



Microeconomics Sample Assignment | www.expertsmind.com

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Answer-1

Crystal meth functions in a market which has huge number of players. The stage is set in such a way that a monopoly cannot function. Every year the numbers of suppliers are growing by 50%. This shows that at certain stage this market will become dependent on the selling price. In the next part of the answer we will look at the factors which make the market perfectly competitive. The Crystal meth market in Southern California can be described as a perfectly competitive market because of the following reasons-

- 1) **There are no barriers to entry and exit.** Any laboratory can freely enter or exit the drugs market according to its wish.

Perfect competition requires that there must be complete freedom for the entry of new firms or the exit of existing firms from the industry in the long run. There must be no barriers to the entry of new firms. If the existing firms are making super-normal profits in the short-run new firms will enter the industry to compete away the profits. If on the other hand, firm are making losses some of the existing firms will leave the industry.



- 2) **There are very large number of sellers and buyers of crystal meth.** A very essential condition for perfect competition to exist is that there a very large number of buyers ad sellers in the market and any single buyer or seller cannot exercise any significant control over the market price, which is determined by the free interplay of forces of demand and supply.
- 3) **Perfect information-** All participants in the market have knowledge about the price and quality of the product. No expenditure on advertisement is made. Another condition for perfect competition to prevail is that both the buyers and sellers are fully aware of the ruling price in the market.
- 4) **Price determined in the market-** Every laboratory has to take price as given. They are price takers and not the price makers. In the wholesale market price is fixed for \$20,000 /kg and in the retail market it is \$1.5 million/ kg. This price is determined on

the basis of free interaction of market forces of demand and supply. This is typically the case in a perfectly competitive market.

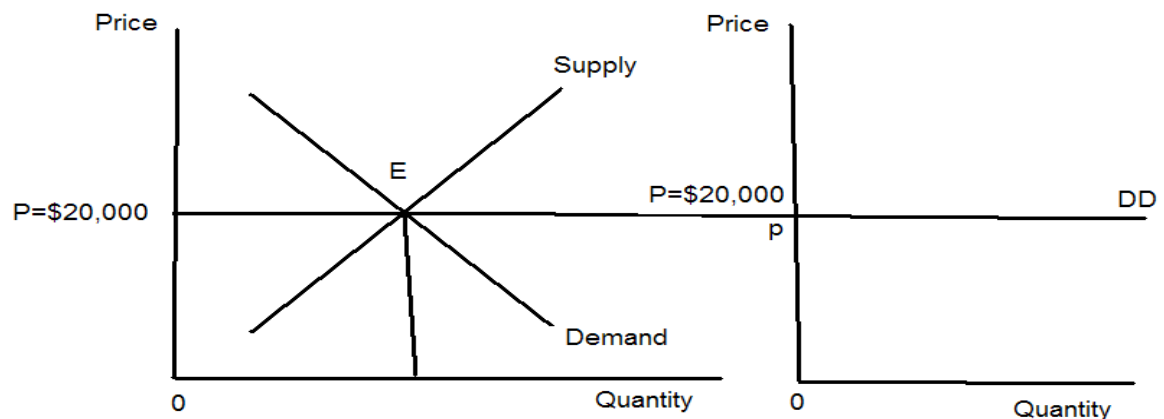
- 5) **Homogenous product-** All units of this drug are identical and there is no differentiation to attract the consumers. All laboratories produce identical drug using same inputs. Under perfect competition products produced by all the firms in the industry are fully homogenous and identical. It means that products produced by various firms are indistinguishable from each other and they are perfect substitutes of each other.
- 6) **Perfect mobility of factors of production-** The basic ingredients and equipment used to produce this drug are simple and widely available and can be easily carried from one place to another.

