached at the intersection of non-distorted foreign currency demand and supply curves in this hypothesis. At this rate, demand and supply on foreign currency would be equal at Q_0 .

If the official exchange rate OER represented by the amount of local currency units required to buy one unit of foreign currency is fixed below the equilibrium, it can be said that it is overvalued. This means that an unrealistically high value is imposed on the local currency to buy a unit of foreign currency. At this overvalued rate, exporters will only be willing to export goods and services with the foreign currency Q_s because they would receive less local currency for a foreign currency than that at the equilibrium rate R' . On the other hand, imported goods are cheaper at this low rate and importers will need the foreign currency Q_d to buy imported goods. Thus, at this artificially low foreign exchange rate (OER) the economy will have excessive demand for foreign exchange as $Q_d - Q_s$.

To overcome the trade deficit, the government may impose import taxes, which will change the actual demand for imported goods; therefore, the actual demand for foreign currency decreases. In Figure 2.25, the imposed tax shifts the foreign currency demand curve downwards DDt. This shift is enough to restore the artificial

equilibrium in the foreign currency market so that demand on foreign currency is equal to the supply at the official rate. Governments can also subsidize export to expand the supply of available foreign currency or impose foreign exchange controls to limit access to cheap foreign currency supply Qs for prioritized users. Regardless of any solutions used and that they allow achieving an artificial equilibrium at the fixed official rate, the applying country will have an overvalued rate.

Countries with an overvalued rate are deemed to impose a fee on foreign currency or foreign currency premium. To some extent, the foreign exchange premium (FEP) decreases the real amount of local currency which local people will be willing to pay for a unit of foreign currency, or real opportunity cost of the domestic currency to the economy. FEP can be measured by the ratio of total commercial value, including imported goods plus exported goods valued by the domestic price, and then including impacts of taxes and other distortions. This ratio is used to value commercial exchanges at the marginal price less 1 as shown in equation 2.5

$$\text{FEP} = \left[\frac{M(1+t) + X(1-d+s)}{M+X} - 1 \right] \times 100\% \quad (2.5)$$

Where:

- t: tax or tax equivalent of non-tariff barriers imposed on imported goods;
- d: export tax equivalents of restrictions and taxes imposed on exported goods;
- s: equivalents of export subsidies of all incentives to encourage exported goods;
- M: value of imported goods by the marginal cif price;
- X: value of exported goods by the marginal fob price.

Numerator of this ratio measures the total amount of local currency that people are willing to pay for consumption of imported goods, including import taxes and other taxes, plus the amount of money that people really accept for exported goods, excluding export taxes and including export subsidies. Therefore, it measures real value for internationally traded goods consumed and produced by the country. The denominator of the ratio in equation 2.5 represents the actual value of the foreign currency of internationally traded goods measured at marginal price, converted to local currency at the official rate. Therefore, the ratio between the domestic value and marginal price of commercial exchange represents the real value for internationally traded goods, equivalent to the economic value at the official rate. FEP is always

expressed as a percentage %, so the ratio of commercial exchange value is at the domestic price compared to that by the marginal price after deducting 1 and being multiplied by 100. Therefore, FEP shows the increased % which people are willing to pay for a foreign currency higher than the official rate if they can freely buy currency and use it to buy duty-free goods.

When estimating the economic price of internationally traded goods in countries with overvalued rates, it will be incorrect if internationally traded goods (often imposed duties) are merely valued at their marginal prices and then these values are converted into local currency at the artificially low rate. This process makes goods seem unrealistically cheap compared with internationally non-traded goods in the country. The reason is that the domestic price of internationally non-traded goods over time will be adjusted towards the price including taxes of internationally traded goods, which have the same appeal to consumers. To make the choice between the foreign currency value of imported goods valued at the marginal price without taxes and converted into local currency at the official rate, and the value of a foreign currency of internationally non-traded goods produced domestically valued according to local market price, the average consumer will prefer the value of a foreign currency of duty-free imported goods. Therefore, the foreign currency necessary to buy these imported goods is more valuable to domestic consumers than the value calculated at the official rate. In this case, project analysts should adjust distortions in the market for foreign currency and internationally traded goods with a foreign exchange premium.

Most of the projects include a mix of internationally traded and non-traded inputs and outputs. If the adjustment of the foreign exchange premium in the economic assessments is not implemented, projects producing internationally traded outputs will obtain the undervalued net present value compared with projects producing internationally non-traded goods. The reason is that internationally traded outputs will be valued at the marginal fob (or cif) price, and then converted into local currency at the dummy low official rate. On the other hand, projects using imported inputs will have low costs when the marginal price of these outputs is converted at the official rate, and therefore the net present value is overvalued compared with projects using internationally non-traded inputs.

Thus, if a foreign exchange premium exists, it is necessary to consider it in all projects of which inputs and outputs are internationally traded and non-traded goods and services, or when comparing projects producing or using internationally traded and non-traded goods and services. If the project uses both internationally traded and non-traded goods, it is necessary to value them at a comparable price before putting them in the project's cash flow.

For example: assume that there are only two homogeneous products produced and consumed in an economy. Internationally non-traded goods are houses and internationally traded goods are automobiles. Average equilibrium price for both houses and automobiles in the domestic market is 1.000.000.000VND. At this price, consumers are not interested in buying more automobiles than houses because both are equally valued. However, automobiles are subject to 100% of taxes and sold in the international market at only \$US 25.000 or 500.000.000VND (converted at the official rate 20.000VND:\$US 1). Because automobiles are the only internationally traded goods in the economy, in equation 2.5 the foreign exchange premium is:

$$FEP = [(1.000.000.000/500.000.000)-1] \times 100\% = 100\%$$

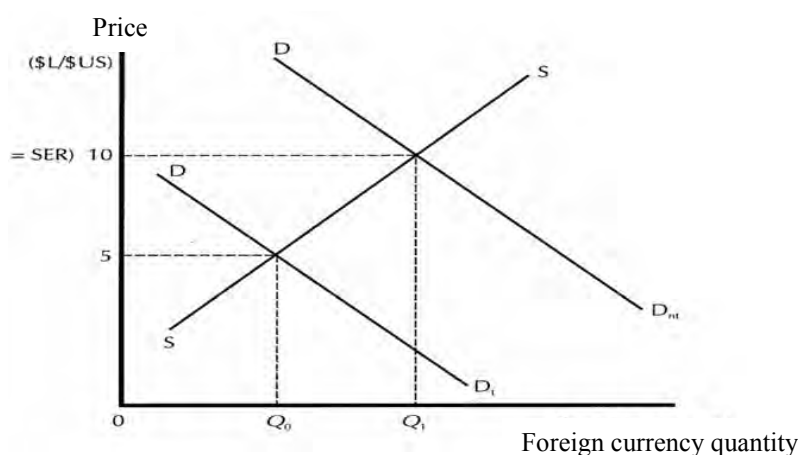
In this economy, there are two projects under consideration: a housing construction project and an automobile production project. In the economic assessment of the automobile plant project, if the currency exchange premium is not considered, automobiles as internationally traded goods will be valued at the marginal price of 500.000.000/unit. On the other hand, the economic analysis of the housing construction project will value houses as internationally non-traded goods at the equilibrium price of 1000.000.000/unit in the free domestic market. If two projects have the same input costs/output unit and the same life, the housing construction project will have a greater net present value. Consequently, housing construction project will be more prioritized to be selected than the automobile production project if one of them is implemented.

However, if taxes on automobiles are lifted and people can buy automobiles at a price of 500.000.000/unit, domestic demand for automobiles will sharply increase. Because there is only one internationally traded good in the economy, at any rate, the demand for foreign currency will increase as seen in Figure 2.26. The foreign currency demand curve DD_t will shift to DD_{nt} , and the duty-free foreign currency demand curve and foreign currency demand curve will expand from Q_0 to Q_1 . As a result, if

the official rate is allowed to float freely, it will devalue the local currency units received to every earned foreign currency. This will encourage producers to export more and earn more foreign currency, until the demand and supply of foreign currency are equal. In Figure 2.26, this occurs at the rate 40.000VND/\$US1. At this undistorted equilibrium rate, the marginal price of automobiles will increase to 1.000.000.000VND and its economic price in reality will be equal to the price of internationally non-traded houses.

Instead, if the project is designed to export automobiles, automobiles can be sold at US\$25.000/piece. If we continue to assume that there is only one internationally traded good in the economy, foreign currency will be used to import more automobiles for people who are willing to pay 1.000.000.000VND. On the other hand, the automobile producing project to sell automobiles in the country shall compete with imported ones also sold at 1.000.000.000/piece. \$US25.000of foreign currency earned from an exported automobile of the project will actually be valued at 1.000.000.000VND for the economy at the domestic market price. Therefore, in an economy with only one internationally traded goods, the real value of \$US1 of foreign currency earned will be 40.000VND rather than 20.000VND. The results from such an example may be used to demonstrate how to calculate the shadow exchange rate (SER) of the economy.

Figure 2.26: Demand and supply of foreign currency in the case of no commercial distortions



6.2. Shadow exchange rate

6.2.1. Definition of shadow exchange rate

Shadow exchange rate (SER) is the rate that reflects real economic value which is valued for foreign currency in the economy. In an economy without trade distortions or a foreign currency market, SER is an equilibrium rate. It is the rate R' in Figure 2.25 which is determined at the intersection of free foreign currency demand and supply curves as assumed. However, if there are distortions in these foreign currency market, the shadow exchange rate is SER as in Figure 2.26. The shadow exchange rate may be used to adjust an overvalued exchange rate in project assessment instead of using the official exchange rate to value all amounts of foreign currencies obtained and used by the project.

To get the shadow exchange rate of a country, we just need to add the percentage % of foreign exchange premium (FEP) to the official exchange rate (OER), or more precisely, multiply the official exchange rate by 1 plus the foreign exchange premium and divided by 100.

$$SER = OER \times (FEP/100 + 1) \quad (2.6)$$

In the example of an economy with two goods of which FER is 100%, shadow exchange rate can be estimated as follows:

$$SER = 20.000\text{VND}/\$US1 \times [100/100 + 1] = 40.000\text{VND}/\$US1$$

Therefore, the shadow exchange rate will be 40.000VND/\$US1, so the value of foreign currency in fact is twice more than the value of the official exchange rate.

From the definition of foreign exchange premium, the shadow exchange rate can be defined as follows:

$SER = OER \times \text{commercial trading value at the domestic price} / \text{commercial trading value at marginal price}$

$$SER = OER \times [M(1 + t) + X(1 - d + s)] / (M + X) \quad (2.7)$$

Where:

- t: tax or tax equivalent of non-tariff barriers imposed on imported goods;
- d: export tax equivalent of restrictions and taxes imposed on exported goods;
- s: export subsidy equivalent of all incentives to encourage exported goods;
- M: value of imported goods at the marginal cif price;
- X: value of exported goods at the marginal fob price.

If a country imports 100 automobiles and tax imposed on them is 100%, then the shadow exchange rate is:

$$SER = 20.000\text{VND}/\$US \times [100 \times \$25.000 \times (1+1)] / (100 \times \$25.000) = 40.000\text{VND}/\$US1$$

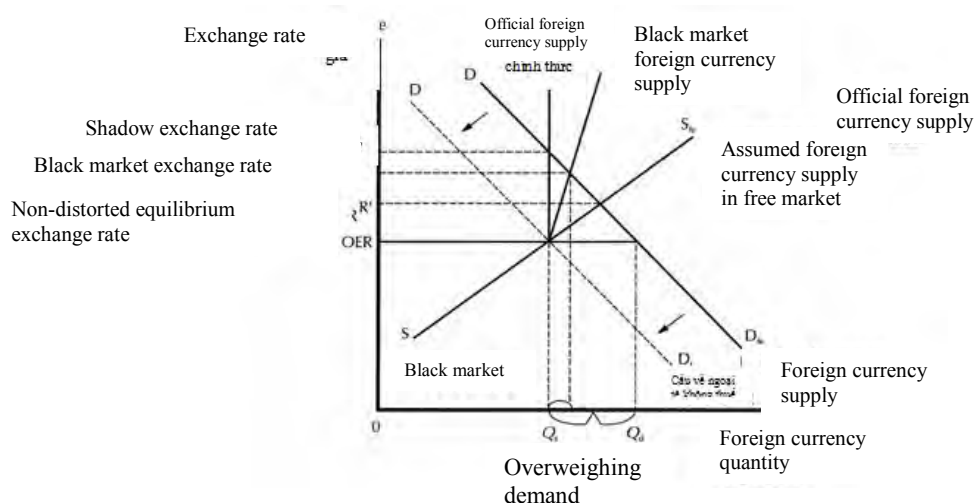
In this SER measurement formula, OER multiplies by the rate of the full amount of money that people are actually willing to pay for internationally traded goods at domestic market price, against the value of these goods at marginal price converted at the official exchange rate. The shadow exchange rate is always higher than the official exchange rate in the form of units of local currency that people will pay for a unit of foreign currency, if the value of the internationally traded goods at domestic prices including export and import taxes is higher than their value at marginal price (on the assumption that export tax is not higher than import tax).

6.2.2. Estimation of shadow exchange rate

Figure 2.27 illustrates that the relationship between shadow exchange rate, official exchange rate and black market rate in a country imposing import taxes.

Because there is only a small rate out of total foreign currency revenues of the country to be exchanged in the black market with risks in illegal transactions, the black market rate is often higher than the non-distorted equilibrium rate R' , but may be lower than the shadow exchange rate if there is control on foreign currency and trade distortions. The smaller the risks in foreign currency transactions in the black market are, the higher the ratio of foreign currency exchanged in the black market will be, and the closer the black market exchange rate will approach the non-distorted equilibrium exchange rate. In this case, the slope of the foreign currency curve of the black market will converge on the slope of the assumed foreign currency supply curve of the free market.

Figure 2.27: Shadow exchange rate and black market exchange rate



Accurate estimation of the shadow exchange rate value requires a computable general equilibrium model (CGE) for the country being considered. This method consumes a considerable amount of time and data and is not accepted by all countries. Analysts can use several partial equilibrium methods in these cases. All of these methods measure costs or benefits to the economy of an additional unit of foreign exchange spent or earned from the project. The formula for calculating SER is also the one that is most used in experiential studies.

6.2.3. Formula of shadow exchange rate

6.2.3.1. Formula of shadow exchange rate of UNIDO

The formula for calculating shadow exchange rate developed by Sen, Dasgupta and Marglin in the Project Assessment Manual (UNIDO, 1972) measures increased benefits from one additional unit of foreign currency generated in the economy at domestic price.

The formula for calculating shadow exchange rate UNIDO is the weighted average of ratios of domestic price to marginal prices (cif or fob) of all goods exchanged by the country whose weights reflect how the next foreign currency will be spent.

$$SER = \sum f_a [P_{ad}/P_{acif}] + \sum x_b [P_{bd}/P_{bfob}] \times OER \quad (2.8)$$

Where:

- f_a : increase in each n of imported goods of the country due to additional local currency in foreign currency availability.
- x_b : decrease in each h of exported national goods of the country responding to additional local currency in foreign currency availability.
- P_{ad} and P_{bd} : domestic market price of a importable goods and b exportable goods respectively.
- P_{acif} : cif price of a exported goods measured in local currency at the official exchange rate.
- P_{bfob} : fob price of b exported goods measured in local currency at the official exchange rate.

P_{ad} is different from P_{acif} due to export taxes and non-tariff barriers, and P_{bd} is different from P_{bfob} due to export taxes, export subsidies and export bans.

The problem with this method is that it does not provide any guidance for estimating the experimental shadow exchange rate because it does not indicate how

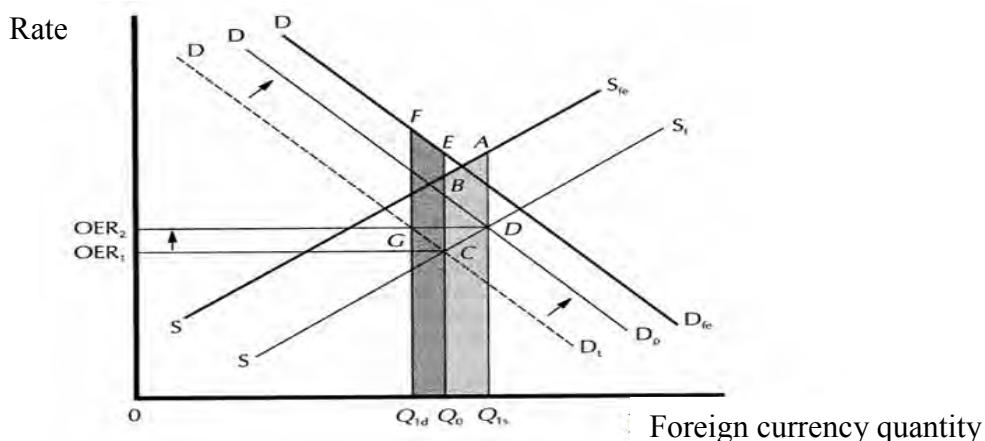
the ratio of f_a to x_b is calculated. It can be assumed that the marginal spending model for internationally traded goods will reflect current the average exchange model, and in fact this method is always applied to estimate the shadow exchange rate of a country. The current exchange model is used to measure ratios of domestic price (including taxes) to marginal price of all exported and imported goods.

There is a significant tolerance in the estimation of shadow exchange rate based on the above formula. This margin of error is due to gross tariff equivalents of all complex non-tariff barriers imposed by the countries on imported goods. If data is available, the price comparison method will be used to fix the problem. The price comparison method requires the use of the observable domestic market price of internationally traded goods in the numerator of the price ratio instead of finding such numerator from the marginal price of internationally traded goods and the import tariff of the country. Marginal price of internationally traded goods of the country used in the denominator can be found from the international trade data.

6.2.3.2. Shadow exchange rate formula HSF of Harberger, Schydrowski, Fontaine

Figure 2.28 illustrates a foreign currency market with tax and import restrictions which has shifted the foreign currency demand from DD_{fe} to DD_t . Export subsidies and taxes help push the domestic supply for foreign currency from SS_{fe} to SS_t . Depending on the project, the Government predicts the increase in demand for foreign currency, shifting the demand curve from DD_t to DD_p .

Figure 2.28: Determination of shadow exchange rate



If the Government does not fix the exchange rate, the rate can be reduced from OER_1 to OER_2 due to the increased demand for foreign currency. The reduced rate

may encourage an increase in exported goods, thus increasing the supply for foreign currency from Q_0 to Q_{1s} , and reducing imports, as a result increasing the demand for foreign currency from Q_0 to Q_{1d} . The economic cost required for this increased foreign currency would be the area $Q_0Q_{1s}AB$, including export subsidies $CDAB$. Benefit loss of consumers who are forced to reduce the consumption of imported goods because of the reduced rate would be the amount that they are willing to pay for imported goods as $Q_{1d}Q_0EF$, including taxable incomes $GCEF$. Therefore, the total economic cost of foreign currency needed for the project will be the total resources used to obtain increased foreign currency and the amount that replaced consumers are willing to pay for the imported goods with the rate now used by the project, respectively as $Q_0Q_{1s}AB$ and $Q_{1d}Q_0EF$.

The economic cost required for the increased foreign currency is expressed in the formula Harberger with weights on official exchange rate (OER). To some extent, it reflects the foreign currency demand unit of the Government that increases the supply for exports and reduces imports. Therefore, shadow rate formula HSF is as follows:

$$SER = \frac{\left[\epsilon_x (1 + s - d) - \sigma_M (1 + t) \left(\frac{X_i}{M_j} \right) \right]}{\epsilon_x - \sigma_M \left(\frac{X_i}{M_j} \right)} \times OER \quad (2.9)$$

Where:

- OER: official rate;
- X_i : i^{th} exported goods consumed in n exported goods (total exports);
- M_j : j^{th} imported goods consumed in m imported goods (total imports);
- ϵ_x : elasticity of supply of foreign currency of the private sector to exchange rate changes;
- σ_M : elasticity of foreign currency demand of the private sector to exchange rate changes;
- t : import tax for the same - type goods price applied on imported goods of private sector;
- s : the same - type export subsidies for exported goods of private sector;
- d : the same - type export tax for exported goods of private sector;

To estimate the shadow price with this formula, information on the supply and demand elasticity for all internationally traded goods should be highly separate from each other, as well as tax equivalents of non-tariff barriers and export taxes and subsidies for internationally traded goods. Very large demand for data is a major problem with the shadow exchange rate HSF. Therefore, the estimation of shadow exchange rate can be simplified; assuming $\epsilon_x = -\sigma_M$, then the formula 2.9 would be:

$$\text{SER}' = \frac{[M(1-d) + X(1+t)]}{(M+X)} \times \text{OER} \quad (2.10)$$

6.3. Incorporating currency exchange fee in valuing internationally traded goods

There are two main methods to adjust the fee imposed on foreign currency when valuing internationally traded and non-traded goods in the project. First is the method recommended in the Project Assessment Manual (UNIDO, 1972) and the second is developed by Little and Mirrlees in the book titled Project Preparation and Assessment for Developing Countries (1974) and later completed by Squire and vander Tak (1975).

6.3.1. Domestic price method (UNIDO)

The traditional method applied in CBA to calculate the foreign exchange premium used in UNIDO's Manual is to assess all internationally traded and non-traded goods and services at the equivalent domestic price. Domestic price is used as a common measure to assess all inputs and outputs of the project, and therefore it is called the domestic price (DP) Method.

First, internationally traded inputs and outputs of the project are valued at their fob and cif prices. Then, they are converted from foreign currency into local currency using the shadow exchange rate (SER), not official exchange rate (OER). This result will better reflect the real economic value of the foreign currency in the economy.

