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Building Blocks for Growth

CHIEF DIRECTORATE: CURRICULUM MANAGEMENT

2020 LEARNER SUPPORT VIRTUAL LESSON

ECONOMICS GRADE 12

TOPIC: OLIGOPOLY

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Introduction

- Content is outlined is in 2017 Economics Examination Guidelines.
- Oligopoly must be examined in detail.
- Learners must be able to:
  - Describe oligopoly
  - Give practical businesses in this market
- Examine characteristics
- Discuss non-price competition
- Discuss collusion & relate it to current egs. of collusive behavior
  - Distinguish-Overt collusion (cartels) & tacit collusion (price leadership)

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Introduction (Cont…)

- Broad outline of prices and production levels
- Kinked Demand Curve
- Use graphs & explain why oligopolists are reluctant to compete on prices
- Compare oligopoly with perfect competition (demand curve, products, prices, output, equilibrium positions & non-price competition)

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Description

- It consists of **few large firms/producers** which are able to influence the supply of a good or service in the market. Producers produce homogeneous or heterogeneous product.
- Oligopoly is a market structure characterized by few large firms that sell a homogeneous or differentiated product.

Practical Examples

- <u>Examples of industries </u>include: South African banking sector (ABSA, FirstRand, Standard bank, Nedcor & Capitec bank), retail supermarkets, cell phone service providers, domestic airlines, Car firms like Toyota, Hyundai, Ford, General Motors, VW, television stations, petrol stations, insurance companies, radio stations, sugar refining.

Characteristics of an oligopoly

- **Number of firms**
  - Few big / large firms dominate the market
  - Firms are interdependent and may cooperate to increase profits.
  - When firms are interdependent each firm's actions influence the profits of all other firms
  - There is limited competition.
  - Only two firms – **duopoloy** (market structure dominated by two large firms)

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Characteristics (Cont…)

- **Nature of product**
  - Products may be homogenous or differentiated (heterogeneous).
  - When the product is homogeneous it is called pure oligopoly. E.g. Many industrial products are standardised for example steel products
  - When products are differentiated, the market is called a **differentiated oligopoly**. E.g. Firms which produce goods such as household appliances, electronics equipment, breakfast cereals, producers of toothpaste, banking services or insurance companies

Characteristics (Cont…)

- **Entry / Entrance and Exit**
  - Entry into the market is <u>restricted</u>, limited or difficult.
  - This is due to <u>brand loyalty</u> and <u>large capital outlay (expenditure)</u> required.
  - The initial set-up cost is high which means that new entrants will have to sell at a higher price than established businesses
  - Companies already in the market will <u>use branding</u> to crowd-out new competition.
  - <u>Advertising</u> extensively is <u>costly</u>
  - Barriers to entry may be natural or legal

Characteristics (Cont…)

- **Interdependence between firms / mutual dependency**
  - Only a few sellers dominate the market, therefore each seller is influenced by the action of the other sellers
  - Interdependence or mutual dependence means that each firm's decision must take into account the reactions of other firms.
  - The firm must consider the market demand as well as the reactions of other firms
  - Retaliation in the form of changing prices and output by other firms is possible

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Characteristics (Cont…)

Uncertainty

– Since firms are <u>interdependent</u>, no firm can be certain of the policies of its competitors and therefore firm operate in an <u>uncertain environment</u>

Market information

– Both buyers and sellers have <u>incomplete</u> market information.

– Rival firms do not always have knowledge about circumstances in the market

– Firms are uncertain about each other's behaviour and reactions.

Characteristics (Cont…)

- **Price control**
  - Firms have control over price of their products although it is not the same as in **monopoly**
  - Firms – price makers
  - They can change their prices in order to increase their market share **BUT** this can result in a **price war.**
  - Firms must consider the reaction of other producers when they change the price.
  - Oligopoly is characterised by price rigidity since if one firm cuts its price, others retaliate by cutting theirs as well.

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Characteristics (Cont…)

- **Extensive use is made non-price measures / competition**
  - Due to risks connected with price competition, oligopolists prefer to use non-price competition.
  - To increase market share firms use non-price measures like advertising, brand loyalty, efficient service or product differentiation, product recognition, product proliferation, extended services

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Characteristics (Cont…)

- **Collusion**
  - Collusion takes place when rival firms cooperate by raising prices and by restricting production in order to maximise their profits.
  - An arrangement between businesses with the aim of limiting competition between them.
  - It occurs when firms collide to fix prices and limit output.
  - **Two forms** are: explicit collusion (**Cartels**) & <u>Tacit</u> collusion / <u>implicit</u> collusion (**Price leadership**)

Discussion: Non-price competition

- Since competition based on **price** can lead to destructive **price war**, oligopolies prefer to use **non-price competition**
- To increase market share firms use non-price measures
- Forms of non-price competition include: advertising, brand loyalty, Other types of non-price competition.