Signs in the article that this market may not be perfectly competitive are-

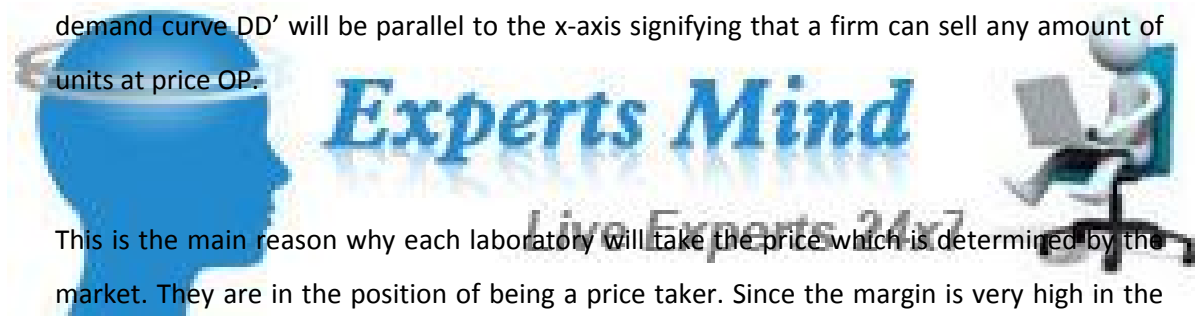


- 1) **Availability of substitute-** Crystal meth has a substitute, cocaine, which gives similar effects. In perfectly competitive market there are no substitutes available for the product. Thus, this may not be a perfectly competitive market.
- 2) **Abnormal profits even in long run.**—In case of perfect competition, firm may earn supernormal profits in the short run but in the long run earns only normal profits. In this market, laboratories are earning supernormal profits even in the long run. The reason of this can be attributed to the substitute being very expensive.
- 3) **Price greater than marginal cost (MC)** - In perfect competition, a firm sells output at a point where his MC is equal to price or marginal revenue. In case of crystal meth price is much higher than the marginal cost.

Answer-2



The above figure shows that price is determined in the market by the intersection of demand and supply curves at point E. This is the equilibrium price. The firm under perfect competition is forced to sell its products at price OP. It may sell any amount of units at this price. Thus, a firm under perfect competition is a 'price taker' and not a 'price maker'. Its demand curve DD' will be parallel to the x-axis signifying that a firm can sell any amount of units at price OP.



This is the main reason why each laboratory will take the price which is determined by the market. They are in the position of being a price taker. Since the margin is very high in the illegal business the laboratory is providing, they tend to stick to the price which is determined. If a single laboratory reduces the price, the volumes of sale will shift to that laboratory. As a result of this action the market as a whole will lower the price as margins are sustainable. This will create a new equilibrium price which will be much lower than the original equilibrium price. This situation will only create lower margins for the industry as a whole and will create no competitive advantage for the firm. If no competitive advantage is created by the action of the firm and only margins are reduced, why would any firm do that in the market? This is the reason why we believe that the price will be sustained in the long run. The equilibrium price will only shift to the other side if the cost price of the product is reduced or increased over a time period. Each laboratory will sell the drugs at a given price, which is determined in the market. Under perfect competition a firm is a price taker, he does not have any control over the price of the product but can sell any amount of the product at the prevailing price. If a firm raises its price slightly its price even slightly above the market determined price, it will lose all its customers to its rivals. Because it can sell as much as it

like at the prevailing price it has no incentive to lower it. Without being able to increase the price and having no incentive to lower it, the firm accepts the ruling price of the market.

A laboratory does not charge a higher price than that determined in the market because there are a large number of laboratories selling this drug at a fixed price and if anyone charges a higher price will lose his customers as they can easily purchase it from other sellers. Thus, in order to not lose his customers and sales he charges a price as determined in the market. If any single laboratory charges higher in the market, customers will evade the shop in the long run and will shift their buying place. If that becomes the case the laboratory will be out of business soon. This is the main reason why laboratory in the area will never increase the price of the drug. Until and unless the cost price of the product increases, no single laboratory will increase the price of Crystal meth. As we have read in the case study margins are also very high in this market. It might also become the case where the company has increased cost but they don't pass it down to the consumers as they still have huge sustainable margins. This will become a case where a firm will be able to create competitive advantage in the market.



Any single laboratory which sells the price lower than the market price will create a short term volume in sales. But as the market is perfectly competitive and information flow is dynamic, this won't be hidden for long. It's not difficult for other firms to reduce the price as margins are sustainable. This will create a new equilibrium price which will be much lower than the original equilibrium price. At the end of the whole scenario all firms will have lower margins and no competitive advantage. Hence no firm or laboratory which produces Crystal meth will take such an action. A laboratory does not charge a price lower than the market determined price because the risks involved is very huge. In case some loss occurs he will earn huge losses. There are added risks of producing an illegal drug and above all there is always a possibility of it being exploded in the process of its manufacturing. Therefore, he does not sell it at a lower than market determined price.

