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Asymmetric Information- Cause of Market Failure

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Abstract: A market appears to be a simple institution where buyers and sellers exchange commodities to enhance economic growth but in reality we fail to realise the dysfunctionalities that actually can disrupt such a transaction and lead to a market failure. A market is usually portrayed as an equilibrium state but this is a utopian state- far from reality. The causes attributed to such a market failure are quite a few like dominance of market power by a few, public goods, asymmetry information and equity. The existence of asymmetry information is easy prone to market failure by way of adverse selection. Asymmetry information is a situation whereby one party has a greater advantage over another in terms of accessibility of market information. In such cases the buyers are the ones who are the ignorant lot and the sellers are the ones who have information more than what they need which ultimately gives the latter an advantage to sell inferior quality goods to the former without they being aware about it. This eventually gives rise to the Lemon Problems Theory described by George Akerlof which explains how asymmetric information provides incentives for sellers of low quality goods to present their products as high quality goods thus reducing overall product quality and consumer satisfaction. This report gives a gist of the various causes of market failure with greater focus on asymmetry information. It seeks to give an insight and understanding of how asymmetric information via the Lemons Problem Theory can lead to a market failure with special reference to the purchase of a car or an insurance policy. It explains in detail the concept of adverse selection as an example of asymmetry information and finally soughts to give solutions to the Lemons Problem.

Keywords: *Market Failure*

I. INTRODUCTION

In economics the concept of Market holds a very significant place. It derives its existence from Microeconomics. Market is an institution where exchange of goods and services takes place between buyers and sellers. Without a Market it is not possible for an economy to function. When the resources in a market are allocated efficiently and the marginal cost is equal to the marginal revenue it implies that there is equilibrium in the market but such an ideal situation is an exception. The market is more prone to the reverse- a disequilibrium situation which is known as Market Failure. A market failure is characterized by a mismatch between demand and supply, more cost over revenue generation and inefficient allocation of resources. Market Failures are often associated with information asymmetries, non-competitive markets, principal–agent problems, externalities, market power or public goods.

In recent times it is seen that asymmetry information as a cause of market failure has assumed significance. The inaccessibility of proper market information to all parties involved in the transaction has resulted in one party having greater advantage over the other which eventually collapses the entire market functioning. Adverse selection and moral hazard are the two cases of asymmetry information. The existence of a market failure is often used as a justification for government intervention in markets. Economists are often concerned with the causes of market failure and possible means of correction for the same. Such analysis plays an important role in many types of public policy decisions.

Market failures have negative effects on the economy because an optimal allocation of resources is not attained. In other words, the social costs of producing the good or service are not minimized and this results in a waste of some resources.

II. CAUSES OF MARKET FAILURES

Apart from asymmetric information which is our main focus of study the following are regarded as some other factors that lead to market failure.

Market Power

Market power implies the power which a firm exercises in terms of changing the price of a good or service. This tends to cut back production in order to drive up prices and increase profits. It leads to concentration of economic power in the hands of a few.

Externalities

An externality means the existence of a third party that is a non-participant in the transaction but is either involuntarily paying a cost or receiving a benefit out of the transaction. For example if there are people who live downstream from a factory that makes widgets and whose waste is being dumped into the stream.This is an advantage to the factory and the customer because they find an easy way out of disposing the waste but it becomes a disadvantage for the people living in that area.

Public Goods

A commodity or service which exists for the public by and large without everyone requiring paying for it is a public good. In other words it is consumed by all without any obligations. As a result of which the firm or person will not be in a position to make any profits as there is no control over the usage of the product by the people. This can be supported with the example of street lights. It ends up under providing these kinds of goods in a free market economy.

