INTRODUCTION TO ECONOMICS (CONTINUED)

COST & BENEFIT ANALYSIS
Rational choice is the choice based on pure reason and without succumbing to one’s emotions or whims. Consumers can decide about the rational decision by using cost and benefit analysis. Rational choice is a general theory of human behavior that assumes individuals try to make the most efficient decisions possible in an environment of scarce resources. By "efficient" it is meant that humans are "utility maximizes" - for any given choice a person seeks the most benefit relative to costs. Consumers can make about the rational decision by using cost and benefit analysis. Consumers want to maximize their level of satisfaction relative to their cost. Rational choice is also the optimal choice.

Optimum means producing the best possible results (also optimal). Equity in economics means a situation in which everything is treated fairly or equally, i.e. according to its due share. So if the lives of all individuals are deemed to have equal value, equity would demand that all of them have equal financial net worth.
Nepotism means doing unfair favors for near ones when in power.
Rational choice is the choice based on pure reason and without succumbing to one’s emotions or whims.
Barter trade is a non-monetary system of trade in which “goods” not money is exchanged. This was the system used in the world before the advent of coins and currency.

HOW CONSUMER DECIDES ABOUT OPTIMAL CHOICE
The consumers decides about the optimal choice by using the cost and benefit analysis which maximizes the benefit relative to the cost.

Example:

<table>
<thead>
<tr>
<th></th>
<th>Benefit (Salary)</th>
<th>Cost (Transportation)</th>
<th>Net Benefit Benefit – Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job A (Lahore)</td>
<td>15,000</td>
<td>1,000</td>
<td>14,000</td>
</tr>
<tr>
<td>Job B (Gujranwala)</td>
<td>20,000</td>
<td>7,000</td>
<td>13,000</td>
</tr>
</tbody>
</table>

Since net benefit of job A is greater so the ration choice is job A which is in Lahore.

HOW PRODUCERS DECIDES ABOUT OPTIMAL CHOIE
Assume that a firm which is thinking to open a new production line of car manufacturing. Rational decision involves the cost and benefit of that car’s production.
Costs will be additional labor employed, additional raw material and additional parts & components that have to be bought.
Benefits will be additional revenue that the firm will get by selling the additional number of cars.
It will be profitable to invest if revenue is greater than the cost.

OPPORTUNITY COST
The opportunity cost of a particular choice is the satisfaction that would have been derived from the next best alternative foregone; in other words, it is what must be given up or sacrificed in making a certain choice or decision.

Example:
Let’s take the decision to buy the book or not, if you will not buy the book then you will be involved in many other activities. In the following table, opportunity Cost of buying the book and not giving charity = 20 SU, which is the benefit derived from giving charity. You will buy the book if the benefit from other alternatives is less than the benefit derived from buying of book.
MARGINAL COST AND MARGINAL BENEFIT

**Marginal cost** is the increment to total costs of producing an additional unit of some good or service. There are other broader definitions as well.

**Marginal benefit** is the increment to total benefit derived from consuming an additional unit of good or service. There are other broader definitions as well.

**PRODUCTION POSSIBILITY FRONTIER (PPF)**

Production possibility frontier (PPF) is the curve which joins all the points showing the maximum amount of goods and services which the country can produce in a given time with limited resources, given a specific state of technology. A production possibilities frontier represents the boundary or frontier of the economy's production capabilities. That's why it's termed a production possibilities frontier (or PPF). As a frontier, it is the maximum production possible given existing (fixed) resources and technology.

**Table: Choice & Opportunity cost revisited: The law of increasing opportunity cost**

<table>
<thead>
<tr>
<th>Rice (Bags)</th>
<th>Cotton (Bushels)</th>
<th>Opportunity Cost of Additional Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>E</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

This table represents the alternative combinations of rice and cotton for a hypothetical economy which is producing only 2 goods. At point A only cotton is produced, rice is not produced. In order to produce one unit of rice, we have to give up one unit of cotton (10-9=1). So the opportunity cost is 1 at point B. Further in order to produce next unit of rice, we have to give up 2 units of cotton (9-7=2). So the opportunity cost of next additional unit is 2 and so on. This table shows that opportunity cost is increasing with each additional unit. It means we have to give up higher and higher units of cotton in order to produce each additional unit of rice. This is the principle of increasing opportunity cost. If opportunity cost decreases with each additional unit produces, then it is the principle of decreasing opportunity cost. And if opportunity cost remains constant with each extra unit produced, it is the principle of constant opportunity cost.