Non-price competition (Cont…)

1 **Advertising**

- Firms advertise aggressive to lure consumers onto their side
- Advertising is used to:
  - ➢ provide information about the product & the firm
  - ➢ persuade consumer to buy the product
  - ➢ remind consumer about benefits of specific product
- Use advertising to promote brand loyalty

Non-price competition (Cont…)

2. **Branding**

- Branding entails giving particular image that is appealing to consumers
- Brand is used to attract and appeal to certain type of consumer.
- Establish brand loyalty to make consumers believe that its brand is the <u>best</u> and <u>to buy only that brand</u>
- For example, a logo for BMW, Mercedes Benze cars for rich people, or Toyota Tazz for another class of lower status

Non-price competition (Cont…)

3. **Other types of non-price competition** includes:

Product differentiation products are made to be slightly different in terms of physical appearance, packaging etc.),

Product recognition – brand names to emphasize any differences to draw clients,

Product proliferation – selling a large variety of products to satisfy the multiple needs of consumers. e.g. take-aways, convenience stores

Non-price competition (Cont…)

3. **Other types of non-price competition**

- Free delivery and installation, extended warranties for consumers and credit facilities, longer trading hours, 24 hour services repairs, after sale service, expansion into new markets by diversifying product range, loyalty rewards for customers, door-to-door deliveries, doing business over the internet.
- **Non-price competition** <u>raises cost</u> of production & it becomes **costly for new firm** to enter the industry

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Discussion: Collusion

- To <u>reduce uncertainty</u>, oligopolists collude (agree on prices and quantities to produce)
- Firms join forces by agreeing to <u>co-operate</u> with the aim of limiting competition between them. Collusion is an **ILLEGAL** practice
- **Advantages** of collusion are: <u>higher profit</u>, <u>less uncertainty</u> & <u>new firms find it difficult</u> to enter the market

2 kinds of collusion

Overt / Explicit (cartels)– <u>illegal</u>

Tacit / Implicit **(**price leadership)

Overt /Explicit collusion e.g. Cartels

- Cartel is formed when group of firms <u>formally</u> agree to fix prices or limit supply of product.
- Cartels are <u>unstable</u> since members tend to **cheat** by cutting prices illegally and sell more than the quotas set by the cartel
- While there is **incentive** to collude there is also an incentive to **compete**
- Although they are <u>illegal,</u> they continue to exist nationally and internationally.
- **Examples**: Organisation of Petroleum Exporting Countries (OPEC) or De Beers (diamond supplier in SA

Tacit collusion /Price leadership

- Firms can decide to collude informally since cartels are forbidden by law
- Price leadership strategy is used
- Dominant firm will increase the price of a product in the hope that its rivals will see this as a signal to increase their prices too
- One firm takes the lead to increase the price and others follow the leader and also increase their prices.
- Examples of price leadership are found in steel and food industry

