VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)
CHENNAI

- This material is prepared in accordance to the video content.
- Activate the "Navigation" checkbox in the "VIEW" tab of Word for easy navigation between concepts. Once enabled, the document's headings will appear on the left side.
- If you are using hard copy of this material, alternatively, use the index page for navigating.

Week 9

Oligopolistic Market, Game Theory and Market Failures

Content

VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)
CHENNAI

Contents

Oligopoly and Meaning

(Refer to previous material for detailed explanation of features)

Sources of Oligopoly

Economies of Scale arising out of producing large varieties:

- In oligopoly, large firms often produce diverse products to capture a broad market share.
- Economies of scale emerge as these firms benefit from reduced average costs due to increased production volume.

Example:

(a) Automakers like Ford and General Motors produce a range of vehicle models, leveraging economies of scale in manufacturing, distribution, and marketing. (b) The automobile industry is a classic example. Large automakers produce a wide range of vehicle models, leveraging economies of scale in manufacturing, distribution, and marketing. The variety of cars allows them to cater to diverse consumer preferences while benefiting from cost efficiencies.

Huge Investment and Specialized Inputs Needed:

- Oligopolistic industries often require significant capital investment in research, development, and state-of-the-art technology.
- Specialized inputs and facilities are necessary, creating barriers to entry for new competitors.

Example:

(a) The semiconductor industry demands substantial investments in research, advanced technology, and specialized manufacturing processes. (b) The semiconductor industry is a prime example. The production of advanced microprocessors requires substantial capital investment in research and development, cutting-edge technology, and specialized manufacturing facilities. Only a few major firms globally can afford such investments.

Established Firms may have a Loyal Following:

- Brand loyalty is common in oligopolies, where established firms have built trust and recognition over time.
- Loyal customers may be less likely to switch to new entrants, providing a competitive advantage.

Example:

Apple and Samsung have a loyal following in the smartphone industry due to their established brands and customer satisfaction. Example: In the smartphone industry, companies like Apple and Samsung have developed strong brand loyalty. Customers who have been using iPhones for years may be less likely to switch to a different brand. This loyalty provides established firms with a competitive advantage.

Few Firms may Own a Patent or Specialized Production Process:

- Oligopolistic firms may own patents or unique production methods, restricting entry by others.
- Exclusive rights to these intellectual properties give firms a competitive edge.

Example:

Pharmaceutical companies owning patents for specific drugs, limiting competition and market entry. Pharmaceutical companies often operate in oligopolistic markets. A firm that owns a patent for a groundbreaking drug or has a unique production process for a specific medication can dominate the market for a certain period, restricting entry by other firms.

Control of Raw Materials:

- Some oligopolies control access to crucial raw materials, influencing market dynamics.
- Control over inputs can lead to strategic advantages and barriers to entry.

Example:

De Beers historically controlled the majority of diamond mines, impacting the global diamond market. The diamond industry exemplifies this. A few companies control the majority of diamond mines worldwide. De Beers, historically, had significant control over the global diamond market, influencing prices and restricting the entry of new competitors.

Government may Give Franchise to only a Firm:

- Governments may grant exclusive rights or franchises to specific firms, limiting competition.
- This practice is common in industries providing essential services.

Example:

Utility companies, such as those supplying water or electricity, may operate with government-granted franchises. Utilities like water and electricity supply often operate as oligopolies. In some regions, governments grant exclusive franchises to specific companies to provide these essential services. This limits competition and establishes a controlled market structure.

Limit Pricing

- Established firms in an oligopoly may engage in limit pricing to deter new entrants.
- They set prices low enough to make it unprofitable for potential competitors to enter the market.

Example:

Large airlines may use limit pricing to discourage new airlines from entering the industry. In the airline industry, larger carriers may engage in limit pricing. They set prices low enough to deter new entrants from entering the market, as new airlines would find it challenging to cover their costs and compete effectively against established players.

These aspects highlight the intricate dynamics of oligopolistic markets, where economies of scale, strategic investments, brand loyalty, intellectual property, control of resources, government interventions, and pricing strategies play crucial roles in shaping competition and market structure.

Price Leadership

Price leadership is a market structure and pricing strategy where one dominant firm, known as the leader, sets the price for a particular product or service, and other firms in the industry follow suit. This concept was formalized by the German economist, Prof. Heinrich von Stackelberg, and is often referred to as the Stackelberg model, leadership solution, or followership solution.

In a price leadership scenario, the leading firm typically possesses a dominant position in the market, either due to its size, market share, technological advantage, or other factors that make it influential. The leader takes the initiative to set the price for the product or service, and other firms within the industry adjust their prices accordingly. The followership solution implies that these other firms accept the price set by the leader and align their pricing strategies with it.

Key characteristics and considerations of price leadership

Leader's Dominance:

- The leader is usually the largest or most influential firm in the industry.
- Its actions, including pricing decisions, significantly impact the overall market dynamics.

Stackelberg Model:

- The Stackelberg model, named after Heinrich von Stackelberg, is a strategic interaction model in economics that captures the essence of price leadership.
- It introduces the concept of a leader making the first move, followed by other firms responding to the leader's actions.

