

A BRIEF STUDY ON THE INTRINSICS OF HEALTH ECONOMICS:

Supply and demand, Elasticity, Production Possibility Frontier, Economics and the types, Health care market, Causes of market failure in health.

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Abstract: Health economics is a branch of economics concerned with issues related to efficiency, effectiveness, value and behavior in the production and consumption of health and healthcare. Healthcare is demanded as a means for consumers to achieve a larger stock of "health capital. The demand for health is unlike most other goods because individuals allocate resources in order to both consume and produce health. A large focus of health economics is the microeconomic evaluation of the value of individual treatments. A valued health economic system in any country would cut off irrelevant expenditure at the health industry and will also help governments, organisations, propellers of health avoid budget deficits in the sector.

Key Words: Supply, demand, elasticity, inflation, gross domestic product, economics, health theory, equilibrium, curves, production possibility frontier (PPF), market failure.

1.0 INTRODUCTION:

The study of economics can describe all aspects of a country's economy, such as how a country uses its resources, how much time laborers devote to work and leisure, the outcome of investing in industries or financial products, the effect of taxes on a population, and why businesses succeed or fail.

Adam Smith, known as the Father of Economics, established the first modern economic theory, called the Classical School, in 1776. Smith believed that people who acted in their own self-interest produced goods and wealth that benefited all of society. He believed that governments should not restrict or interfere in markets because they could regulate themselves and, thereby, produce wealth at maximum efficiency. Classical theory forms the basis of capitalism and is still prominent today.

2.0 DISCUSSION:

2.1 *Brief Definition of Economics*

Economics includes the study of problems of consumption, production, exchange and distribution of wealth , determination of the values of goods and services, the volume of employment and the determinants of economic growth, the causes of poverty, unemployment, underdevelopment , inflation and steps for their removal” – Jhingan 2004: principles of economics p.g 8

Economics can also be defined us the study of the production and consumption of goods and the transfer of wealth to produce and obtain those goods. Economics explains how people interact within markets to get what they want or accomplish certain goals. Since economics is a driving force of human interaction, studying it often reveals why people and governments behave in particular ways.

2.2 *Types of Economics*

Basically, there two main types of economics, namely;

1. Microeconomics and

2. Macroeconomics

2.3 Microeconomics

Focuses on the actions of individuals and industries like the dynamics between buyers sellers, borrowers and lenders.

2.4 Macroeconomics

On the other hand, takes a much broader view by analyzing the economic activity of an entire country or the international marketplace.

2.5 Health Economics

Kenneth Arrow is credited to have been the founding father of health economics by writing an article that set it differences from other branches of economics. The distinguishing factors which Kenneth pointed out were;

1. The huge government intervention in this economy is different from the other type of economics where market forces are left to take cause on market direction.

2.6 Definition

Health Economics is one of the many branches in economics. Most of the concepts surrounding this branch are both the micro and macro economics placed in the context of efficiently and effectiveness in the production and services delivery in the health sector industries. The concept of health economics can be explained in layman language as the study of economical functioning of health care system in an economy. It involves matters affecting the health of individuals in a society. An example of application of the health economics is the study of cigarette smoking and its effects on the economy from the health expenses perspective. Economics bills have been introduced to curb smoking related expenditures and health care.

Health economics is also characterized by monopoly that discourages barriers to entry, a lot of externalities and information present is only known to a few groups of individuals. Health economics also allows for middlemen to act between the buyers and the sellers. Under health economic the health specialist is the one making the decision. His/her decision is restricted by prices of the products or the services. The physician should thus make a decision that maximizes the output and minimizes the total cost of that service. The decisions to be made by the health specialist are to prescribe medication or ordering a lab test.

A health economist evaluates several financial information regarding costs, charges and expenditures. The knowledge gaps between the health specialist and demand for such services creates an advantage for the physician called the market information asymmetry.

3.0 ANALYSIS:

3.1 Supply and Demand

Supply and Demand are essential since the entire study of economics revolves around supply and demand; their interactions and how they affect the economy.

3.2 Supply

In order to come up with a simple description of what supply is in an economy, perhaps one would have to ignore some factors which are also important in economics.

Actually, in many descriptions of core economic terms, the only way to describe something effectively would be to assume that other factors are constant, even though in reality, these factors actually vary a great deal, and effectively determine these situations.