The law of increasing opportunity cost is what gives the curve its distinctive convex shape. Points on the PPF show the efficient utilization of resources. Points inside the PPF show inefficient use of resources. Points inside the PPF show that some of the resources are unemployed or not utilized. PPF curve shifts upward due to technological advancements. If there is improvement in technology to produce the output, then total output will increase and PPF will shift outward.

**OPPORTUNITY COST & PRODUCTION POSSIBILITIES**
The production possibilities analysis, which is the alternative combinations of two goods that an economy can produce with given resources and technology, can be used to illustrate opportunity cost—the highest valued alternative foregone in the pursuit of an activity. The PPF showed in the video lecture slide shows the principle of increasing opportunity cost.

**PPF AND ITS RELATIONSHIP WITH MACROECONOMICS**

In the graph of PPF, Points within the PPF are inefficient and it is the rare possibility in the real world. Inefficient means that it may not be using its available resources. May be some workers are unemployed creating the macro economic problem of unemployment or may be capital is not using properly. Points outside the PPF are unattainable since the PPF defines the maximum output produced at the given time period so there is no possibility to produce output outside the PPF. Here in PPF, we are not concerned with the combinations of goods which is a microeconomic issue rather we are concerned with the overall output produced which is a macroeconomic issue.

**Economic growth** is an increase in the total output of a country over time. It is the long-run expansion of the economy's ability to produce output. When GDP of a country is increasing it means that country is growing economically. Economic growth is made possible by increasing the quantity or quality of the economy's resources (labor, capital, land, and entrepreneurship).
EXERCISES

Could production and consumption take place without money? If you think they could, give examples.

Yes. People could produce things for their own consumption. For example, people could grow vegetables in their garden or allotment; they could do their own painting and decorating. Alternatively people could engage in barter: they could produce things and then swap them for goods that other people had produced.

Must goods be at least temporarily unattainable to be scarce?

Goods need not be unattainable to be scarce. Because people’s incomes are limited, they cannot have everything they want from shops, even though the shops are stocked full. If all items in shops were free, the shelves would soon be emptied!

If we would all like more money, why does the government not print a lot more? Could it not thereby solve the problem of scarcity ‘at a stroke’?

The problem of scarcity is one of a lack of production. Simply printing more money without producing more goods and services will merely lead to inflation. To the extent that firms cannot meet the extra demand (i.e. the extra consumer expenditure) by extra production, they will respond by putting up their prices. Without extra production, consumers will be unable to buy any more than previously.

Which of the following are macroeconomic issues, which are microeconomic ones and which could be either depending on the context?

   a) Inflation.
   b) Low wages in certain service industries.
   c) The rate of exchange between the dollar and the rupee.
   d) Why the price of cabbages fluctuates more than that of cars.
   e) The rate of economic growth this year compared with last year.
   f) The decline of traditional manufacturing industries.

   a) Macro. It refers to a general rise in prices across the whole economy.
   b) Micro. It refers to specific industries
   c) Either. In a world context, it is a micro issue, since it refers to the price of one currency in terms of one other. In a national context it is more of a macro issue, since it refers to the exchange rate at which all Pakistanis goods are traded internationally. (This is certainly a less clear-cut division that in (a) and (b) above.)
   d) Micro. It refers to specific products.
   e) Macro. It refers to the general growth in output of the economy as a whole.
   f) Micro (macro in certain contexts). It is micro because it refers to specific industries. It could, however, also help to explain the macroeconomic phenomena of high unemployment or balance of payments problems.

Assume that you are looking for a job and are offered two. One is more unpleasant to do, but pays more. How would you make a rational choice between the two jobs?

You should weigh up whether the extra pay (benefit) from the better paid job is worth the extra hardship (cost) involved in doing it.

How would the principle of weighing up marginal costs and benefits apply to a worker deciding how much overtime to work in a given week?

The worker would consider whether the extra pay (the marginal benefit) is worth the extra effort and loss of leisure (the marginal cost).

Would it ever be desirable to have total equality in an economy?