Strategic Pricing:

Price leadership is a strategic approach where the leader strategically sets prices to achieve certain objectives, such as maximizing profits, gaining market share, or deterring new entrants.

Market Acceptance:

- The success of price leadership relies on the acceptance of the leader's pricing decisions by other firms.
- Followership occurs when other firms find it advantageous or necessary to align their prices with the leader.

Stability and Predictability:

- Price leadership often contributes to market stability and predictability.
- Consumers and firms can anticipate price changes based on the actions of the leader, fostering a sense of stability in the industry.

Government and Regulatory Considerations:

- Price leadership can raise concerns related to anti-competitive behavior, and regulatory bodies may monitor such practices to ensure fair competition.
- Legal frameworks may influence the extent to which price leadership is permissible.

Types of Price Leadership:

There are two main types: dominant firm price leadership, where one firm takes the lead, and Barometric or Collusive price leadership, where firms coordinate to set prices collectively.

Overall, price leadership provides a mechanism for coordinating pricing decisions in an industry, contributing to stability and efficiency. However, it also raises issues related to market concentration, potential anti-competitive behavior, and the need for regulatory oversight.

Cases of Price Leadership

(1) Price Leadership by a Low-Cost Firm, and

(2) Price Leadership by a Dominant Firm.

(1) Price Leadership by a Low-Cost Firm

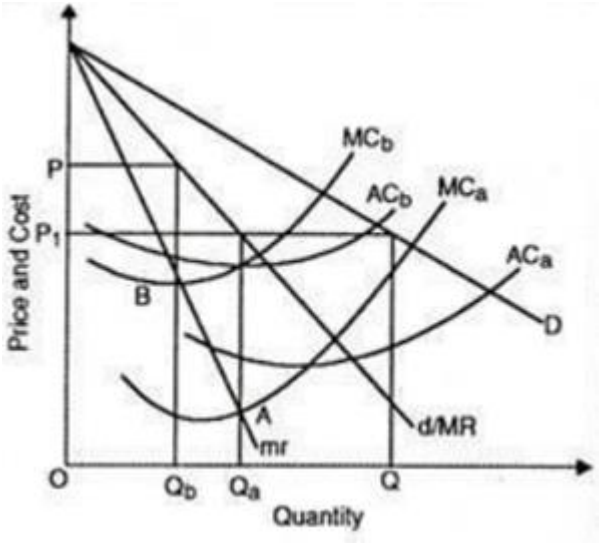
In the low-cost price leadership model within an oligopoly, a firm with lower costs than its counterparts establish a reduced price, compelling other firms to follow suit. Consequently, the low-cost firm assumes the role of the price leader.

This model operates under several assumptions:

Assumptions

- The existence of two firms, denoted as A and B.
- Distinct cost structures between the two firms, with A being the low-cost entity and B the high-cost entity.
- Similar demand and marginal revenue (MR) curves for both firms, where the demand they face represents half of the overall market demand curve.
- Many buyers participating in the market.
- Both firms possess knowledge about the industry demand curve for the product.

Explanation

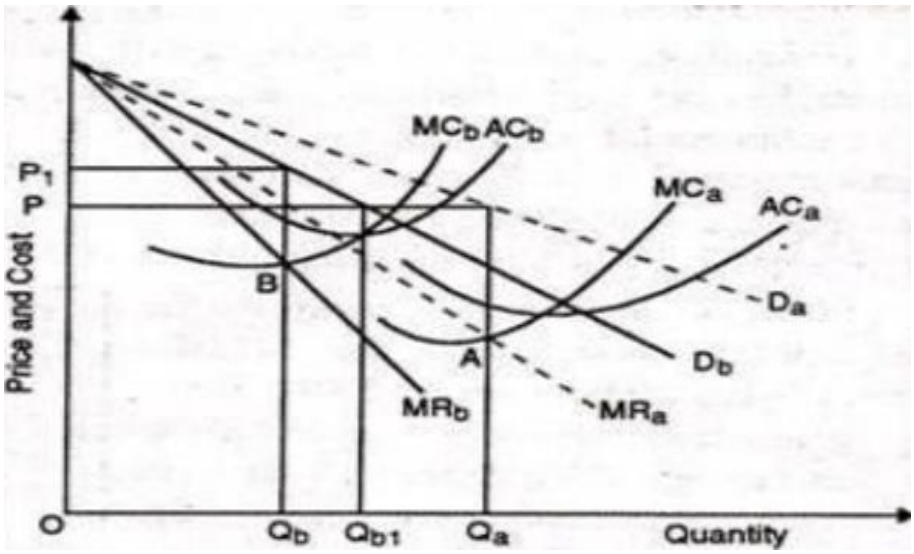


In the figure shown above, D represents the industry demand curve, and d/MR signifies the corresponding marginal revenue curve applicable to both firms, with mr denoting their individual marginal revenue curves. The cost curves for the low-cost firm A are denoted as ACa and MCa, while those for the high-cost firm B are ACb and MCb. If the firms act independently, firm B, being the high-cost entity, would set a price of OP per unit and sell a quantity of OQb, determined by the intersection of its MCb curve with the mr curve at point B. Simultaneously, the low-cost firm A would set a price of OP1 per unit and sell a quantity of OQa, determined by the intersection of its MCa curve with the mr curve at point A.