Supply can be defined as the amount of certain goods and services that producers are able and willing to produce to a market at given prices, with other factors assumed to be at a constant. Sometimes in the description of supply, public goods may not be considered due to their non-excludability and the fact that they may not be part of the core economics.

3.3 Shifts in the Supply Curve

The quantity supplied in the market will increase with increase in the production capacity of the different firms in the market. The supply curve as described and illustrated by different economics supply curve will increase upwards from left to right. The supply curve is a diagrammatic illustration of how the output produced by a company changes will changes in the prices of the total output in the market. The main determinant of the amount supplied to increase or decrease is the prices of that commodity in the market.

Price increase will increase the firm profit and all the firms in the market will be attracted by the profits being achieved in this market. The influx in company and expansion of supply capacity by the companies will increase the supply in the market. Hence an increase in prices of a commodity increases the quantity supplied in the market. If the prices of the quantity supplied reduce the amount of profits acquired by the companies in the market will reduce. Some companies that are not efficient will be pushed out of the market and the efficient company will have to lower their production. This results to a total decrease in the amount of overall supply in the market. The effects of the prices changes will results to movement in the supply curve. This movement of the supply curve along the original supply curve is referred to as by economists as the expansion or contraction in the supply curve.

There are several other factors that besides the prices of quantity produced that affect the quantity supplied in the markets.

These factors are namely;

1. Changes in the level of technology
2. Changes in the prices of input products
3. Changes in the prices of related goods and changes in consumer's income.

These factors can also be represented in the supply curve. The supply curves behave the same when either of the factors that affect supply is varied. An increase in these factors will make the demand of the commodity to increase.

The same effect is achieved when these factors decrease. I.e. the supply will reduce will reduction in the determinant of supply curves. When these determinants' are varied and prices of supply is held constant the supply curves will move to a new position further away from the original curve. This phenomenon is referred to as the movement of the supply curve.

The improvement of technology being a factor that influence the quantity supplied will make the supply curve to shift downwards to the right provided the prices of the quantity supplied is held constant. This is due to the reduction in costs of production. The firm marginal costs reduce making the optimal levels of production to also increase. Suppose the prices of the input in the production increase. This will increases will increase the costs per unit. If the prices of the quantity supplied in the market remains the same the input prices will shift the supply curve upwards to the left.

3.4 Demand

The demand for a commodity at a given price is the quantity that will be purchased at a unit of time and at a unit price.

Demand has the following features;

1. Demand refers to the quantity at a given price,

2. Demand must be defined per unit time.

3. Demand must be associated with the willingness of the consumers to part with his resources to get the commodity,

4. Demand must be associated with the ability of the consumer to purchase the commodity.

From the above concepts of demand it can now be defined as the quantity that a buyer is willing and able to purchase and a given period of time and a certain price level. Demand can be explained by the use of a demand schedule and a demand curve.

A demand schedule shows a relationship between two variables of a commodity the prices and their corresponding quantities. In a nut shell it is a list of product quantity and their prices. An individual demand schedule is a list of various quantities of a commodity which each individual consumers purchases at different or alternative prices in the market.

On the other hand a market demand schedule is the aggregate of all the individual demand schedules. A market demand schedule is calculated by taking the demand schedule of the representative consumers and multiplying its prices to the total number of consumer. Demand curve is the relationship that exists between prices and quantity.

The demand curve will slope downwards from left to right. This is in conformity with the law of demand which states that at higher prices lower will be demand and at and low prices high quantities will be demanded if all the other factors are to be held constant.

There are several determinants of demand, the main one be the price of the commodity. Price changes will make demand to shift upwards or downwards when the prices increase the quantity demanded will reduce and vice versa. The other determinant of demand is the income of the consumers. An increase in consumer wealth will increase the consumer's purchasing power and hence increase the demand for the commodities. The other determinants of demand are the changes in tastes and preferences of consumers, changes in the prices of related products, changes in prices of complementary goods, speculative factors, income distribution and level of advertisement.

The laws of demand are only an indicative statement and it only indicates the direction in which the demand will increase to. The law of demand does not tell us how much demand increases or decreases. The condition of demand should be restricted to some conditions for it to operate. The people's income should remain unchanged for the law to operate, the taste and preference of consumers should not change and prices of related commodity should remain the same. There are exceptional types of commodities that defy s the law of demand. They are given goods or commodities, status symbol commodity, habitual goods, Inferior goods, and high priced commodities.