Answer-3

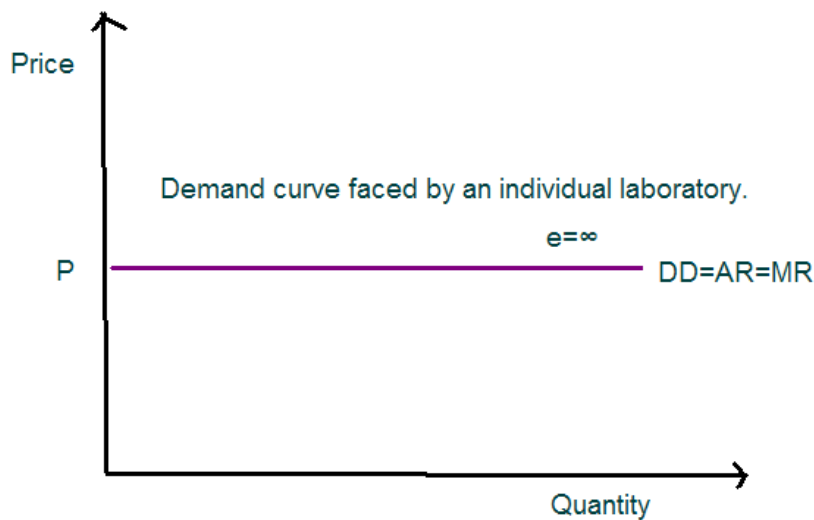
If an individual producer increases the production of the drug market price of the drug would not change significantly because there are a very large number of producers of Crystal meth in the market and the position of a single firm in the market is just like a drop in the ocean. The existence of a large number of laboratories producing and selling this drug ensures that an individual producer exercise no influence over the price of the product. The output of a single laboratory constitutes a very small fraction of the total output of the whole market so that any increase in output by an individual producer has a negligible effect on the total supply of crystal meth in the market. As a result, an individual producer is not in a position to influence the price by altering its output.

The case will be different if the single firm improves its production quantity by leap and bounds. This will lead to huge holding capacity in the market. Two scenarios can occur under such a situation. The first one being that the company reduces the price of the product to such levels whereby other firms are not able to sustain it at their level of production. This will create huge competitive advantage for the firm. The second thing that the firm can do is to produce huge quantities of Crystal Meth when the production of other firms is at its lowest. This will give the company huge volumes and will also allow them to charge premium from the customers.

The elasticity of demand curve facing an individual laboratory is infinity.

Since a single price must prevail under perfect competition and the demand curve or the average revenue curve faced by an individual laboratory is perfectly elastic at the ruling price in the market. Perfectly elastic demand curve signifies that an individual producer does not exercise any control over the price of the drug but can sell any amount of it as he likes at the ruling price. If the seller raises the price slightly above the ruling price, it will lose all its customers to its rivals. Because it can sell as much as it likes at the prevailing price it has no incentive to lower it. Without being able to raise the price and having no incentive to lower it, the firm is content to accept the ruling price in the market.

The firm under perfect competition is forced to sell its products at price OP . It may sell any amount of units at this price. Thus, a firm under perfect competition is a 'price taker' and not a 'price maker'. Its demand curve DD' will be parallel to the x-axis signifying that a firm can sell any amount of units at price OP .



Increased production in a perfectly competitive market cannot create huge advantage. The reason for the same is the number of suppliers and buyers available in the market. This proportion of production compared to total production should be huge to make any market price shifts. As the case does not tell us the relative quantity of production that the manufacturer will increase, we are not in a position to clearly comment on it. What we have done is creating a scenario analysis of the whole situation. This will help us to understand the situation in a much more holistic manner.

Answer-4

Since the price is constant for an individual laboratory his total revenue will increase in a constant proportion with an increase in sales. Thus, total revenue curve is a 45 degree straight line.