However, due to a tacit agreement between the two firms, the high-cost firm B becomes the price leader. Consequently, it sells a quantity of OQ at a lower price of OP1, although this does not result in maximum profits. Conversely, the price leader, firm A, earns significantly higher profits by selling a quantity of OQa at the price OP1. While both firms sell the same total quantity, OQ, it is equally divided between them (OQ = 2 OQa). If firm B adheres to the price OP, it faces zero sales because, given the homogeneity of the product, all customers shift to firm A.

Firm A, as the price leader, could potentially force firm B out of the market by setting a price lower than OP1, below the average cost (ACb) of firm B. However, this could lead to legal issues, prompting firm A to prefer fixing the price at OP1 and tolerating firm B to equally share the market and maximize profits.

The price leadership model with unequal market shares, as illustrated in the figure below, involves different demand curves for each firm, with the low-cost firm's demand curve (Da) being more elastic than that of the high-cost firm (Db). The low-cost firm A sets the price at OP and sells the quantity OQa, determined by the intersection of its MCa and MRa curves at point A. Meanwhile, the high-cost firm B sets the price at OP1 and sells the quantity OQb, determined by the intersection of its MCb and MRb curves at point B. Following the price leader (firm A), firm B, by accepting the price OP, sells a larger quantity (OQa) and earns less than maximum profits.



For the follower firm, it is profitable to sell at the price OP as long as it covers its average cost. If firm B does not follow the leader and attempts to sell the quantity OQb at its profit-maximizing price OP1, it risks closure as customers would switch to the leader firm charging the lower price OP.

In the absence of a market-sharing agreement, the follower firm could adopt the leader's price (OP) but produce a lower quantity (less than OQb1) to disrupt the market equilibrium, potentially putting the leader in a non-profit maximization position by reducing its output.

(2) Price Leadership by a Dominant Firm

This scenario exemplifies a classic instance of price leadership, featuring a single prominent firm alongside several smaller entities within the industry. The dominant firm takes the initiative in establishing the price that governs the entire industry, while the smaller firms freely sell their products within this pricing framework. The dominant firm strategically selects a price that maximizes its own profits, capitalizing on its significant market influence.

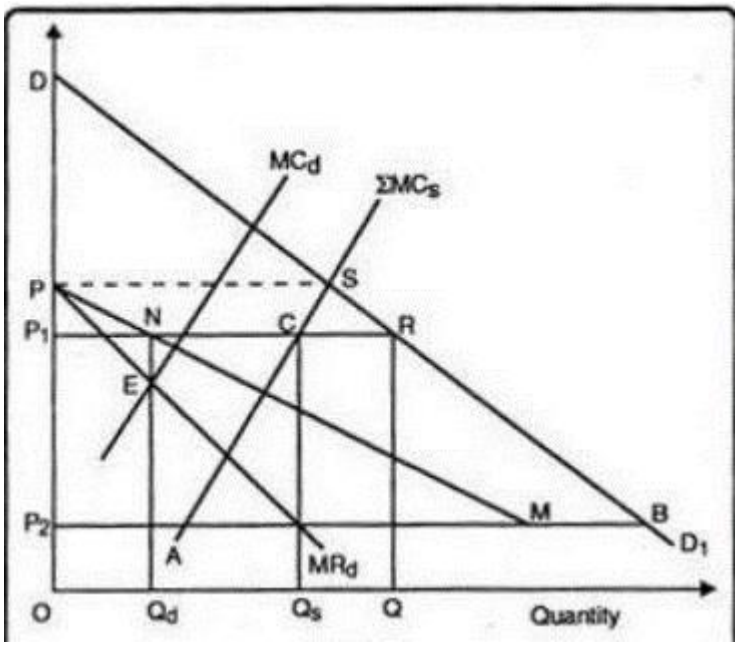
Assumptions

1. The oligopolistic industry comprises a substantial dominant firm and numerous smaller firms.
2. The dominant firm assumes the role of setting the market price.
3. All other firms operate akin to pure competitors, functioning as price takers. Their demand curves exhibit perfect elasticity, aligning with the price determined by the dominant firm.
4. The dominant firm possesses the exclusive capability to estimate the market demand curve for the product.
5. The dominant firm is adept at forecasting the supplies offered by other firms at the price established by itself.

Explanation

Under these assumptions, when each firm aligns its product pricing with the dominant firm's set price, its demand curve becomes perfectly elastic at that price, coinciding with a horizontal demand curve. The firm will produce the quantity at which its marginal cost equals marginal revenue. The combined lateral aggregation of the marginal cost curves (MC) of all small firms establishes their aggregate supply curve (∑MCs), while the dominant firm adopts a passive role, fixing the price and allowing small firms to freely sell their products at that price.

The case of price leadership by the dominant firm is elucidated in the figure below. DD1 represents the market demand curve, and ∑MCs is the aggregate supply curve of all small firms. By subtracting ∑MCs from DD at each price, we derive the demand curve faced by the dominant firm, represented by PNMBD1.