In case of overvalued local currency and a positive foreign exchange premium, the ratio between shadow exchange rate and official exchange rate will be greater than 1. Using the shadow exchange rate to convert the marginal price of internationally traded goods into the domestic price will decrease the marginal price until it is equal to the amount that people are willing to pay for or receive internationally traded goods. Then, the reduced price of internationally traded goods will reflect the real value imposed on internationally traded goods versus internationally non-traded goods. This is because the internationally traded goods are now valued at the equivalent domestic

price and can be directly compared with internationally non-traded inputs and outputs of the project which are valued at the domestic price.

When using this domestic price method, the internationally non-traded inputs and outputs of the project are simply priced at their domestic prices. First, it is necessary to adjust the price of internationally non-traded goods to ensure that it reflects real marginal social costs and benefits of the consumption and production of the goods. The adjustment includes consumer surplus (not producer surplus), less transfers. There are no additional adjustments to the price of internationally traded goods to reflect their overvaluation related to internationally traded goods as a foreign exchange premium, because it would lead to duplicate calculation. Then, both internationally traded and non-traded goods will be valued at the comparable price and equivalent domestic price, therefore they will be put together into the project's cash flow.

Therefore, the domestic price method adjusts the foreign exchange premium by reducing the marginal value of internationally traded goods, using the shadow exchange rate of the economy, until the values accurately reflect the relative value of goods compared with the domestic price of internationally non-traded goods.

In summary, the domestic price method is outlined as follows:

Internationally traded goods	Internationally non-traded goods
Marginal price x SER	Domestic price
→ Equivalent domestic price	
Common measure: Domestic price	

6.3.2. Marginal price method (Little and Mirrlees)

Another method developed by Little and Mirrlees (1974) is called marginal price (BP). This approach values internationally traded goods at their marginal price in the same way as the above domestic price valuing method. However, this marginal price is then converted to domestic currency at the official rate, instead of shadow rate. Internationally traded inputs and outputs of the project are maintained at marginal price. However, if there are fees for foreign currency conversion in the country under consideration, the price of internationally non-traded goods will increase to match the price of internationally traded goods including taxes. Therefore, the price of internationally non-traded goods will exaggerate the real value of goods for consumers,

proportional to the marginal price of internationally traded goods. Therefore, the marginal price method increases the value of internationally non-traded goods according to the equivalent marginal price using specific conversion factors. These factors are the ratio of the equivalent marginal price of each internationally non-traded good and its domestic price. Multiplying the marginal price of internationally non-traded goods by the conversion factor shall convert the domestic price of goods into the equivalent marginal price. Then, both internationally traded and non-traded goods are valued by the same measure, i.e. marginal price, so they can be put into the project's cash flow. This is the reason why this method is called the marginal price method.

The marginal price method enables accurate comparisons of internationally traded and non-traded goods. This is the reverse of the domestic price method.

In summary, the marginal price method is outlined as follows:

Internationally traded goods	Internationally non-traded goods
Marginal price x OER	Domestic price i x Cfi
	→ Equivalent marginal price
Common measure: marginal price	

Cfi = conversion factor of goods i = equivalent marginal price i / domestic price i

6.3.3. Pros and cons of the two methods

According to two surveys of CBA practice in 1989 (Squire) and 1991 (Little), the marginal price method is more popular than the domestic price method. This is because the marginal price method is accepted by international lending institutions such as the World Bank and some regional development banks like the Asian Development Bank and the Central American Bank for Economic Integration. The marginal price method is easier for analyzing projects using internationally traded goods as main inputs and outputs, such as export-oriented industries. Internationally traded goods can be completely valued at marginal price and converted to domestic currency at the official rate. The advantage of the marginal price method is that it allows more accurate estimation of economic values of the project using conversion factors for internationally non-traded goods. These economic values show the exact impact of the project on benefits based on the marginal price. Because the marginal price method uses multiple separate conversion factors and requires little data to estimate each conversion, occurrence and consequences of big mistakes are very low.

On the other hand, for projects primarily using inputs and producing outputs which are internationally non-traded, such as domestic projects for social services and infrastructure, the domestic price method is preferred and easier to apply. In this case, internationally non-traded goods can be valued at the domestic price and adjusted for distortions. Domestic price method provides less accurate measures of impacts of the project on economic benefits as the project uses and produces internationally traded goods. This is because this method uses only one parameter, shadow exchange rate (SER), to reassess the value of internationally traded goods at the domestic price value. Shadow exchange rate is the average value measure which is valued for foreign currency; therefore, there are some reasonable theoretical reasons to use it to reassess internationally traded goods at the domestic price. However, there are problems in estimating the shadow exchange rate of a country. Because this parameter focuses heavily on domestic price method, it is easy to make big mistakes in the evaluation of the project if analysts make mistakes in calculating shadow exchange rate. However, if shadow exchange rate is calculated reliably, this method is easily implemented, especially if the project has multiple internationally non-traded inputs and outputs.

In summary, because of difficulties in gathering accurate data on the ratio between the domestic price and marginal price for all internationally traded goods in an economy, experienced calculations of shadow exchange rate may be inaccurate and unsatisfactory. Furthermore, using shadow exchange rate in project evaluation can be politically unacceptable for a country when that country is said to admit foreign currency regulation and suboptimal trading policies. For these reasons, World Bank and many international organizations prefer to use marginal price method to adjust fees for foreign currency conversion in economic analysis. However, both methods are widely used and analysts may change the method based on the nature of the project evaluated.

7. Ability to compare data of internationally traded goods

7.1. Equivalent position

The important thing is that input and output prices used in the project's cash flow reflect the appropriate position of the goods being valued. The project's outputs and inputs should be preferably priced at the project's door-to-door price. Therefore, the project's outputs are priced in the market where they are sold, or at the border

where they are exported at a lower cost of shipping and packaging from the project to the market and before including tax and retail limits.

The cost of shipping and packaging is called the transfer fee. They are internationally non-traded services and valued at shadow price to eliminate impacts of taxes, monopoly profits, price controls and other distortions. It is necessary to estimate the cost of the available domestic lowest transfer fee.

7.2. Equivalent quality

The quality of imported goods is often different from that of domestically produced alternatives. If the goods are exported, the fob marginal price will be used as the marginal economic value. However, it may not be feasible to use only marginal cif price for price calculation of import alternatives. If the goods themselves are not exported and cannot be exported because of lower quality, they are considered internationally non-traded goods. Therefore, they can be valued at the latest shadow marginal cif price of import alternatives which are discounted at the ratio of domestic price of project outputs and domestic price of import alternatives. This procedure will make it possible to determine the economic value reflecting the world price of alternatives and relative value imposed by domestic consumers on domestically produced goods and import alternatives.

Economic price = fob price of import alternatives x domestic price of goods
i/domestic price of import alternatives

If analysts use the data of import prices which are classified to four industrial categories at international standards, some goods with different quality can be combined into one type. Therefore, it is necessary to ensure that data of the marginal price associated with the same type or quality of the goods is being considered in the project.

7.3. Data source of internationally traded goods

If the goods are actually bought or sold in the international market, the price information can be obtained directly from the seller or buyer. If the goods are produced or sold locally without the exact international equivalent, the best solution is to use the adjustment as described above to adjust the difference in quality. The basic method is to use the cheapest price at the time inputs are bought and the output price is

estimated in the most conservative manner. The data of internationally traded goods can also be obtained from international organizations such as the World Bank, foreign agencies and governments, trade organizations, magazines, and consultants. Generally, available data on goods is more essential than data on producers because producers are diversified. The project's analysts can order more extensive studies on assumptions as the basis of estimation of main input and output prices.

Chapter 3:

VALUING TYPICAL FACTORS

I. VALUING LAND, LABOR, NATURAL RESOURCES

1. Valuing land

Land value should be determined according to its opportunity costs, i.e. the value it can create in the best use plan. If there is a completely free land market, the market price of land or the present value of future land income is its opportunity cost. If a public project uses State-owned land and there is no obvious market price or land rent, it is necessary to calculate the shadow land price (the equivalent private land is used where possible).

Undeveloped land, like unskilled labor, is a primitive unexchanged element with a fixed supply. In few cases, the amount of land can be extended, for example when swamps are drained and land from the sea is reclaimed. In general, the economic costs of land used in the project are determined by the demand price that replaced users are willing to pay for it.

If there is a free land market, the market price of land will reflect the demand price that people are willing to pay, thus it will reflect the benefits they get from using it. However, if there are distortions in the land market, capital, foreign exchange rate or goods, it is necessary to adjust the market price of land to determine economic costs. For example, if land users replaced by the project are producing tax-protected goods, their ability to pay for the land can be exaggerated by such distortion. Moreover, if there is a premium imposed on the foreign exchange rate in this country, this premium should be taken into account. Economic cost valuation of land is conducted using the marginal and domestic price methods.

1.1. Valuing economic costs of land using the marginal price method

If there is a free land market near the project location, the market price of such land should be converted into the equivalent marginal price before being put into the economic cash flow of the project. The conversion factor for land used is equal to the ratio between the marginal market price and domestic market price of the outputs generated by the land. If the land required by the project can produce different kinds of cereals, the regional conversion factor for agricultural outputs will be used to convert land value into marginal price. Similarly, if the land can be used for multiple industrial projects, the regional conversion factor will be used for produced items, or

the standard conversion factor may be used to convert the land value into marginal price.

Without a free land market in the area surrounding the project or similar locations in the country, it is necessary to directly estimate the opportunity cost of land. The opportunity cost of land is the value of net output which can be produced in its best next use plan. If agricultural land is used, the economic cost will be the total of discounted agricultural output value lost during the project life. The cost of other inputs is valued by marginal price.

$$\text{Economic cost of land} = \sum \frac{(X_{tb} - N_{tb})}{(1 + r)^n}$$

Where:

X_{tb}: value of cereals produced on the land in year t by marginal price.

N_{tb}: value of non-land outputs used to create these cereals in year t at marginal price.

r: discount rate and n: number of years for which the project uses the land

For example, an industrial project needs 20 hectares of land, but without the project, such area will be used to grow cotton. There is no free market for the land, therefore no market price. The land is owned by local residents, or the State. Currently it produces 0.5 tons of cotton per ha, at the market price of \$800 per ton. Tax imposed on imported cotton is 25%, so marginal price is \$640 per ton, and the marginal conversion cost is 0.8. Non-land inputs to produce cotton include seed, fertilizer, labor and transportation with an equivalent marginal price of \$600 per ton. If using a discount rate of 10% for 20 years in the project life, the economic cost of land recovery from cotton production for the project is:

$$\sum \frac{(640 - 600) \times 0.5 \times 20}{(1 + 0.1)^n} = \sum \frac{400}{1.1^{20}} = \$3,805$$

A simple method used to value non-agricultural land is that if the land is currently used for industrial production, its value will be forgone industrial productivity each year minus the annual cost of all other inputs (excluding land), valued at marginal price, discounted and totaled in the project life.

The supply of renovated land such as clean and useful agricultural land can be extended. The land cost is estimated at the value of raw land (unrenovated) and valued

by the above method, plus the equivalent marginal price of inputs used for land renovation. The inputs include land treatment equipment, fertilizer and labor. If the replaced users are the people, the free market price of residential land will be the best measure of benefits forgone by the project. This price will be the same as the equivalent marginal price by multiplying the market price by the conversion factor for residential land development, based on an assumption that replaced users would move to new developed residential land.

When the conversion factor for the renovated or unrenovated land in a specific location has been already calculated, analysts can use it for project evaluation in similar locations.

1.2. Valuing economic costs of land using domestic price method

The economic cost of 20 hectares of land for cotton production can also be measured by the adjusted domestic price if this method is used to incorporate the foreign exchange premium. If the foreign exchange premium is 20% in the economy, the marginal price of cotton of \$640 per ton will be converted into the equivalent domestic price using a shadow exchange rate 1.2 times that of the official exchange rate. Cotton value at the equivalent domestic price will be \$768 per ton. Marginal price of internationally traded inputs for cotton production such as seed and fertilizer is \$200 per ton, so the equivalent domestic price will be \$240 per ton. Domestic price of internationally non-traded non-land inputs, including labor and transportation is \$480. Marginal social benefits of the land to the project for 20 years would be:

$$\Sigma \frac{(768-720) \times 0.5 \times 20}{(1 + 0.1)^{20}} = \Sigma \frac{480}{1.1^{20}} = \$4,567$$

2. Valuing labor

2.1. Valuing labor based on ignored outputs

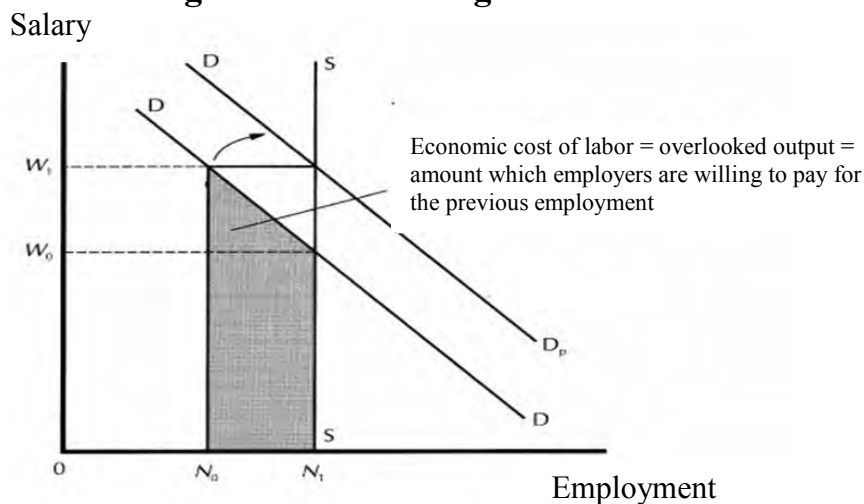
Generally, due to a stable supply of untrained labor, once a project needs a labor force, it shall attract labor from other sectors in the economy. This force obviously comes from other sectors, such as agriculture. If this unexchanged element is removed from other users, its economic cost is the cost that they are willing to pay for labor.

As in Figure 3.1, when the highway project increases labor demand in the region, from DD to DDp, laborers are attracted to from local agricultural sectors. The

economic cost of this force is the amount of money that the replaced employers in the agricultural sector are willing to pay for such labor. That is the area beneath the labor demand curve DD.

Demand price for the labor last hired by the employer will represent his/her contribution to the total income of the employer, or marginal income product of the labor. No employer in the private sector pays their laborers a higher wage than the laborer's contribution to the increased output income in the long term.

Figure 3.1: Valuating untrained labor



If the labor market is efficient and without State intervention in the form of a minimum wage, fixed wage, employment restrictions or income tax, the laborers' wage paid by the market will reflect their marginal contributions to the employer's total income. Therefore, the laborers' market wage in the previous employment reflects ignored output value. In such cases, the market wage can be directly used to determine the economic price of the labor. For example, in many developing countries, the market price for trained labor is at least equal to the marginal income product of the labor. Also, if there is a free and dynamic rural labor market, the rural wage may reflect the opportunity cost of the labor in rural areas.

However, in most countries, the labor market is somewhat under some control with certain distortions. In this case, it is necessary to determine real cost of the labor input required by the project to the economy by calculating shadow wage rate (SWR), or marginal social cost of this labor. Output is ignored in the rest of the economy because the employment for the project represents the main element of this economic price. Without the free market influence on labor force or labor with the same skills in

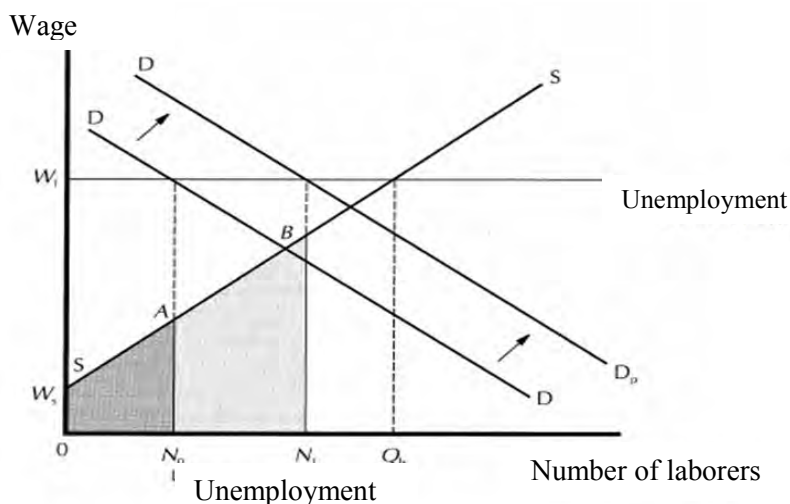
the same locality, it is necessary to directly calculate the economic value of this ignored output.

It should be noted that the ignored output is not the laborers' marginal contribution to income of the project when estimating the laborers' shadow wage rate used. Thus, the laborers' economic price is their marginal contribution to income earned in industries from which the labor is removed. If the labor for the project comes from some sources, the ignored output will be equal to the weighted average of the marginal income product of the labor in sectors from which the labor is removed. An example of how to calculate the ignored output of labor is shown in Figure 3.1.

2.2. Distortions in labor market and other markets, and market wage

- *Distortions in the labor market:* Distortions in unskilled and semi-skilled labor markets can lead to the laborers' wage being higher than their marginal income product valued at the economic price. The distortions in the labor market include specified minimum wage, fixed wage, restricted union activities, and compulsory trade union participation. These distortions are common in the urban labor markets because State control and trade union activities are stronger in urban areas.

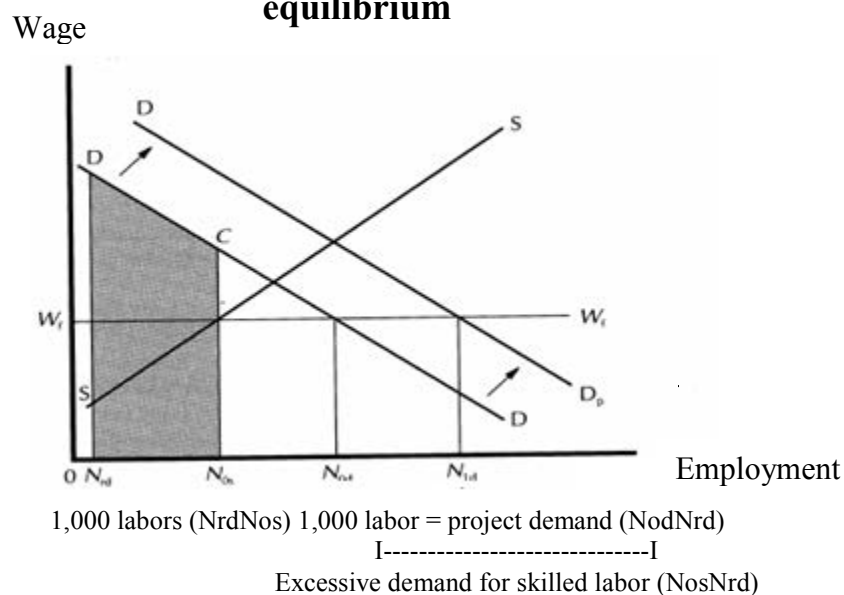
Figure 3.2: Economic price of the labor with specified minimum wage



As described in Figure 3.2, if a project shifts the labor demand from DD to DDp, the labor supply will steadily expand without an increase in the fixed wage rate for unskilled labor, but just with a sudden drop in unemployment rate. Thus, the economic cost of this labor will be the supply price of the labor, i.e. the wage that the laborer is willing to receive in exchange for work. That is the area NoN1BA under labor supply curve SS.

In the previous centralized planning economy, there were significant distortions in the skilled labor market. The wage rate for this labor was often fixed below the equilibrium and the skilled labor was often recruited by the companies. This prevented the free movement of laborers to employers who were willing to pay higher. This made the market wage rate for some skilled laborers account for only a small amount of their marginal income product. Economic analysis of projects using skilled labors in this country should take this into consideration. This case is illustrated in Figure 3.3; if a software company needs 1,000 skilled computer scientists and this workforce is short-term because the wage payment method is lower than the equilibrium market wage, they have to be taken from other employers. The economic cost of these computer scientists will be the amount of money that the previous employer would have paid to them in the case of there being no State wage control. That is the area $NrdNosCD$ under the labor demand curve. The wage paid by private companies will provide evidence related to the shape of the skilled labor demand curve.

Figure 3.3: Measuring economic costs of skilled laborers paid below the equilibrium



- *Distortions in the goods market and other factors*: Distortions in the goods market and other factors also lead to the diversion of the labor market wage used in the project to the real cost for labor to the economy. Keeping the interest rate below the equilibrium by the State may lead to selecting technologies which exceed the usage of capital. This may increase the labor's marginal product in the prioritized areas above the standard level of the economy. In addition, imposing a tax on savings

and investments can lead to biased investment projects in the economy, which could increase the economic cost of hiring labor. Commercial distortions such as tariff protection will inflate the market price of protected goods and provide opportunities to laborers in protected industries to receive a wage higher than the marginal income product valued under the marginal price.

With such a labor market and goods distortions, the market wage that the project must pay may be higher than real economic cost of hiring labor for the project, i.e. the shadow wage rate of the labor. As mentioned above, in some cases, direct calculations of the market value of ignored outputs due to hiring labor for the project might be used. However, normally this method is time consuming and not always accepted unless there is no parallel free market. Analysts can make other adjustments to ensure that the calculated shadow wage rate reflects the real cost of hiring labor for the economy

2.3. Unprotected labor market

Usually, parallel with an urban labor market, there is an unprotected labor market, i.e. no trade unions, no minimum wage, and no fixed wage. If this is the case, the method to directly calculate ignored outputs is to use common wage rates in unprotected areas as a measure of the opportunity cost of hiring labor for the project.

