

Class: SY BSc

Subject : Business Economics - Micro

Chapter: Unit 4 Chapter 3

Chapter Name: Price Discrimination & Strategy

Today's Agenda

1. Price Discrimination
 1. Types of Price Discrimination
 2. Conditions
 3. Aim of Price Discrimination
 2. Price Discrimination in Action
 3. Profit Maximization
 1. Profit Maximization under first-degree price discrimination
 2. Profit Maximization under third-degree price discrimination
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1. Distribution Effect

1 Price Discrimination



Explain what do you understand from the term 'price discrimination'?

1

Price Discrimination

- Price – Price is the monetary value of a good, service or resource established during a transaction.
- Price Discrimination – Price Discrimination is defined as a business charging different consumers different prices for the same product



1.1

Types of Price Discrimination

1st Degree

- First-degree price discrimination is where the seller of the product charges each consumer the maximum price he or she is prepared to pay for each unit. It is sometimes called 'perfect price discrimination' or 'personalised pricing'.
- For example, stallholders in a street market and second-hand car dealers will attempt to do this when haggling with their customers

2nd Degree

- Second-degree price discrimination is where a firm offers consumers a range of different pricing options for the same or similar product. Lower prices for products are conditional on factors like:
 1. The quantity of the product purchased
 2. The use of coupons/vouchers.
 3. When the product is purchased.
 4. The version of the product purchased.

3rd Degree

- Third-degree price discrimination is where a firm divides consumers into different groups based on some characteristic that is (a) relatively easy to observe; (b) informative about consumers' willingness to pay; (c) legal; and (d) acceptable to the consumer. T

1.1 Types of Price Discrimination

What is peak - load pricing ?

- Price discrimination (second or third degree) where a higher price is charged in peak periods and a lower price in off-peak periods

1.2 Conditions

Ability to separate
different groups

- Requires information / sufficient market intelligence

Firms must have
sufficient monopoly
(market) power

- Monopolists always have pricing power—price makers not takers

Identifying different
market segments

- i.e. consumers with different price elasticities of demand

Ability to prevent re-sale
(arbitrage)

- No secondary markets where arbitrage can take place at intermediate prices e.g. limiting sales, age-restrictions, ID cards

1.3 **Aim of Price Discrimination**



Explain as to why a business might resort to price discrimination

1.3 Aim of Price Discrimination



10% Student Discount

Extra Total Revenue

Marginal Profit

Providing that extra units of a good or service can be sold for a price above the marginal cost of supply, price discrimination is an effective way to increase revenue and profits



Higher Total Profit



Use Up Spare Capacity



Improved Cash Flow

Multiple Prices

Price discrimination takes us away from the standard assumption in theory of the firm that there is a single profit-maximising price for the same good or services

2

Price Discrimination in Action



Market haggling



Mobile phone contracts / tariffs



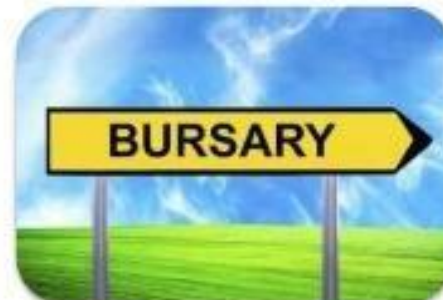
Taxi fares at peak times of the day

TKET TYPE	OFF-PEAK PRICES	PEAK PRICES
Adult	£7.29	£8.49
Child	£5.29	£6.49
Teen	£5.79	£6.79
Student	£5.99	£7.29
Senior	£5.29	£6.49
Family of 4	£21.16	£25.96

Cinema ticket prices



Hairdresser discounts



Educational bursaries

2

Price Discrimination in Action



Does the below picture depict price discrimination?
If yes, which type?

airtel 4G

**Say hello to our all new
TRULY UNLIMITED Prepaid Plans**

MRP	₹219	₹399	₹449
Calling	Unlimited Calling on any Network in India		
Data	1 GB/ Day	1.5 GB/ Day	2 GB/ Day
SMS	100 SMS/ Day	100 SMS/ Day	90 SMS/ Day
Airtel Thanks Benefits	Free Hello Tunes, Unlimited Wynk music, Airtel Xstream App	Free Hello Tunes, Unlimited Wynk music, Airtel Xstream App Premium	
Validity	28 Days	56 Days	56 Days

Yes.

