Assignment 1

Engineering Economics (COMSATS University Islamabad)

Question 1:

Discuss the factors (five, other than price) which influence the demand curve and supply curve.

Answer:

There are many factors that effect demand and supply curve few are listed below with examples.

Factors Affecting Demand:

1. Quality:

An increase in the quality of the good will increase the demand of the good and vice versa. For example, if the quality of Sony Camera is good then other brands in quality, then off course people will buy Sony Camera not others.

2. Economic cycle:

In a recession, people will cut back on spending, even if their income remains steady. This is because they fear the possibility of losing job, so they will take risk averse approach and reduce spending. Similarly in an economic boom, confidence will be high and incomes rising–causing more demand.

3. Credit facilities:

Credit Facilities increase the demand. For example, if it is easier and cheaper to borrow, this may encourage consumers to buy expensive items on credit.

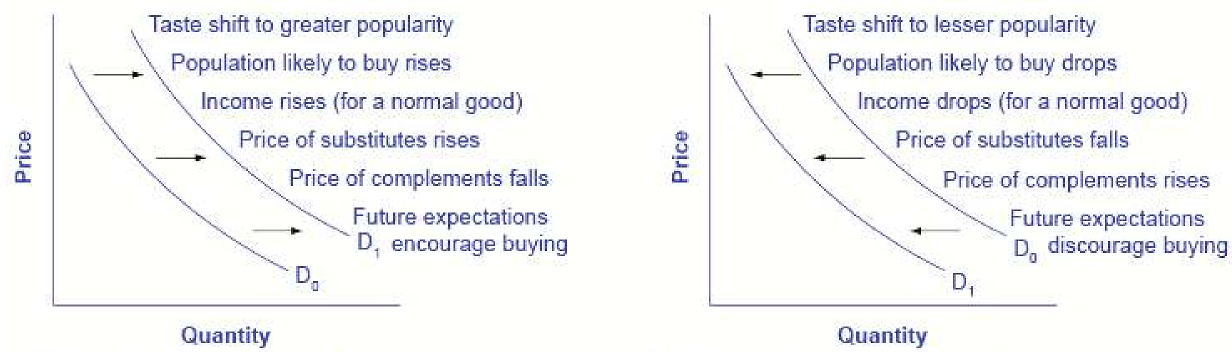
4. Advertising:

It can increase brand loyalty to goods and increase demand. For example, higher spending on advertising by Coca Cola has increased global sales.

5. Weather:

Weather also effects the demand of the product. For example, there will be increase in demand of warm clothes in winters.

Diagram:



(a) Factors that increase demand (b) Factors that decrease demand

Factors Affecting Supply:

More firms. An increase in the number of producers will cause an increase in supply.

1. <u>More firms:</u>

An increase in the number of producers will cause an increase in supply.

2. <u>Related supply:</u>

Related supply plays important role in increasing of supply. For example, if there is an increase in the supply of beef (from cows) then there will also be an increase in the supply of leather.

3. <u>Taxes:</u>

Placing a tax on a good, shifts the supply curve to the left. It leads to a fall in supply as the product will cost more to factories so they will decrease their production and supply will also be decrees.

