

Principles of Microeconomics - principles of individual decision making and principles of economic interactions - **Introduce trade off, opportunity cost, efficiency, marginal changes and cost-benefit**, trade, market economy, property rights, market failure, externality and market power.

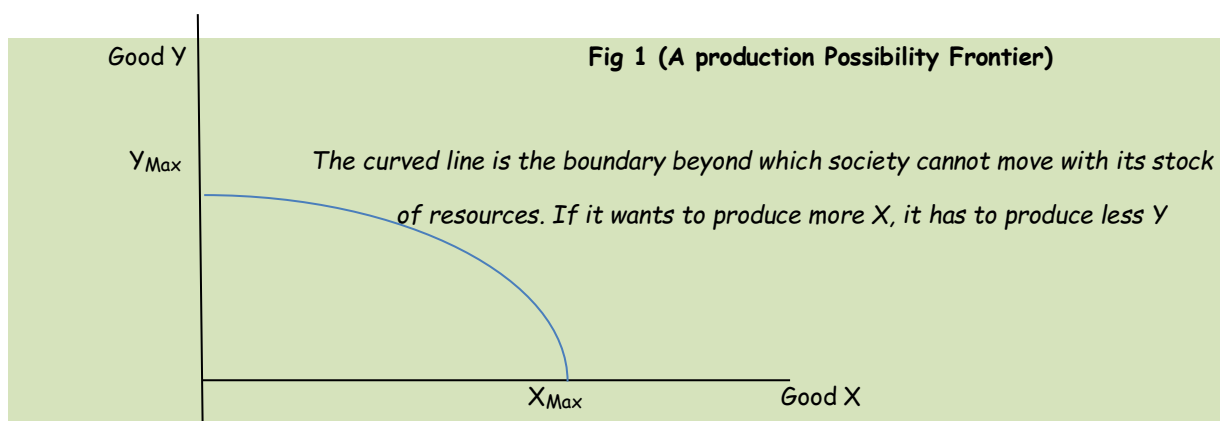
The yellow-marked part is covered in this note. We already know the basic definition of Economics. This note tries to build up on that basic knowledge.

*Economics is about making choices, in order to make best possible use of the scarce resource. Whenever we make a choice among various alternatives, we have to forgo some other options. In this context, two economic terms are often used - the **trade-off** and **opportunity cost**. While **trade-off** indicates that there is an option we have to give up in order to obtain something we want, **opportunity cost** is the **cost of the next best alternative given up** to obtain that thing. In other words, it is the cost of the opportunity that is missed and so it makes a comparison between the project accepted and the project rejected.*

Efficiency: We often have to find ways to use, produce, and distribute scarce resources in the "**best possible**" (i.e., efficient) manner. However, "best possible" is an ambiguous term. What is best possible for a farmer may not be best possible for the middleman. It depends on the issue we are looking at, the person from whose viewpoint we are considering a topic etc. Thus, there may be different factors that define whether a situation is considered "**efficient**" or not. In other words, there may be different types of economic efficiency. We will briefly define just three of them below: **allocative**, **productive** and **social**.

Allocative efficiency occurs when all goods and services within an economy are distributed according to consumer preferences. In this scenario, **price** always equals the **marginal cost** of production. The reason for this is that the price consumers are willing to pay for a product or service reflects the **marginal utility** they get from consuming the product. Hence, the optimal outcome is achieved when the **marginal cost (MC)** equals **marginal benefit (MB)**.

Productive efficiency occurs when the combination of inputs results in the "**maximum**" amount of output with the given resources. A productively efficient economy always produces on its production possibility frontier. That means that the economy can't produce more of one good or service without reducing the production of another one. In this sense, output is the maximum possible, as the society cannot move beyond that frontier.



Social Efficiency occurs when goods and services are *optimally distributed* within an economy, also taking **externalities** into account. This is the case when the marginal social cost of production equals social benefit.

Thus, we have come across several terms we are not familiar with like **marginal utility**, **marginal cost**, **marginal benefit**, **externalities** etc. So we go next to the concept of **marginal**.

Concept of 'marginal' in Economics: In economics, the concept of margin has great importance. The marginal unit of anything is the unit whose small addition or subtraction is under consideration. In the language of Mayers, "**The marginal unit of any factor of production, of any stock of goods and of any output of goods, is one extra unit of the same.**"

In economics the term 'margin' always refers to anything extra. Thus, the term 'marginal utility' of a commodity is the **extra utility** obtained from the consumption of the **extra unit of a commodity**, or the term 'marginal cost' is the **extra cost of producing one extra unit of a commodity**.