4.0 FINDINGS:

4.1 Shifts in the Demand Curve

A demand curve is a line or a curve showing the relationship between the quantity purchased and their respective prices. A normal demand curve will slope from the left to the right. This is said to be the demand curve for normal goods. There are exceptional like the demand curve for inferior goods or given goods that does not follow this principle. The demand curve for inferior goods for example will have a zero gradient since the changes in prices will not affect the quantity demanded from the market. The demand curve whether it is normal or abnormal has certain unique features. For example the demand curve can make some movements on the Cartesian planes when the various factors that influence the quantity demanded are varied. The movement can either be along the demand curve or movement away from the original demand curve. Movement along the demand curve is referred to by economists as either expansion or contraction.

The upwards movement along the demand curve is called contraction and the downwards movement along the demand curve is called expansion. Movement along the demand curve is caused only by changes in commodities

prices. Our main interest on the movement of demand curves is the shift in the demand curve. The shift in demand curve is caused by the other factors that influence demand apart from the price changes. For the shift in demand curve to occur all the other factors must be changing but the prices has to remain the same. The shift in the demand is referred to as a change in consumers demand.

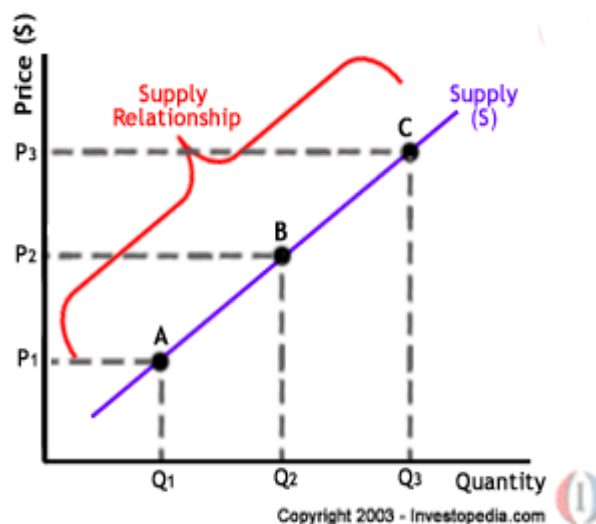
The major factors that result to the shift in demand curve are; changes in the consumer's income, changes in consumer's expectation or speculation, changes in the prices or related goods related goods can be grouped as either complimentary goods or substitute's goods. Complimentary goods are goods that are consumed together. One good cannot be used on its own.

An example is car and fuel. Substitute goods are goods that are used to satisfy the same need or want. The last major factor that results to a shift in demand curve is the changes in consumer's tastes and preference.

An increase in consumer's income will cause two types of changes depending of the type of goods being purchased by the consumers. When an increase in the consumers income results in an upwards shift on the demand curve that type of good is referred to as a normal goods. It means that increase in consumer's purchasing power increases the demand for that commodity. The second type of good is an inferior good. An increase in consumer's wealth will reduce the quantity demanded from that commodity. It means that consumers will only purchase that product under budget constraints. Taste and preference is another factor that results to a shift in demand curve. Loss in consumers taste and preference for ac certain commodity will result to a downward movement of demand curve. Fashion is an example that result to either loss or increase in preference for a commodity. The demand curve for goods that are in fashion will shift upwards provided prices are kept constant.

4.2 The law of Supply and Demand

For a market economy to function, producers must supply the goods that consumers want. This is known as the law of supply and demand. "Supply" refers to the amount of goods a market can produce, while "demand" refers to the amount of goods consumers are willing to buy. Together, these two powerful market forces form the main principle that underlies all economic theory.



A, B and C are points on the supply curve. Each point on the curve reflects a direct correlation between quantities supplied (Q) and price (P). At point B, the quantity supplied will be Q2 and the price will be P2, and so on.