Moral Hazard

A moral hazard is a situation where the actions of one party may prove to be damaging for the other party. The former, who is not concerned about the cost accrued to his/her actions, tends to get involved in high risk activities, which in turn effects the latter in a negative way. For example, a vehicle user takes all necessary precautions in order to safeguard himself from any catastrophic event. Now, suppose the same vehicle user buys an insurance policy which guarantees to bear the entire cost in case an accident transpires. The vehicle user will now not consider prevention of an accident as a great benefit and thus the marginal benefit of preventive measures will change drastically for him. He will become callous in his approach as the incidence of the burden has now been shifted to the insurance company. Besides this, when the policy holders tend to compromise on the preventive measures, the insurance company is forced to hike the premium amount. The increased premium amount is not reduced later even if the policy holders

choose to take necessary precautions as over a period of time the insurance company loses its belief in them. This brings about inefficiency in the pricing.

***The Principle Agent* Problem**

The principal-agent problem ensues when one person (the principal) permits another person (the agent) to act on his behalf. This results in two kinds of problems- first; a disconnection or clash between the intentions and objectives of the principal and those of the agent ratified to represent the principal, second, the inability of the principal to monitor the agent in a cost effective manner at all times due to the situation of hidden action. The key to the principal-agent problem is that principals and agents are people, people who pursue any task with the objective of maximizing utility. For example, in any organisation, maximising the profit level is the end objective, but the manager of the firm would try to enhance his share of the profit and thus might incur high costs in the process. Also, the manager sometime would tend to evade his work and opt for more leisure time. This further deteriorates the profit level. It is difficult for the firm (principal) to monitor such acts of the manager as they might be unobservable.

Asymmetric Information

Asymmetric Information is a situation where one party has no access to information compared to other parties regarding a particular transaction. In certain transactions, the buyers have incomplete information while in certain other transactions the sellers might not have access to detailed information. The sale of a used car is an example pertaining to limited information from the buyer's perspective. The seller of the used car will definitely tend to have more information about the characteristics of the car and might not completely share the information at hand with the potential buyer.

Likewise, in an issue concerning health, the buyer will have more information about himself rather than the seller. In such situations, when one party knows something which the other party does not, it not only leads to inefficient market functioning but also hinders efficient decision making.

Buyers try to gather information which they do not have access to, through various mediums such as media, past buyers, or by actually probing the product. Such categories of goods which can be searched are called as 'search goods', such as clothes, furniture, beauty products, etc.

Other kinds of goods which cannot be adjudged on the basis of a search only are called as 'experience goods'. The buyer cannot ascertain the characteristics of a product at the time of purchase as certain features can only be realised after using the particular product. For example, the quality of a used car, quality of paint, quality of a used refrigerator, can only be known after buying the product.

There are two types of information which result in asymmetric information-first, information pertaining to characteristic, wherein one side is aware of a particular characteristic which the other side is not, and second, regarding an action, which one side can take and the other side cannot directly discern. For example, in an insurance market, the seller of an insurance policy might not be aware of the intricacies concerning the health of his buyer (of insurance policy), which the seller would wish to have but does not have.

This is termed as a situation of 'hidden characteristics'. Similarly, an employee would desire to hire a candidate who is dependable, dedicated and works hard. However, the employer is unable to actually observe these characteristics prior to the recruitment of the candidate. This is the problem of 'hidden action'.Hence, asymmetry in information is a consequence of either a hidden characteristic or a hidden action.

Another example related to asymmetric information is the buffet system which is in vogue in the restaurants. The restaurants owners are unaware about the kind of customers that will come to the restaurant for the buffet similarly; the customers have no idea about the intentions or the reasons for the restaurant to have such a system. Usually in a buffet system food served is unlimited but the objective of having such a system is that the owners make cost and price calculations in such a way that inspite of maximum food intake by acustomerthe price charged maintains the profits. There was an exception in case of Mr Bill Wisth in Thiensville who consumed more than what was expected at the buffet until he was asked to leave by the restaurant owners. This was an exception but since there was lack of market information it resulted in the lapse of the functioning of the system. (http://www.forbes.com/sites/modeledbehavior/2012/05/23/the-economics-of-all-you-can-eat-buffets/)

III. OUTCOMES OF ASYMMETRIC INFORMATION

Signalling

The buyers and the sellers continuously attempt to overcome the problem of hidden characteristics. To identify these characteristics, a mechanism named 'signalling' is used by both the buyers and sellers.