2.4. Rural labor markets and family farm labor

In some cases, the labor force for the project might be taken from family farms; the family members receive an average income, rather than a marginal income product. This is because the total income of the farm is divided up to all family members equally, rather than distinctively to each member with his/her marginal contribution to the farm income. Therefore, the project should pay a higher wage than the ignored marginal product for these unskilled laborers to encourage them to leave the farm. However, provided that farms also hire some unskilled labor, the wages of unskilled laborers employed will be a reasonable guideline on marginal income products of a farmer as a family member, because employed laborers will not be employed unless their wage is at least equal to the their marginal income products. Their wages will be almost equal to or slightly lower than the marginal income product of the family member last employed.

In the case of there being no unskilled laborers employed to work in family farms from the labor force for the project, it can be called "disguised unemployment",

i.e. it is possible to take a family member from the farm to work for the project without reducing the total farm output, because other farm members will only increase their contribution for a higher average income. To a certain extent, this happens due to the non-full-employment of efforts by the remaining family members during the working time. In such cases, the marginal social cost of the ignored output will lie between the marginal product of the member leaving and 0.

2.6. Direct valuation method of ignored output of labor by economic price

Without the unprotected labor market freely operating in rural or urban areas where the project is conducted, it is necessary to directly estimate the ignored output value of the labor taken for the project. For example, the project is supposed to be located in the rural area of a Northern mountainous province, without a free rural labor market, and the project will take unskilled laborers from ricecultivation. In this case, it is necessary to determine the market price of rice production lost annually as the project employs these unskilled laborers to determine the cost for hiring each laborer to the economy per year.

The findings show a farmer might produce an average of 3 tons of rice per year sold at \$200 per ton in the local market. Other input costs of agricultural products are land worth \$40 per ton, and internationally traded goods (equipment, seeds and fertilizers) with a value of \$30 per ton. Net income of each farmer is his/her working input value, i.e. the output to be lost if the project employs him/her. The ignored value of the labor inputs at the market price: Market value of the labor per ton of rice - cost of non-labor inputs = $200 - 70 = \$130$ per ton. The market value of the ignored output of the farmer per year = $\$130 \times 3 = \390 .

Then, it is necessary to value ignored outputs at their economic cost. If analysts use the marginal price method, the ignored outputs are revalued at the marginal price. If analysts use the domestic price method, the ignored outputs will be valued at adjusted domestic price.

- *Marginal price method*: In the above example, if the import tax rate on rice is 33%, the actual marginal price will be \$150. If the import tax rate on inputs such as equipment, seed and fertilizer is 100%, the marginal price of such inputs will be \$15. The conversion factor of marginal price for land was formerly estimated at 0.875, so the value of land for rice at the marginal price is \$35 per ton. The equivalent marginal

price of each annually ignored output of rice farmers: $(150 - 15 - 35) \times 3 \text{ tons} = \300 per year.

Net economic value at the marginal price of ignored rice outputs because of hiring labor for the project will be \$300 per year. This value is used to value the labor input for the project in cases where there are no adjustments. The conversion factor of marginal price for ignored labor outputs is called μ , or $300/390 = 0.77$ in this case. This factor can be reused in the assessment of other projects hiring this type of labor.

If the labor of the project was previously employed to produce a mix of outputs, the appropriate conversion factor of marginal price for the ignored output μ can be calculated by estimating the weighted average of conversion factors of the goods the labor would have produced if the project had not employed them. The weights used will be equal to the rate at which each good is represented in the entire ignored output of the labor.

If the wage in an unprotected urban labor market is used to measure the marginal social cost of skilled labor and semi-skilled labor in an urban project, it is impossible to determine the nature of ignored outputs using labor. Although it may be reasonable to assume that the market wage is a good measure of market value of the ignored outputs, it may be unfeasible to determine the appropriate conversion factor to assess goods at the economic price. In this case, it is necessary to use the standard conversion factor (= Official exchange rate/shadow exchange rate) to reassess output at the equivalent marginal price.

- *Domestic price method*: If the farmer's work must be valued at domestic price, the method used should be domestic price method. Studies have shown that if the foreign exchange premium in the economy is 20%, the shadow exchange rate is 1.2 times higher than the official exchange rate. Therefore, the equivalent domestic price of rice will be its marginal price (for example, \$150 per ton) converted into local currency at the shadow exchange rate ($\$150 \times 1.2 = \180 per ton). The initial inputs of goods will be valued at their marginal price (excluding tax) of \$30 per ton and then converted into equivalent local price using the shadow exchange rate ($\$30 \times 1.2 = \36 per ton). Land, a kind of internationally non-traded good, is valued only at its domestic price of \$40 per ton. The annually ignored output value of each farmer will be: $\$(180 - 36 - 40) \times 3 \text{ tons} = \$ 312$ per year.

1.6. Impact on immigration

In some cases, the creation of jobs by the project may cause output in other areas of the economy to fall below the laborers' contribution to the project. For example, providing a new urban job may motivate a rural laborer to go to the city. This is more probable in the case of the non-equilibrium labor market as the protected urban wage is higher than the equilibrium wage. Also, in many cases, family members of a male laborer may go with him. There are fewer opportunities for wives and older children who were previously engaged in agriculture, handicrafts or industry to find jobs. If these additional migration impacts are common, it is necessary to take them into consideration in the economic assessment on labor costs of the project.

2.7. Formula of shadow wage SVT

The real economic cost of the employment will include all the elements discussed above: ignored outputs, net social income of the increased consumption, and social costs of partial devotion and additional costs.

Both marginal and domestic price methods include these elements in its shadow wage formula. The only difference is the numbers used in these two methods. The shadow wage formula generalized in formula 3.2 is developed and used with the marginal price method by Squire and van der Tak, so the economic cost of the labor is measured by equivalent marginal price.

Assuming that all of the income increase of the labor is higher than the ignored marginal product consumed, the shadow wage would be:

$$SWR = \mu l + (\omega - 1)(b - d/v) + (\omega - 1) \phi \lambda \times d/v \quad (3.1)$$

Where:

+ μl is the ignored income of the labor by the economic price, i.e. efficient cost of the labor; μ is the conversion factor of ignored outputs into marginal price.

+ $(\omega - 1)(b - d/v)$ is net social cost of the consumption increase. This cost is equal to the increased consumption cost by ignored value $(\omega - 1) b$, where b is the appropriate consumption conversion factor, minus social benefits of the increased consumption, equivalent to the increased investment value $(\omega - 1)d/v$. d is the social value assigned to the consumption increase by the employed labor and v is the social value assigned to the investment increase.

+ $(\omega - 1) \phi \lambda \times d/v$ is the social cost of the reduced idle time and increased additional cost.

Loosening assumptions that all additional income is consumed, just the fraction c is consumed, and the shadow wage formula becomes:

$$SWR = \mu l + c(\omega - 1)(b - d/v) + c(\omega - 1) \phi \lambda \times d/v \quad (3.2)$$

2.8. Simplifying hypothesis

Typically, analysts of the project will not have enough time or resources to accurately measure all the elements of the economic cost of each laborer. Especially, if the laborer accounts for a relatively small part of the total cost, assumptions should be simplified. However, analysts need to consider each specific case to determine whether the approximation is close enough to the actual situation of the country, provided that analysts are not too biased when applying this method. The assumption simplification commonly accepted in these cases is:

- Wages received by laborers from the project is equal to the ignored marginal product, i.e. $\omega = 1$ or

- Increased consumption social cost is offset by the benefits, i.e. $b = d/v$, or

- Income distribution is optimal and social values of consumption and investment are equal when both are valued by the equivalent marginal price, i.e. $d = 1$ and $b = l/v$, and

- $\phi \lambda = 0$, State and individual valuation on the increased effort is 0, then the economic cost is μl , ignored output by economic price and efficient shadow wage. In fact, the ignored output μl is often used in simple economic analysis to measure the shadow wage.

If the State values 0 on the increased personal consumption and only pursues high economic growth, which means that if v tends to be unspecified (infinite), the economic cost of the labor will be equal to the economic cost of the ignored output of the laborer plus total marginal estimate of increased consumption formed by the income from the project which pays higher, or in other terms:

$$SWR = \mu l + (\omega - 1)b \quad (3.3)$$

If the State values economic growth, the economic cost of the labor may be higher than that of the ignored output due to the use of the labor for the project. This may result in more options of technologies which need more investment capital. In this case, the social value of increased consumption generated by hiring many laborers will be valued at 0.

If the State and individual valuation on increased efforts in public and private sectors is 0, i.e. $\phi\lambda = 0$, the economic cost of the labor will be equal to the economic cost of ignored output plus net social cost of increased consumption:

$$SWR = \mu l + (\omega - 1)(b - d/v) \quad (3.4)$$

3. Valuing natural resources

If the resources used in the project are internationally traded, they will be valued by marginal FOB or CIF price, depending on whether they have an impact on exports or imports. For example, the coal imported for the steel plant is valued at marginal CIF price, while bauxite exported by a mining project is valued at marginal FOB price. Any tariffs, export subsidies or other taxes should be deducted to obtain cost or economic interests of the input or output resources. If the State applies the foreign exchange premium, the input cost of these resources will be converted into local currency at the official exchange rate or shadow exchange rate, depending on whether the marginal or domestic price method is used.

If the project uses internationally non-traded input resources of which supply is expandable, these inputs are valued at the supply price, i.e. marginal production cost. The supply price of the resources is equal to the economic value of the resources used to produce it. All taxes on inputs should be deducted and all subsidies should be added to get the actual cost of the input provision. Also, any producer surplus obtained by the input resource suppliers must be deducted. If the State imposes a foreign exchange premium and the marginal price method is used to adjust this premium, the internationally non-traded inputs are split into internationally traded and non-traded components to determine its economic cost at the equivalent marginal price. If the domestic price method is applied, the domestic market price of the resources is directly introduced into the economic cash flow.

If the project uses internationally non-traded resources with relatively fixed supply, the resources will be valued at the demand price. If the resources required by the project have a short term supply, they can obtain scarce benefits. The market price will best reflect such profits if there is a free resource market. If the foreign exchange premium and marginal price method are used to adjust this premium, the appropriate conversion factor to convert the value of resources into marginal price is a conversion factor of supply price. This factor is the weighted average of the conversion factor of

the resources into the factor which replaced producers will convert if the project takes advantage of some of the resources in the fixed supply. If the domestic price method is used, the domestic market price of the resources can be introduced directly into the economic cash flow of the project.

If the resources are exhaustible ones, such as petroleum or minerals, the market price may not fully reflect their long-term scarce return. In this case, analysts can add the scarcity cost to the shadow input price.

If there is no market for resources with a relatively fixed supply, it is necessary to estimate the opportunity cost of the resources by the same method of estimating the value of land in cases where there is no free market. The economic cost of the resources will be equal to the economic value of the best alternative produced using natural resources, minus the economic cost of all other outputs.

For example, a road construction project needs a large amount of gravel with a stable supply subjected to price controls. If the gravel is not used for road construction, it can be used for a hydroelectric dam project in the same area. The economic cost of gravel will be equal to the current economic value of the sale of electricity from the hydroelectric dam project minus the current economic value of all other inputs used in the hydroelectric dam project, including capital, labor and land.

After estimating the economic price of internationally non-traded resources, the conversion factor is calculated as follows:

$$CF_{nt} = \frac{\text{Economic price of the resources}}{\text{Market price of the resources}}$$

This conversion factor may be used in evaluating future projects that use resources.

II. VALUING PUBLIC GOODS, INTERMEDIATE GOODS AND SOCIAL SERVICES

1. Valuing public goods

Some projects and programs generate outputs as pure public goods. Public goods are goods neither exclude nor compete with consumables, and sometimes include both features. Non-competitive goods exist when the individual's consumption of goods does not lower the availability of goods for other consumers, such as information services. Non-excluding goods exist when someone cannot be excluded

from the consumption of goods; for example, all citizens enjoy defense benefits, and all street users benefit from street lights. Private companies tend to produce too few public goods, and overvalue non-competitive goods because of the marginal consumption cost of 0; they have no motion to provide non-excluding goods because in fact they cannot charge fees (at least for some consumers).

Without public goods markets, valuing them poses a lot of difficulties. However, there are some methods to estimate willingness to pay by consumers for the public goods. These methods are divided into 2 main types: stated preferences and revealed preferences.

The revealed preference method gives indirect inference on the basis of market behavior or household behavior, for example, based on expenditures or travel behavior, to derive the individual preferences from these behaviors. The revealed preference methods include prices in a private market or an intermediate market, analyses of asset value, travel behavior and preventive expenditures. For example, analysts can infer the amount of money that people are willing to pay for public training courses by referring to fees of private training courses. Asset prices are often used to infer the value that householders assign to environmental goods or traffic access. Travel behavior and especially the choice between more expensive or cheaper vehicles (such as use of tolls) provide information about the value of travel time savings as a basis of most transport investment projects. Expenditures for noise prevention, examples of noise isolation of assets, are an indicator for costs that are willing to be paid by households to reduce or avoid trouble caused by noise.

The stated preference methods use a questionnaire including questions to ask people how much money they were willing to pay for certain public goods. For example, households can be asked how much money they will be willing to pay for a program of new military equipment. One problem arising from this approach is that respondents may not answer questions in a serious manner because they think they will not be punished if they make inaccurate valuations. Moreover, respondents may have the free-riding tendency. They may overstate their true preferences with the desire to encourage the supply of public goods in the hope that it will be supplied from the national income and they do not have to pay. However, the aforementioned problems can be overcome by designing a survey and selecting other appropriate measures.

If problems of valuations still remain, a concept of opportunity cost can be used to clearly determine costs of an activity; therefore, determination of the threshold value of which its outputs are valued by beneficiaries if the program is important. In addition, when a political decision is issued to allow expenditures for simple public goods, cost result analysis can be used to ensure that services are supplied in the most effective manner.

2. Valuing intermediate goods

Some public goods are intermediate ones: these goods are inputs in the production of finished goods, for example, water supply for agricultural production. Normally, finished goods are valued in the market and in these cases the valuation of benefits is easier.

The direct valuation method is to estimate how much intermediate goods have increased the value of finished products. This method is applied in sectors such as water supply, education, health and transport. For example, the value of increased agricultural outputs generated by watering crops is used to determine the value of the amount of water supplied by the project. Another example is that an increase in the income of laborers by alleviation of diseases is a benefit from public expenditures for health services.

When using this method, it is necessary to be careful in defining the boundaries of the project. For example, if a rural road is valued on the basis of agricultural outputs increased by it, the inputs of the project do not include only the road but also all other inputs which increase agricultural production (land, labor, machinery, etc.). From this perspective, agricultural products are made by road and agricultural activities, but not just by the road.

3. Valuing social services

CBA is often used to assess projects designed to provide social services such as healthcare and public education. As in the case of public goods and externalities, social services made are not for sale; therefore, there is no market price for them. However, such services are mainly valued by recipients of services and the supply requires certain costs. Therefore, the State will be interested in defining whether benefits resulting from the supply of services can justify costs to supply them and how many social services need to be supplied.

Some social services such as health and education have alternative private services - private schools and hospitals. Costs of equivalent private services are a good measure of the amount that people are willing to pay for social services. Similarly, the value of social services such as primary, secondary or high schools can be measured by the present value of increased net incomes which graduates get from these various educational levels during their lifetime. Survey data is from a large number of people (normally from 2,000-20,000) to conduct econometric estimates of an increase in personal incomes created by educational services. This survey is conducted using multiple characteristics (properties) of respondents, including family background, experience, age, gender and intelligence, as well as the number of educational years as explanatory variables in econometric regressions to explain changes in incomes, which aims to differentiate impacts of a high school education. To a certain extent, the coefficient denoting the number of educational years will indicate that education will increase the annual incomes of individuals, with all the fixed explanatory variables.

Benefit from education is equal to an income increase in the individual's lifetime due to education less the loss of income during the school years. This benefit is compared with costs of providing education for an individual to define whether the investment can bring a positive net present value at the market price. Economic analysis of social profits from the development of human resources is the shadow price of trained human value and costs of resources used by the educational system to define whether this investment has a positive economic net present value.

Private profits from education can also be estimated to determine whether the investment has a positive net present value to individuals. In this case, analysis will be a financial analysis and only costs incurred in implementation of education and after-tax profits received by individuals will be included in the cash flow. If education is provided by the State without fees, then the only personal fees will be the lost incomes during the study period.

Finally, the State may wish to perform financial analysis of public investment projects in the educational institutions. The financial costs will include capital and recurrent expenses of primary, secondary or high school education and losses of tax from individuals while they go to school. The financial benefits to the State include increased income taxes from trained individuals in their lifetime.

4. Valuating benefits from cost saving

A method to value publicly supplied goods and services is valuing the amount of cost savings which can be made from outputs being public goods and services. For example, a hydroelectric plant can reduce the electricity fees of consumers. Similarly, information technology (IT) systems are usually applied to reduce recurrent expenses, especially labor costs. Therefore, cost savings are a measure of the benefits of the project.

Estimating the benefits of a project on the basis of cost savings is often used when outputs are essentially intermediate goods; however, when the outputs are finished goods, it is difficult to quantify. IT systems providing information about management are often classified by this type. However, it should be noted that using cost savings as benefit measures implies that outputs are being created for the first time. It is important to pay attention to the finished products.

Other types of savings can also include time, incomes or lost spare time when they are used for a specific activity. Travel time savings (quantified by converted currency value) typically accounts for 80% or more of the benefits of other road and transportation projects. Time savings is also suitable for other cases, such as a project on an optimal auto-response system.

Another type of savings is the saving of human life. For example, medical technologies are expected to reduce neonatal mortality, morbidity of diseases; road construction projects or traffic safety projects are expected to reduce traffic accidents and probability of death.

There are three basic methods to value human life in CBA:

- *Human capital method*: This method considers the value of human life to be the same as the individual's capacity, which is measured by a discount line of higher incomes in the future;
- *Compensation method*: This method converts the value of life into additional wages that are required by laborers to compensate jobs with a higher probability of death than the normal rate of death;
- *Stated preference method*: This method is based on interviews about how much money they are willing to pay to reduce the risk of death.

III. VALUING EXTERNALITIES AND ENVIRONMENTAL IMPACTS

1. Definition and categories of externalities

1.1. Definition of externalities

Externalities can be understood as any production or consumption process which brings benefits to other parties when they do not have to pay fees, or causes incurred costs to other parties when they are not automatically compensated. There are two types of externalities; positive externalities (benefits) and negative externalities (costs). For example: vaccinations to prevent infections bring benefits to members of a community, which is a positive externality; water source pollution caused by waste from chemical plants has negative impacts on a community, which is a negative externality.

Normally, when a project or policy is implemented, citizens, labor force and consumers benefit or suffer a loss from operation of that project or policy, not project owners. When existence or operation of a project leads to net gain benefits or losses to the society, but not to people in charge of them, these benefits or losses (costs) are called external effects or externalities.

There are two main issues related to externalities in CBA: (1) Clearly determining externalities, especially before the project is started; (2) Quantifying the value of externalities to incorporate into CBA.

The second issue includes measuring impacts of externalities on citizens' welfare in the form of currency and determining economic value to put into the economic cash flow of the project.

1.2. Categories of externalities

To clearly determine externalities, it is necessary for us to classify various types of externalities. Externalities can appear during the process of production, distribution or consumption of a project's inputs or outputs. Besides, they have positive or negative impacts on the welfare of the community.

- **Technological externalities:** Technological externalities are those having impacts on production or consumption capacity of other producers or consumers.

- **Pecuniary externalities:** Pecuniary externalities are those only changing the prices of inputs or outputs to the producers or consumers. Unlike technological externalities, pecuniary externalities do not have impacts on production or consumption capacity of other producers or consumers, but on the costs of production or consumption.

- **Externalities created during the production process:** Externalities made in the production process.

- **Externalities created in the distribution of a project's outputs:** Positive or negative externalities which may arise in the process of input distribution of the project.

- **Externalities created in the consumption of a project's outputs:** The consumption of a project's outputs also creates externalities for the people, not only for direct consumers of goods and services.

2. Handling externalities in economic analysis

2.1. Integrating externalities in cash flow

When determining externalities caused by the project, analysts need to value currency to them in order to put them into the cash flow of the project and the final calculation of project's net present value. There are many methods to measure externalities and put them into the economic cash flow of the project.

- **Internalizing externalities by redesigning the project:** In many cases, the best solution is that the designer of the project tries to internalize externalities so that it becomes a cost or benefit of the project. In a case where the project causes negative externalities such as a reduction of environmental quality, the optimal solution usually used is redesigning the project to reduce negative effects or prevent them entirely. In a case where the project causes air or water pollution, the project can be re-designed to install anti-pollution devices so as to prevent pollutants from being released into the atmosphere or water source. If a road construction project is in a high rainfall area, which may increase the erosion of cultivated land and drifting alluvium down to fields, it is necessary to allocate part of the budget for planting trees, bushes, and grass to quickly growing and stabilize the cultivated land. This work will have the effect of increasing the direct production costs of the project; however, it will reduce or eliminate costs which are caused by pollution imposed on local people and other producers. The reason a public project approves this method is that the project will be subject to all economic costs from production, although legal liability for that is not clear. If not, the people in charge of implementing the project may undervalue real production costs and production may exceed the socially optimal level.

In a case where a private project has unclear asset ownership, the State can interfere to force the project to internalize its negative externalities. For example, the

State can impose waste controllers by fixing the maximum waste permitted to release from the polluted plants. The maximum levels of waste released are often associated with the international standards which regulates the waste level that is not a threat to public health. Therefore, private project developers are forced to design projects so that they meet these standards. However, this method is quite inflexible and may make a project inviable though its economic net present value is positive. The State may use other solutions such as pollution taxes and transferred right of pollution to increase the efficiency of the decisions related to pollution control. However, in all cases, externalities will be internalized and the project will produce at a lower output level than the socially optimal level.