The law of supply and demand explains how prices are set for the sale of goods. The process starts with consumers demanding goods. When demand is high, producers can charge high prices for goods. The promise of earning large profits from high prices inspires producers to manufacture goods to meet the demand. However, the law of demand states that if prices are too high, only a few consumers will purchase the goods and demand will

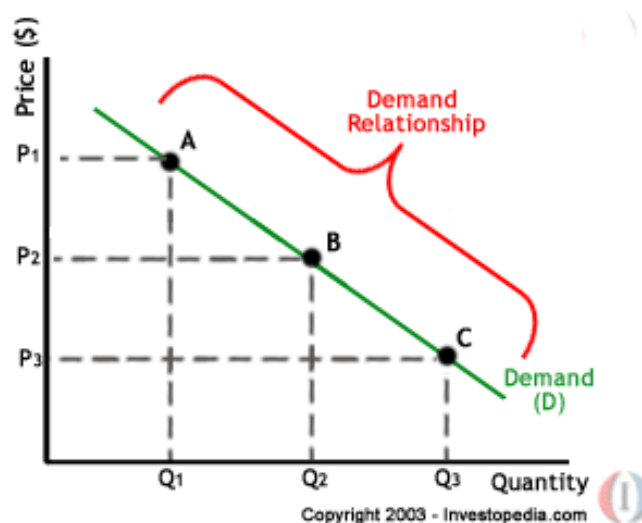
go unmet. To fully meet demand, producers must charge a price that will result in the required amount of sales while still generating profits for themselves.

For example, assume that a cell phone manufacturing company perceives demand for new cell phones. The company invests in market research to produce the exact cell phone that consumers want. The company then produces 5,000 units and puts them up for sale at GHC 300 each. Consumers who find the phone to be valuable pay the full GHC 300, and half of the units are soon sold.

Because of the high price, however, sales gradually begin to drop off. Many consumers still want the phone, but are unwilling or unable to pay GHC 300 for one. Because the cell phone company loses money on unsold products, it reduces the phone's price to GHC 250 in hopes of increasing sales. Consumers begin buying again. The process continues until a price is reached that will both meet demand and maximize the company's profits.

That price is known as the market-clearing price. When supply becomes balanced with demand, the market is said to have reached equilibrium. At equilibrium, resources are used at their maximum efficiency. The study of economics is largely a study in how market economies can best achieve equilibrium, which is why economists spend a great deal of time analyzing the relationship between supply and demand.

The law of supply and demand explains why people behave in certain ways within a market economy, and can even be used to predict behavior and, thereby, economic outcomes. Manufacturers, who want the highest price possible for their products, utilize inventory management protocols and invest in advertising to encourage consumers to buy. Consumers who value a low price over the quality or popularity of a product shop at outlets and discount stores, while those who favor popularity over price purchase goods from retail stores at the height of the market.



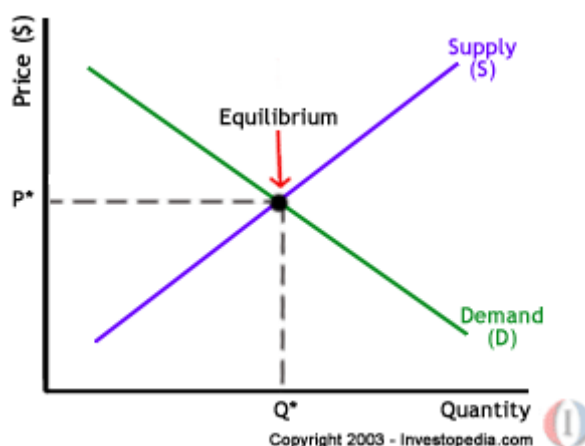
A, B and C are points on the demand curve. Each point on the curve reflects a direct correlation between quantities demanded (Q) and price (P). So, at point A, the quantity demanded will be Q1 and the price will be P1, and so on. The demand relationship curve illustrates the negative relationship between price and quantity demanded. The higher the price of a good the lower the quantity demanded (A), and the lower the price, the more the good will be in demand (C).

The law of supply and demand is not just limited to the sale of products, however. It can be used to explain almost any economic phenomenon, such as a rise or drop in employment, increased or decreased enrollment in colleges, the expansion or shrinking of government programs, and increases or reductions in available resources. Therefore, the law of supply and demand is not only vital to economic theory; it is the foundation of economics itself.

4.3 The concept of Equilibrium in Economics

Equilibrium is a situation in which the force that determines the behavior of variables is in a balance and therefore they exact no pressure on the variables to change. In an equilibrium position the actions of all economic agencies are mutually constant. Or in other word the variables are equal. Market equilibrium is a situation in which the forces of demand and supply are equal. At this point there is no pressure exacted on the demand and supply to change. The equilibrium point is therefore determined by the intersection of the supply and the demand curve. At the point of intersection we have the equilibrium prices that a commodity should be sold at in the market and the equilibrium quantity which is the quantity the sellers are willing to supply in the market at the equilibrium prices. The equilibrium prices will equate the potential buyer's willingness to buy the additional units of a commodity with the seller's willingness and ability to supply the last additional units. Prices therefore will be said to show the marginal evaluation of commodities produced. There is a tendency at the equilibrium point for the demand and quantity supplied to be constant.