The given picture depicts 2nd degree price discrimination as airtel is offering consumers a range of different pricing options for the same or similar product (data and calling).

Consumers are then free to choose whichever option they wish but the different prices are conditional on factors of amount of data, validity period, SMS per day, etc

2

Price Discrimination in Action

Uber & Price Discrimination

- Uber is a fast-growing taxi service app that now operates in more than 50 countries.
- In May 2015, Uber was valued at about 41 billion U.S. dollars by venture-capital firms
Uber engages in surge pricing – also known as dynamic pricing.
- When market demand out-strips available supply e.g. at peak times, then Uber raises the average fare on their app
- The aim is to encourage more drivers to take to the roads to expand supply.
- The business is taking advantage of low price elasticity of demand at busy times.
- Some economists have criticised this policy especially during emergencies such as freak weather events and terrorist attacks



3.1 Profit Maximization – 1st degree price discrimination

First-degree price discrimination

- Since an increase in sales does not involve lowering the price for any unit save the extra one sold, the extra revenue gained from the last unit (MR) will be its price.
- Thus, profit is maximised at Q_1 in graph below, where $MC = MR (= P \text{ of the last unit})$.

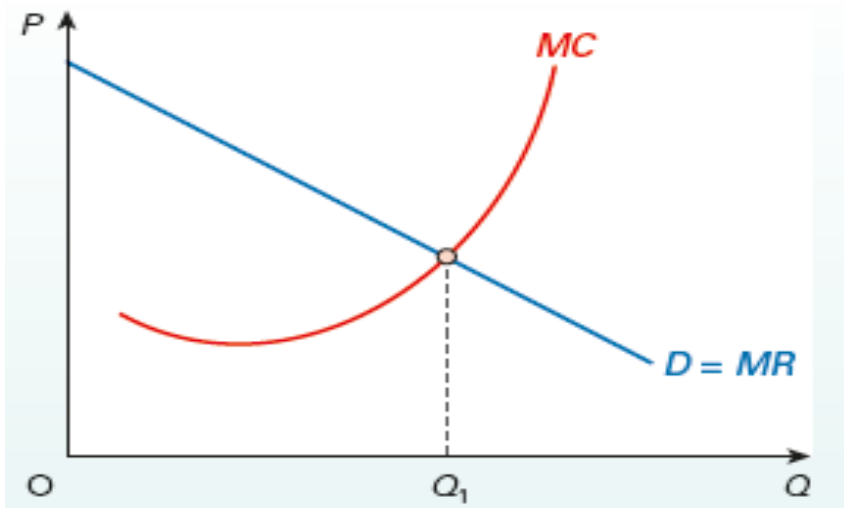
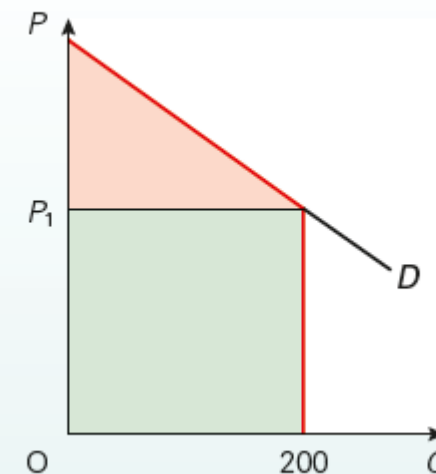
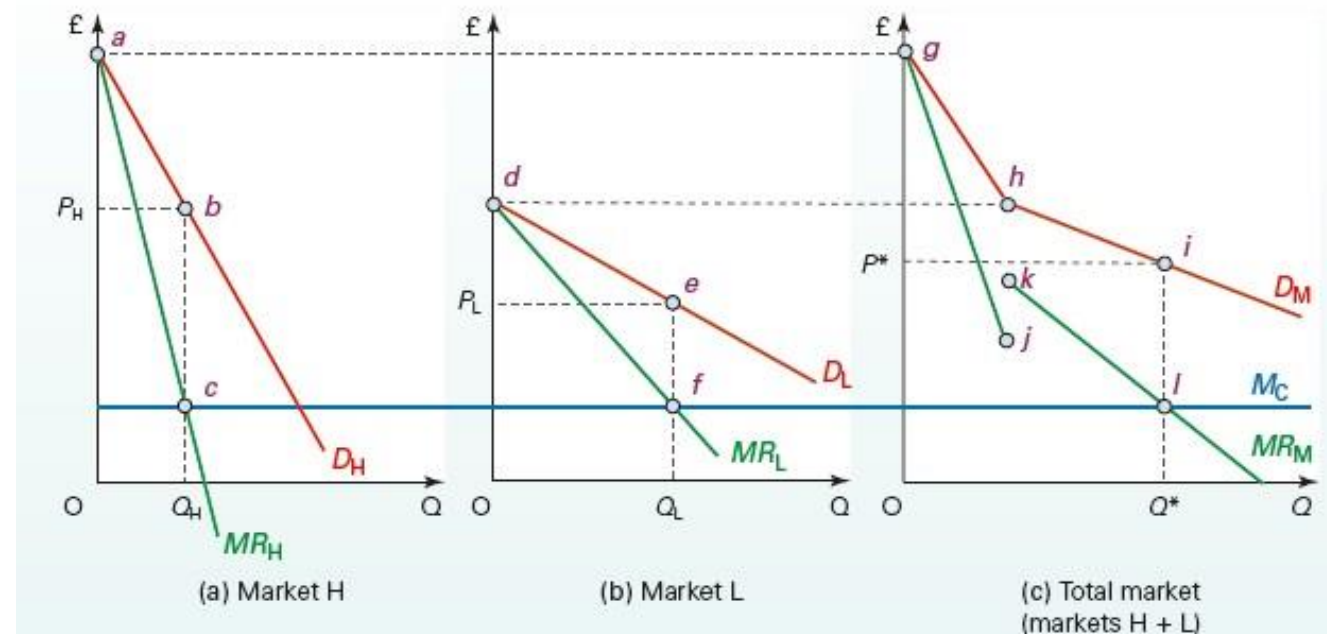