Assuming the dominant firm sets the price OP, it permits small firms to fulfill the entire market demand by supplying quantity PS. However, the dominant firm supplies nothing at this price, establishing point P as the starting point of its demand curve. If a price OP1 lower than OP is set, the small firms would supply output P1C at this price, where their ∑MCs curve intersects the horizontal demand curve P1R at point C. The total quantity demanded at OP1 is P1R (OQ), with small firms supplying P1C quantity. The dominant firm's supply at this price is CR (Qs Q), resulting in point N on its demand curve. The dominant firm's demand curve coincides with the horizontal line P2B over the range MB, then aligns with the market demand curve over the segment BD1, forming the curve PNMBD1.

Profit maximization for the dominant firm occurs at equilibrium point E, where its marginal cost curve MCd intersects its marginal revenue curve MRd. At this point, the dominant firm sells OQ1 output at OP1 price. The small firms sell OQs output at this price, as their marginal cost curve (∑MCs) intersects the horizontal price line P1R at point C. The total industry output is OQ (OQd + OQs).

If the dominant firm sets the price OP2, the small firms would sell P2A, and the dominant firm would sell AB. If a price below OP2 is set, the dominant firm meets the entire industry demand, and small firms have zero sales.

This analysis reveals a stable price-quantity solution, as the small firms behave passively as price-takers in this scenario.

Kinked Demand Curve

The kinked demand curve is a concept used to explain price rigidity and stability in oligopolistic markets. It suggests that firms in an oligopoly might face a demand curve with a kink, reflecting the competitors' likely reactions to price changes. The key features of the kinked demand curve model in oligopoly are:

- ### Price Rigidity

The model assumes that rival firms are likely to match price decreases but not price increases. If one firm lowers its price, others will follow suit to avoid losing market share. However, if one firm raises its price, others are unlikely to follow, as they fear losing customers.

- ### Inelastic Range

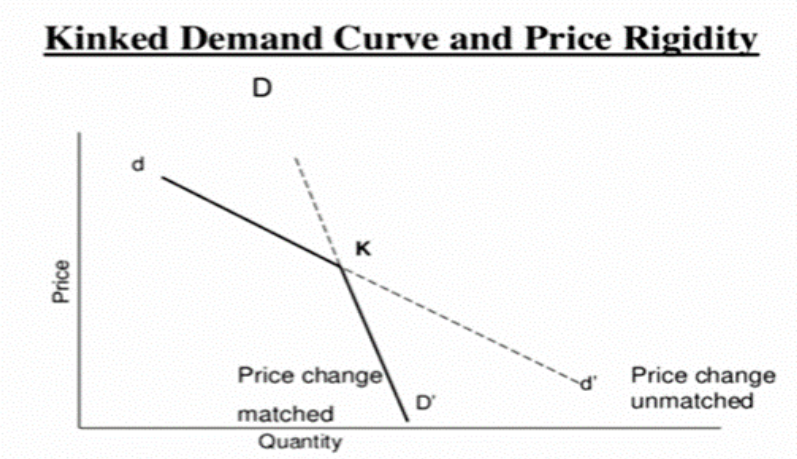
Below the existing price level, the demand curve is relatively inelastic. In this range, consumers are less responsive to price changes, and a price cut by one firm is matched by others to avoid losing market share.

- Elastic Range

Above the existing price level, the demand curve is relatively elastic. In this range, consumers are more responsive to price changes. If one firm raises its price, others do not follow suit, leading to a potentially large loss in market share for the firm that increased prices.

- Kink Point

The point of the kink is where the two segments of the demand curve meet. At this point, the demand curve has a sudden change in elasticity, representing the assumption that competitors respond differently to price increases and decreases.



- Stable Prices

The kinked demand curve model implies that firms have an incentive to keep prices stable. The fear of losing market share prevents firms from initiating price changes.

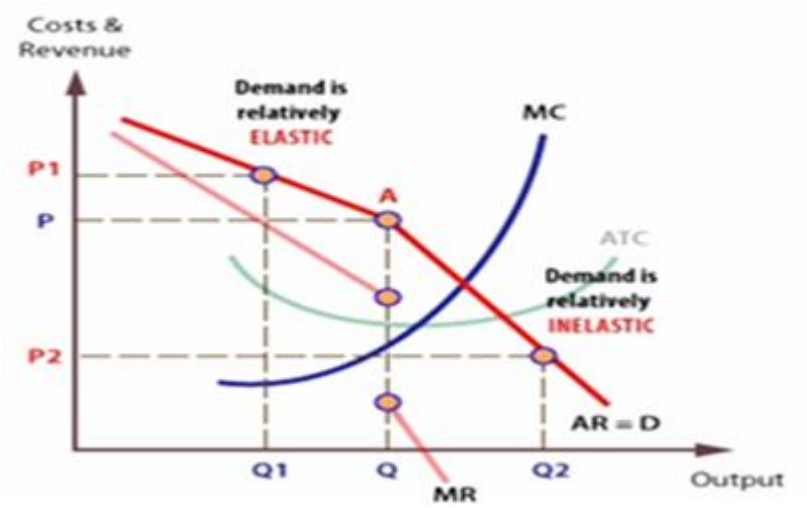
- Non-Collusive Behavior

The kinked demand curve model does not assume collusion among firms. Instead, it suggests that firms independently make decisions based on expectations of how competitors will react to price changes.