- **Internalizing externalities through compensation:** In some industries, technologies to control pollution may not exist or may be too expensive, and may be higher than the economic costs of pollution prevention. In this case, the only viable solution is not to produce or compensate for people affected by the pollution. People who receive compensation may be farmers with crops damaged or local people who have lost a pleasant environment – a utility they get from living in a clean environment. In countries with a tradition of strong jurisdiction and high cultural standards, people who are entitled to legally claim compensation can pursue rights to claim for compensation through the court system.

It may not be feasible to internalize externalities by these solutions if a victim of a negative externality has incomplete property rights. This can make it difficult for the State to issue a satisfactory compensation mechanism. For example, laborers in neighboring factories, guests suddenly coming to polluted areas or fishermen not having fishing rights along the river legally have unclear rights to claim for compensation. Therefore, the issue is how to directly value positive or negative externalities for these groups to put them into the economic cash flow of the project. In these cases, analysts should use random evaluation methods to determine the levels of loss in benefits of people who suffer from externalities. However, when appropriate levels of compensation are determined and actually paid, externalities will be internalized because the amount of compensation will be taken directly into the cost flow of the project, increasing its costs.

- **Internalizing through taxes and subsidies:** Another solution to internalize externalities is to impose taxes on consumers who cause large negative externalities.

An example of this approach would be to impose high taxes on tobacco and alcoholic beverages to discourage their consumption and internalize the costs of individual consumers of these products. On the other hand, the State often subsidizes or provides free goods and services such as primary education, secondary education and expanded vaccination programs because consumption of them makes large positive externalities. These solutions ensure the production of these goods at the socially optimal level.

Sometimes it is technologically unfeasible or the society doesn't desire to internalize an externality related to a project. In such cases, it is necessary to directly value externalities to put them into the economic cash flow of the project, but not putting them into the financial cash flow of the project. For example, in the case of a hydroelectric dam project, the project can charge local residents who use the road as a part of the project and add collected fees into the direct benefits of the project. However, it can be found that the setting of road fees is very costly. Therefore, if it is a public project, the State may decide to provide the road as a public utility. In this case, the project should directly value externality benefits from the road to be put into the economic cash flow of the project. Similarly, if the project is harmful to an important cultural site, it may be unfeasible or pointless to try compensating those affected because it may be the entire population. Therefore, the potential loss suffered should be estimated, it may use random evaluation methods, and then be directly put into the cash flow for economic costs. This should be performed even when no compensation is provided for the people who suffered a loss. After that, if the project has a negative net present value, it will not be implemented.

2.2. Direct valuation of impacts of externalities on welfare using market price

- **Measure of productivity changes:** The project can create externalities affecting the productivity of other producers and consumers. This change of productivity can be measured by the value of produced net outputs. For example: minimum economic costs of air or water pollution destroying crops will be the market value of these crops during the lifecycle of the project creating them, or until losses continue appearing. If some crops are less sensitive, but some less profitable crops can be planted instead, the difference between the value of the prioritized and replaced crops with lower value can be calculated and used as a measure of pollution costs. On the other hand, a road built to serve a port project could increase the productivity of

local farmers and this impact can be measured by increased income that farmers obtain from sales of agricultural products in accessible new markets.

- **Income changes or human capital method:** Another measure of externalities from the project is measuring change in labor productivity. This change can be measured by the losses or earned incomes, or the change in human capital value of affected labors. For example, air pollution from a coal mining project may make some miners get lung disease, reduce their working age, or even shorten their longevity. Income from losses is a measure of decreased productivity and estimates minimum pollution costs.

- **Opportunity cost method:** If it is very hard to measure externalities, a method to address this issue is measuring the net present value of the project which makes these externalities and comparing it with the net present value of the next best alternative project without externalities. The difference between the two net present values of the projects is the opportunity cost of externalities. Then, a decision maker can decide if the costs or benefits of externalities are higher than the difference in the net present values of the projects.

- **Preventive expenditure method:** Another cost of negative externalities determined is the preventive expenditures incurred by people to reduce or avoid damages from negative externalities. Those expenditures are done to maintain the productivity of economic activities or a pleasant environment. For example, the costs of sound-proofing materials installed by people who live near airports are preventive expenditures.

- **Replacement cost method:** The replacement cost method can be used to measure costs of water, air or cultivated land pollution. Water, clean air and cultivated land provide numerous valuable services to human beings and other living things. The replacement cost method measures the costs of decreasing environmental value in the form of resources which have to be used to substitute the environmental services lost from this quality degradation. For example, if the project causes air pollution, costs for air cleaners in houses and buildings are a measure of pollution costs.

2.3. Indirect measure of value of externalities using alternatives

Besides of using direct observation prices, there are many other methods to measure externalities related to the pleasure of the environment. These methods base on prices to indirectly measure impacts of externalities on welfare.

- **Hedonic pricing:** In countries with a free land market, the present value of the externalities generated by the project can be measured indirectly using hedonic pricing technique. This method is particularly useful in measuring changes in pleasant environment such as noise or air pollution. Hedonic pricing includes price comparison for property, residential land, or agricultural land in areas near polluted sources with the land price in similar areas far from the sources of pollution. Control measures are applied to eliminate differences due to the real value of houses or land such as size, age, location near markets or other facilities, using large samples and statistical regression. Differences in land prices that cannot be explained by any other factor will be the present value of anticipated loss on the pleasant environment of users due to living near sources of pollution. The differences in house prices are used to measure pollution cost caused by projects. Studies show that the amount of money that people are willing to pay will increase with their income levels because environmental comfort is common goods and such amount may be higher. Hedonic pricing can also be used to value positive externalities related to a project. For example, consumer surplus obtained from people living near a railway route can be measured by the higher current house prices close to a station.

- **Travel expenses:** Measurement of changes in travel time and travel costs is an indirect method that uses market prices to value externalities of a project. This method can be used to measure both negative externalities such as congestion, and positive externalities from environmental comfort such as national parks or scenic areas in general. For example, in a case of traffic jams in areas surrounding projects, the additional cost of travel time of road users is valued at economic prices, providing an estimate of benefit loss because of non-market externalities like traffic jams.

2.4. Random price valuation method

Sometimes externalities generated by the project cannot be measured directly or indirectly by the market price because there is no real market or even an alternative market to goods or services being considered. Cultural, historical sites or important spiritual sites and the continued existence of flora and fauna are examples of goods that cannot be valued according to the willingness to pay of people observed by market price.

Moreover, people can get some utility or pleasure from the knowledge of a pleasant environment or cultural property even though they have never used or seen

them, or even paid attention to them. This utility is called a non-use or passive use value.. Market price methods cannot measure utility from passive use of environmental comfort. Therefore, the random price valuation method was developed to directly ask people which value they assign to environmental comfort and other types of comfort including the means they receive from passive comfort.

Random price valuation methods include conducting surveys to affected individuals to identify how much money people affected by a negative externality, such as the flooding of a beautiful lake caused by a dam, will be willing to pay for the prevention of such an externality. On the other hand, respondents can be asked how much money they would be willing to accept to make them bear this negative externality. In the case of a positive externality, the survey tries to gather information about the amount of money which the beneficiaries would be willing to pay for protecting the environment, like a wilderness or other comfort such as road service provided in the example of a hydropower project.

Alternative random valuation survey method. Some other survey methods have been developed to find accurate responses from respondents. The private goods market model includes an interviewer giving respondents the opportunity to "buy" comfort at various prices. The interviewer can participate in the auction game with respondents to find the maximum price that people are willing to pay for a specific source or means which brings comfort. These interviews must be conducted face-to-face or by telephone so that the bargaining process can be repeated.

One increasingly popular method is the referendum method. According to this method, the respondents answer questions about whether they are willing to pay tax in order to conserve or get an environmental comfort. Respondents could only answer "agree" or "disagree" for this question. The different groups are asked to answer a range of different amounts of money and the average value found would be a tax rate passed by half of the population.

Analysts can use the above methods to assess how much money people are willing to pay for public goods such as public roads or buildings, or social services such as schools and hospitals.

Chapter 4:

DISCOUNT, RISK HANDLING AND POLICY SELECTION CRITERIA

I. DISCOUNT TO PRESENT VALUE

Most projects and programs feature costs and benefits arising over time. However, people are not concerned about time of costs and benefits - as they always want to receive benefits as soon as possible and pay as late as possible. The main reasons that people prefer to get income immediately rather than in the future are:

- Future uncertainty: Life is often uncertain. Therefore people cannot ensure that they will still be alive in the coming years to get their money. They also cannot be sure about whether they will be paid that amount in the next years or not because there are many factors subject to change over time. Such risks can be limited if there is a strong legal system to enforce contracts compliance. This factor is called pure risk or pure time preference.

- Society and individuals expect a better future: If this belief is widespread, it will form another reason to impose a value on presently received income that is higher than the received income in the future. People predict that they will get some utility or benefit from the received income in the following years less than the currently received income. The State, private companies and investors also prefer to receive the income immediately rather than in the future is because the currently received income can be used to invest in and get a marginal profit from investment capital in the economy. Investors are willing to pay interest to borrow for investment. Hence if projects create revenue in the early years instead of later years, such earnings can be used to reduce the amount that the State or investors have to borrow to invest in projects. Hence, the incremental value of this income will be equal to the interest rate that they will not have to pay to borrow this capital.

For all the above reasons, the present received income of projects cannot be considered the same value as the income to be collected in a certain period in the future. In other words, the presently received income will be more valuable than the income received in the future. Therefore, when valuing the costs and benefits, it is necessary to consider time of appearance, i.e. the discount on costs and benefits in the future to the present value.

1.1. Formula of present value

The standard method that is used to value the costs and benefits occurring at different periods is the discount method. The standard discount method converts the flow of costs and flow of benefits in the future to the equivalent amount at present. This amount is called the present value of the flow of costs and benefits in the future. The present value is calculated using the gross interest method; and the rate used to convert the future value to the present value is called the discount rate. In fact, the discount rate is the exchange rate between the present value and future value.

Symbolize received VND value of benefit in any year in the future as B_t , where t is year number t , and projects last for T years, then the present value of the benefit flow is total of all annual benefits of which each annual benefit is discounted at the appropriate discount rate r to convert to the present value. The calculation formula is as follows:

$$\text{Present value} = \sum B_t / (1 + r)^t$$

2. Selecting discount rate

2.1. Capital interest rate

When considering the appropriate discount rate, the starting point is the borrowing interest rate of government. This borrowing interest represents direct or observed costs of amount for the government. This method implies that the discount rate based on the borrowing cost of the government (normally represented by the long-term bond interest rate)

However, the borrowing interest rate of government does not reflect real opportunity cost of capital source use, known as the social opportunity cost (SOC) of capital. The social opportunity cost of capital represents the income of capital that can be achieved by a program or other project. If government capital source is considered as a fixed capital source, the alternative project is the marginal project in the public sector. However in an optimal case, government loans will not be fixed but flexible for worthy marginal private projects. In this case, the appropriate point of comparison is the marginal profit rate in the private sector, i.e. income from an alternative private investment. The efficient allocation of resources required in the profit margin in the public and private sectors is equal, then taking into account all costs and benefits which can be attributed to the project.

Normally SOC is higher than the borrowing rate of the government. The government can borrow at a lower interest rate for one main reason that lenders know

that their money is guaranteed by the Government's tax collection. However, taxes impose an excessive burden on the economy, or in other words, actual borrowing costs are higher than nominal borrowing costs. This is another reason for focusing on the actual opportunity cost of capital, which is known as the social opportunity cost.

A method closely related with SOC is using the estimated project specific cost of social capital (PSCC) as a discount rate. This method is based on the capital asset pricing model (CAPM) developed to explain the relationship between expected profits by the shareholders of a private company and market risk characteristics of stocks. Market risk may be defined as risk for all businesses that are exposed through business cycles and other general business conditions. In the CAPM, shareholders seek risk premiums to compensate for price fluctuations of their investments. Estimates of average market risk cost size are usually based on risk cost for stock investments.

While all businesses are exposed to market risks which are considered unchangeable, some companies and industrial areas have larger or smaller risks than others. Market risk is measured through "beta". While the whole market has a beta of 1, low risk companies and areas have a beta less than 1, and high risk companies and areas have a beta higher than 1. Normally, companies related to natural resources have a low beta. It is necessary to determine an appropriate beta for projects. According to CAPM, this beta value is then multiplied by the average market risk premium and added to a common "risk-free" interest rate that is often approximately equal to the rate of long-term treasury bonds (10 years). It should be noted that long-term treasury bonds are not risky only on the technical perception that nominal profits at the end of term are guaranteed; other risks such as inflation uncertainty are inevitable.

2.2. Time preference rate

Both SOC and PSCC reflect the potential interest rate of alternative projects. PSCC tends to relate to privately funded projects. Hence, it also reflects the interest rate required for projects by lenders. In a perfect capital market without taxes, the interest rate gained from capital and the interest rate required by lenders to waive current consumption and bear risk are equal. However, generally SOC is greater than the marginal profit required by lenders due to taxes. The issue becomes more complicated when the taxes are applied to nominal income (profit) instead of real income.

Social time preference rate (STPR) reflects the current consumption preferences of society in exchange for future consumption. STPR is similar to PTPR but it aims to express the social views of future consumption that increase requirements to exactly compensate for delays of one current consumption unit. In terms of concept, STPR can be very different from current individual consumption preferences. For example, if individuals make decisions without considering the needs of future generations, STPR will be smaller than individual time preferences.

2.3. Selection between capital cost and discount rate on time preference

In fact, there is a hierarchy of discount rates that can range from PSCC always as the highest rate to SOC, PTPR, and STPR always as the lowest rate. This leads to a lot of controversy about the appropriate choice.

According to observation, there are two main options. The first is to use the capital cost or measure of a discount rate of a producer (PSCC or SOC), or use the time preference rate or discount rate of individual consumers (PTPR or STPR). The second is to use a discount rate of a consumer or producer.

Due to discounted cost and benefit flows (net benefit flow) corresponding to ignored consumption goods flow and gained consumption goods flow, we can argue that use of a consumer discount rate is appropriate. However, the use of a consumer discount rate brings with it obstacles that projects having a low profit rate can be chosen instead of projects in the public or private sector that will gain a profit higher than consumption discount rates.

This obstacle can be solved using shadow prices for capital reflecting its actual opportunity cost. Shadow price is calculated by estimating the profit flow that will be earned from capital in another project and discounting such profits to the present value using the consumption discount rate. The estimated present value for this capital becomes a shadow price of used capital. In terms of technique, this is an interesting procedure because it applies consumption time preference rate while allowing full application of opportunity cost of capital. However, this is a relatively complex procedure. Moreover, this procedure only has an effective impact on a project or program in general if they achieve profit on capital at least equal to SOC.

The general consensus and international fact is that a producer discount rate is appropriate to be applied. This rate ensures that resources are used effectively. A consumer discount rate should only be used in exceptional cases, such as when

resources do not have opportunity costs and a project includes a single comparison of consumption flows.

2.4. Standard discount

For most evaluation of public projects, programs or policies, we recommend using capital cost or producer discount rate. Using the producer discount rate ensures that the actual opportunity cost of capital is reflected in the project evaluation and resources are used effectively.

Regarding projects usually funded by the public sector and projects with absolutely no element of privatization, it is required to reflect SOC in the standard discount rate. However, while it must be accepted that SOC reflects the costs borne by society due to the transfer of resources from the private sector into the public sector, there are no standard measurement techniques to determine SOC. In any case, SOC will be greater than the long-term bond rate and the consumption discount rate based on time preferences.

However, in some cases, PSCC based discount rate may be appropriate. These cases occur when the risks of projects are incurred by specific investors who require a higher dividend rate to participate in the project. Typically, these are public - private joint venture projects or totally private projects. In such cases, the standard discount rate should reflect the interest rate that investors are willing to accept in order to provide capital. This interest may cover certain risks seen from the perspective of investors. As discussed above, PSCC are calculated with the appropriate CAPM and beta necessary to define the project. At the same time, it is important to note that the standard discount rate for public sector investment must not be too low to drive the capital expenditure towards the public sector and away from the private sector.

3. Selecting discount term

Costs and benefits can be discounted in any year and the start and end of any year. Selecting a discount point has an impact on the magnitude of the report results. The sooner the discount point is, the smaller the magnitude is. However, for any defined impact lines, selected term impact has no impact on the estimated net present value.

Costs and benefits are usually discounted by year. They may be discounted at the beginning of the year in the case of a prepaid amount, or at the end of the year in the case of a deferred payment. The difference between these two methods is

described in the following example: an project has an investment cost in the first year of VND10 billion and a benefit of VND2 billion/year in the next 10 years.

(1) Discount at the beginning of the year (2) Discount at the end of the year

$$\begin{array}{l}
 \text{(1) Discount at the beginning of the year} \\
 -10 + \frac{2}{1.05} + \frac{2}{(1.05)^2} + \dots + \frac{2}{(1.05)^{10}}
 \end{array}
 \qquad
 \begin{array}{l}
 \text{(2) Discount at the end of the year} \\
 -10 + \frac{2}{1.05} + \frac{2}{(1.05)^2} + \dots + \frac{2}{(1.05)^{11}}
 \end{array}$$

In the two above methods, it is possible to suggest that the year-beginning discounting method is closer to the actual expenditure model. Note financial function Excel for the net present value (NPV = (discount rate, range), where the range is cell S1: S20, assuming that the first cash flow occurs at the end of the first period. To let cash flow appear at the beginning of the first stage, the formula can be adjusted to = NPV (discount rate, S2: S20) + S1.

Of course, there are no arithmetic limits on the choice of time in the project phase to discount costs and benefits. In previous evaluations, the first year of the project is often used as an appropriate term to discount. In the following evaluations, the final year of the project, or probably the year of evaluation is often the appropriate year to make a discount.

When discounted at the end of the project period, the absolute values are multiplied by the discount coefficient, but not divided by it. When discounted at the end of the project period from a favorable position earlier over time, it is about future values, not present values.

4. Discounting in 1 year

It is accepted that the discount period is one year. However, the length of the discount period used in an analysis is a matter of choice, and can be monthly, quarterly, or any other unit.

To illustrate, assume that an agency receives a grant for a program at the beginning of each quarter instead of biweekly. This plan would include all costs to the Government in the form of interest rates; cash balance or payment for the interest of additional loans are negligible. These costs can be determined by comparing the current values of the two payment lines. The current values are calculated by adjusting the discount rate to match the discount period. If the annual discount rate is 8%, then the transition to the equivalent quarterly discount rate is calculated as follows:

$$1.08 = (1+r_q)^4$$

$$(1.08)^{1/4} = 1 + r_q$$

$$r_q = 1.0198 - 1 = 1.98\%$$

and equivalent biweekly discount rate is:

$$1.08 = (1+r_{ft})^{26}$$

$$(1.08)^{1/26} = 1 + r_{ft}$$

$$r_{ft} = 1.0030 - 1 = 0.30\%$$

5. Calculating equivalent yearly costs

The technique representing the present value in the form of equivalent yearly costs can be used to compare plans with different lifecycles. Moreover, this technique can also be used to express the capital value of assets or projects through its economic lifecycle as the yearly amount; it can be considered as a basis for value calculation (in fact, it is a basis for estimating the long-term marginal prices), or it can provide a threshold value that only higher average annual discounted benefits for the project may be considered. This method is also worthy in the estimation of "lifecycle" or the cost of the entire lifecycle of capital goods before any decisions are made.

This technique includes the consideration of equivalent costs as an annual payment, that is, as an asset that pays a fixed sum of money every year for a number of years as determined. The formula for calculating the annual payments is:

$$PV = C[1/r - 1/r(1 + r)^t]$$

Where PV is the present value (the present value of the project costs), C is the annual cash flow (the equivalent yearly costs), r is the discount rate and t is the period of time.

II. RISKHANDLING TECHNIQUE

1. Definition of risk and uncertainty

The difference is sometimes made between the terms of risk and uncertainty. Risk can be measured, which refers to the cases with advance probability. In contrast, uncertainty is vague and unclear, which refers to the case without advance probability. In reality, the difference is very small. A probability can be allocated to a specific event, but the probability is rarely known with complete certainty; conversely, some events are so uncertain that it is impossible to allocate the probability for them. Therefore, in this book, unless otherwise indicated explicitly, the two terms are used interchangeably.

2. Risk handling technique

2.1. Sensitivity analysis

Values in the CBA are estimated average values. In terms of principles, they show the estimated average value. Sensitivity analysis is a simple procedure in order to provide decision-makers information on impacts of errors in estimates on the viability of the project.

- The first step in sensitivity analysis is to simultaneously replace the reliably pessimistic estimates for each important variable and estimate the net present value. If the estimated net present value is still positive, we can conclude that even with pessimistic assumptions, the project will still be able to gain net social benefits. However, if the estimated net present value is lower than 0, we can confirm that the project has real risks, at least at a certain level of risk.

- The second step is to assess the risks of the project and the variables importantly affecting the net present value. A way to do this is to change each variable while keeping the others, in order to find out the best estimated value. However, in some cases, the variables are correlated with each other. The best estimate of these variables is to put them together. This process will help determine the variables that decide the magnitude of the net present value. The value of the variable that makes changes of the net present value from positive to negative status is called "switching value".

If there are only one or two important variables, then we can analyze as below:

+ If this variable is smaller (or larger) than the switching value, the project is likely to bring a positive or negative net present value;

+ when the project gives a positive net present value, assess the possibility of outputs of switching value for decisive variables to give a clear opinion on the project's risks. Owing to that, decision makers are provided information to make decisions.

If there are more than two decisive variables, it is difficult to express any significant decisions regarding the real risk levels of the project. If there are more than five such variables, there may be many combinations of variables to justify the project, and other combinations that will not.

2.2. Full risk assessment

When there are many uncertain variables, a full risk assessment should be conducted. In this assessment, probabilities are distributed for values of all main variables and estimated values under these combined variables. Then, through the repetitive calculations on the basis of a random sample selection of variable values, the probability distribution for the net present value of the project can be determined.