Figure 8.13 First-degree price discrimination



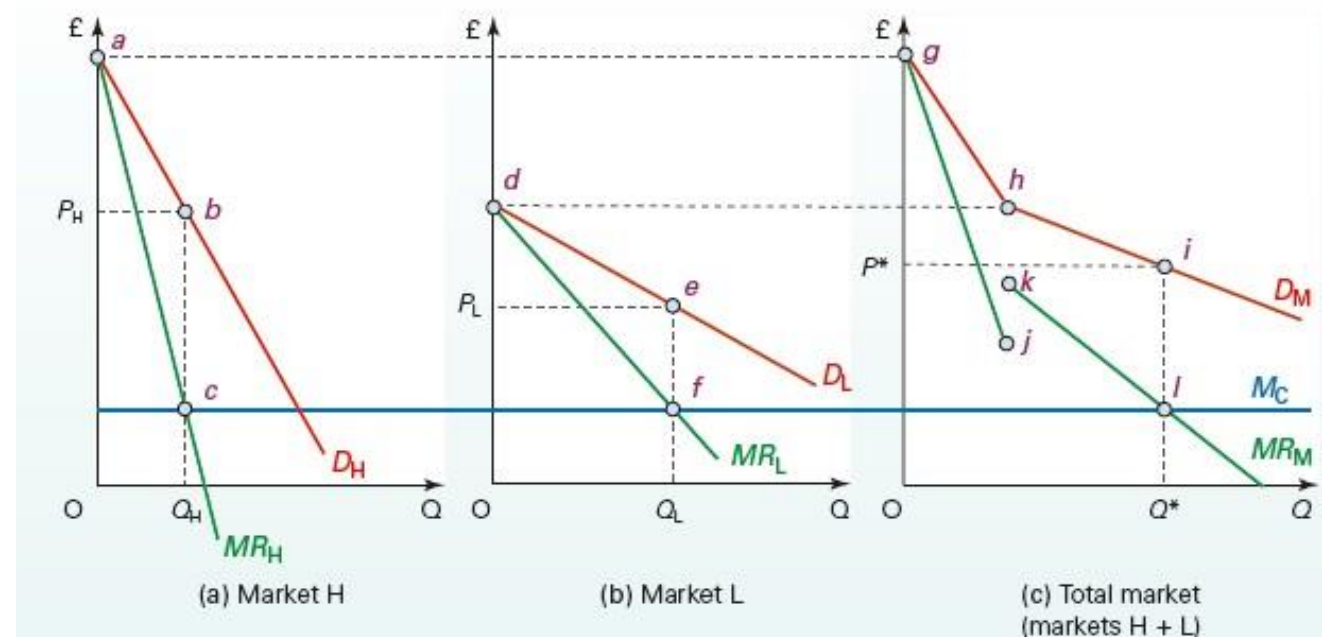
3.2 Profit Maximization – 3rd degree price discrimination