There is no shortage in supply or any excess. A shortage condition in the equilibrium will be eliminated immediately by the supplier increasing their produce until the equilibrium point is reached. When the supply is in excess the suppliers will cut their production until the equilibrium level is reached.



As you can see on the chart, equilibrium occurs at the intersection of the demand and supply curve, which indicates no allocative inefficiency. At this point, the price of the goods will be P^* and the quantity will be Q^* . These figures are referred to as equilibrium price and quantity.

The equilibrium point of a firm under the perfect competitive market is when there is no trend to increase or decrease the levels of output; at this point the firm is earning maximum possible profits.

Similarly at this point there are some equilibrium conditions that should be met; the marginal revenue should be equal to the marginal costs and the marginal revenue; marginal costs curve must cut the marginal curve from below.

4.4 Elasticity

Elasticity has been described as the degree of responsiveness of the quantity demanded relative to the factors that influence the quantity demanded. It is a ratio of relative change in quantity demanded and the relatives' changes in factors that affects demand.

Elasticity can be grouped into two major components;

1. Elasticity of demand
2. Elasticity of Supply

4.5 Elasticity of Demand

Elasticity of demand has been defined by a lot of economists with different explanation but the core concept that emerges from all their definitions is that elasticity of demand is a relative change between two quantities demand and the other factors that affects demand. Elasticity of demand can therefore be defined as the extent to which the quantity demanded in the market of a unit of commodity in response to a given change in the price. It is the sensitiveness or responsiveness of demand to changes in the prices. Elasticity of demand is one of the properties of demand to expand or contract in respect to changes in prices. Mathematically the elasticity of demand can be represented by the formulae;

$$E.D = RD/rp$$

Elasticity of Demand = E.D, RD = Relative change in demand, rp = relative changes in price

Since elasticity of demand is a mathematical function some of its component like magnitude can be measured. The measurement of the elasticity of demand can be said to be the degree of elasticity of demand. These results suggest that the elasticity of demand can be a unitary figure, it can be less than one or it can be greater than one. The elasticity of demand is a unitary figure when the amount of the quantity demanded at a price multiplied by the prices remains constant. When the value is greater than one the demand is said to be elastic and it implies that that a small change in price leads to very large change in the quantity demanded .When the unit of elasticity of demand is less than one it is referred to as inelastic demand and can be interpreted to mean that large changes in the prices of a commodity leads to a very small change in the quantity demanded. The classifications based on the three category is very general and can be grouped further to unitary elastic demand, Relatively elastic demand, perfectly elastic demand, relatively inelastic demand, perfectly inelastic demand.

Under unitary elastic demand there is a proportionate change in price being accompanied by an equal proportionate change in quantity demanded. A relatively elastic demand will indicate that there is a small change proportionate change in prices followed by a larger proportionate change in quantity demanded. Under a perfectly elastic demand the slightest change in prices of a commodity causes a huge or infinite changes in the quantity demanded.

An example is when the prices of a commodity is increased zero amount of quantity will be demanded. These cases are very rare in a perfect market. A relatively inelastic demand occurs when there is a very large proportionate change in the prices of a commodity by a smaller proportionate change in quantity demanded. The last category the perfectly inelastic occurs when a substantial change in prices leaves the demand unaffected.

The measurement of elasticity of demand is important in economics because it can be used to make important decisions and conclusions. Some of the decision made from the elasticity of demand is fixing the prices of commodities. The prices of product under the perfectly inelastic category can be increased without affecting the company's sales. Other uses are tax rate fixation, price discriminations, and environmental improvement.

4.6 Elasticity of Supply

The supply curve as shown empirically but various experiments conducted shows that the quantity of total output produced is going to increase as the prices of the total output increases. Elasticity of supply is a measure of the extent in which the supply of the commodity responds to changes in the quantities of the influencing factors. However normally the elasticity of supply in lay mans language refers to the extent to which the supply of a commodity responds to a change in its price. The change in the supply due to changes in the prices per unit is therefore referred to as price elasticity of supply. The mathematical formulae for the price elasticity of supply is given by, changes in the commodity supply divided by the changes in the prices of the commodity.