While the kinked demand curve model provides insights into price stability in oligopolistic markets, it has limitations. Critics argue that the model oversimplifies the complex interactions in oligopoly and assumes that firms have perfect knowledge of each other's reactions, which may not be the case. Additionally, it doesn't account for strategic behaviour or collusion, which can also influence pricing decisions in oligopolies.

In an oligopoly, firms possess the capability to determine their own prices; however, the majority refrain from doing so to enhance competitiveness. This restraint is attributed to interdependence, where firms base their decisions on the anticipated reactions of others in the

same industry. The kinked demand curve effectively elucidates this phenomenon. Assuming a firm sets a price (P) at a quantity (Q), we can establish a baseline to elucidate the reasons for price stability. If the firm were to increase its price to P1 at Q1, other firms would likely maintain their prices to secure market share gained due to the initial price hike. This is because, at that point, the demand curve (AR) is elastic, and a price increase could lead to a decline in sales, translating to lower revenue.



Conversely, if the firm were to reduce prices to P2 at Q2, other firms would respond in kind to prevent a loss in market share. Here, the demand (AR) is inelastic, and although there might be slight sales increases, revenue would still decrease. The interdependent nature of these reactions ensures price stability, prompting firms to prioritize non-price strategies for competitiveness.

Moreover, without profit maximization points unless MC equals MR, prices remain stable or rigid. A stable equilibrium at P and Q, where profit is maximized, provides little incentive to adjust prices. Periods of relative price stability in such scenarios are termed "price rigidity." Prices would remain settled even with an increase in MC, as there would be no alteration in the profit-maximizing level where MC equals MR. This is why prices tend to stay relatively stable in an oligopoly market.

GAME THEORY

Game theory is a mathematical and strategic framework used to analyze and model the interactions between decision-makers (players) in various scenarios. In the context of corporate decision-making, game theory can be applied to situations where the outcomes for each participant depend on the choices made by others.

Terminologies related to game theory

Term	Meaning

Game Theory	Game theory is a branch of mathematics and economics that studies strategic interactions among rational decision-makers. It models the decisions of players in situations where the outcome depends on the choices of all participants.
Players	Participants or individuals involved in a game who make decisions that affect the overall outcome.
Payoff	The reward or outcome that a player receives based on the combination of choices made by all players in the game.
Strategy	A complete plan of action that a player adopts to achieve their objectives, taking into account possible moves by other players.
Nash Equilibrium	A state in which no player has an incentive to unilaterally change their strategy, given the strategies chosen by the other players.
Dominant Strategy	A strategy that is optimal for a player regardless of the choices made by other players.
Prisoner's Dilemma	A classic example of a game where two rational individuals might not cooperate, even if it appears that it is in their best interest to do so.
Cooperative Game	A game in which players can form coalitions and make binding agreements to achieve better outcomes.
Zero-Sum Game	A type of game where one player's gain or loss is exactly balanced by the losses or gains of other players. The total amount of wealth or utility in the system remains constant.
Incomplete Information	A situation in which players do not have complete knowledge about the strategies or payoffs of other players.
Perfect Information	A situation in which all players have complete and accurate knowledge about the game, including the strategies and payoffs of other players.
Simultaneous Game	A game in which players make decisions simultaneously, without knowing the choices of other players.
Sequential Game	A game in which players make decisions in a specific order, and each player observes the decisions made by those who preceded them.

Example: Oligopoly and Price Setting

Consider an oligopoly, a market structure characterized by a small number of large firms dominating the industry. In this scenario, each firm's pricing decision affects not only its own profits but also the profits of its competitors. Let's simplify the example with two major players: Firm A and Firm B.

Players:

Firm A

Firm B

Strategies:

Set High Price (H): Charge a high price for the product.

Set Low Price (L): Charge a low price for the product.

Payoffs (Profits):

If both firms set a high price (HH), they both earn moderate profits.

If both firms set a low price (LL), they both earn higher profits.

If one firm sets a high price while the other sets a low price (HL or LH), the low-price firm gains a larger market share and higher profits, while the high-price firm loses market share and earns lower profits.

Payoff Matrix:

	Firm B sets High (H)	Firm B sets Low (L)
Firm A sets High (H)	(Moderate, Moderate)	(Low, High)
Firm A sets Low (L)	(High, Low)	(High, High)

Analysis:

- If both firms set high prices (HH), they may earn moderate profits, but there's a risk of losing market share to competitors.
- If both firms set low prices (LL), they can both earn higher profits, but there's a risk of a price war, reducing profits.
- If one firm sets a high price while the other sets a low price (HL or LH), the low-price firm gains an advantage in market share and profits, while the high-price firm loses out.

Nash Equilibrium:

The stable outcome, known as Nash Equilibrium, might be where both firms set high prices to avoid a price war, resulting in moderate profits for both.

This example illustrates how game theory can help analyze strategic interactions in corporate decision-making, especially in situations where firms' actions and outcomes are interdependent. The analysis assists in understanding the dynamics and potential outcomes based on different strategies chosen by each player.

Strategies:

(a) Cooperate and Set High Prices (HH):

Both Firm A and Firm B choose to set high prices.

Strategy : Avoid intense price competition.

Possible Outcome : Both firms earn moderate profits, but there's a risk of losing market share to competitors.