- Assume that a firm sells a given product (such as window cleaning services) and can split its customers into two groups, based on location, where people in market H have a higher average income than people in market L.
- It is highly probable that most consumers with the higher incomes would be willing to pay more for the product than those on low incomes. Panel (a) illustrates the demand curve for the firm's product in the high-income market, market H, while panel (b) illustrates the demand curve for those in the low-income market, market L.



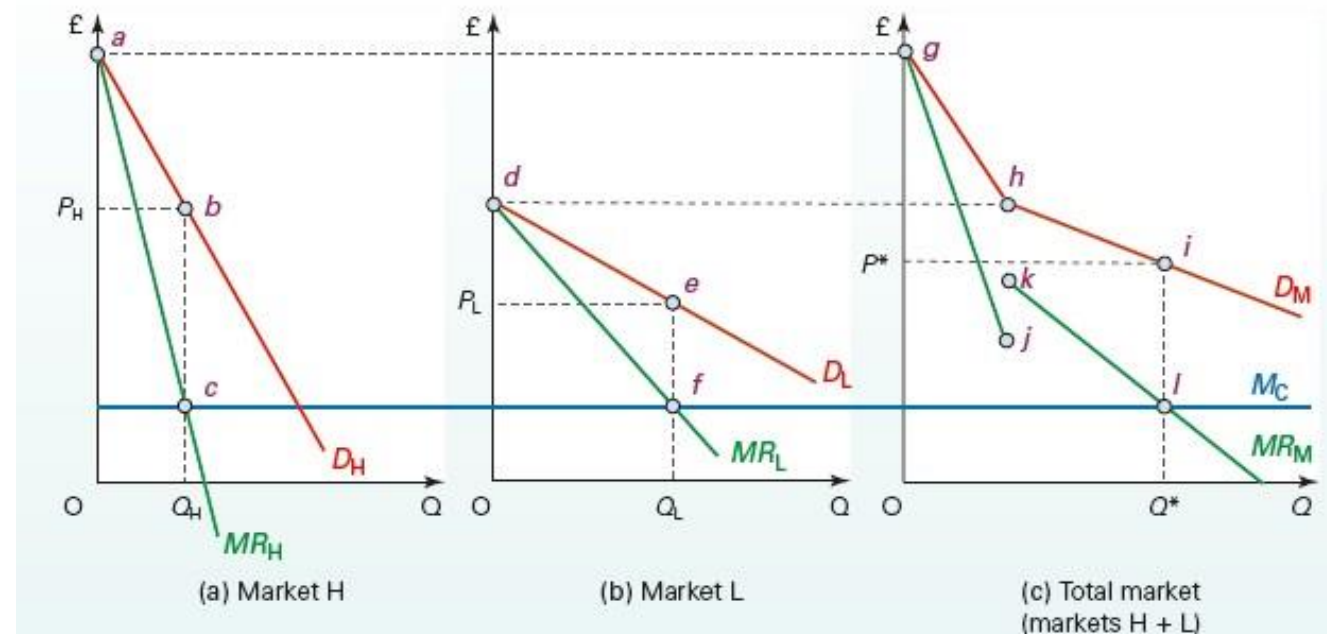
3.2 Profit Maximization – 3rd degree price discrimination

- If the firm were unable to split its customers into these two groups, then a market demand curve could be derived. This is illustrated in panel (c) and is obtained by horizontally aggregating the demand curves in panel (a) and (b).
- The market demand curve between points g and h is the same as the demand curve in market H between points a and b. This is because no consumer in market L is willing to pay a price above d . As the price falls below d , consumers in both market H and market L are willing to buy the good, so horizontal aggregation of both demand curves must take place from this point onwards.



