

Market with Asymmetric Information

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Introduction

In perfect competition model it is assumed that consumers have complete information about the products and their prices available in the market. Also they are aware about the quality of the products. The firms or the producers of goods are fully informed about the most efficient techniques available for producing goods, the productivity of workers hired by them and other production related issues. Moreover, in this kind of situation both the consumers and the producers have complete information about the market conditions. However in real world, the households and firms do not have full information about the price, quality and availability of the products. Rather they have only imperfect information about opportunity set available to them.

The Information Problem

Asymmetric Information is an example of imperfect information. Asymmetric information means that one party in the market has no perfect information about the quality of the product being sold say for example used or second-hand cars. In case of used cars while the sellers know about the exact quality of their products (second-hand cars), the buyers do not know the quality of used cars which may turn out to be “lemons (which means defective pieces)”. Another example of asymmetric information is regarding the workers who sell their labour services. They know their ability and efficiency, while the firms who hire them are not well informed about it.

The Market for Lemons and Adverse Selection

Asymmetric information means the market situation where the buyers and sellers have different information while making a transaction. This situation can well be understood with an example. Let us consider a market for used cars. In this case the sellers are better informed than the buyer about the quality of used cars that are being sold. Some used cars are of low quality (i.e. they are lemons) while others are of good quality. Hence, the sellers are aware about the lemons but the buyers are totally unaware about them. **The problem about the asymmetric information is that it leads to market failure, that is, failure to achieve Pareto Efficiency.**

The Market for Lemons

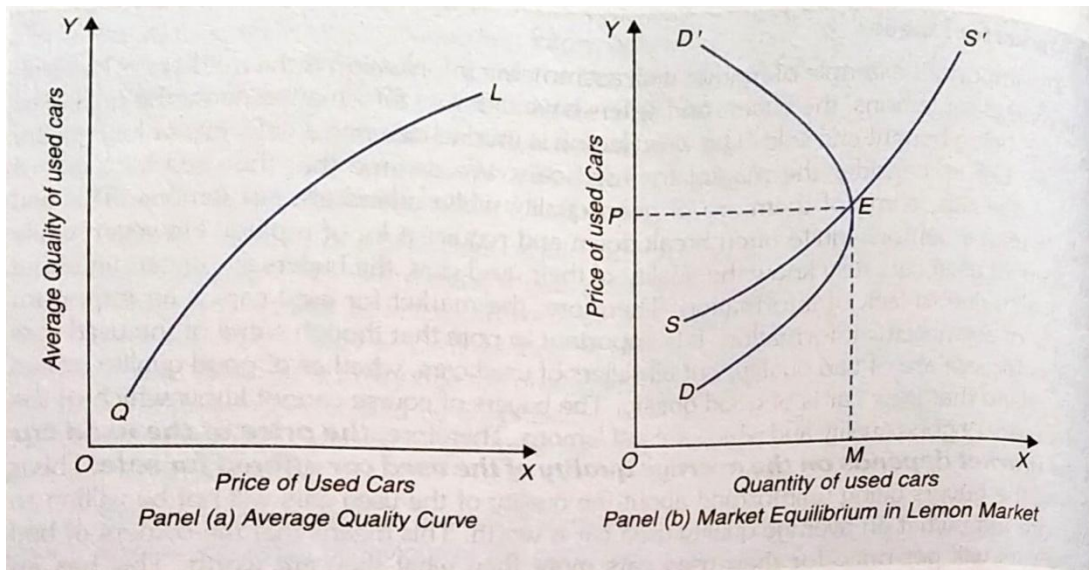
In the market for lemons, the buyers and sellers have different information about the quality of the goods being bought and sold. In the market for used cars, used cars are of different qualities; some of them are of good quality while others are just lemons. For lemons also the sellers claim that their car is of good quality. The buyers on the other hand are completely unaware about the quality of used cars. Therefore the price of the used car in the market depends on the average quality of the used car offered for sale. This is because the buyers being uninformed about the quality of the used cars will not be willing to pay more than what an average quality used car is worth. This means that the owner of bad cars will get price more than they worth it while owners of good quality cars will not be able to get the price for their better quality cars. As a result owners of good quality cars will start withdrawing their cars from the market. This will reduce number of cars available in the market. With this average quality of used cars offered for sale will also go down and so also the price of the used cars. This will further force more owners of good quality cars to go out of the market. This process of withdrawing from the market for used cars will go until only bad quality used cars are left for sale in the market. This phenomenon is called adverse selection due to asymmetric information on the part of seller and buyers. Bad qualities product drive out the good quality products from the market.

Market for Lemons and adverse selection is illustrated in the following figure. In panel A of the figure, along X-axis price of used cars is measured and on the Y-axis average quality of used cars being sold in the market is measured. As price of used cars rises, their average quality rises and on the other hand as price of used cars falls, their average quality decline rapidly because good quality used cars are withdrawn from the market. Therefore, the average quality curve QL of used cars slopes upward to the right.

Panel B of the figure, depicts market equilibrium of the used cars. SS' is the supply curve of the used car which slopes upward. As price rises, the number of used cars supplied in the market increases because at a higher price even the relatively good quality used cars is also supplied in the used cars market. DD' is the demand for used cars. This curve slopes upward in the beginning but bends backward after a point. This is because, with the fall in price average quality of used cars declines. The demand for used cars depends not only on the price but also on the quality of used cars offered for sale in the market. Thus as price falls, their average quality decreases rapidly, their quantity demanded falls. This causes the demand curve to bend backward at lower prices of the used cars.

E is the point of equilibrium determined with OP price and OM quantity of used cars available in the market.

Figure 1: Market for Lemons



The problem of asymmetric information leads to market failure. This is due to the externality between the seller of high-quality and low-quality used cars. As some buyers are trying to sell their low quality cars they affect buyers perception of the quality of the average cars available for sale in the market. This causes reduction in the price that they are willing to pay for the used cars available in the market which hurts the sellers of good-quality cars. Because of asymmetric information, buyers cannot easily determine the quality of used cars. Thus externality created by asymmetric information prevents achievement of Pareto efficiency and creates market failure.