(b) Cooperate and Set Low Prices (LL):

Both Firm A and Firm B choose to set low prices.

Strategy **:** Maximize market share and potentially trigger a price war.

Possible Outcome : Both firms earn higher profits, but there's a risk of reduced profits due to price competition.

(c) Compete with Mixed Strategies (HL or LH):

One firm sets a high price (H), and the other sets a low price (L).

Strategy : Gain a competitive advantage in market share.

Possible Outcomes **:**

- If Firm A sets a high price (H) while Firm B sets a low price (L):
- Firm A loses market share and earns lower profits.
- Firm B gains a larger market share and earns higher profits.
- If Firm A sets a low price (L) while Firm B sets a high price (H):
- Firm A gains a larger market share and earns higher profits.
- Firm B loses market share and earns lower profits.

Possible Overall Outcomes:

- **Nash Equilibrium (HH):**

Both firms may settle on setting high prices to avoid a price war.

Possible Outcome: Both firms earn moderate profits, maintaining stability.

- **Price War (LL):**

Both firms may choose to set low prices, triggering a price war.

Possible Outcome: Both firms earn higher market share but experience reduced profits due to intense competition.

- **Mixed Strategies (HL or LH):**

Firms may adopt mixed strategies, leading to varied outcomes.

Possible Outcome: One firm gains an advantage in market share, while the other experiences a loss.

The actual strategy chosen and the resulting outcome will depend on factors such as market conditions, the perceived reactions of competitors, and the firms' risk tolerance. The concept of Nash Equilibrium suggests that, in stable scenarios, firms may converge to a situation where neither has an incentive to unilaterally change their strategy.

MARKET FAILURES AND INFORMATION ASYMMENTRY

Market failure occurs when a free market, left to its own devices without government intervention, fails to allocate resources efficiently, resulting in a net social welfare loss. In

other words, the market mechanism leads to suboptimal outcomes from the perspective of society.

Causes of Market Failure

- **Externalities**:

Externalities occur when the actions of individuals or firms have spillover effects on third parties who are not part of the transaction.

Example: Pollution from a factory impacting the health of nearby residents.

- **Public Goods**:

Public goods are goods or services that are non-excludable and non-rivalrous, meaning that consumption by one individual does not reduce its availability to others.

Example: National defense or street lighting.

- **Imperfect Competition**:

Imperfect competition arises when market power is concentrated in the hands of a few firms, leading to suboptimal outcomes.

Example: Monopolies or oligopolies that can set prices higher than in a competitive market.

- **Information Asymmetry:**

Information asymmetry occurs when one party in a transaction has more or better information than the other party.

Example: Used car sales, where the seller may have more information about the condition of the car.

- **Income Inequality:**

Market failure may occur if the distribution of income is extremely unequal, leading to disparities in access to essential goods and services.

Example: Lack of access to education or healthcare for lower-income individuals.

- ***Factor Immobility:***

Factor immobility refers to the inability of resources (such as labor or capital) to move between different sectors of the economy in response to changing conditions.

Example: Structural unemployment due to mismatched skills.

- ***Market Power and Monopoly:***

Market power, especially in the form of monopolies, can lead to higher prices, reduced output, and less innovation than a competitive market.

Example: A single company dominating the market for a particular product.

Government Interventions:

Governments may intervene to correct market failures through regulations, taxes, subsidies, public provision of goods, or other policy measures. The goal is to align private incentives with social welfare and ensure more efficient resource allocation.

Information Asymmetry

Information asymmetry refers to a situation in which one party involved in a transaction possesses more or superior information than the other party. This imbalance of information can lead to adverse selection and moral hazard, impacting the efficiency and fairness of transactions.

Key Concepts:

1. Adverse Selection:

Adverse selection occurs when the party with less information is at a disadvantage because they cannot accurately assess the quality of the goods, services, or assets being exchanged.

Example: In the used car market, sellers may have more information about the condition of a vehicle than potential buyers, leading to a risk of buyers selecting poor-quality cars.

2. Moral Hazard:

Moral hazard arises when one party can take risks because it does not bear the full consequences of those risks, often due to information asymmetry.

Example: In insurance markets, policyholders may take greater risks (e.g., neglecting safety measures) if the insurer cannot observe or assess their behavior.

3. Hidden Characteristics:

Information asymmetry can involve hidden characteristics, where one party has private information about qualities that are not readily observable by the other party.

Example: When hiring an employee, the employer may not have complete information about the candidate's work ethic or skills.

4. Hidden Actions:

Information asymmetry can also involve hidden actions, where one party engages in actions that are not observable by the other party.

Example: In financial transactions, investors may not have complete visibility into the day-to-day operations and decisions made by the company they invest in.

5. Market Efficiency Implications:

Information asymmetry can lead to market inefficiencies as the side with more information may exploit its advantage, resulting in suboptimal outcomes.

Example: If sellers in a real estate market have more information about property values, they may take advantage of uninformed buyers.

6. Role in Financial Markets:

Information asymmetry plays a significant role in financial markets, where investors may lack access to the same information as insiders or company management.

Example: Insider trading, where individuals with non-public information about a company's performance use that information for personal gain.