Since marginal revenue and average revenue both are derived from total revenue both will be constant because price is constant

$$AR = TR / Q$$

$$= P * Q / Q$$

$$=P$$

$$MR = dTR/dQ$$

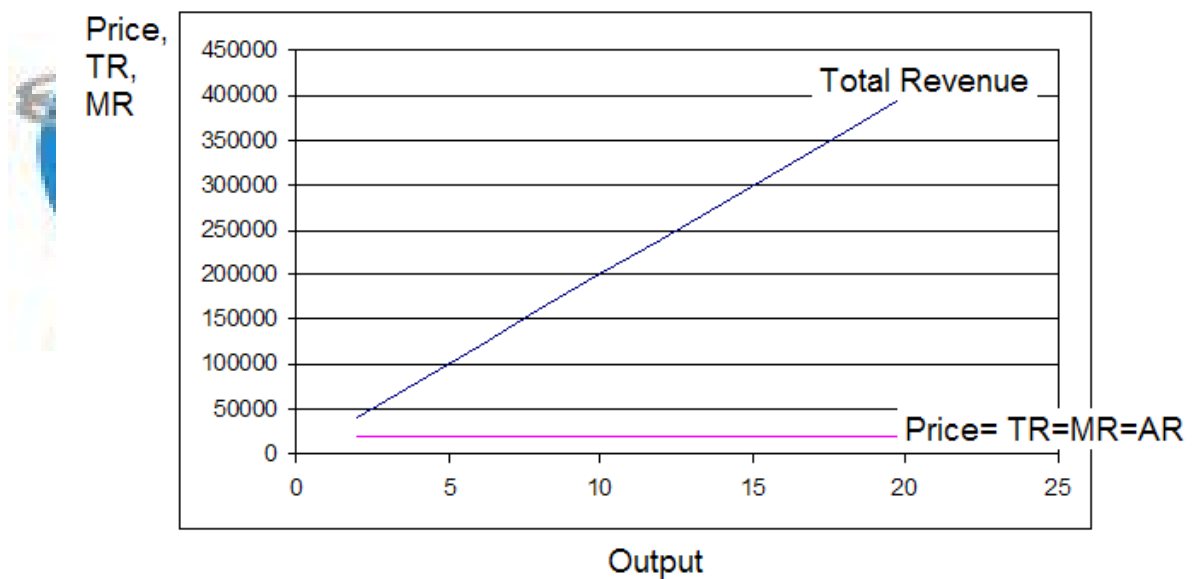
$$=d(PQ)/dQ$$

$$=P * dQ/dQ$$

$$=P$$

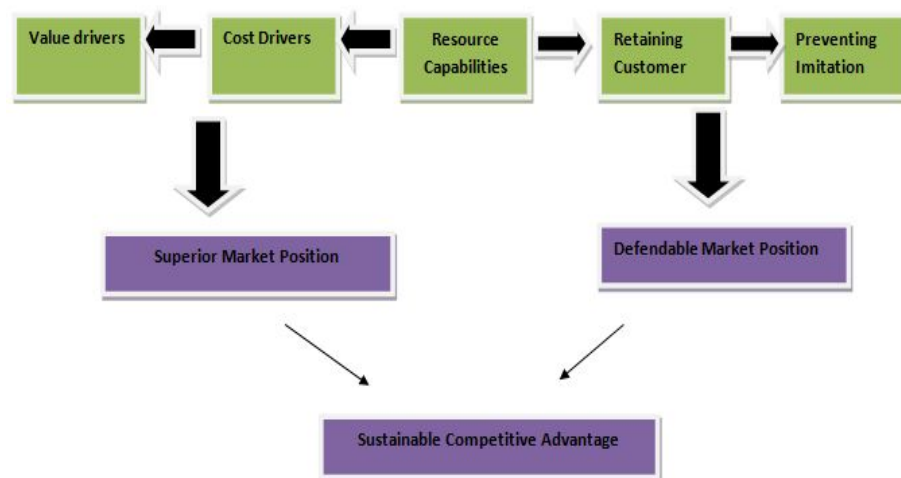
Thus, $AR=MR=P$

For laboratory-



The horizontal axis represents output, while vertical axis shows price, total revenue, marginal revenue and average revenue. Total revenue curve is a straight upward sloping line while AR and MR are constant and are equal to the price of crystal meth. This is the case of a perfectly competitive market where the price function is decided by the market. All the labs in the area are price takers as no single way has been found to create monopoly in the market. There is no way available in the market by means of which an organization can

create competitive advantage over the peers. Neither of the firms can differentiate on the product and only way to create competitive advantage is by means of low cost strategy.