In economics, we talk about 'marginal utility', 'marginal cost', 'marginal revenue', 'marginal product', etc. It is to be noted that the marginal unit is not necessarily the last unit, although it may sometimes appear to be so. Thus, in any stock of identical goods, say, any unit, the concept of margin has reference to the addition or subtraction of any one unit without regard to a particular unit. So:

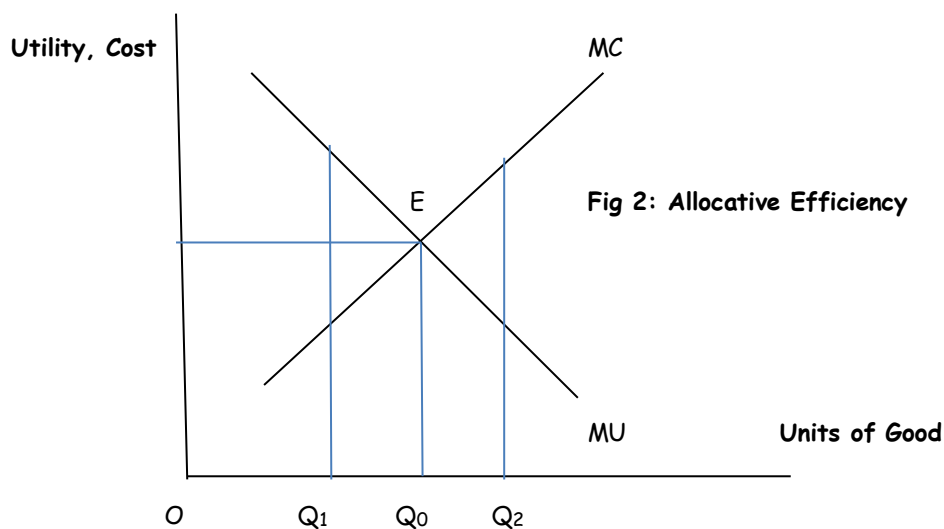
Marginal Utility (MU) - It is the additional utility that the consumer gets from consuming one more unit of a good. For example, if a consumer gets 50 units of utility by consuming 10 units of a good and 54 units of utility by consuming 11 units of the same good, the **MU** for the 11th unit is 4. Similarly,

Marginal Cost (MC) - It is the additional cost that the producer incurs for producing one more unit of a good. For example, if the producer incurs Rs. 50 of cost for producing 10 units of a good and Rs. 54 for producing 11 units of the same good, the **MC** for the 11th unit is Rs.4.

Marginal Revenue (MR) - It is the additional revenue that the producer gets from the sale of one more unit of a good. For example, if the producer gets Rs. 50 of revenue from the sale of 10 units of a good and Rs. 54 from the sale of 11 units of the same good, the **MR** for the 11th unit is Rs.4.

Marginal Product (MP) - It is the additional product or output that the producer gets from the use of one more unit of a particular input. For example, if the producer gets 50 units of rice output from the use of 10 units of an input (labour, say) and 54 units of rice output from the use of 11 units of that same input, the **MP** for the 11th unit of labour is 4 units of rice.

Now the question is: how is society's achievement of 'efficiency' linked to the above-mentioned concepts? For example, let us consider the issue of '**allocative efficiency**'. As already discussed, it occurs when **price** equals the **marginal cost** of production. The reason for this is that the price consumers are willing to pay for a product or service reflects the **marginal utility** they get from consuming one more unit of the product. On the other hand, marginal cost is the cost incurred by the society for producing one more unit of that product. Hence, the optimal outcome is achieved when the **marginal cost (MC)** equals **marginal benefit (MB)**.



The diagram above provides an idea about the concept of allocative efficiency. MC and MU curves represent society's marginal cost and marginal utility (benefit) respectively of having one more unit of some good. At E (quantity Q_0 of the good), MU and MC are the same (indication of allocative efficiency). At $Q_1 < Q_2$, MU is greater than MC, and society gains by allocating more resources to the production of more units of this good. The marginal unit will give us more than what it costs us. So, we should go further. At $Q_1 > Q_2$, however, MC is greater than MU, and society loses by allocating further resources to the production of more units this good. In fact, it gains by cutting back on production and consumption.

Therefore, under the 'marginalist' principle, the total value or the total output or the total cost does not influence economic decision-making: it is the utility or cost or output at the margin - the marginal value - that determines whether we should want more or whether we should stop.

For the understanding of social efficiency, we need to discuss the concept of externalities. However, that will require a separate lesson and this will be taken up in the next lecture notes.

What we have learnt so far: *Concept of efficiency, the marginalist principle, definitions of allocative, productive and social efficiency, definitions of MU, MC, MR and MP.*

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