5.0 CONCLUSION:

5.1 *Determinants of Elasticity of Supply*

Prices of the commodity in the market: the changes in normally leads to a change in the supply of a commodity i.e. the extent to which the supply changes depends on the extent of the prices changes. Stock of the commodity available: stock is the amount of output already in the stores that are waiting to be sold. If there is a large stock of the commodity which is unsold the elasticity of supply will be elastic and if there is no stock of that commodity available then supply will be inelastic.

Spare production capacity: this considers whether the factors of production are fully utilized. If the factors of production are fully utilized even if the price of the commodity increases the supply will remain the same implying that the elasticity of supply will be inelastic.

However if the firms are operating below their full capacity, with increased prices of a commodity supply will increase implying that elasticity of supply is elastic.

Availability of the factors of production: if the variable factors of production are available the elasticity of supply will be very elastic. If the same factors are not available then it means that the elasticity of supply is inelastic.

The easiness of resources shifting from one industry to the other: When the production resources are mobile or it is easy to shift them from one industry to the other the elasticity of supply is elastic and when it is difficult to shift the production resources from one industry to the next the elasticity of supply is inelastic.

5.2 *Market failure*

Not always do expectations in economics come true, and not always are the goals of doing business achieved. Classical economics is based on the assumption if someone does something, or engages in an enterprise for his own self interest, they are bound to produce good results for everyone in the economy. But it is inevitable that sometimes, even often, individuals may do things that leave others worse off than themselves gaining. This is not good for economics, yet it is inevitable that sometimes this will occur. Economists have a term for this condition, which is Pareto sub-optimal. This term refers to a situation when the distribution of resources in an economy is such that it does not encourage optimal efficiency. Essential, this what market failure is all about- the failure of a market to achieve the desired level of efficiency.

A market failure is what informs government intervention in a market. There are many reasons for market failure, which have been listed by economists. But before mentioning any of those reasons, perhaps it is worth pointing out that market failure may occur due to more than one reason. In fact often market failure will occur due to more than one reason.

One cause is owed to the nature of the market itself. Sometimes in a market, one or a few players gain too much power in the market, and they make it difficult for other players to be actively involved in the economy. This result in some sort of imperfect market, and at some point, it begins to block certain mutually beneficial gains from taking place because they may not achieve what is referred to as perfect price discrimination. Monopolistic markets, in this sense, are more prone to this cause of failure, due to the fact one or just a few players in the market exercise control of prices.

Market failure may also come about as a result of the nature of the goods and services being traded. For instance, some goods and services are considered non-excludable. Non-excludable goods are those whereby one may not be in a position to limit their use to only those people who have bought them. A good example is an invention, or technology.

When invents a certain technology and reveals it, it is difficult for them to control usage, because they will have to sell the technology. Therefore, they end up selling only to a few people, but the technology ends up being used

by many others. It turns out that the person who invents that particular technology does not get the revenue that they should earn from their invention.

Well, market failure usually warrants government intervention. When the situation is adverse, sometime the government needs to come in to save in somehow. However, there is never a guarantee that intervention by the government will lead to correction of the problem. In fact, it might end up making the situation worse than it already is.

This situation, where intervention by the government worsens the situation rather than make it better, is often referred to as government failure. In a situation of market failure, therefore, economists are usually torn between the option of government intervention, which could possibly worsen the situation, and the other option of dealing with it without help from the government.

5.3 Causes of Market Failure in Health Care

1. Monopoly Syndrome ; In the health sector, many service providers always want to be the only source of distributors in the market and by so doing use all means to abrogate and sabotage contracts of other stakeholders in the industry. They control the market and regulate the price index making the market a stand still which tends to affect micro economic investments than macro economics.

2. Information asymmetry between producers and consumers ; Communication is one of the key to market growths but our health care markets lack a strong communication techniques especially between the service providers and their clients, most of the decisions and directives taken and given by our providers become final and clients fail to ask questions and to inquire more information. This at times leads to mis-information to the clients on the part of the service providers because of their love for money and not the client's best services.

3. The economics of scale attitude; this affects the health market since producers concentrate their attention on service providers who can buy more of their products for better discount prizes. It creates a huge vacuum for low level entrepreneurs since they cannot afford to buy more and also enjoy the good deal. With this, they also buy the little they can but goes to the market to increase their prizes since they did not have any better deal or discount. This makes the health care market shapeless since other part would be enjoying good service while the other will also be suffering high cost.

