A Simplified Theoretical Understanding of Price Discrimination as a Business Management Strategy

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Article History
Received: 19 February 2022
Revised: 10 April 2022
Accepted: 16 April 2022
Published: 19 April 2022

How to Cite
Ejiro, U. O. (2022) A Simplified Theoretical Understanding of Price Discrimination as a Business Management Strategy. Sumerianz Journal of Social Science, 5(2): 20-24.

Abstract
The paper delves into the five different types of price discrimination while giving graphical and illustrative examples of Pigou (1920) price classifications, marketing strategies, and more. The paper shows the differences and similarities between all price discriminations during transactions from first degree, second degree, third degree, fourth degree, and fifth-degree pricing [discrimination] strategies while graphically showing the ratio to marginal cost.

Keywords: Price discrimination; Pricing strategy; Business management.

1. Introduction
The consumer and producer surplus theory is essential to understanding the different types of price discrimination as they are the bedrock of these discriminating marketing concepts or selling strategies. The familiarization with those terms will help through the five types of pricing strategies from the supply-side economics perspective. Pricing discrimination was introduced in the market to reduce [seen as the most effective way] the deadweight loss in any transaction. This academic letter aims to explain [theoretically, illustratively, and graphically] the five types of pricing discrimination. While it contributes to the literature on business pricing strategy, it expands and explains one of the most predominant marketing practices that firms worldwide use to increase their profit margin and market share in different industries while using simplified terms and understandable examples for non-academics', policymakers', and entrepreneurs.'

According to Varian (1985), "The [most common] and conventional definition is, price discrimination is present when [a company] trades identical [product(s)] at different prices to different consumers, but Varian's definition fails to note this differentiation may be correlated to some miscellaneous costs. According to Stigler (1987), it is the ratio difference to marginal costs of an identical product sold to different customers. In this study, pricing discrimination will be defined as a pricing strategy where buyers are charged different prices for the same goods or services based on biases toward groups of consumers.

1.1. The Legality of Price Discrimination
Based on the 1936 Robinson-Patman Act, also called the Anti-Price Discrimination Act, prohibits price discrimination that is likely to hurt competition. In addition, the 1964 Civil Right Act prohibits any form of discrimination based on race, color, national origin, religion, or gender orientation.
1.2. First Degree Price Discrimination

Also known as the "Perfect Price or Price is Right discrimination," this is a situation where the customers within the same market economy are charged the maximum possible price that the customer is willing and able to pay for each unit of demand.

Example:

The airline industry is an excellent example of a market that practices a perfect price discrimination strategy. When booking a travel ticket, they divide their customers into the following groups [first-class, business-class, prime-economy, and economy]. Another industry that is involved with perfect price discrimination is the telecommunication sector. In this market, customers can select the plan to use from their phone carriers depending on their budget and willingness to pay. For example, a client can pay for a phone plan with [1 G.B., free calls, & text; 50 G.B., free calls, & text; and unlimited data, free calls, & text]. In conclusion, an industry that uses first-degree price discrimination usually divides its customers into prime, standard, and economy to reduce the deadweight loss.

1.3. First Degree Price Discrimination

![Perfect Price or Price is Right Discrimination Diagram]

Where:

A = Consumer Surplus
B = Producer Surplus
C = Opportunity Cost
A + B = Area of first-degree price discrimination

Author's Creation, 2022.

1.4. Second Degree Price Discrimination

Also known as "Bulk Pricing Discrimination," it involves giving discounts for each additional good or service added to the demand. Second-degree price discrimination charges customers differently for the same product based on the total amount or quantity of goods and services bought or demanded by the customer. The bulk-pricing discrimination capitalizes on the consuming nature of human-unlimited wants, and this is an indirect form of regressive tax.

Example:

The Costco store and Sam's Club are good examples of stores that participate in second-degree price discrimination. Because consumers are buying in bulk, they get the store's discount. Also, the stated two examples illustrate the "Two-Part Pricing system," where you must pay (membership due) to partake in the discount.
Second Degree Price Discrimination

Bulk Price Discrimination

Where:
- Small bulk \( S_1 = Q_1 = (A+D+F) \)
- Medium bulk \( S_2 = Q_2 = (D+B) \)
- Large bulk \( S_3 = Q_3 = (F+E+C) \)

Author’s Creation, 2022.

1.5. Third-Degree Price Discrimination

Also known as "Price-Elasticity Discrimination," unlike the first- and second-degree price discrimination, this type of price discrimination occurs when different prices are set for different demographics/groups of consumers. The discrimination is usually based on [age, income, time, occupation, and geography]. Third-degree price discrimination aims to divide the population by demographic [elderly, students, military, and location].

Example:
A good example will be a store charging students lesser [student discounts] because they are students or giving military personnel discounts for their service to the nation, the elderly discounts for living long, and paying more for living in a BIG city, for example, the price of a BIG MAC in Irvine CA is different from that in Iraan, TX. However, the products are identical and taste the same.

1.6. Fourth Degree Price Discrimination

Also known as "Reverse Price Discrimination" because it is faced by the producers' based on their average cost of production. In this case, the firm is faced with unplanned diseconomies of scale & scope due to unanticipated additional services or products added to the order/demand.

Example:
Say Jackie placed a catering order for her son’s 10-year-old birthday party, and a week before the party, the catering service finds out that the birthday boy is a vegetarian. Now the catering service will have an additional cost of production to add vegetarian cuisine to the party’s menu, while the cost of the order remains the same. This example can also be seen in the airline industry after a person buys a plane ticket and informs the airline that they are vegan; the flight will have to accommodate that person even if they are the only vegan on that flight.
1.7. Fifth Degree/Premium-Price Discrimination

Also known as the "Premium-Price Discrimination," based on increasing the producers' total marginal revenue due to an additional unit or scope of production. In this case, the firm is faced with planned economies of scale & scope; as a result, the firm's marginal revenue will increase.

Example:

The petroleum industry is an excellent example of a sector that practices fourth-degree price discrimination. For example, it may cost ExxonMobil a based $## to produce "Regular-gasoline"; an extra $0.05 to produce "Midgrade-gasoline"; an extra $0.05 to produce "Super Premium-gasoline," but ExxonMobil will sell the Midgrade- & Super premium-gasoline way above the cost of production.

2. Comparison

The main difference between all five types of price discrimination is that first-degree price discrimination sets different prices for the product to different consumers based on their willingness; second-degree price discrimination targets groups that can buy in bulk for a discount; third-degree price discrimination sets different prices based on their demographics (age, location, military status, etc.); fourth-degree price discrimination is based on the producer's incurring unplanned diseconomies of scale & scope; increasing their average cost of production; while the fifth-degree price discrimination, the producers enjoy economies of scales & scope.

The primary similarity between all five types of pricing discrimination is that they aim to reduce the deadweight loss in any market; hence the business pricing strategy is introduced as a business management process. In conclusion, price discrimination is based on the presupposition that the seller can categorize customers into specific
groups and reduce their consumer surplus during the transaction by using first degree, second degree, third degree, fourth degree, or fifth-degree pricing discrimination strategy.

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