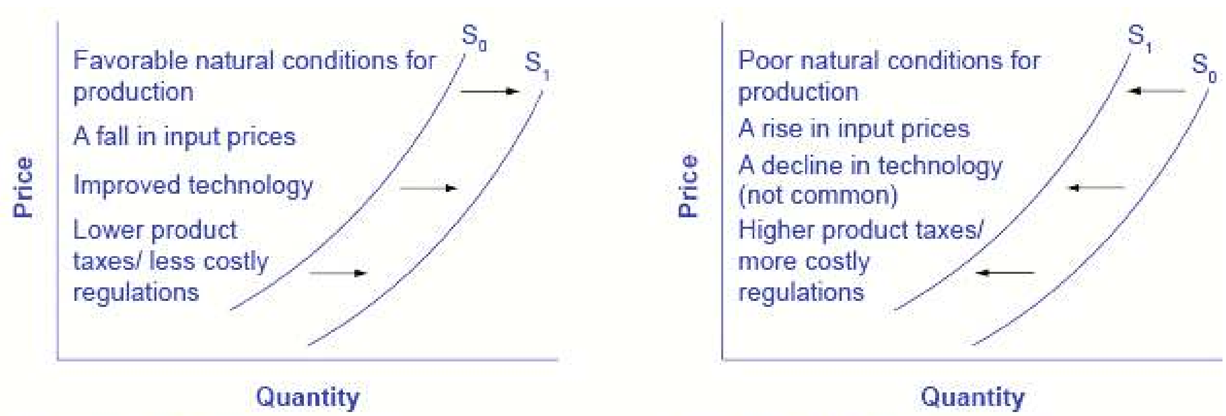
4. <u>Objectives of firms:</u>

If firms are profit maximisers and collude with other firms, we may see a fall in supply as they try to maximize profits. However, if they switch to targeting sales or revenue maximization, then we will see an increase in supply.

5. <u>Technological improvements:</u>

Improvements in technology, e.g., computers or automation, reducing firms' costs.

<u>Diagram:</u>



(a) Factors that increase supply

(b) Factors that decrease supply

<u>**Question 2:**</u>

Differentiate between the following with examples:

i. Difference between opportunity cost and sunk cost.

Difference Between Opportunity Cost and Sunk Cost:

The six important points of difference between opportunity cost and sunk cost are detailed below:

Opportunity cost	Sunk cost
Meaning	
Opportunity cost is the cost of a missed opportunity i.e.: the profit/gain foregone when choosing one business alternative over another.	Sunk cost represents past costs that have already been incurred and cannot be recovered.
Notional v/s Actual	
Opportunity costs are implicit costs as they are notional in nature and do not result in actual cash outflow for the entity.	Sunk costs are explicit costs as they result in actual cash outflow for the entity.
Estimation of cost	
The estimation of opportunity cost can be subjective. For example, while calculating the loss of profit while evaluating alternatives, there may be some degree of subjectivity involved in estimating the potential loss of profit.	The calculation of sunk cost is completely objective with no requirement for estimation as these are actual costs already incurred.
Accounting	
Opportunity costs are notional costs and thus not accounted for.	Sunk costs are actual costs and hence accounted for in the books as well as reported in the financial statements.

Reporting	
Opportunity costs are not reported in financial statements but may be reported in internal management reports.	Sunk costs are reported in the published financial statements.
Examples	
Examples of opportunity cost include – loss of rent when the same land is used for other purposes, loss of productive time of workers when sent for training etc.	Examples of sunk costs include – conducting marketing studies to evaluate feasibility, R&D cost for developing new product etc.

ii. Difference between opportunity cost and sunk revenue.

Answer:

In order to answer this, we must first understand what "marginal" means.

Marginal:

It refers to the cost or revenue that comes about through the production and sale of the next unit of output. In other words, it does not refer to all costs or revenues that a company has, but only those related to changes in what the firm is doing.

Example:

For example, if I own a shirt making company and I decide to hire one more worker, the costs and revenues associated with that worker are my marginal costs and revenues with respect to that worker. I do not need to look at all my costs and revenues, just those that have come about because I hired that worker.

Difference between Marginal Cost and Marginal Revenue:

Costs are the money that has to be paid out while **revenues** are the money received from selling products. So, if we hire the new worker, our marginal costs will be things like the wages and benefits we pay them and the wages we pay to our administrative staff as they do the paperwork for hiring the worker. The marginal revenues are the amount of money that we make over and above what we were making before the new worker was hired.

iii. Difference between total cost and total revenue.

Basis of Difference	Total Cost	Total Revenue
Meaning	It refers to the expenditure incurred by the producer on the production of a commodity.	It refers to the money received from selling the produced commodity.
Components	Total cost comprises fixed cost, variable cost, marginal cost, and average cost in the short run.	Total Revenue comprises Marginal revenue and Average Revenue.
Behavior	It increases with an increase in production or output.	It increases with an increase in sales.
Represents	It represents the total cost of producing a specific output.	Total revenue represents the total money receipts from the sale of the output over a specific period of time.
Nature	TC is regarded as the expenditure for any business enterprise.	TR is regarded as the income for any business enterprise.
Calculation	It can be calculated as: Total cost = Fixed Cost + Variable Cost	It can be calculated as: Total revenue = Price × Quantity.