The objective of total equality may be regarded as desirable in itself by many people. There are two problems with this objective, however. The first is in defining equality. If there were total equality of incomes then households with dependants would have a lower income per head than
households where everyone was working. In other words, equality of incomes would not mean equality in terms of standards of living.

If on the other hand, equality were to be defined in terms of standards of living, then should the different needs of different people be taken into account? Should people with special health or other needs have a higher income? Also, if equality were to be defined in terms of standards of living, many people would regard it as unfair that people should receive different incomes (according to the nature of their household) for doing the same amount of work.

The second major problem concerns incentives. If all jobs were to be paid the same (or people were to be paid according to the composition of their household), irrespective of people’s efforts or skills, then what would be the incentive to train or to work harder?

If there are several other things you could have done, is the opportunity cost the sum of all of them?

No. It is the sacrifice involved in the next best alternative.

What is the opportunity cost of spending an evening revising for an economics exam? What would you need to know in order to make a sensible decision about what to do that evening?

The next best alternative might be revising for another exam, or it might be taking time off to relax or to go out. To make a sensible decision, you need to consider these alternatives and whether they are better or worse for you than studying for the economics exam. One major problem here is the lack of information. You do not know just how much the extra study will improve your performance in the exam, because you do not know in advance just how much you will learn and you do not know what is going to be on the exam paper. Similarly you do not know this information for studying for other exams.

Make a list of the benefits of higher education.

The benefits to the individual include: increased future earnings; the direct benefits of being more educated; the pleasure of the social contacts at university or college.

Is the opportunity cost to the individual of attending higher education different from the opportunity costs to society as a whole?

Yes. The opportunity cost to society as a whole would include the costs of providing tuition (staffing costs, materials, capital costs, etc.), which could be greater than any fees the student may have to pay. On the other hand, the benefits to society would include benefits beyond those received by the individual. For example, they would include the extra profits employers would make by employing the individual with those qualifications.

There is a saying in economics, ‘There is no such thing as a free lunch’. What does this mean?

That there is always (or virtually always) an opportunity cost of anything we consume. Even if we do not incur the cost ourselves (the ‘lunch’ is free to us), someone will incur the cost (e.g. the institution providing the lunch).

Are any other (desirable) goods or services truly abundant?

Very few! Possibly various social interactions between people, but even here, the time to enjoy them is not abundant.

Under what circumstances would the production possibility curve be (a) a straight line; (b) bowed in toward the origin? Are these circumstances ever likely?

a) When there are constant opportunity costs. This will occur when resources are equally suited to producing either good. This might possibly occur in our highly simplified world of just two goods. In the real world it is unlikely.

b) When there are decreasing opportunity costs. This will occur when increased specialization in one good allows the country to become more efficient in its production. It gains ‘economies of scale’ sufficient to offset having to use less suitable resources.

Will economic growth necessarily involve a parallel outward shift of the production possibility curve?
No. Technical progress, the discovery of raw materials, improved education and training, etc., may favour one good rather than the other. In such cases the gap between the old and new curves would be widest where they meet the axis of the good whose potential output had grown more.

Which of the following are positive statements, which are normative statements and which could be either depending on the context?

a) Cutting the higher rates of income tax will redistribute incomes from the poor to the rich.

b) It is wrong that inflation should be reduced if this means that there will be higher unemployment.

c) It is wrong to state that putting up interest rates will reduce inflation.

d) The government should raise interest rates in order to prevent the exchange rate falling.

e) Current government policies should reduce unemployment.

a) Positive. This is merely a statement about what would happen.

b) Normative. The statement is making the value judgment that reducing inflation is a less desirable goal than the avoidance of higher unemployment.

c) Positive. Here the word 'wrong' means 'incorrect' not 'morally wrong'. The statement is making a claim that can be tested by looking at the facts. Do higher interest rates reduce inflation, or don't they?

d) Both. The positive element is the claim that higher interest rates prevent the exchange rate falling. This can be tested by an appeal to the facts. The normative element is the value judgment that the government ought to prevent the exchange rate falling.

e) Either. It depends what is meant. If the statement means that current government policies are likely to reduce unemployment, the statement is positive. If, however, it means that the government ought to direct its policies towards reducing unemployment, the statement is normative.