Mitigation Strategies – Information Asymmetry

1. **Regulation and Disclosure Requirements:**

Governments may implement regulations that mandate the disclosure of relevant information to ensure transparency in markets.

2. **Third-Party Certification:**

Independent third parties or certifications can verify and disclose information, helping to reduce information asymmetry.

3. **Incentives and Contracts:**

Designing contracts with appropriate incentives can align the interests of parties and reduce the risks associated with information asymmetry.

4. **Screening and Signaling**:

Parties may use screening (gathering information) or signaling (conveying credible information) mechanisms to mitigate adverse selection.

Addressing information asymmetry is crucial for promoting fair and efficient transactions in various economic contexts.

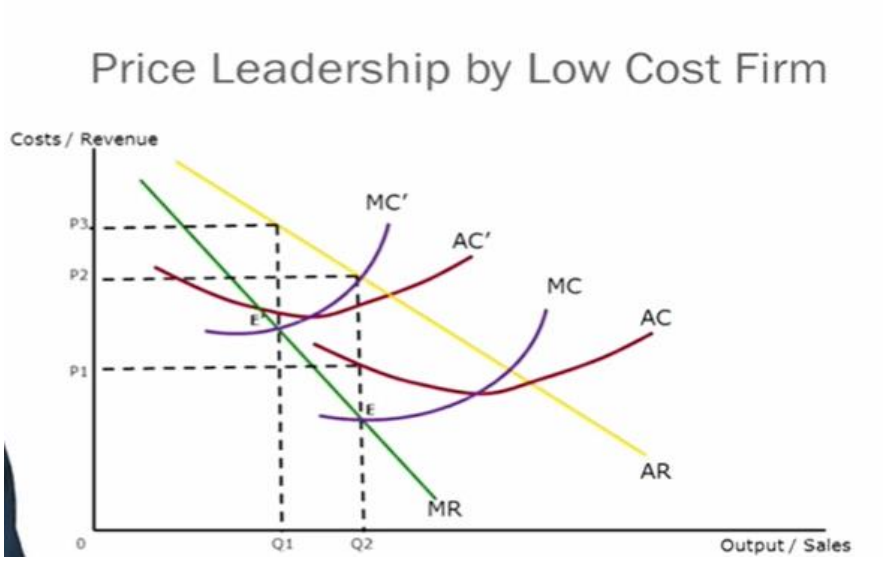
Summary of Video Content

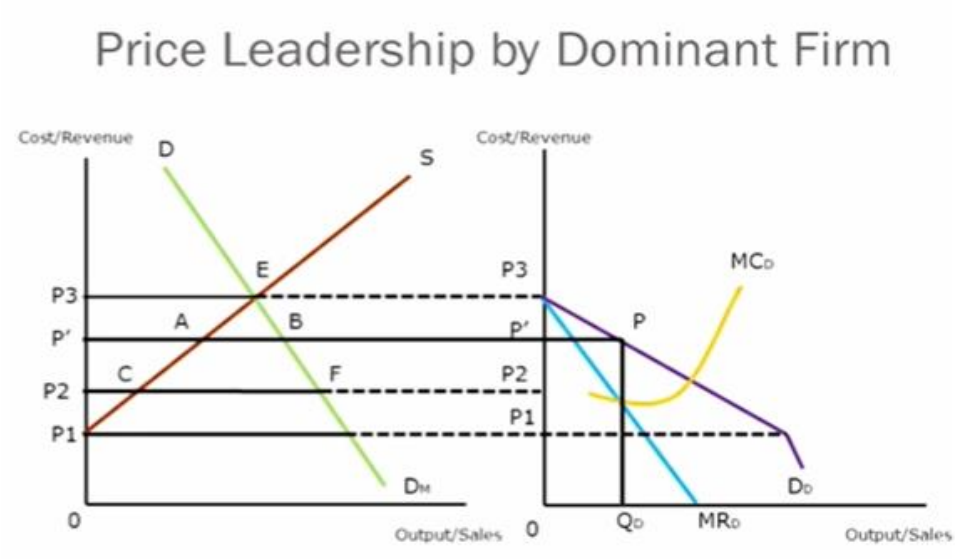
Video 1

Sources of Oligopoly

1. Economies of scale arising out of producing large varieties
2. Huge Investment and specialized inputs needed
3. Established firms may have a loyal following
4. Few firms may own a patent or specialized production process
5. Control of raw materials
6. Government may give franchise to only a firm
7. Limit Pricing