A skilled worker tends to signal to his potential employer that he/she is entitled to a better wage in an unswerving and inimitable manner. Attaining higher education is one such signal which facilitates the employer in effectively gauging the high skilled worker. The worker, who possesses the relevant aptitude, opts for higher education irrespective of the costs accrued to it. Thus, the more educated worker goes to college, gains relevant skills and becomes entitled to a better wage as opposed to the low skilled worker. Thus, signalling enables a potential employer to effectually screen his future employee.

Adverse Selection

Another important outcome of asymmetric information is adverse selection. It is an unproductive, inefficient, or adverse result of a market exchange that arises because buyers (or sellers) make decisions based on asymmetric information. This frequently results in a market that settles for a lesser quality good.

The uninformed parties do not make an attempt to gather relevant information and the informed parties do not 'signal' or reliably communicate essential information, thereby resulting in the 'Market for Lemons' given by George Akerlof.

IV. THE LEMON THEORY

Buying a Used Car: The Market for Lemons

The classic example of adverse selection is the market for used cars. This market has cars of variable quality, quality that is known to sellers but not to buyers, thereby augmenting the problem of adverse selection.

First, the market has two different qualities of cars, namely, 'gems' and 'lemons'. Gems have been well preserved, are unlikely to need any repair, and are high quality cars. Lemons have not been well preserved, are likely to require some repair work, and are low quality cars. Second, there is an equal probability attached to the buyers purchasing either gems or lemons and there is no way of knowing which is which until after the purchase.

However, the buyer is aware of only one thing that the seller of a lemon would be most anxious to sell it. So, the buyer would tend to place a low value on the cars sold, thereby, pushing down the value of a good quality car (gem) as well.
This further shoves down the average quality of the cars sold in the lemon market as the seller of a gem has no inducement to sell in such a market scenario. Thus, the poor quality lemons are the once finally sold in the market and even if a gem has to be sold, the seller would have to convince the buyer that it is a good quality car. The cost involved with such an attempt of convincing the buyer might be much higher than the benefits which the owner of the gem is likely to receive. This is the phenomenon of adverse selection, wherein the unapprised side, tends to interact with the sellers of lemons only.

Case Study

Business Line, 11th January, 2003-
At Maruti True Value, Older is now better

Maruti has its branded pre owned car business, Maruti True Value. It deals with cars that have been operational for seven years and have covered upto one lakh kilometres. Such cars when sold are bound to impact the market for new and used cars. Under the True Value scheme, qualified engineers from Maruti check the vehicle thoroughly and refurbish the car at authorized workshops. These cars are sold with free services and warranty. The responsibility of verifying the seller and the buyer is also taken up by Maruti True Value. The used car market is expected to grow on a significant scale in the coming years with India as one of the countries in the forefront.

Insurance Market Case: the Market for lemons

The phenomenon in which the seller is less informed than the buyer is also observable in the insurance market. The insurance company does not have ample information pertaining to the health of the insurance policy buyer. Due to inadequacy of information the company is forced to sell the policy at the same rate to both the healthy people and the sick people.

Due to the hidden characteristic, the sick people will have a greater incentive to buy the policy as they are likely to receive the maximum benefits out of it. But this is specifically the group that the life insurance does not want to deal with thus giving rise to the problem of adverse selection.

On the other hand, there has been a gradual shift in the structure of these policies encompassing more features which seem favourable to the customers. Some of them include lifetime coverage, pension allowance after retirement and increased sum assured after a period of time. The choice between varieties of policies created by increasing number of such organisations leaves the buyer in a state of confusion and even though the buyer feels he is well informed in many cases it is not true.