It should be emphasized that this is only one type of assessment which provides a comprehensive picture of potential changes of the project. To provide complete information, decision makers require an adequate risk analysis for every project. However, in most cases, sensitivity analysis provides enough information about risk levels of a project or program.

2.3. Increasing discount rate

Another method to consider risks is increasing the discount rate, or in other words considering insurance of the discount rate. Although this method is widely used in the private sector, it is not generally recommended to apply it to the public sector, except to projects funded from specific private resources with risks.

The discount rate increase method is usually used to fight systematically excessive optimism in net benefit forecasts. However, this method is reasonable only when the object concerned is benefit, especially late-appearing ones which may be too high. The method will fail if there is an interest in late-appearing benefits derived from the source of uncertainty. It may be appropriate for construction projects and projects with negative long-term environmental impacts to apply this method. Then, the appropriate method should be to reduce the discount rate instead of adding a premium to it, so that cost estimates can be maximized rather than minimized. This difficulty shows that it is impossible to use risk increase to prevent a simultaneous overestimation of benefits and underestimation of costs. Generally, when there are reasons to believe that certain cost values or equivalent benefits of a project are different from their predicted values, it is necessary to make a clear assessment on how big of a difference it is. Sensitivity analysis is the most effective means for making these assessments.

2.4. Sensitivity analysis and discount rate, optimistic trends

Sensitivity analysis and discount rate

The important thing is to expand the sensitivity analysis to the discount rate applied for the net benefit flow of the project. It is assumed that a discount rate of 7% at the

mid-point is accepted, and a sensitivity test at 5% and 9% can provide the uncertainty in the level of capital opportunity costs throughout the project period. Moreover, using a discount rate test can help to focus on the major uncertainties in the event of significant differences in time records for benefits of the project substitutes.

Optimistic trend

“Optimistic trend” or “optimistic assessment” is another reason to favor a risk-averse method to assess the project and this is a reason for the specific concern.

An optimistic trend appears when prospective estimates of net benefits are presented as average or the most likely estimates. It is a special issue in the CBA and may reflect an overestimation of future benefits or underestimation of future costs. The overestimation of benefits is usually involved in highly unrealistic estimates of the annual benefit growth rate. On the contrary, underestimating costs often eliminates some reasonable costs. There are three methods to resolve this issue that should be considered.

- Firstly, analyzing sensitivity. Changing individual parameters in accordance with individual and general pessimistic values may reveal more about excessive optimism that may reinforce the analysis. This process should be conducted in an honest way.

- Secondly, increasing the discount rate. This technique calculates the reduced values for both benefits and costs, and an increase in the discount rate will cover all estimates below costs. Moreover, it should be understood that the process of assessment and establishment of the adjustment coefficient to the optimistic trend by itself may cause a distortion of information.

- Thirdly, providing a clear statement of assumptions in the analysis, especially forecast assumptions, and their reasons. For example, if analyzing an office construction project is dependent on office leasing profit which is higher than the inflation rate; this assumption can be justified by paying greater attention to established trends or by giving evidence of demand on office spaces in the area. In many cases, independent and professional assessments should be conducted to develop and demonstrate cost and demand estimates. That clear demonstration not only assists analysts but also helps decision makers avoid mistakes.

III. POLICY SELECTION CRITERIA

1. Net present value criteria

1.1. Formula of the net present value

Net present value (NPV) of a project is calculated according to the following formula:

$$NPV = \sum_{t=0}^t \frac{(B_t - C_t)}{(1+r)^t}$$

Depending on budget limitations and other considerations, and assuming there are no other considered substitutes, a project may be accepted if the sum of the discounted benefits is greater than total discounted expenditures, or in other terms, the net present value > 0 .

In a case when mutually exclusive projects are considered (that is, the projects offer different solutions to an issue), a project which maximizes the net present value will be selected.

1.2. Issues in using the net present value principle

The net present value principle is an easily applicable principle; however, it is useful if using this one to address arising issues, such as impact of the budget limitations, supplementation between projects, interaction of budget limitations and project timing, and comparison between projects with different life cycles.

- **Considering budget limitations:** When there are budget obstacles that limit the number of projects that can be conducted, the appropriate decision principle is to choose a subset of projects which maximize the total net present value.

- **Considering supplements between projects:** The greater the number of projects taken into consideration, the more complicated the optimal choice is when there are budget limitations. This is especially true when there is a supplement between investment projects, or rather when the net benefit flows of a project depend on the acceptance and implementation of another one; for example, a watering project may depend on a hydropower plant construction project. If needed, mathematical optimization techniques can be used to consider all combinations of projects and to select a set or package of projects that satisfy the identified limitation on choices and have the greatest net present value.

- **Budget limitation and time:** Then, the way the budget limitations interface with options about the optimal time of the project is considered.

It is assumed that there are two projects A and B. The net present value of project A (\$10 million) is smaller than that of project B (\$12 million). However, the benefits of project A appear earlier than those of project B. Thus, it must be

determined which project will deplete the annual capital budget more. Provided that the capital budget of the next year can project the confidence level, it is necessary to consider the mixed net present value of a different project chain before making decisions. The options are in Table 4.1:

Table 4.1: Options for a project chain

Year	Project (net present value)	Project (net present value)
1	B (\$12 million)	A (\$10 million)
2	A (\$9 million)	B (\$11.5 million)
Total:	\$21 million	\$21.5 million

In the above example, the estimated net present value of project B, when it has been delayed for one year, currently decreases to a value less than that of project A.

- **Considering projects with different lifecycles:** When comparing projects with different life cycles, one assumption is the end of the shorter-term projects which cannot be expected to bring re-suspension of opportunities for the next projects with an above-normal rate of refund – that is, opportunities have a net present value of more than 0. The estimated net present value is a suitable criterion to compare projects with different life cycles, with a brief description of the net benefits of the projects discounted according to the social opportunity cost.

In some cases, it may be necessary to compare large capital investment with a chain of short-term projects. If the short-term projects are likely to repeat over time, there is no point in making a comparison between their net present value and that of longer term projects.

1.3. Considering distributional impacts

Unless the distributional impacts of the projects are presented in a certain way, CBA can ignore these impacts.

- ***The limitations of CBA in distributional issues:***

+ First, CBA compares the predicted costs and benefits but does not associate their importance with social groups that incur costs or receive benefits. In a democratic society, decision-makers need to recognize groups who can obtain benefits or bear losses by their decisions, and know the nature and scale of benefits and losses.

+ Second, the premise of the cost-benefit principle is the Kaldor-Hicks criterion. According to this criterion, a project may be adopted if beneficiaries can fully compensate for losers and are still richer than them even if the project is not done (still

being a residue). However, the majority of cases do not have an auto-assessment mechanism of compensation, and the implementation of compensation. With no real compensation, there will still be people who lose out in some respect, and those who benefit in some way.+ Third, both costs and benefits accrued for the lower income groups may be estimated to be lower in the CBA. While economists always attempt to avoid welfare comparisons among individuals, the CBA will combine them to measure the costs and benefits in monetary form. This method can be applied to accept that the marginal utility of income is the same for everyone; that is, one additional coin has the same value for the rich and the poor.

In other words, the costs and benefits of a project reflect the existing distribution of income. Income distribution impacts the consumer's demand (their willingness to pay is affected by its affordability) and impacts the supply of inputs by resource owners. Other initial income distributions will lead to other production and consumption models and distribution of resources with different degrees of efficiency in the economy. Therefore, the adequacy of CBA procedures may be suspected on the basis of a common fairness background.

The distribution mentioned above can be overcome traditionally when conducting CBA completely separate from the issues related to income distribution.

- *Overcoming distribution problems in CBA:*

Analysts can use the display method to solve distribution problems in CBA.

+ Using the impact scope matrix: the first two limitations mentioned above can be resolved satisfactorily if the identity of the groups who benefit or suffer a loss, and the scale of benefits and losses are carefully presented in CBA.

The distribution impact scope matrix indicates the benefits and losses on the vertical axis and the identity of affected groups on the horizontal axis, and can be a useful resource for decision makers.

+ Distribution weight method: The third restriction of CBA in addressing the distributional impacts of a project is "inherent" bias toward low income groups who benefit or suffer a loss. This can be resolved by allocating different weights to the costs and benefits accrued to specific groups.

1.4. Weight estimation techniques

There are two techniques used to estimate the distribution weight named: (1) deducing weights from applicable or past policies and decisions; (2) fixing weights

- **Deducing method:** In this method, weights can be deduced from the current programs with a redistribution feature, for example, personal income tax. High-income individuals are subjected to a marginal tax for a final income as 0.47 dong, while low-income people over the marginal tax threshold are subjected 0.17 dong only. This is referred as a sacrifice of 0.47 dong for the rich being equivalent to 0.17 dong for the poor. With such logic, all benefits for low-income people can be assigned to a weight of t_r/t_p times that for the rich, where t_r and t_p are real marginal taxes paid by the poor and the rich.

However, there are some difficulties with this approach. First, the income tax not only reflects the decisions on the desired income distribution, i.e. interests in sharing the burden for legal operations are the same, but also focuses on the effectiveness or motivation effects, or in other words there is an impact on working effort and the entire economy, assuming the tax rate is 100% (or higher) for the highest income range and 0 % for the low-income range. Thus, it is necessary to separate the motivation orientation policy from the redistribution orientation policy in the tariff at all times to estimate the appropriate tax rates. Obviously, this is impossible to achieve.

- **Fixing weight method:** Problems in the distribution weight can be solved easily by acknowledging distribution decisions made correctly and fully to the political levels. Analysts can accept the distribution weights determined by the decision maker. However, it should be noted that the decision makers fix one set of distribution weights to express their appropriate intention in accordance with this weight. Therefore, the fixed distribution weights imply an explicit policy to redistribute income to a specific target group from other groups.

This method is only accepted in appropriate contexts. However, beyond such contexts, analysts should apply weights based on their own experiences rather than for the purposes of government decision making.

2. Supplementary criteria

In addition to net present value, some other criteria commonly used to evaluate programs and projects include: (1) Rate of return; (2) Cost-benefit ratio; (3) Capital recovery period.

2.1. Rate of return

Internal rate of return (IRR) is the discount rate that generates a net present value 0 (it is proportional to costs and benefits discounted). It is assumed that with the estimated IRR of 8% and the discount rate used in the NPV calculation of 7%, the project must have a positive NPV. Generally, if the estimated IRR is greater than the selected discount rate, the NPV is positive (> 0) and the project is effective. When the estimated IRR is less than the selected discount rate, the NPV is negative (< 0) and the project is ineffective. Therefore, if the present value of the costs is 10 billion dong and annual interest is 2 billion dong, the IRR is determined by the following equation:

$$10 = 2/(1+IRR)^1 + 2/(1+IRR)^2 + \dots + 2/(1+IRR)^n$$

The IRR method with reverse procedure is used to calculate the net present value. Rather than calculating the net present value at the pre-determined discount rate, the IRR is calculated at the pre-determined net present value of 0.

However, the IRR rule is often incorrect as alternative projects are different in scale. Therefore, the IRR rule inevitably leads to confusion when projects have different lifecycles. Project A with cumulative benefits shortly after the end of the investment period can gain a higher IRR than a project with a later but large cumulative benefits. The net present value method in this case will handle this bias.

Another problem arises when decision makers choose a list of projects dependent on budget constraints. According to the criteria of net present value, the rule is to select a set of projects that maximize total net present value under budget constraints. The rate of return is sub-index, not the main one.

Moreover, if a project has negative net benefits more than once during the project, it is always impossible to identify a single rate of return. Projects with large expenditures on periodically purchased equipment may fall into this category, such as construction projects requiring many periodic renovations. Similarly, mining projects often have large amount of cash at the end of the year, due to costs of reconstitution and reforestation to meet environmental requirements.

2.2. Benefit – cost ratio

Benefit – cost ratio (BCR) is estimated to be approximately equal to the ratio between the discounted retrospective net benefits and the discounted capital costs. Benefit – cost ratio of a project is calculated in two ways: The most useful method is the present value of the net retrospective benefits (benefits minus operating cost or other retrospective costs) divided by the present value of the capital cost:

$$\text{BCR} = \text{PV net retrospective benefit} / \text{PV capital cost} \quad (4.1)$$

Purposes of this measure are to estimate the recovery of scarce resources.

Another way to calculate BCR is take the present value of all benefits divided by the present value of all costs.

$$\text{BCR} = \text{PV benefit} / \text{PV cost} \quad (4.2)$$

Regardless which method is used, a project can only be accepted when the BCR value is greater than 1. If so, the net present value is positive (> 0) and vice versa, if the net present value (NPV) is positive, the BCR will be greater than 1.

The difference between the NPV and BCR occurs when two projects with the possibility to exclude each other are used, beyond the decision to dismiss or accept.

2.3. Capital recovery period

Capital recovery period is the time (by year) when capital expenditures of a project are returned. Sometimes, state agencies require an initial budget for a project which may be withdrawn within a certain period. The capital recovery period of the project is determined by calculating the number of years required before the accumulated cash flow expected equals the initial investment.

To use this rule, state agencies must decide the appropriate return limits. However, this rule seems to be imposed and inaccurate.

Another feature of the capital recovery period is that it assigns equal weights to the cash flow without consideration of the time they appear before the limit. The criticism of this weight determination leads to the birth of the rule of the discounted capital recovery period. This rule includes the acceptance of the project with the shortest period of discounted capital recovery.

2.4. Inflation consideration

Future costs and benefits may be valued at real price (fixed) or nominal rates (current). In the real price method, all the variables are expressed under the price rate of a certain year. Regardless which year is used, the current year is always used as the base. Note that if the entire analysis is conducted according to the price of the year that the analysis takes place, it should be conducted under real conditions.

This method assumes that future inflation will equally impact all costs and benefits. If there are reasonable reasons for the specific cash flow or interests to fail to follow the general price fluctuations, these changes in the respective price should be included in the analysis.

In the nominal price method, the predicted impact of inflation is accurately reflected in the cash flow predictions. Unlike the real price method, the different inflation rate, if necessary, may be applied to the different benefit and cost flows. Because the strict requirement of data of this method (the inflation rates should be estimated for the entire period of the project), it is not generally applied.

Note that when using fixed values, always accept the price of the first year of the project. However, the CBA is conducted as part of the retrospective evaluation, so the convention is to use the price of the last year of the project.

The important thing is that the real price and nominal price should not be confused in the analysis. Specifically, when the analysis is presented in nominal price, the discount rate should be adjusted by the inflation rate. This confirms that investors must compensate for the estimated inflation as part of the cost in creating available financial funds. With the annual total, the formula to transfer the real discount rate (r) into the nominal discount rate (n) is:

$$n = (1+r)(1 + \text{inflation rate}) - 1$$

Conversely, to transfer a nominal discount rate into real discount rate, apply: $r = (1+n)/(1+ \text{inflation rate}) - 1$

While it is difficult to measure inflation, inflation statistics are usually based on the experience of inflation over previous years. With the assumption that the consumer price index (CPI) is the focal point for the assessment of the capital market on the current rate of inflation, the CPI is used for this purpose.

It is concluded that the net present value method is the primary basis for recommendations and decisions in all project evaluations. It has always been included in a project analysis. The other decisive rules may provide useful additional information but only be applied if they do not lead to incorrect or false recommendations.

The rate of return criteria will provide accurate results, and be used only if all the following conditions are applied: (1) the project(s) selection is not restricted by the budget limits; (2) the projects do not hinder another project; (3) net benefit flow is negative at first and then positive for the remaining period of the project lifecycle (or vice versa). The foreign aided projects are often evaluated on an individual basis and in an environment with significant budgetary flexibility classified in this category.

Similarly, the criteria determining the benefit - cost ratio are as reliable as the net present value criterion when projects are not mutually exclusive and the decision is made to accept or reject the project. When projects are mutually exclusive, the ranking according to the net present value is prioritized. An exception arising to this is when the budget is limited and all projects which can be conducted are unacceptable, and the ranking according to the benefit - cost ratio maximizes the net present value on the basis of limited capital.

When the capital recovery period criterion is used, the discount rules are prioritized rather than the non-discount one.

Other criteria are not as reliable as the net present value. Therefore, they should be avoided for use in decision making

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**NATIONAL ACADEMY OF PUBLIC ADMINISTRATION – JAPAN
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SCENARIO PLANNING FOR PUBLIC POLICY

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1. GENERAL THEORY ON PLANNING POLICY SCENARIOS

1.1. Definition of scenario and policy scenario

1.1.1. Definition of scenario

The term “scenario” is used quite commonly in life but for contents that are not exactly the same. The concept of "scenario" is generally understood as a story expectedly used to carry out a work in the field of cinema or theater. With that meaning, the “scenario” is often understood as a document outlining the necessary elements to tell a certain story. That story could help us recognize and adapt to the changes of current environment in the future, based on thinking of what will certainly happen and any unexpectedness might occur.

In publications on strategic management, the concept of scenario is not clearly defined, but can be perceived as one of common ways to judge the future.¹ Different researchers may have various ways to define scenarios. For instance, Peter Swarts defined scenario as "Tools to construct imaginations on possible conditions of future activities when the approved decision is to be right". Or Gill Rigland pointed out the concept of scenario as “Elements constituting a strategic plan based on methods and technology to manage future uncertainties” Pol Sumakher also identified scenario as “Method to optimize imaginations on possibilities of the future when organizations realize the approved management decisions” .²

The traditional planners often make their choices based on predictabilities: rules are drawn from statistical science and judgment of development based on collected past evidence, etc. However, we are living in a world with rapid changes in which not all factors in the future can be predicted. In the fall of 2007, none among us could have imagined a financial crisis during the fall of 2008 in the US, a year later, resulting from subprime loans and then rapidly entailing a global recession. Also

¹ Kees van der Heiden (1996), page 5

² Xem Lindgren, M, Bandhold, H (2009)

almost no one could be able to imagine an oil price slump in late 2014 and early 2015 in the context that oil prices had been kept at a very high level and regularly reflected a rising trend for several years, from the second half of the 20th century to the early years of the 21st century. And no one can foresee the terrible terrorist attack taking place in the US on September 11, 2001- an event caused a change in the way of thinking about security strategy makers over the world.

For example, when we ask the question: what would happen with Vietnam in 2020? It might be found that besides predictabilities by scientifically analyzing development trend from the past to the present, such as socio - economic development rate, recent growth trend; population size and foreseeable population fluctuation; ... there still be unforeseeable movements such as natural disaster, war and etc. It can be said that future forecast is extremely difficult, even almost impossible. However, we ourselves have to make policy choices considered as responding options of the State to guide the society against such uncertain future and before making any decision, the State needs to further determine how the future look like. That is an approach to plan policy scenario.³

From above ways of perception, it is clearly that a scenario is not a forecast (for example, weather forecast) or the description of anticipatable relative developments of an existing event. It is also not “prediction” (foretelling) – or the imagination of expected futures without relying on authentic evidence. Scenario is the carefully considered answer to the question: “What is expected to happen?” or “What will happen, if ...?” Therefore, scenario is different from forecasting or predicting as it can develop risk management capacity while forecasting and predicting “conceal” risks.

It is also necessary to distinguish policy scenario from policy implementation planning. Policy implementation planning is only carried out in near future while data

³ Shiroyama Hideaki/Suzuki Tatsujiro/Kakuwa Masahiro (2015), pg.36

on policy issues is available and the development trend of policy issues is clear, forecastable and anticipatable. In contrast, policy scenario is often implemented in the far future (5, 10 or even 50 years) when data on policy issues is unclear and unspecific or policy issues do not appear clearly and many in anticipated issues may still happen.

Policy scenario is not simply preparing a scenario but it requires associating it with State's strategic planning. Scenario planning is a future-based approach by assuming problems needed to be tackled in the future to match various ways, which enables us to imagine the future and work out the most suitable development trend for us. It means that scenario planning is actually a process for us to think about the future when there isn't any certain and clear evidence to present hypotheses to support the future.⁴

Scenario planning, as a part of strategic planning, is an approach that many organizations, firstly including those in the private sector, use to design and implement long-term and flexible plans. To achieve their goals, survive and develop, such organizations need to fit with the existing environment.

Scenario planning is a method for organizations to think about the future during thinking process to define their own strategy. A team of researchers will gather to discuss and develop some possible scenarios for an issue that such organizations might face in the future. The issue may be a specific investment activity, for example whether we should construct a supermarket or a car park on a given plot for nearby residents? But in some cases, the issue may be much greater, for instance making a policy, such as the Ministry of Education and Training have to think about the increase in the number of universities or about the impact of demographic changes, thereby to determine the need for new schools; or whether the

⁴ Refer Shiroyama Hideaki/Suzuki Tatsujiro/Kakuwa Masahiro (2015), page 37

shortage of labor due to aging population can be balanced by an increase in immigration or labor importation?

Scenario is an effective tool to analyze future potentialities of an organization. But it does not mean that scenario is a forecast for future, actually scenario is a scientific and rational consideration on all probabilities in the future. While scenario planners start from the point of view that future is unpredictable, thus it is necessary to make various assumptions on future to actively response. Scenario planning allows us to assess possible outcomes of current plans as well as exploring possible benefits and costs of the future. With a good scenario, policy planners can better identify goals which should be achieved in a policy. If a favourable scenario was chosen for the future, the communities may choose to move forward by modifying current plans or making new strategic plans.

Model for scenario planning is a rational combination of three main factors, namely the objective analysis of environmental factors based on current data, the forecast on movement and development of the environment and the strategy of the organizations (see diagram 1).