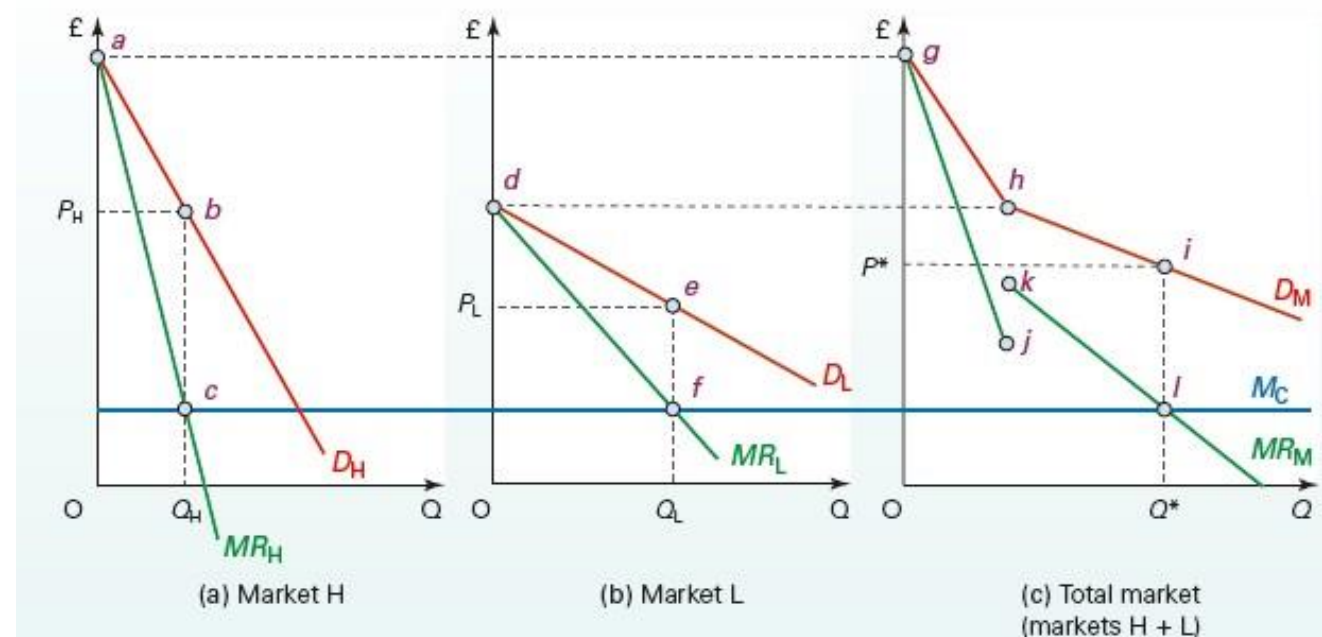
3.2 Profit Maximization – 3rd degree price discrimination

- This creates a kink in the market demand curve at point h . This kink also creates a discontinuity in the MR curve between points j and k . To simplify the explanation, it is also assumed that the firm's marginal cost is constant and it has no fixed costs. Thus $AC = MC$.
- To understand how a firm would behave if it could only set one price for all of its customers, we need to focus on the market demand curve in panel (c). If it was a profit-maximising firm then it would produce where the market MR (i.e. MR_M) = MC . This occurs at point l in panel (c). It would therefore produce an output of Q^* and sell all of this output at the same price of P^* .