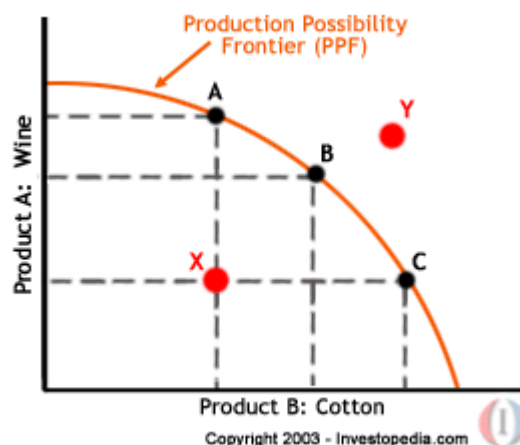
Other causes and factors of market failures are ; Option good property of medical services, Lack of consumer sovereignty, thus Patients' behaviour not rational, Lack of perfect information in markets for health care ;Imperfect agency relationship, Incomplete markets, Consideration for equity and not efficiency alone.

6.0 RECOMMENDATION:

6.1 Production Possibility Frontier

Under the field of macroeconomics, the Production Possibility Frontier (PPF) represents the point at which an economy is most efficiently producing its goods and services and, therefore, allocating its resources in the best way possible. If the economy is not producing the quantities indicated by the PPF, resources are being managed inefficiently and the production of society will dwindle. The production possibility frontier shows there are limits to production, so an economy, to achieve efficiency, must decide what combination of goods and services can be produced.

Let's turn to the chart below. Imagine an economy that can produce only wine and cotton. According to the PPF, points A, B and C - all appearing on the curve - represent the most efficient use of resources by the economy. Point X represents an inefficient use of resources, while point Y represents the goals that the economy cannot attain with its present levels of resources.

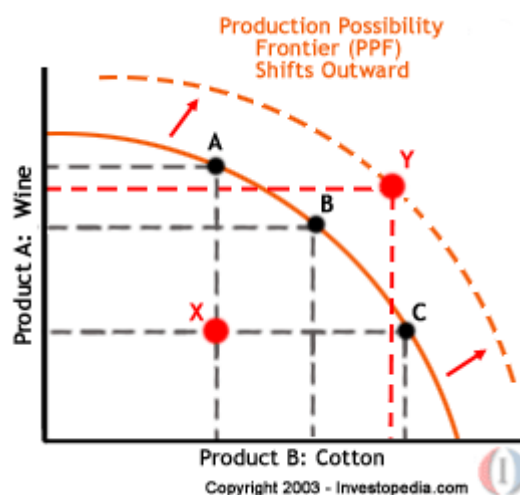


As we can see, in order for this economy to produce more wine, it must give up some of the resources it uses to produce cotton (point A). If the economy starts producing more cotton (represented by points B and C), it would have to divert resources from making wine and, consequently, it will produce less wine than it is producing at point A. As the chart shows, by moving production from point A to B, the economy must decrease wine production by a small amount in comparison to the increase in cotton output.

However, if the economy moves from point B to C, wine output will be significantly reduced while the increase in cotton will be quite small. Keep in mind that A, B, and C all represents the most efficient allocation of resources for the economy; the nation must decide how to achieve the PPF and which combination to use.

If more wine is in demand, the cost of increasing its output is proportional to the cost of decreasing cotton production.

Point X means that the country's resources are not being used efficiently or, more specifically, that the country is not producing enough cotton or wine given the potential of its resources. Point Y, as we mentioned above, represents an output level that is currently unreachable by this economy. However, if there was a change in technology while the level of land, labor and capital remained the same, the time required to pick cotton and grapes would be reduced. Output would increase, and the PPF would be pushed outwards. A new curve, on which Y would appear, would represent the new efficient allocation of resources.



When the PPF shifts outwards, we know there is growth in an economy. Alternatively, when the PPF shifts inwards it indicates that the economy is shrinking as a result of a decline in its most efficient allocation of resources and optimal production capability. A shrinking economy could be a result of a decrease in supplies or a deficiency in technology.

An economy can be producing on the PPF curve only in theory. In reality, economies constantly struggle to reach an optimal production capacity. And because scarcity forces an economy to forgo one choice for another,

the slope of the PPF will always be negative; if production of product A increases then production of product B will have to decrease accordingly.

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