Dominant Firms

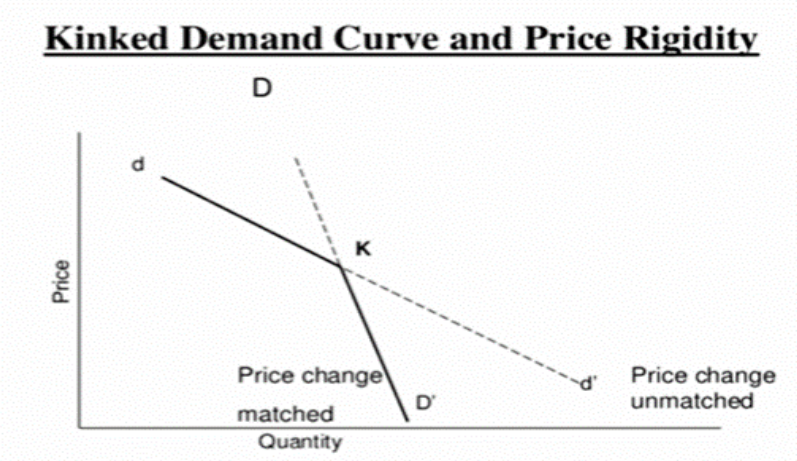


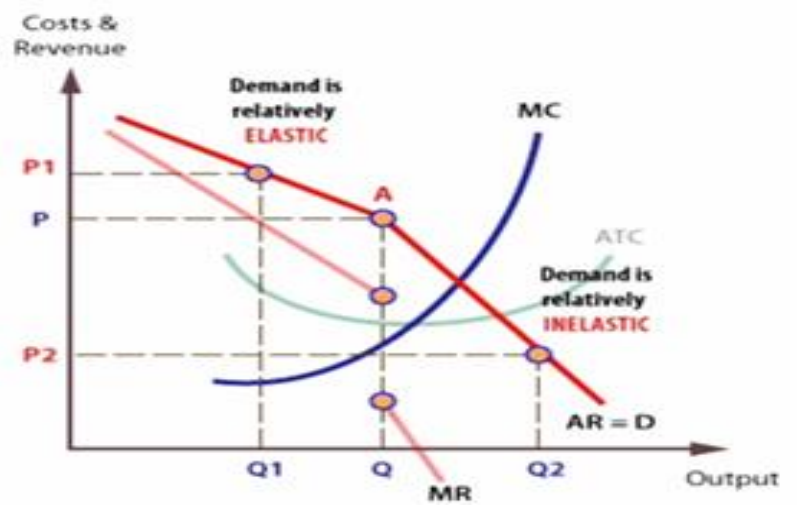


Video 2

Kinked Demand Curve

The kinked demand curve explains price rigidity in oligopolistic markets. It suggests that firms face a demand curve with an elastic range above the current price and an inelastic range below it. This results in price rigidity, where firms are hesitant to change prices due to the fear of competitive reactions.





Video 3

Game Theory

- Analysing decision that will affect other people's decision.
- Game theory is a tool of economics

Crucial decisions of Corporate

- Pricing
- Level of Production
- Investment in R&D
- New Lauch

Examples of dilemma

- Firm A decides to spend money on R&D, should Firm B follow or not?
- Firm B decides to cut down production. Rival firm a should cut down or remain calm
- Firm B plans to increase price, will Firm A respond?

Dominant Strategy

- A choice that is preferable for one player no matter what their opponent chooses to do, since that choice gives a better pay-off.

Dominated Strategy

- It is the strategy that one can choose from a strategic perspective.
- Since it is the one that will lead to the worst payoffs for them.

Strategic Dominance

Two companies are competing in the market

(a) New shop Corporate (b) Start Shop Corporation

A product is sold in two types or versions

(a) Basic consumer version (b) Corporate Version
- 80 per cent of people buy basic consumer version
- 20 percent of people buy corporate version

✓ Both are equally profitable for the firms.
✓ If the firms choose to sell both versions, then they have to share the market amongst themselves.
✓ Otherwise each firm has either the entire market of basic version or corporate version for itself.

Strategies and possible outcomes –

For both firms there are two strategies and four outcomes.

(a) Both firms enter the 'basic consumer version' market (80 percent of the market share): each firm split the market amongst themselves, i.e., each now have 40 percent of market share.
(b) Both firms enter 'corporate version' market (20 percent of market share): each firm splits the market amongst themselves, i.e., (10 percent for each firm)
(c) Newshop enters 'basic version' and Starshop enters 'corporate version': Newshop now holds entire 'corporate version' market with 20 percent share.
(d) Newshop enter 'corporate version' market and startshop enter 'basic version' market: Now Newshop hold the entire 20 percent of corporate version market, and Starshop now has the entire 80 percent of basic version market itself.

Strategy Classified

- For both firms entering the 'basic version; is a dominant strategy. Since regardless of move chosen by other firm, they end up having larger portion of market share.

- For both firms entering the 'corporate version' is a dominating strategy. Since regardless of move chose by competitive firm, they end up having lesser portion of the market share.

Payoffs

- If a firm enters the 'basic version' market they know that it will fetch them either 40 percent or 80 percent of the market share.
- If a firm enter the 'corporate version' market, they know that it will provide them either 10 percent or 20 percent of market share.

Video 4

Market failure and Information Asymmetry

- **Market Failure:** It is an economic situation defined by an inefficient distribution of goods and services in the free market.
- Individual incentives for rational behaviour do not lead to rational outcomes for the group.
- Each individual makes the correct decision for him or herself, But those prove to be the wrong decisions for the group.

Information Asymmetry

Buyers and sellers having different information about a product of services they wanted to transact.

Examples –

1. Used Vehicles
2. Insider Dealing
3. Tenants and Landlords
4. Health Insurance
5. Borrowers and Lenders
6. Product Warranties

Moral Hazard

Situation in which one person makes the decision about how much risk to take, while someone else bears the cost, if things go badly.

Examples –

1. Insurance
2. Government Bailing out Banks