Diagram 1: Position of scenario

Scenario planning is not about prediction of the future or provision of a specific answer of the future, it is imagination on how the policy should be consistent with the awareness of policy makers about the future. It is a method used to “see” the future which is not easily predicted by using past trends or assumptions. In a policy scenario, policy makers express their ideas through the recognition of the plans that might occur, including certain and uncertain predictions. Basically, it may imagine three forms of uncertain states:⁵

- Risk: whether or not an event or phenomenon happens in the future is identified by the signs primarily in the form of precedent events or similar phenomena in the past. This allows us to determine the possibility that things or phenomena could happen at a certain probability. Once a decision is made based on uncertain assessments or low probability, it is considered as a risk. The lower the probability is, the higher the risk may be. Risk is one of key factors determining to success in business, but being too risky or reckless and thoughtless often leads to failure.

- Structural uncertainty is a phenomenon which we would identify the possibilities of appearing via certain signs. The appearance of new phenomena are the result of the phenomenon which were already occurred, recognizable, but uncertain for us to determine the appearance of things or phenomena.

- The entirely unknowable phenomena: it is the factors occurring unexpectedly, without any early warning signs for us to think before hand (force majeure situation)

This method is not similar to the common forecasting method: the common forecasting method asserts that future is a consecutive line of the past and appears on the basis of what has happened in the past. It means predicting future in this way would be mainly based on the calculable data through analysing the data in the past

⁵ Kees van der Heiden (1996), page 83-93

and present. While scenerio planning is based on the viewpoint that future is unpredictable. As a result, it could only provide some possibilities of the future, meaning to imagine various scenarios to gain advantages of initiative in the process of policy making in the future.

Scenarios were used early in military intelligence to assume the ways responding to the assumed activities of the enemy.⁶ The researchers believed that the scenerio planning is to imagine the future was firstly applied in the tactical maneuvers of the US Army in the World War Two.⁷

Pierre Wack was the person who had deserts in making the scenerio planning become a future approach for the development strategy in an organisation. He applied the new approach in the activities of developing strategy for Shell Corporation since the middle of 1960s.⁸ He was also the first person to determine the main elements applying the scenerios as a tool for developing strategy of an organisation. Also, those who laid important milestones for scenerio planning were Napier Collyns and Peter Schwartz.

Royal Dutch Shell is one of typical examples for success in applying scenarios to develop strategy. In the early 1970s, Royal Dutch Shall conducted scenerio planning related to oil prices.⁹ At that time, Shell gathered a team of internal and external experts to forecast the oil prices based on the Delphi method,¹⁰ however, the outcomes of this method showed a resulting of "crude oil price in future would only increase by 2 dollars per barrel". Not satisfied with that result, Shell's team went back to study the factors possibly influencing on the prices of crude oil to determine the predictable and unpredictable factors. The team recognized that the size and structure

⁶http://en.wikipedia.org/wiki/Scenario_planning. Access on the 05th of March, 2015.

⁷ Shiroyama Hideaki/Suzuki Tatsujiro/Kakuwa Masahiro (2015), Page 36

⁸ Kees van der Heiden (1996), Pg.x.

⁹ Regarding "Scenarios on oil crisis", see also Shiroyama Hideaki/Suzuki Tatsujiro/Kakuwa Masahiro (2015), pg.36-37.

¹⁰The Delphi method, developed by RAND Corporation in 1950s, was the method of gathering information about future, based on interviewing experts on various different fields in regards to their forecasts in different professional fields.

of crude oil supplies were factors that would forecast certainly, while those who manage reserves and volume of the exploitable oil and the behavior of the governments governing their countries with large oil reserves are unpredictable (*uncertain factor*). The team rebuilt a hypothesis in this direction and the latter scenerio was called “Oil crisis scenerio”, which clearly indicated that the behavior of the oil exported countries was hard to predict, and they could refuse to countinuously increase outputs of oil exploitation if it did not give any meaning or benefit to them. In fact, in the fall of 1973, oil crisis happened, oil prices jumped to a record of 4 times within only 2 months. Shell immediately realised that the scenario of “Oil crisis” tended to become a reality and promptly made a number of strategic decisions By dint of these decisions, after passing the oil crisis, Shell overcame other competitors to become one of leading oil companies. The method “scenario planning” that Shell started up has still applied to this day.¹¹

The success of Shell in developing strategy based on scenario planning method has gradually attracted other companies to implement. In recent years, scenario planning method was applied widely to other areas of society and economy such as in enterprises and public sector. Scenario planning in strategy developing process has been applied recently by some global large corporations such as Royal Dutch Shell, Motorola, Disney and Accenture, aming to determine their strategies and to orient for the development of these corporations.¹² Today, large enterprises in energy sector such as EDF power company of France, Pacific Gas & Electric of the US and Shin-Nihon oil company of Japan etc. have taken the leading positon and these companies have applied successfully this method. Some enterprises in other sectors such as pharmaceutical manufacturing, media and foods are also utilized this method effectively.

¹¹See also Shell (2013): New Lens Scenarios- A shift in perspective for a world in transition.

¹²<http://www.economist.com/node/12000755>

According to Bain & Company in the annual survey on management tools, less than 40% companies applied scenarios in their development strategies until 1999. However, the number of companies applying this method to make strategic decisions increased to 70% by 2006. The attraction of applying the scenario planning method for predicting future also rose significantly after the terrorist attack on September 11, 2001 in the United States and the recognition of uncertain factors (unpredictable factors) would face more in the 21st century. As a results of their scenario planning, Board of Directors of the New York Trade Center decided to build a second trading floor in 1990 which were located outside the World Trade Center. This was an important decision to retain the operation of the Center after the terrorist attacks against the twin towers in New York on September 11, 2001.

1.1.2. Policy scenario

Scenario for public policies is a method to determine choices for state policies based on identifying the assumed scenarios of the environment in the future. That environment is the result composed by various different factors, including predictable and unpredictable factors.

It is understood that: Policy scenario is the result of the research and the development of orientation (outline) for model to solve problems posed in policy making. For example, throughout the study of the economic situations during the last few years, it has shown that the economic, financial crisis in the world as well as the difficulties and instability in the local economy has posed Vietnam to many great challenges and a demand for intensive reform. Many policy programs were set up, especially the reform program of restructuring the economy, transforming the quantitative growth economic model to qualitative one. But time still goes on and there are many reasons for suspicions about the ability to implement the urgent reform ideas which were established. Additionally, long-term issues should be

established through specific steps right from now on, including improving the business environment, restoring the publics and investors' confidence, reducing administrative instructions and government interventions in economic activities, reforming the land relations and the market structure in the fields of administration. Hence, the necessary measures would be identified for policy making purpose.

Policy scenario is a description of the forecast/ oriented plan to solve policies, which might happen in a social-economic development environment. It is anticipated with the imagination based on the accurate forecast and invalid data that policy makers would be imaginable in the future. Each scenario is compatible with an assumed environment in which the researchers would identify factors that may appear in the future.

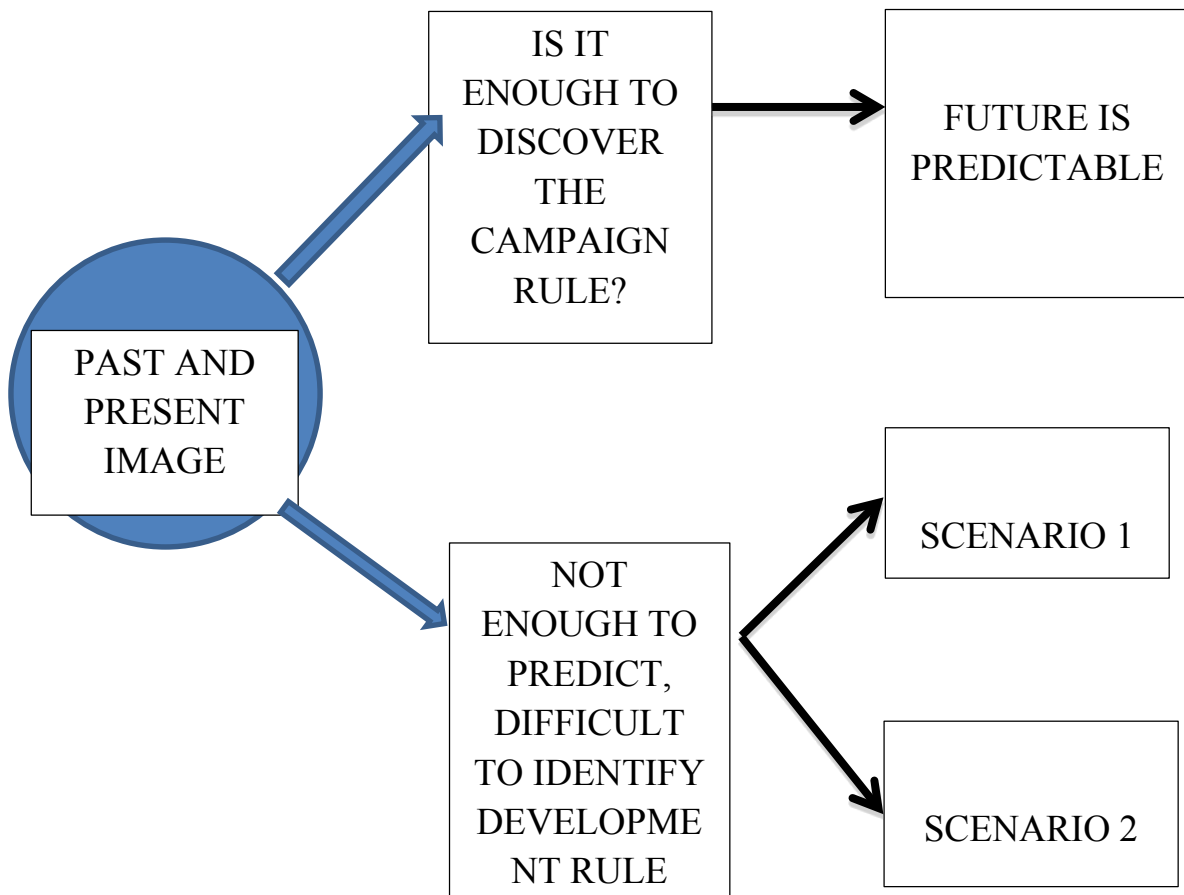


Diagram 2: Scenario and plan

The method of planning scenario was firstly applied and widely used in the private sector; however, it has been currently expanded in a diversity of application scopes. Not only do the large private companies in the private sector but also the governments in many countries adopt this strategic thinking method in the process of developing their policies.

“Planning by scenario” (or “strategy making by scenario”), was developed dramatically especially from early 90s of the 20th century in large enterprises in developed countries, as a typical phenomenon of actual economic development in the West when scenario was widely used in late 60s as an option for forecasts or plans for future development of enterprises. Forecasts are made based on authentic data which are basically quite close and define the only one development plan for the organization. In fact, especially under unpredictable changing conditions of external environment, they often bring about mistakes. Thus, by applying planning by scenario to a specific organization, some co-feasible plans are formulated, but they are quite inconsistent with future development of external environment. Moreover, basic characteristic of such forecast scenarios is that they are tools for formulating the overall strategy; therefore, they focus on key perspectives of organization managers when making strategic decisions.

The United States of America (US) is a leading country in the use of scenarios to develop public policies. In the US, even before the terrorist attacks on September 11, 2001, the United States Commission on National Security has developed a scenario of national security in which it has described the potential menaces in the future for the United States in the next 25 years.¹³ In the reports, the Commission has analyzed that the international security environment and the development of the national security strategy of the US are adaptive to the environment by the means of

¹³ See the United States Commission on National Security/21 century, 1999. This Commission is also often called Hart-Rudman (Hart-Rudman Commission) OR Hart-Rudman Task Force on Homeland Security.

scenario planning. In the report, the researching team confirmed that the US have to respond with the sudden changes of security and ensuring the security depends heavily on allies but seeking reliable allies will be very difficult.

The UK Government continually plans the future scenarios called "*Foresight Program*" as a basis for determining the strategic policies. Some international organizations such as the International Energy Agency IEA also conduct energy scenario planning for the future.¹⁴

In Vietnam, the scenario has also been mentioned in the process of forming public policies in recent years. In many policy areas, scenarios were also applied to give strategic direction to respond to important issues. For example, with awareness of many unexpected and unpredictable factors in the current world, it should have different scenarios in order to actively cope in the future. On the morning of 23rd May, 2014, in the group discussions on the economy - society, many Deputies of the National Assembly have a common concern: a need of economic scenario planning to respond timely and suitably to movements in the situation on the East Sea.¹⁵ As science based and reliable assumptions of the future evolution of the economic - social relations, Gross National Product, greenhouse gases, climate change and rise of sea-level, indicating the ties between development and global actions in the future, the climate change scenarios were also developed and implemented training at both central and local levels to avoid the unexpected.¹⁶

In the cycle of planning - from the conditions analysis (observation) to the performance (action) - the methods of scenarios planning are used in some certain

¹⁴See Shiroyama Hideaki/Suzuki Tatsujiro/Kakuwa Masahiro (2015), page 37

¹⁵www.tuoitreonline.com.vn on 24/5/2014.

¹⁶For example, the scenario of climate change and rise of sea level for Vietnam is planned according to the scenarios of emission of global greenhouse gas including the scenario of low emissions (B1), medium emission scenario (B2, A1B), high emission scenario (A2, A1FI) - See announcement of scenarios of climate change and rise of sea level which were published by the Ministry of Natural Resources and Environment in 2012.¹⁷ The Resolution of the Ninth Congress of the Party.

periods. Those methods are effective tools to change the environment and the possibilities. The scenarios based on the tendencies (contrasts, different options) can be used to form and select the strategic issues. Then, the choice of strategy will be undertaken to develop management issues. However, to purely depend on the scenarios is not enough.

Scenario planning techniques can also be applied effectively to define the strategic vision and visualize the perspectives of issue development. The realization of the strategy may be more important than the planning itself. The implementation process is not always consistent with the scenario; however, the scenario and the vision are always important directions for the policy implementation. It can also be used to evaluate the operation results and the chosen direction.

Scenario planning – a part of strategic planning, is attached with the tools and techniques which allow to manage an “unsecure” future. The nature of this approach is to study the external environment of the issue on the basis of the predetermined elements and the key uncertainties and link them to form scenarios for the future selection.

The predetermined elements probably include: demography (e.g., the number of children aged 10 to 15), politics, technology, geography, etc.

The key uncertainties are probably: any environmental factors that are critical to the raised issue (e.g., the level of the budget deficits of the State or the market volumes).

Each scenario to choose (which are interchangeable) should consist of aggregation of the predetermined elements and different outcomes of the key uncertainties. The scenario planning should be directed to building scenarios which may equally happen in the future.

For instance, as our country is in a phase of international economic integration; public policies are affected not only by the national factors but also the global ones. Policy on the agricultural development is an example. As the price of rice in the world market has recently been pushed up high, which raises the issue of food security, the policy on agricultural development in our country requires the appropriate recalculation, reconsideration and readjustment accordingly. Obviously, the public policies of a country are being affected in a wider scope and at a higher level. The public policy formulation requires the review, analysis and assessment of the impacts on the policy implementation and methods, thereby becoming the basis for choosing the policy options consistent with the reality.

The policy of our Communist Party and the State is to gradually build a democratic society where people are humane, well-educated, respect laws and disciplines; everyone has equal conditions and opportunities in promoting their talents and creativity and in pursuit of a prosperous, free and happy life, "... Performing several forms of distribution, the main one of which is based on the labor productivity and economic efficiency; others of which are based on different contribution levels and production & business performance; and conducted through social welfare along with reasonable policies on regulation and labour right protection. Encouraging legal enrichment in line with poverty eradication, narrowing the gap of development levels, living standards among regions, ethnic groups and citizen classes".¹⁷ In essence, that's the fundamental idea of the socio-economic development strategy of our country in the transitional period to the socialism.

From the above direction, the orientation of combining the economic policies and social policies at the national level is as follows:

¹⁷ The Resolution of the Ninth Congress of the Party.

- Combination in the objectives and directions of the socio-economic development strategy of the country in the transitional process to the socialism;
- Combination in the overall planning and the five-year term socio-economic development plan;
- Combination in the development, institutionalization and legalization of social policies;
- Combination in the annual budget balancing and plans which define clearly the proportion and scale of investment for social policies with prioritized issues chosen;
- Combination in the integration of economic programs/projects and social ones.

The combination of the economic policies and the social policies right at the beginning requires the State to make smooth combination and appropriate integration of the economic growth and social objectives. Depending on each period, it requires the State to introduce decisive policies focusing on developing the economic priorities or giving favour to solving the pressing social issues.

The field of scenario planning has not been defined clearly enough. It is the combination of various trends and methods used in very different contexts in term of objective and scale. Therefore, the scope of scenario planning contains a lot of conflicts and paradoxes that need to be settled, specifically:

- Planning and training: determining in accordance with basic requirements of operations.
- Complexity and simplification: Selecting basic contents and integrating to scenario issues that can be implemented.

- Comprehensiveness and limitations of abilities: Scenario collection needs to be sufficiently and adequately comprehensive to cover the most practical aspects of external environment. However, our brain capacity can only handle matters limited in about 3-5 scenarios simultaneously.

- Selective, creative and analytic thinking: To be able to build an effective scenario, we need to have selective, creative and analytic thinking. However, people often think “like this, like that”. It is necessary to different such a way of thinking from selective, creative and analytic thinking.

- Process and analysis: Scenario planning process aims to provide a viewpoint for creating decision-making conditions, or targeting future perspectives but it does not always result in quality analysis results.

- Identification of uncertainties and management of those problems. Scenario planning techniques sometimes are used for searching and discovering methods to identify uncertainties and manage them.

- Renovation and assessment: Planning scenarios that are associated with renovation and deemed to be different from processes with targets on assessing perspectives and strategies, etc.

- Long-term and short-term characteristics: For short-term periods, it is often easy to plan scenarios based on trends; therefore, most changes have happened. For long-term, the indefiniteness and interruption are negative. When focus is placed upon actions, it is more suitable than short-term assessment. However, for the urgency of arguments, it is necessary to consider long-term perspectives in making short-term decisions.

- Future forecast and past analysis: Scenarios can be planned or follow the direction from present to future, or follow past-directed method (past analysis).

- Ideologists and decision-makers: How are they attracted into the process? Because, on one hand, there is often a risk that internal “plots” may make the process complicated while, on the other hand, raising the capacity to implement issued decisions.

- Internal perspectives and attraction to external members (consultants, experts, customers): Scenario planning can only be carried out internally, without requiring external participation. External experts can make positive or objective contributions, but their appearance can make discussions “lack of openness”.

- Complete scenarios and scenarios that can finish differently. Scenarios are often used to make specific decisions, but they can be also effectively applied for research objectives and analysis of various options for event development.

- Intuition and scientific arguments: Basically, scenario planning is a creative and initiative process. Nonetheless, this process needs to be based on careful study of past and current conditions and future development trend.

- Intellect and emotion: Scenario planning is an intellectual thinking process because it is related to the consideration of what can happen. However, for thinking to have influence on decision-making, it is required to coordinate emotions. Decision-makers need to have enthusiasm, passion and interest in the effectiveness of decision (“Cool head and warm heart”).

- Viewpoint protection and exchange: Frank and open exchanges are intended for planning good scenarios. However, protection of certain scenarios can make discussion process become more active, and develop arguments and logics provided that protection is not “outrageous”.

- Skepticism and competence. Knowledge and experience are always necessary in scenario planning, but they are insufficient. Skepticism toward familiar opinions and prejudice is also very necessary.

- Quantity and quality: On principle, scenarios are imagined structures. However, to have a certain level of reliability and persuasiveness, we need to base on data and quantitative expressions.

- Probability and reasonability: Scenarios need to reflect changes of the future (to make short-term decisions)? Or reasonable selections for distant future, or both of them

1.2. Contents of policy scenarios

In planning a policy scenario, it is necessary to change the approach of the policy-makers and to understand correctly and clearly what can be forecasted and what cannot be forecasted. Each way, in which policy-makers envision the future, will offer a compatible scenario. Therefore, the way that we think about the future holds an important position in the scenario planning.

Policy scenario contains many different contents, depending on each sector, specific policy issues, nevertheless including the following main contents:

Description of policy environment: the recognition of the events taking place at the present time permits policy makers to make predictions about the future environment, in which the public policy should be implemented and impact on the social life in a scientific manner. Thus, in a policy scenario, the description of future environment under the assumption of policy makers is indispensable. With every assumption about the future, there will be a separate policy scenario which is different from other scenarios.

Description of scenario (assumptions): The scenario should propose simultaneously some pictures of the future. Each scenario should differ in structure, but the content of each story should tell about the world with a logical consistency.

Every picture of policies is developed in accordance with an assumption of the environment, in which it contains what could be determined certainly and images of what is uncertain in the future.

In this section, with each assumption of the environment in the future, policy makers should identify one or some certain policy plans and clarify the reasons for proposing those orientations and policy solutions.

Analysis and evaluation of the scenario: After outlining scenarios, i.e. determining the policy directions to implement in accordance with assumption environment, it needs to analyse and evaluate each plan in detail to redefine exactly optimal plan.

The optimal level of each policy option should be demonstrated by the specific data and practices to ensure the science and objectivity, avoiding the policy options coming from subjective need of policy maker or group benefits. Basically, predictions can be inaccurate, therefore, to limit the subjectivity of the policy makers, it should develop the logical thinking in analysing and forecasting.

1.3. Benefits of using scenarios in public policy making

Scenario is a powerful tool, which is used quite diversely in developing and implementing an organization strategy. It is especially useful in developing strategies to proactively respond to a series of recent events that we have seen but they are not predictable in the world economy. Scenarios allow an organization's strategies to not be dependent on a single prediction and help strategic regulators to avoid paralyzation, confusion in difficult times. The reasonable and scientific analysis of these scenarios helps policy-makers to have better overview for the studied policy area. Although in Vietnam the scenario planning is a new issue and is only mentioned recently but it begins attracting attention of both researchers and policy makers in practice.