The above charts set the theme for both the views in motion. They are so well interrelated that there is a common goal that can create a competitive advantage. There are five critical blocks (Green cells are RBV while violet ones are for Competitive positioning) for RBV which when practiced can lead to two quality positions- Superior market position or Defendable market position, which in turn is key component to position a product or service competitively.. These two strategies work in junction and neither of them can be sustainable in isolation.

The *differentiation* among these two perspectives lays in the fact that one talk about capabilities and the other does not. Competitive positioning talks how the capability of an organization allows the firm to be competitive in the market, while RBV only stresses on the resource. Competitive positioning shows the angle of marketing deciding the strategy of the firm while RBV is more from the side of manufacturing.

The two houses of strategy namely Resource based view & competitive positioning had their fare share of critics. After studying them in detail it can be seen that there are certain inherent weakness in both of them and both of them are not sustainable in long run if isolated. In a long competitive environment a firm needs to invest in either *product differentiation* or *cost leadership* and then utilize the *competitive positioning* which will be *sustainable* because of our ability to defend it on the *base of cost advantage*. If a company develops a sustainable cost advantage in the industry it can kill its competitors and rules the

market. Sustainable differentiation helps an organization charge brand premium to the customer. Either of the strategy in modern day's scenario will not work in isolation. A developing organization needs to realize that in such a globalized scenario no differentiation or cost leadership can last for long. Baring an example of some technological innovation no strategy in isolation has created a lasting organization.

This is the reason why Crystal Meth making organizations cannot create any strategically advantage. The price of the product is equal to AR and to MR.

Answer-5

Monthly profits of crystal meth by producing 20 kg are-



Total Revenue= 20 * 20,000

= \$400,000

Total cost= \$16,000

Profits = \$400,000 - \$16,000

= \$38,400

Profits in retail market

Total Revenue= 20 * \$1.5 million

= \$30,000,000

Total cost = \$16,000

Profits = \$30,000,000 - \$16,000

= \$2984,0000

Profits made by crystal meth are so high because of huge risks involved in producing it. The risks are-



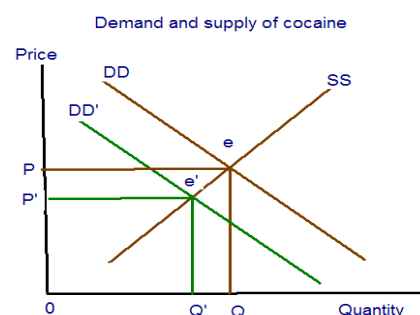
1) It is illegal to produce this drug.

2) There is always the possibility that in the process of making the drug it can explode.

Thus, due to such high risks, profits are so high.

Answer-6

As a result of introduction of crystal meth, the price of cocaine in southern California will fall. Crystal meth is substitute of cocaine and its price is much lower than cocaine. Since crystal meth is cheaper than cocaine its demand is high. Some of the consumers who were consuming cocaine will shift their demand to crystal meth because of substitution effect. Thus, demand for cocaine will fall, which will result in a decline in its price. This new product in the market has created a niche for itself. It has taken a pie from the cocaine market and hence created a huge Market for Crystal Meth. If Cocaine wants to enter the market again, it needs to take the market back. This can be achieved only by reducing the price of cocaine. If a superior product is available at the same price,



people will buy the branded cocaine. This is the reason price of cocaine will fall as the demand has considerably reduced. With the reduced price, cocaine will again have few buyers and a new buyer which can sustain the market in the long run.

With the momentum shifting back to the cocaine market, Crystal Meth is expected to reduce price further. At an ultimate level a situation would arise whereby the margins would be really low and it will be the volume in the market that will decide the players in the market. It is a situation whereby ultimately the markets are made in different countries. The problem to this market is the illegality which is involved. It will creep in at some time or the other. This will lead to some buyers or sellers being wiped out of the market. This will shift the market to uncertainty as per the situation.



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