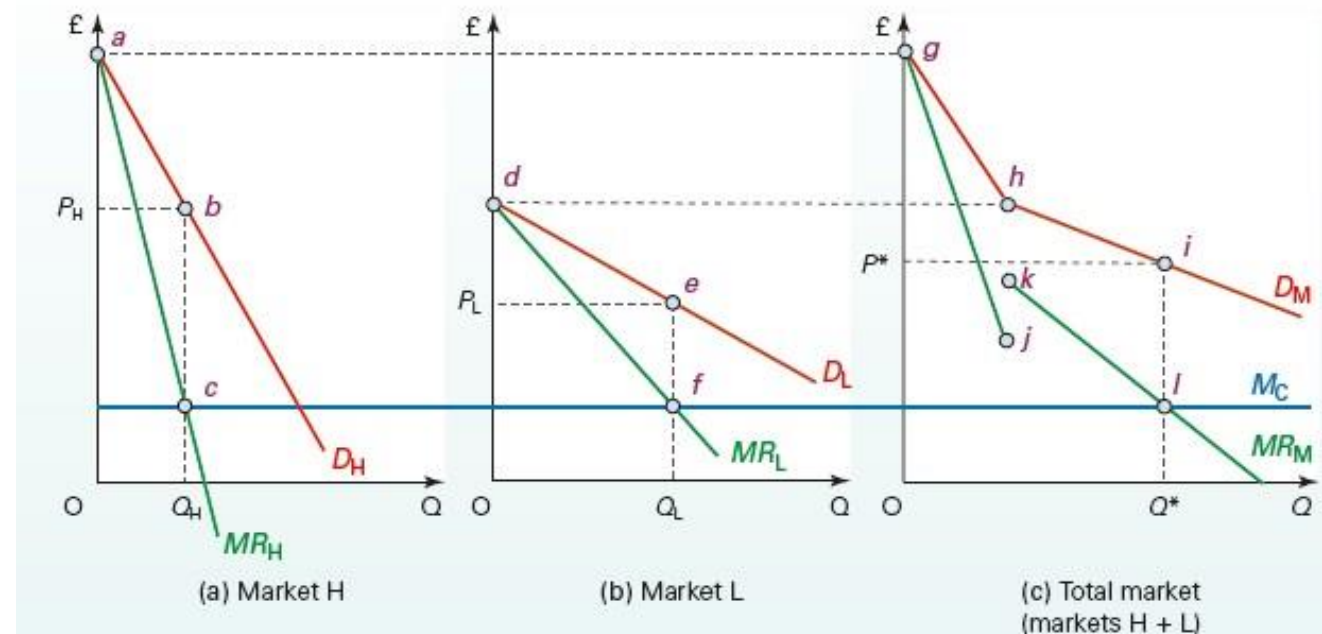
3.2 Profit Maximization – 3rd degree price discrimination

- What happens if the firm could now charge a different price to the customers in market H from those in market L?
- At the single price of P^* the price elasticity of demand in market H is lower than it is in market L. (Note that demand is nevertheless elastic in both markets at this price as MR is positive).
- Therefore, the firm could increase its profits by charging a price above P^* in market H and below P^* in market L.
- Once again this can be illustrated in the above graph.



3.2 Profit Maximization – 3rd degree price discrimination

- In market H the profit-maximizing firm should produce where $MR_H = MC$. Therefore, it should sell an output of Q_H for a price of P_H .
- In market L the profit-maximizing firm should produce where $MR_L = MC$ at point f. Therefore, it should sell an output of Q_L for a price of P_L .
- Note that P_L is below P^* , while P_H is above P^* . Also, because the demand curves are linear, the total output sold is the same under third-degree price discrimination as it is under uniform pricing: i.e. $Q^* = Q_H + Q_L$.



4

Distribution Effect

Distribution effects on those customers who previously purchased the good at a uniform price

- Those paying the higher price will probably feel that price discrimination is unfair to them. Price has risen for them and their consumer surplus is lower.
- On the other hand, those who previously purchased the good but are now paying a lower price will feel better off. Their consumer surplus will be higher.
- Judgements could be made about whether the gains were more socially desirable than the losses.

4

Distribution Effect

The impact of any extra sales

- Some consumers, such as pensioners, who previously could not afford to buy the good when the firm used uniform pricing. The lower price, made possible by price discrimination, now enables them to purchase the good. These extra sales will have a positive impact on the welfare of society. They will increase both consumer surplus and profit.

Misallocation effects

- Price discrimination may cause a negative allocation effect. Under uniform pricing the product is allocated through the price mechanism to those consumers who value it the most, given their incomes. The implementation of third-degree price discrimination could result in some units of the product being reallocated away from those consumers with a higher willingness to pay to those with a lower willingness to pay.
- Without any restrictions, mutually beneficial trade might be able to take place between the buyers. Those consumers with a higher valuation of the good could, under some circumstances, purchase it from those with a lower valuation at a price that would improve the welfare of both parties. However, the seller blocks this resale from taking place and in the process reduces society's welfare.

4

Distribution Effect

Competition

- As explained above, a firm may use price discrimination to drive competitors out of business. This is known as predatory pricing. For example, in many towns, large bus companies have used profits they make in other towns where they have a monopoly to subsidise their bus fares and thereby drive competitors out of business, only then to raise prices above those that the competitors had been charging. On the other hand, a firm might use the profits from its high priced market to break into another market and withstand a possible price war. Competition is thereby increased.

Profits

- Price discrimination raises a firm's profits. This could be seen as an undesirable redistribution of income in society, especially if the average price of the product is raised. On the other hand, the higher profits may be reinvested and lead to innovation or lower costs in the future.