Where the scenario planning is well conducted, the scenario has a lot of advantages.¹⁸ It can help managers of both organizations in the public sector and the

¹⁸http://www.mckinsey.com/insights/strategy/the_use_and_abuse_of_scenarios

private sector to make better strategic choices in a world with several unpredictable changes.¹⁹ Therefore, the identification of scenarios allows us to visualize policy environment. It means the environment in which the state should take actions to lead the society.

The scenario has become a powerful tool for understanding the future and developing strategies accordingly.²⁰

Firstly, the scenario allows us to expand our thinking and understanding about the surrounding environment.

We will think broadly if we develop a range of possible results by viewing the development sequence of events taken place in the past and at the present. We can establish the causal relationship and anticipate the development of the phenomena in the future. We expect that the future will be like the past or will be a change of the past but only happen gradually without sudden changes and according to what we visualize and calculate. However, the predictable factors are very finite and even any small change at any given time can deflect our calculations.

According to theorists of the Marxist materialism, cognitional ability of human is unlimited, i.e. there are only things which we do not know yet rather than we cannot know. Theoretically, in the future, human beings will be able to know everything. However, with the current conditions of human, the predictability and anticipation of future movements of human are still very limited. The recent crises such as the financial and monetary crisis in Southeast Asia in the late 1990s, the world economic crisis in 2008 or the drop in oil prices at the recent period of 2014 to 2015 are the most tangible evidences of this assertion. Many economists made great effort in using data of a few recent years to establish the financial models through

¹⁹ Ringland, Gill (2014), tr.xi.

²⁰http://www.mckinsey.com/insights/strategy/the_use_and_abuse_of_scenarios

analyzing the movements and believed in the objectivity of the economic rules and thus they were almost unprepared for responding to the unexpected.

The scenario planning helps us to have the insight of the processes governing the changes and to give answers under the assumption relation, i.e. the scenario has to always answer the question: "What would happen if ...?" As a result, via identifying such assumptions we can test a series of hypotheses related to changes in all specific context. Along with the policy scenario planning, we could have in-depth understanding of the surrounding environment and the future. It is due to our perception of several events going on in reality in accordance with a trend or a larger format and interpreting the meaning of what happened.²¹

If we can feel quickly the change, action can be taken also faster. Thus, this capability building of awareness will enable subjects to make decisions in order to quickly cope with the changes.

Secondly, through the scenarios built in a scientific manner, we envision the inevitable or mostly inevitable future; thereby we can improve our awareness capacity and cope with potential changes in the future.

A scenario planned cannot be entirely accurate, compared to what might happen in reality latter but it is the imagination of the future, based on what are happening in reality. Therefore, the scenario helps us to envision the assuming future with the specific details and thereby we get the activeness in reality. The scenario planning also assist us in being ready for coping with the uncertainty and unauthentication which can occur in the future and therefore we will not be surprised when these phenomena occur. Even if the imagination isn't completely exact, it also helps us to think coherently about the problem, avoiding the failure of knowing how to react to the changes taking place in the future.

²¹See Shiroyama Hideaki/Suzuki Tatsujiro/Kakuwa Masahiro (2015), page 38

In the process of scenario planning, defining the future is usually considered based on the imagination by a group of capable persons, so it helps us often avoid possible errors in formulating the strategy in the normal way. In practice, the participants normally focus and tend to support the ideas of persons with the highest position. In the organizations with strong hierarchy, staff will wait for the most senior leaders to express their opinions, and then staff speaks his opinion accordingly. This puts the strategy on the right track which the leaders desire and thereby they can more easily operate, on the other hand, it usually makes creative ideas early aborted and difficult to be accepted. The scenarios allow the companies to escape from this trap by providing a "safe heaven" for diverse thinking.

Thirdly, being the most important point, this method helps decisions makers cope with the unauthentication and unpredictability of the future. It is unable to make sure that the stories will come true exactly as were written in the scenario.

However, more importantly, it is the existence of inauthenticity. When experiencing scenario planning at the first time, many people realize that their company's business strategies have been ever developed with a premise of a silent future. They are surprised once knowing that it is possible to appear another future which is different from predetermined future²².

A good policy scenario can also support the dissemination of the policy to the public, assisting the public in learning how current policies may influence on their lives in the future, thereby seeking the community's support towards policies of the government, making the promulgated policies feasible in practice.

1.4. Requirements for a policy scenario

In the process of planning a scenario, policy-makers shall play a simulation game, which combines current collected events, data of the nation to forecast the

²²See Shiroyama Hideaki/Suzuki Tatsujiro/Kakuwa Masahiro (2015), pg.38

development in the future, such as number and structure, distribution of the population; natural characteristics, military-political geography, information technology, etc...with comments and feelings against the unclear events or they anticipate events with no signals to happen in the future under a consistent context within their possible imagination. Thus, each country should plan its scenarios based on its own characteristics, or in other words, there are no similar scenarios for different countries.

A policy scenario is not a forecast for the future of a policy. Intrinsically, it is an outline of the future with specific assumptions of the research group presenting both what they can predict and what they can envision but yet identify any signals for exact forecasts.

In order to do this, in addition to making forecast by logical rules, reflecting the normal development of the status quo in predictable trend, policy-makers need subjective sense to envision unexpected events from what are not fully existed.

A good scenario should meet following requirements:

- To clearly reflect the link between the present and changes in the future, connecting predictable and unpredictable things.
- To be argued logically, showing the causal relationship between the assumptions and solutions for problems of the government.
- To figure out solutions to handle with assumptions in the scenario.

2. FACTORS AFFECTING TO PUBLIC POLICY SCENARIO PLANNING

2.1. Possibilities (predictable and unpredictable)

Everyone develops a scenario for their issues in the future. Human brain always goes ahead and handles information on what would happen. All living

organisms, for example human being and organizations, need a certain functional system to receive feedbacks for determining what would expectedly happen. To make the decision for the next step, we always need information of the future, which means we need a “predestined connection with the future” system.

As mentioned above, scenario is different from forecast and prediction. Forecast is normally quantifiable. However, it is sometimes thought in form of a scenario and is a certain description of what may happen, or what we need to accept and what we need to overcome. This is also the case for prediction, which means our expected future, it also contains risks; it is quite clear to perceive, but it is also quite “vague” for people to be attracted. In the process of formulating policy scenarios, forecasts can be used as input information. At the same time, strategic prediction is normally one of the results of scenario planning.

Scenario is a clear description of the most possible plan that may happen in the future and is the way to imagine the future with expectations of the planner in the most reasonable manner.

The more we look into the future, the better we can realize that there are more and more unpredictable factors. For example, if we can imagine the future which is one week away from present moment, the quantity of possible developments within one week is not much because all the data for making forecast is almost correct. However, if we anticipate a longer period: 5 years, 10 years or further, there will be more probabilities. Some future probabilities that can be perceived at present are more realistic than others.

Here, there is a correlation between possible future possibility, probability and expectations of strategy planners. Even scenarios are always planned in our mind; we (individuals or organizations) hardly develop them systematically. Scenario planning is often limited to efforts to envision or forecast the consequences of making choices

of decisions. The question is what consequences could happen, for example: a signed contract or actions of the competitors. However, systemization of possibly happening scenarios hardly occurs in our mindset. One of the reasons is that this work requires such a lot of time, effort and knowledge. If scenario planning is not considered as a thinking exercise, someone in the organization should be responsible for the continuity of its operation, while one or more others shall draw conclusions and analyze possible consequences thereby choosing strategic solutions.

The further future is forecasted, the less reliable the forecasts become, especially for the more complicated range of issues. Because of the increasing indeterminacy, it is raised the need of other planning tool for research and study of the conditions of the future work to identify potential risks and prepare for various possibilities rather than only one possibility.

Meanwhile, we are not able to study each possibility of the future. Simplification is the way out to solve complicated situations. Thus, planning scenarios, especially effective ones, is a necessity to minimize most of unclear issues and obtaining possible orientations, including the most important indeterminacies.

2.2. Political orientation

This factor is closely related to the administrative management principle “depending on politics and serving for politics”, a factor which is principal and widely spreading to any nations. A policy orientation though taking into account unexpected elements may not be separate from political orientation of the ruling party.

Thus, in Vietnam originating from the unique leadership of the Communist Party of Vietnam to the State and the society, its guidance and policies always take the leading role to the State in determining the content and direction for the

development of legislation. Therefore, policy scenario planning should take development orientation of political directions of the Communist Party of Vietnam into account and make appropriate decisions.

The Party's leadership is the prerequisite and the highest guarantee for the existence and development of the State. Every activity of the State is led by the Party, including development of legislation. This is an objective requirement and becomes the decisive factor in the performance of the state apparatus.

The Party's leadership is the supreme principle over the activities of politics system, is the red thread guiding through the entire operation of politics, economy and national defense. The Party determines main directions, plans and contents of legislation development in accordance with the Party and science. The Party's resolutions and documents are solid basis for the State's formulation of legislation.

Through the State, the Party directs social administration by laws. The Party leads the State, rather than taking over the State's functions, and the Party's documents are certainly not laws. Therefore, the State shall concretize them in legal regulations.

In developing legislations, the Party exercises its leadership by introducing proper guidelines and appropriate policies and measures, depending on the objective context of the countries in each stage of development. Thereby, the State has the basis for the formulation of legal regulations. In doing so, the Party should understand deeply the objective rules of the social movements and development and status quo of the domestic economy, politics, culture and society together with the foreign relations so that the guidance of the Party shall be often scientific and most feasible, in line with the rules of social developments.

The Party, through the State, carries out the training and selection of moral, talented and capable people to work in the State agencies. Legislative formulation

shall be conducted by ones with sufficient professional capacity and legal qualification. These people who are assigned by the Party and trusted by the public, will be the bridge between the Party and the State at every level, and able to understand deeply the Party's visions and directions a, to know how to legislate these visions and directions into laws of Government. Via the system of the State agencies, the Party monitors the process and assesses the formulation of legislation by the State, thereby contributes its comments for the State to correct shortcomings in this work. Meanwhile, the Party also examines the rightness of its policies in the Government's operation to have appropriate adjustment.

The Party leads the people to contribute their comments to the process of legislation formulation, to supervise activities of the Government and support the people to exercise their sovereignty in all aspects.

In compliance with these fundamental principles, the policy scenario should be planned so that it is suitable to the socio-economic development guidelines under the Party's political orientation at each development stage (period) of the country. Our country's policy scenario should be established on the basis of following political orientations:

1) Carry out proactive and strong international integration; firstly, carry out international economic integration, and through it, develop the economy, promote the industrialization, modernization and build up an independent and autonomic economy, leveraging our country to be an modern-oriented industrialized country.

The main mission of our country's revolution during the transitional period to socialism, skipping the stage of capitalist system is to develop an infrastructure for socialism with modern industry and agriculture, advanced culture and science. To successfully carry out this important task, industrialization and modernization are

necessarily conducted, which means transforming a backward agricultural economy into an industrial and civilised one.

The essence of industrialization and modernization is to transform the entire social production with the mainly manual labour into the one with advanced methods providing high productivity.

Industrialising and modernising the national economy in the context of economic globalization, we have to build an independent and autonomic economy. An independent and autonomic economy firstly means its independence and autonomy in regards to guidelines and policies on socio-economic development, or economic - political conditions rather than those set by external forces. It has sufficiently economic potential; increasing accumulation of domestic economy; endogenous capacity in science and technology, ensuring the food security and energy safety, finance and environment, etc. Building independence, self-reliance economy, along with proactive integration into the regional and international economies, thereby striving to make our country basically become a modern industrialized country by 2020.

Being active in integrating into world economy enables us to shorten the differences with countries in the region and in the world, which is convenient for the expansion of domestic consumption market (advantageous products). This process also helps create fast, effective and sustainable developments, which need to be thoroughly grasped in all sectors and fields of the economy both in immediate term and in long term.

2. Prioritising productive forces development and establishment of socialist-oriented production relation.

According to the most common rule regarding suitability of production relations with the nature and level of productive forces, any changes of the production relations is the inevitable result of productive forces evolution.

Throughout the renovation process, the Party and the State of Vietnam have always concentrated upon prioritisation for the development of productive forces; several economic sectors are invested and gradually modernized. On the other hand, they have also not underestimated the construction and completion of new production relations accordingly. In fact, for the past few years, in agricultural and rural development sector, the alignment between the level of productive forces development and the new production relations has created important development in these economic sectors.

3. Promoting internal strength, utilising external resources for fast, effective and sustainable growth.

In the context of economic regionalisation and globalisation, the Party indicates clearly that it is a must to promote internal strengths and regard them as decisive factors. This means that it is necessary to establish an independent and autonomic economy, promote internal strength for the development of the country.

However, in the context of increasing globalization and international integration as today, external resources must not be taken lightly. There should be an appropriate strategy to take advantage of investment capital from abroad through integration process to accept the achievements of science and technology, management experience, etc. This is considered to be important additional resources for the development of the country.

4) Economic growth goes together with cultural development, gradually improving material and spiritual life of the people, making social progress and justice, protecting and improving the environment.

The concept of nowadays development is recognized in a more comprehensive manner (sustainable development). Apart from indicators of economic growth

(income per capital), development also encompasses many other important indicators on the values of culture and humanities.

For our country, the socialist oriented economy requires economic development associated with advancement and social justice, people's knowledge enhancement, preservation and promotion of national cultural identity, protection and improvement of the environment; encouragement for legitimate enrichment, as well as hunger eradication and poverty reduction, reduction of income gap between regions and social classes, etc. Ensuring social justice must be implemented immediately in every step of the development process

5) Combining socio-economic development with strengthening national defence and security.

Policy of national construction along with national defence, which is an important policy of the Party and State, has been thoroughly applied in combining economic development with national defence and security.

Economic development provides the basis to build up people's trust in the Party and State, as well as strengthen national defence and security. On the other hand, strong national defence and security provide a favourable environment for rapid and sustainable development of the economy and society.

Our Party has defined: "Basic conflicts in the world manifested in several forms and to different degrees still exist and develop. Peace, national independence, democracy, cooperation and development are major trends; but national struggle, class struggle, local wars, armed conflicts, ethnic and religious conflicts, proliferation, intervention, subversion, terrorism, territorial disputes, disputes for sea, islands, natural resources and competition for economic benefits continue to be complicated. Asia - Pacific and Southeast Asia regions have made dynamic development, but there are also potential factors of instability. That situation create opportunities for development, while placing severe challenges, especially for developing and least

developed countries.”²³Therefore, we must constantly strengthen our vigilance, be fully and properly aware of the relationship between economic development and national defence and security reinforcement.

2.3. Socio-economic development level of the nation

In addition to achievements that make our country's position and strength much higher than before, our country still faces many challenges. Four risks that our Party has pointed out are: Economy is much more backwarded than those of many countries in the region and world; Socialist misdirection; corruption and bureaucracy; "Peaceful development" caused by hostile forces are still unresolved, complicated and connected and can not be underestimated.

Among risks, it is necessary to properly identify internal risks. 4th Meeting of the Central Committee (9th Congress) in identifying urgent tasks in the development of the Party stressed that:²⁴ Besides achievements, the work of Party building contains a lot of limitations, weaknesses, and even shortcomings lasted for many terms, which decreased people's trust in the Party; if they are not resolved, it will be great challenges for the leadership of the Party and the survival of the regime.

A large part of officials and party members, in which there are those holding positions of leadership, management, including a number of senior officials show the degradation of political ideology, ethics and lifestyle with different expressions of the ideal deterioration, falling into selfish individualism, opportunists, pragmatic man; chasing after fame, money, status envying; corruption, waste, arbitrary , unscrupulousness.

Officials of central and strategic level are important, but they are not yet built in a fundamental way. Planning new staff focuses on local implementation only, not

²³ **Political program national construction in the transitional period to socialism.**

²⁴ Party Central Committee's 4th plenum Resolution (11th session) on "Urgent issues on current Party building"

at national level, leading to the feeling of uncertainty, patchwork, asynchrony and lack of initiative in the allocation and assignment of staff. In some cases, the assessment and staffing are not very impartial and objective, failure to base on work requirements, or improper assignment due to capability and credibility. This has affected the credit of leadership body, the development of industry, locality and the nation in general.

The principle of "collective leadership, individual responsibility" in fact falls into the formality in many places, because it does not clearly define accountability mechanisms, the relationship between team and individual, when errors, defects appear, no one is responsible. Thus, there remains both phenomena of relying on collective without any individual responsibilities, and not encouraging leaders with enthusiasm, passion, and bravery to think and do. This has created opportunities for irresponsible way of doing things, stagnation, or subtle abuse of power to pursue personal interests.

2.4. National socio-economic development plan (strategy)

Plans (strategies) for socio-economic development are often built in a relatively long period (usually 5 or 10 years, there can be a strategy with a vision toward 50 years in the future) and contain the most extensive and important orientations for development. Therefore, this strategy is one of the important basis to develop policy scenarios for specific industries and areas.

A built industrial policy may not be conflict with the overall development strategy of the country, and must also not contradict or hinder the development of other industries and fields. Therefore, in order to imagine the development of policy in each industry or area in the future it is necessary to clearly understand the overall development strategy.

2.5. Capacity of policy planning team

Perception and skills of policy makers are decisive to the fact that how exactly policy scenarios can be visualized. To obtain good and proper policy scenarios, policy makers need to have specific skills such as:

1) Skill of information collection and comparison. This skill requires civil officers to adopt methods, principles of information collection and comparison as a routine of their work. This is the first important skill of collecting and processing information.

2) Skill of logical thinking. Logical thinking ability allows policy makers to link collected data and information together to figure out the relationship between them. Thereby, they envision the development of problems in the future and give appropriate script for them. This supports the collection of documents and request of explanations with reference to conducting the comparison, analysis, synthesis, generalization of sources of evidence.

3) Skill of orientation. That is the skill to accurately determine the direction of research, testing and handle properly case scenario to achieve the purpose of indicating the exact source of evidence. Skill of orientation requires the ability to apply in an effective way, appropriate steps to collect and process information and the patience, satisfaction achieved through each item of work to clarify the accuracy and objectivity of all jobs.

2.6. The impacts of new international context

In the current context of globalization and international integration, no country can grow rapidly without involving in the process of globalization. Integration helps a country expand its international market, access sources of capital, enhance the ability to obtain scientific-technological achievements in order to develop human resources,

etc. Therefore, international context has strongly influenced the development of national policies.

Current international context is reflected in the following basic characteristics:

The trend of both competition and cooperation among countries is common. While interwoven interests and interdependence force countries to carefully consider before creating conflicts with other nations, smaller conflicts still occur daily in multiple locations around the world.

The revolution of science and technology over the world has achieved great leap. With such great speed of development, science and technology will certainly achieve many miracles in the upcoming time, especially in the fields of electronics, information technology, biology, new materials, energy, space research etc. ... these fields have direct impacts on every aspect of the social life in every country.

Knowledgeable economy is an economy based on advanced science and technology and modern information network associated with high productivity, quality, efficiency, growth, quick restructuring and non-stop innovation. However, this is also an economy associated with risks and placing challenges for nations, especially for underdeveloped nations.

Economic globalization is an objective trend which more and more countries are attracted to participation. It is a great opportunity for us to carry out the task of forcing strongly industrialization and modernization, to shorten the development process by leapfrogging. On the other hand, modern capitalism and the enemy forces nowadays have the advantages in capital, technology, market, and attempt to take advantage of this trend to dominate the process of economic globalization, for the economic and political benefit of capitalism, conducting cultural and information invasion, and also exploiting workers and natural resources of underdeveloped countries, including our country.

3. POLICY SCENARIO PLANNING PROCEDURE

Preparing for a policy scenario is a closed circulation process and usually comprised of major stages as follows:

- 1) Analyzing factors that affect the development of our country and each industry and section in the future.
- 2) Identifying scenario framework for developing logical scenarios, with no conflict on the basis of linking the basic motivations.
- 3) Describing the logic of each scenario and determine the most probable scenario.

3.1. Identifying factors affecting the development of Vietnam in general and the specific industry, areas in the future

The most common factors affecting the development of Vietnam play a fundamental role in determining future environment of policies. All sectoral, regional, and local policies must be based these factors. Therefore, identifying common elements plays a particularly important role.

The most common factors that affect the development of Vietnam in the future include:

- Political environment in the country and in the world;
- Level of national socio-economic development;
- Development of science and technology;
- Intellectual standards and needs of the people;
- ...

Based on this common environment, each industry and area has specific characteristics of development. One factor may be favorable for the development of this industry and area but can be an obstacle to the development of another industry and area. For example, increasing awareness of the people about harmful effects of tobacco can lead to new directions in the prevention of harmful effects of tobacco, to facilitate health sector in the propagation and dissemination of Law against harmful effects of tobacco but this makes tobacco industry lose and other policies are required for development. For example for real estate market, when considering factors affecting the development of real estate market, following points need to be noted:

Firstly, the global economic situation, especially the public debt problems of European countries: If the European countries overcame the debt crisis, at the same time, the world economy had no negative movements; money could flow smoothly around the world. Vietnam would benefit from it. Capital would run into Vietnam. Consequently, the real estate market would have a new energy. The situation would be better. On the other hand, if the public debt crisis in the European countries worsened, the situation of the world economy was gloomy, flows of capital would be stuck somewhere. Vietnam's economy would be negatively affected; as a result, the real estate market could not have the stimulus sources.