Case Study

Motor Insurance in India

From the buyer's perspective Motor Insurance is attractive because it absorbs sudden unexpected costs which are incurred during accidents. However, there can also be bogus buyers which can make false claims. The Motor vehicle insurance has been amended over the years. Initially, the buyer of a vehicle had to pay premium based on the premium payable and base premium which amounted to a smaller amount.Later amendments include many changes. The driving force behind these changes isthe increased number of vehicles. The premium is based on the city and the age of the vehicle. Secondly, earlier a safe driving record would lower the premium gradually across successive years and people were entitled to discounts. Currently the premium can increase up to 100 percent and no discounts are offered. Further the rate of depreciation used in the calculation of the insured's declared value also favours the insurer. To sum it up, there has been a decline in the amount that a vehicle owner can insure. To add to this insurers are also increasingly tying up with car dealers and service stations to facilitate cashless settlement of claims.

Solutions to Asymmetric Information

Asymmetric information and the lemon market problem are predominant in many industries, most noticeably in the automobile, healthcare, banking, pharmaceutical and professional services industries. The problem of adverse selection particularly leaves some people displeased during exchange of goods and services. The mechanisms of signalling and screening devices can be successfully used to overcome the problems of asymmetric information.

Lemon Problem

The probability that a consumer will end up buying a 'lemon' becomes quite high if the consumer is unable to perfectly screen the product prior to its purchase. Accessibility to information along with an efficient market and government response can solve the problem of asymmetric information to quite an extent. Some of the plausible solutions in this regard have been highlighted below:

Guarantees and Warranties

Guarantees and warranties can be offered by firms, assuring higher quality goods and services. Also, the consumers could be given the chance of returning the goods in case they turn out to be defective. The firms can also procure *external product certification for their product so that the consumers can trust the quality of the goods and services being sold to them.*

Consumer Protection Regulation

In many countries, there are existent laws, defining certain parameters which the firms need to comply with, pertaining to the quality of goods that are offered. Given this backdrop, other countries can introduce similar laws which will enable consumer protection at all times.

If the firms fail to adhere to minimum quality standards, they should be penalised for the same by imposing a predetermined fine amount. Further, a firm selling a good of mass consumption should obtain a government recognised license before it commences its operation.

Social Regulation

Apart from monitoring industry based activities; the government should also undertake social regulatory measures, like, monitoring the banking sector of the country.

Insurance Problem

The insurance companies have identified certain procedures to solve the problem of adverse selection. One such measure includes, screening the individual who applies for an insurance policy. Under this, a medical examination of the individual is carried out, post which the person is categorised as healthy or sick. Although, this solves the problem of adverse selection form the company's point of view but it deprives a certain section of the society of the benefits of an insurance scheme.

Another solution to this problem is the group health insurance scheme. In many organisations, the employer provides insurance to all its employees thereby ensuring that all of them get enrolled in a group insurance scheme, at a reasonable price and the problem of adverse selection is eliminated. There is accurate dissemination of information if such a scheme is in operation which ensures that partial or false information is not circulated.

CONCLUSION

Asymmetric information is a common feature of market interactions. The seller of a good often knows more about its quality than the prospective buyer. The job applicant who is selling his services typically knows more about his ability than his potential employer who is the buyer. The buyer of an insurance policy usually knows more about her individual risk than the insurance company. Such asymmetries give rise to a number of questions. What happens to prices, quantities and quality of transacted goods?

The above helps to give answers to some of the questions that come to our mind in our normal customary lives - Why do people looking for a good used car typically turn to a dealer rather than a private seller? Why is it in the interest of insurance companies to offer a menu of policies, which combine premiums, coverage and deductibles in different ways? Why do wealthy landowners not bear the entire harvestrisk in contracts with poor tenants?

The situations cited are different but have one thing in common that in each case one side is better informed than the other. The seller knows more than the buyer about the quality of his car; Insurance clients know more than the insurance company about their accident risk and tenants knows more than the landowner about harvesting conditions.

To conclude we can say that while purchasing commodities in the market if the consumers do not have adequate information or lack knowledge regarding the market ethics then there is a possibility that they will get a lemon in place of the commodity. With special reference to the used car case and the insurance company it is always advisable to do an in depth examination, scrutinise and then decide on such transactions. What may seem perfect from outside may not necessarily be the same from within.

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