Secondly, the macro-economy: It is likely that if the macro-economy becomes brighter before the end of the second quarter, 2012, the capital inflows to the markets would be unlocked. Currently, there are signals showing that the inflation has been controlled at an acceptable limit. Foreign investments into real estate markets have been improved. Interest rates have been reduced by some percentage points. The securities markets have risen by 25%. Capital inflow would be possibly activated. And probably, a new trend will be established. However, if such changes happen, the markets could only have new movements since the third quarter, 2012

Thirdly, policies, especially monetary policies: At the moment, the real estate markets almost depend on the banking system and the monetary policies. Therefore, if the macro economy is stable and the banking system is healthily restructured, the monetary policies will head to create advantages for the real estate markets. The real estate markets will have opportunities to develop then. Otherwise, if the macro economy meets with difficulties, the commercial bank system fails to restructure, the monetary policies will be tightened. The real estate markets subsequently will be in even worse situation, at least in the short term.

Fourthly, the behaviours of the enterprises themselves: Markets always have two sides: positiveness and negativeness. The market impacts on enterprises are also positiveness and negativeness. At the moment, in the short term and especially in the middle term, there will be great changes for the positions of the enterprises. The existence or the collapse of one enterprise will be the premise for the development or decline of other enterprises. More than ever, it is the time for the related parties in the real estate markets to define their vision, approach and make their decisions. If the enterprises are optimistic, there will probably be a new motivation for the markets.

Eventually, the abnormalities of the economic factors beyond the real estate markets: It is possible that the securities markets will have a boom. The VNIndex may lift suddenly up to over 500 points in April. Consequently, there will be investors realising profits and transferring the gains to the real estate markets. There will probably be new investors (due to their success in other markets) participating in the markets. Nevertheless, these factors will not have fundamental impacts on the real estate markets.

3.2. Defining scenario framework and preparing possible scenarios

Scenario framework is considered as the overall and detailed outline to plan scenarios. Such scenario can be based on certain judgment/thought, meaning based

on a certain assumption of the scenario maker. A policy issue may have various scenarios based on different judgments of different makers.

Basing on scenario framework, possible scenarios will be developed.

For example, for climate change by 2050, it is possible to create a scenario as follows:

- First scenario: If exhaust gases causing greenhouse effect do not change compared to present level, temperature of the earth will increase by °C and with such temperature, thawing level will be... and sea water level will raise by ...m.

- Second scenario: If gas causing the greenhouse effect is reduced to, earth's temperature will reach....and.....

- Third scenario:

The possible scenarios for real estate markets in 2012 and trend to 2015:

- The first scenario, i.e. the least possible but the most desirable one, the markets are flourishing. The conditions for this scenario include: the world economy is stable; the Eurozone countries overcome the public debt crisis; the domestic macro-economy is well, with high growth rate; the inflation continues under control and the interest rate is of 10%/annum. Some financial instruments related to real estates are introduced, such as real estate investment trusts (REITs), mutual saving funds etc... Then, the markets will get over the bottom and get brighter in lunar August. From March to September 2012, it will be a harsh and screening time for the enterprises on the real estate market. Then a new growing stage, the market financialisation stage will begin. Nevertheless, since assuming there are several favourable factors occurring concurrently, the possibility of this plan is low.

- The second scenario, the least expected one, i.e. none of the events in the first scenario will happen. The real estate enterprises will meet a lot of difficulties. The

market will decline severely. A bad wave will probably occur; the policies will continue being stagnated. Many constructions will continue being freezed. If this scenario happens, the secondary market investors will leave the real estate markets and they will need quite a long time to recover then.

- The third scenario, the most possible scenario. The situation remains the same as the present. The policies continue being studied, the enterprises will operate perfunctorily, investors will keep hoping and some investors will narrow down their production.

4. KEY TECHNICAL TOOLS USED IN POLICY SCENARIO PLANNING

4.1. Development models:

There are various scenario planning models in which the most common models are:

- Expert model: In this model, scenario planner often operates independently. As an expert, scenario planner can be a member of an organization or an external expert invited to participate in scenario planning project. In many cases, it is necessary to invite external experts to assure the independence of proposed contents.

- Group model: For this model, scenario is a product of a common operating group. An expert is considered as the manager and leader of the project to work with a group of cadres.

- Organizational model: In the organizational model, experts train a group of cadres who will implement scenario planning process later. In this case, results completely depend the organization or the group implementing the work.

THREE SCENARIO PLANNING MODEL

CHARACTERISTIC	MODEL		
	Expert	Group	Organization
Planner	One	Group of internal and external cadres	Train or guide cadres of the organization to implement
Supervisor	Supervised by the planner itself	Group leader is the participant and instructor of the planning	Planner participates in external activity.
Result	Presented by the planner	Belong to the group and be presented by the group	Belong to organization
Relationship	Undertake by the planner	Planner keeps regular contact with the group	Develop and transfer to group of cadres of the organization

Among above models, group model with discussion and exchange programs on key issues is the most widely applied.

4.2. Common technical tools

There are various methods to identify problems and determine priority levels for the problems that need to be solved in the future imagination process. Here are some key methods used in scenario forming process under group model:

- *Brainstorming method:*

Braining storming method is developed to solve a problem via the mobilization of the collective's intellect. This technique was first created to work out ideas in teamwork ²⁵. It was initially described in the book Applied Imagination written by Alex F. Osborn in 1941 to solve problems and mobilize the collective's participation in the innovation.

Brainstorming is an active working technique through discussion to generate new and unique ideas on a topic and all members will participate in the discussion. Members are welcomed to participate actively without any limitation to ideas. The purpose of brainstorming process is not to find out specific and complete ideas, but to generate as many ideas as possible.

Thus, brainstorming is a method to apply experience and initiative given by every person in the minimum period of time (depending on the problem) so as to obtain the most and best information to identify the problems and generate the most number of solutions to handle the problems.

To implement this method, a group of people will work together. Concepts/images of problems in near future are raised by group's members randomly and freely following their thoughts as much as possible. Those opinions may be very broad and deep as well unrestricted in any aspect of problems that the participants may think about, but they do not establish requirements for assessment.

It is not recommended to raise any comment or criticism on any opinion or concept during the collection process. The thingy opinions if receiving criticisms or prejudices, will be easily abolished and impair the comprehensiveness of brainstorming session. Each member is encouraged to make contributions and develop ideas based on their specific qualifications and aspects without any limitation on the way of thinking.

²⁵ https://vi.wikipedia.org/wiki/%C4%90%E1%BB%99ng_n%C3%A3o

- *Six Thinking Hat method*:

“*Six Thinking Hat*” is an ideal method to assess the influence of a decision from various viewpoints. This is an effective method which helps assess a case from various perspectives to present a better decision to support the thought and it was introduced for the first time by Edward de Bono in “*6 Thinking Hats*”. This method helps us combine emotional factors with rational decisions and encourages the creativeness in the decision making so that the plan will be reasonable and closer.

6 hats with different colors represent various ways of thinking on the problem. The interactions and connections between these perspectives will enable use to judge the problem more comprehensively and avoid missing aspects of the problem that are hard to be seen through subjective perspective of a person. For example, successful people often think positively and rationally – which is one of the reasons that help them successful. However, normally, they may not assess the problem from different aspects such as emotion, intuition, creativeness or negativity. The consequence is that they sometimes miss factors which may lead to changes and cannot create real breakthroughs and do not prepare necessary plans for possible risks. In addition, those that have been familiar with solving problems scientifically may not be able to promote their creativeness or solve problems based on their intuition.

To assess and solve a problem, a manager needs to “wear” 6 hats in turns to think. Whenever wearing a new hat, it means that we turn to a new way of thinking, or judge the problem from a different aspect.



Figure 3. 6 Hats Thinking Model

- **White hat:** White hat represents the objectiveness. When wearing “white hat”, we can assess the problem objectively based on given data.

- **Red hat:** When wearing “red hat”, we can assess the problem based on intuition and emotion. Let’s try to judge others’ emotion through their reactions and try to understand natural reactions of those that do not understand your arguments clearly.

- **Black hat:** When wearing “black hat”, we will be able to assess the problem from negative, prudent and precautions perspective. Let’s try to predict the cause which may make the idea and way of solving the problem as not effective as expected. By judging the case in this way, we can eliminate weakness in a plan or way of implementing the work, adjusting the problem solution or prepare a alternative plan for unexpected problems.

- **Yellow hat:** When wearing “yellow hat”, we will be able to think positively. Optimistic attitude will enable us to see our decisive benefits and opportunities. “Yellow hat” way of thinking enables us to have more determination to continue our work when encountering difficulties or obstacles.

- **Green hat:** Green hat represents creativeness. The free and open way of thinking when wearing “green hat” will enable use to find out creative solutions to tackle the problem.

- **Blue hat:** Chairperson will wear this hat when controlling the progress of the meeting. When encountering difficulties regarding the idea, chairperson can flexibly adjust participants’ ways of thinking toward the direction of “green hat”. Meanwhile, when mentioning the alternative plan, chairperson will require everyone to think according to “black hat” method.

The “6 Thinking Hat method” can be used effectively in meetings or when solving problems. If being used in a meeting, this technique will enable the chairperson to remove the “detonator” of possible conflict which may happen when many people with different ways of thinking discuss the same problem. We can use another method that is similar to “6 thinking hat” to assess the problem from the perspectives of many experts or customers.

- *SWOT method*

SWOT is the acronym of initial letters in English words: **S**trengths, **W**eaknesses, **O**pportunities and **T**hreats - which is a famous model firstly applied in business activities of enterprises, but it is currently applied commonly to all forms of organizations at various levels. This method is also called internal and external environment analysis method.

This method was introduced in the 60s when Stanford Research Institute, Menlo Park, California conducted a survey on over 500 companies with the highest revenue elected by Fortune Magazine to find out the reasons why many companies failed in implementing their plan. The research group consisting of economists such as Marion Doshier, Otis Benepe, Albert Humphrey, Robert F. Stewart and Birger Lie introduced “SWOT analysis model” so as to understand enterprises’ planning process,

find out solutions to help leaders agree and continue to implement the plan and change their management methods. This research project was conducted in 9 years, with over 5000 staffs working hard to collect questionnaire that included 250 items and was conducted over 1100 companies and units.

In other words, SWOT is a theoretical background based on which we can reconsider strategies, determine the position as well as orientation of an organization. It provides a strategic tool to analyze, check and re-assess the position and orientation of the organization. To carry out a SWOT analysis, firstly, we need to determine 4 basic aspects related to internal and external environments of an organization: Strengths and weaknesses are internal factors which reflect internal environment of an organization; meanwhile, opportunities and challenges are external factors which have influence on the organization's operations.

After analyzing four factors, an analysis framework will be created to point out strategies which need to be selected for the development of the organization in the future.

- *Mindmap method:*

Mindmap is a method which uses brain's ability to recognize images. This is the way to memorize details to summarize or analyze a problem in a form of branch diagram. By using mindmap, overall aspects of the problem will be pointed out in form of an image in which objects are linked to each other by connecting lines. By using that method, data will be memorized and judged more easily and quickly. This method was developed in late 1960s (20th century) by Tony Buzan as a method to help students "record lectures" by using keywords and images. This way of recording will be quicker and easier to remember and review²⁶.

²⁶ https://vi.wikipedia.org/wiki/B%E1%BA%A3n_%C4%91%E1%BB%93_t%C6%B0_uy

Instead of using words to make a single-way description, mindmap represents the whole detailed structure of an object by two-way images. It points out the form of the object and mutual relations between related concepts (or ideas) or their correlation in a big problem. Compared to the traditional way of recording, mindmap method has superior advantages as follows:

- + Main idea will be put in the center and is clearly defined.
- + Relation among ideas is pointed out clearly. The more important the idea is, the closer it is to the main idea.
- + Connection among key concepts will be immediately perceived visually, so memorizing will be more effective and quicker.
- + Adding information (ideas) more easily by inserting it into mindmap.
- + Each mindmap will be distinctive to make it easier to remember.
- + New ideas can be easily placed in the right place on the image despite the order of presentation, creating conditions for quickly and flexibly changing the memorizing.
- + It is possible to utilize the support of computer's software.

- *Fishbone diagram method*

Fishbone diagram method (*fishbone diagram*) as also known as Ishikawa method (or diagram) (English: *Ishikawa diagram*) (named after the creator of this method), or cause and effect diagram (*cause-and-effect diagram*), is a method to recognize issues and give methods of management, leadership.²⁷ This method brings the name of a Japanese called Mr. Kaoru Ishikawa and it was given in 1960s and considered to be one of 7 basic tools of Quality management.

²⁷ https://vi.wikipedia.org/wiki/Ph%C6%B0%C6%A1ng_ph%C3%A1p_Ishikawa

Fishbone diagram is the diagram used to help us screen out factors and causes of issues systematically. Because it looks like a fishbone, it is called fishbone diagram. This is a typically important tool when analyzing quality improvement and implementation of countermeasures.

Purposes of creating fishbone diagram:

- + Searching for, revising factors of issues from root to top in an order and avoiding omission
- + Helping easily search fundamental causes to implement innovation (kaizen) to the issue.

How to build a fishbone diagram:

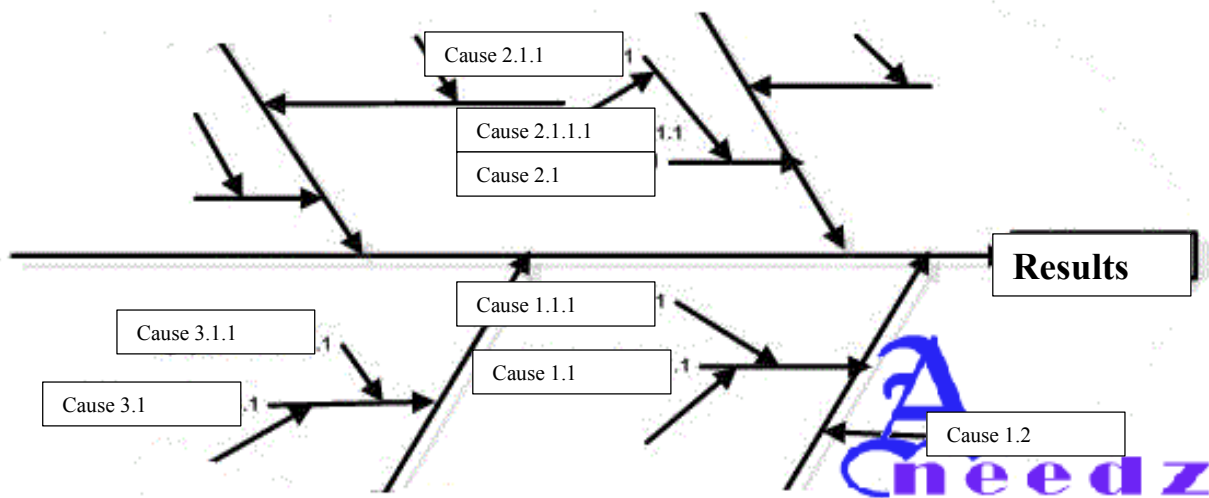


Figure 5. Fishbone model

We build this diagram by going backwards from results (or phenomenon) to find causes (or necessary solutions). Problems solved are called results; influencing factors are considered causes.

When building a fishbone diagram, it is necessary to collect as many opinions of members as possible. When building a diagram, it is important to gather as many opinions as possible. The opinions must be given freely, it is better to have as

opinions of many people in many different locations as possible. For giving opinions in a scientific way, we should use brainstorming method. This method is thought to give opinions freely. There are 4 principles of this approach and all of which must be complied with:

- + No criticism: There should not be any good or bad criticism on given opinions. (All opinions given are thanks to other people's thinking efforts and criticism would impair given opinions and inspiration of people giving that opinion).

- + Encourage the freedom: The more unique the opinion is, the better it will be.

- + Give as many opinions as possible

- + Encourage sharing opinions

- *Problem tree method:*

Problem analysis method is done by constructing a problem tree. It is called "problem tree" because problems (also called core issues) were identified and analyzed in the form of a "tree".

Problem tree is a tool (in the form of a tree diagram) that allows participants to analyze the system of fundamental causes in analyzing a problem with the goal of discovering intermediate and specific causes (etiology) of the problem, and then building solutions in the target tree. The purpose of problem tree analysis is to ensure that planning is based on authentic foundation, detection and handling of root causes that hinder the process of handling the problem, but not just addressing any superficial phenomenon.

Problem tree illustrates the structure of core problem and "causes" and "consequences" of it. The root shows causes and branches illustrate consequences. A problem is expressed in the problem tree in which causes of the problem are put at upper layer as well as the consequences of the problem are located at lower layer.

Causes and consequences are determined by answering pairs of questions - answers: "Why - Because" for every problem in the problem tree. Thus, a problem tree will have the problems sorted in the order and linked together in a logical sequence for the purpose of establishing an overall view of the problem through linking the problems together.

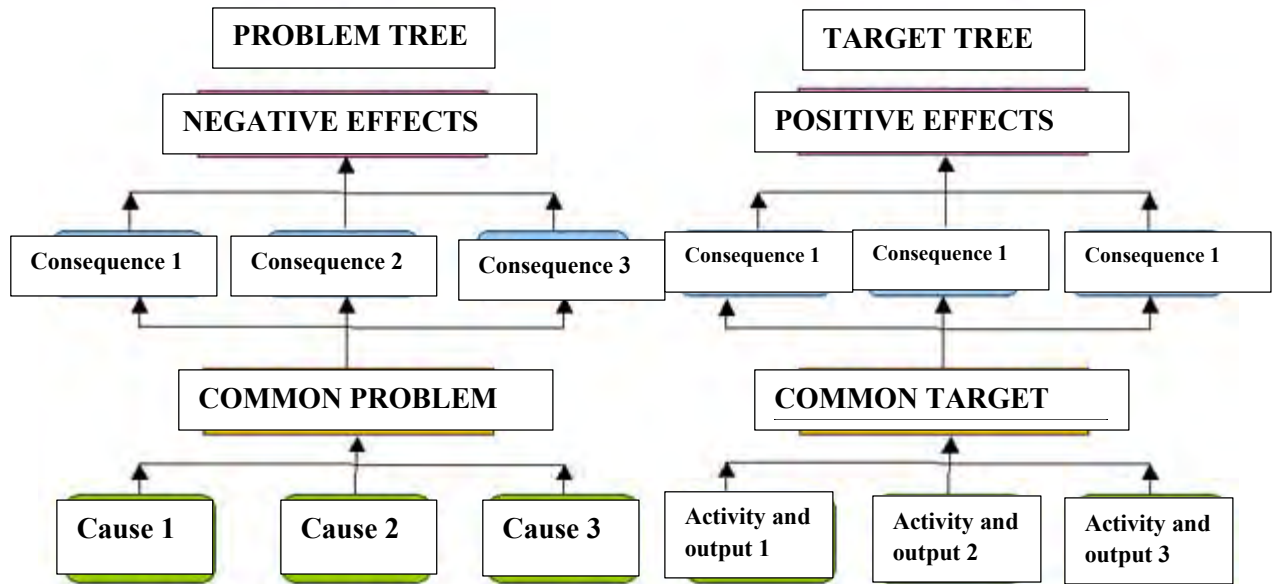


Figure 5. Problem tree model

It can be seen that, the analysis of problem tree is used to illustrate and link related issues in a hierarchical manner as to how they affect others. Any box in the tree is considered as an issue. The cause of the problem will be found as you move further downwards the problem tree and the consequences are boxes when you move upwards. The main purpose is to determine / identify possible audit problems from survey results.

The analysis of a tree issue requires working methods involving participation such as brainstorming or group discussion. Means of work are very flexible; the most common one is to use board, A0 paper and cards to collect opinions. Participation:

about 7-15 people. It is recommended that people of different sectors/ units with knowledge and experience on problems to be discussed and analyzed should be chosen to make sure the variety in opinion development.

CONCLUSION

Scenario planning has been paid special attention to by many countries in the world, especially developed countries. Although at first, this approach to future is built primarily for military field and business sector but so far it has begun known and widely used in the public sector.

Under high uncertainty and rapid changes in the environment, the development of strategies only based on a probabilistic forecast is too risky. In today's world there are regularly unforeseen problems, sudden changes, and unexpected events.

The basic meaning of scenario planning is to design and produce various "stories" and options and they are all plausible for future growth, structured and logical. Therefore, this strategy is no longer a difficulty and gets the flexibility needed for the organization to remain successful in the different scenario of future.

In developed countries, building policy scenarios has emerged and been used since the 60s of the 20th century and today it is widely used thanks to its coverage of uncertainties. Developing countries and transitional countries of Eastern Europe and the former Soviet Union so far has started paying attention to this issue. Also, there have been some important researches as the basis of scenario approach in building national strategies as well as strategic development for the industries and areas.

Modern strategic management in general, and strategic analysis in particular need to be initiated from analyzing its external environment. Strategic analysis in

accordance with SWOT model, PEST model or other specific analysis methods as well as integrated multi-index analysis method of external environment shares the common basic purpose of providing relevant information about threats and variation possibilities of external environment. This information must be considered before issuing and implementing important decisions about the operation and development of the organization in a certain period.

Strategic analysis of internal environment, just like that of external environment, of an organization needs to be multidimensional and systematic. On the internal environment analysis for the organization, every potential needs to be regarded as its strategic resources. Thus, theoretical content and practical significance of the concepts “strategic analysis of internal environment of the organization” and “strategic analysis of resources of the organization” are totally matched.

Different structures can be built up to perform strategic analysis of internal environment of the organization. According to criterion of “final effect”, different strategic analysis structures correspond with internal structures of the organization. Sample scenario (scenario-based strategic planning) is a special tool to manage practical strategy of organizations, thereby delivering different forecasts of future development of organizations. An essential function of these forecasts which will support the organization to develop effective solutions for all important strategic issues characterized for a certain scenario stage is the initial and fundamental orientation of all scenarios (key factors, trends, etc.)

Strategic dialogue system held frequently may become a means of creating a better environment for scenario modeling of internal operations along with perfecting the common cultural values of the organization. The specific and high quality content of a scenario, that is the process of scenario modeling, depends greatly on the quality of process management methods in the organization. High-quality scenario for any

circumstances is to guarantee the obligation and loyalty to the development plan models of the organization.

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