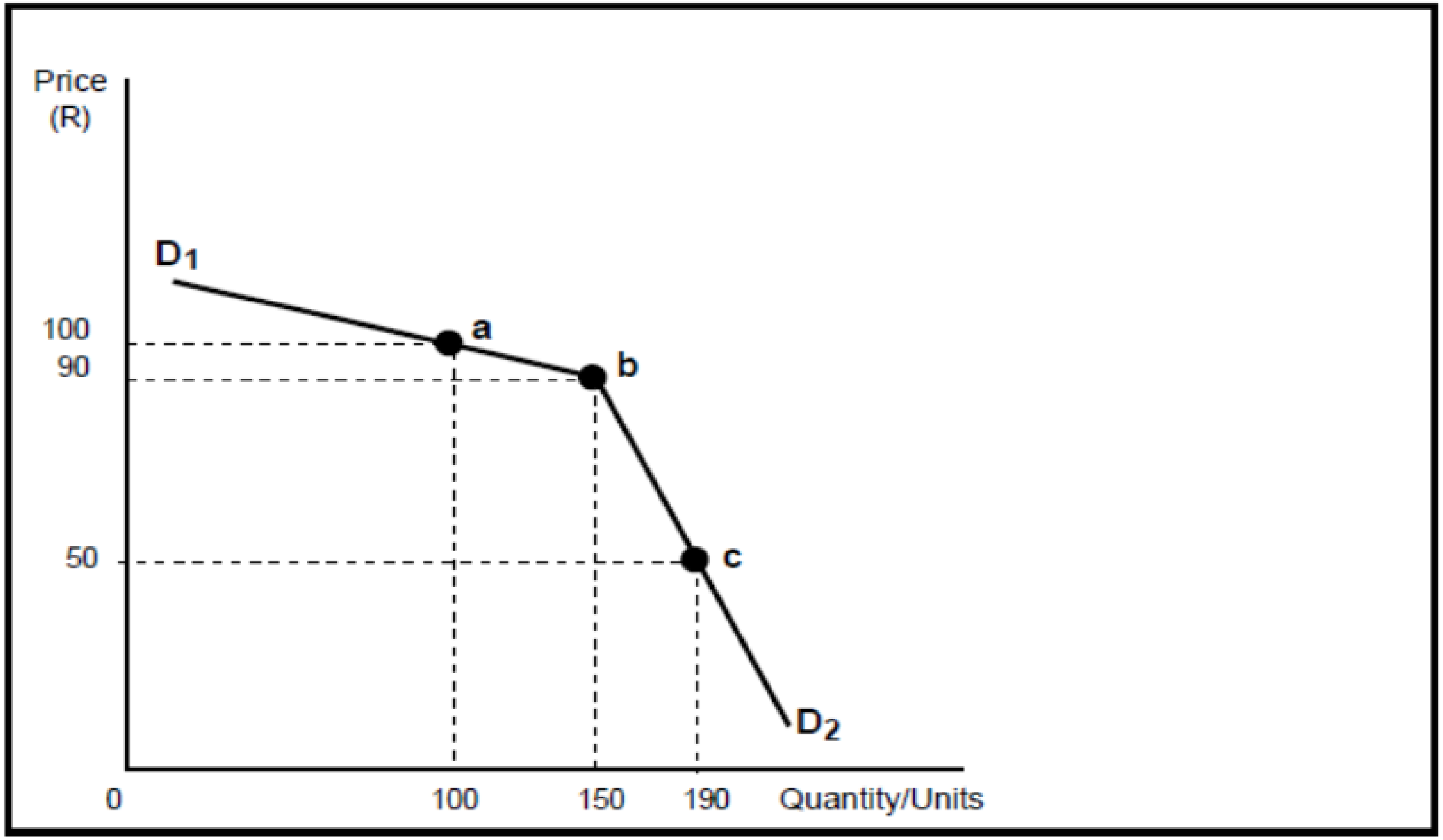
Prices and output levels

- **No single theory** exist to explain pricing and output decisions of the oligopolist
- Several theories based on different assumptions about the reaction of competitors to pricing and output decisions exist.
- Firms are interdependent, highly competitive and act strategically
- Focus is on Kinked demand curve theory

The Kinked demand curve theory

- Developed by Paul Sweezy, who stated that firms strive to protect and maintain their market share
- This theory **does not explain** how prices and output decisions are made
- It illustrates **interdependence** and **uncertainty** in the market
- It also provides a possible reason for price stability in the oligopolistic market
- Oligopolist faces a Kinked demand curve which has two segments. Study graph below

Kinked demand curve (Cont…)



The Kinked demand curve (Cont…)

- Instead of explaining the price of the product and level of output, assumptions are made
- **Assumptions**
  - The price of the homogenous product = R90
  - Quantity supplied = 150 units. TR=P × Q= R90 × 150= R13 500. This is indicated by point b which is a point on the demand curve for the product of the firm.
  - If price increases from R90 to R100 (R10) & quantity demanded decrease from 150 to 100 (50 units). TR= 100 × 100= R10 000. Small change in price leads to a big change in quantity demanded.

The Kinked demand curve (Cont…)

Explanation

- The firm assumes that the competitors (rival frims) will **not increase** their prices
- A price increase will therefore lead to a large decrease in quantity demanded (50 units) – consumers will buy from the other firms – indicated by portion D1ab of Kinked demand curve
- The firm will lose some of its market share if it increases the price of its product

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The Kinked demand curve (Cont…)

- Assume that when a firm **decreases** its price, <u>other firms</u> will also <u>lower</u> their <u>prices.</u> E.g. Price is reduced from R90 to R50 & Q increases from 100 to 150. TR= R50 × 190 = R9 500. TR has decreased from R13 500 to R4 000.
- Decrease in price from R90 to R50 has not benefited the firm since it cannot increase its income
  - **Why**? – The Quantity demanded will increase but not enough to compensate the firm for the decrease in price – Illustrated by bcD2 of Kinked demand curve

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The Kinked demand curve (Fig. 5.19)

- The difference in reaction of the competitors to a price increase compared to the price decrease – creates kinked demand curve
- **Kink** – at the level of the **ruling price**
- The kinked demand curve dEC consists of portions of two different demand curves.
- dE– if competitors do not react to price change (relatively elastic demand curve)
- EC– when competitors do react to price change (relatively inelastic demand curve)

The Kinked demand curve (Cont…)

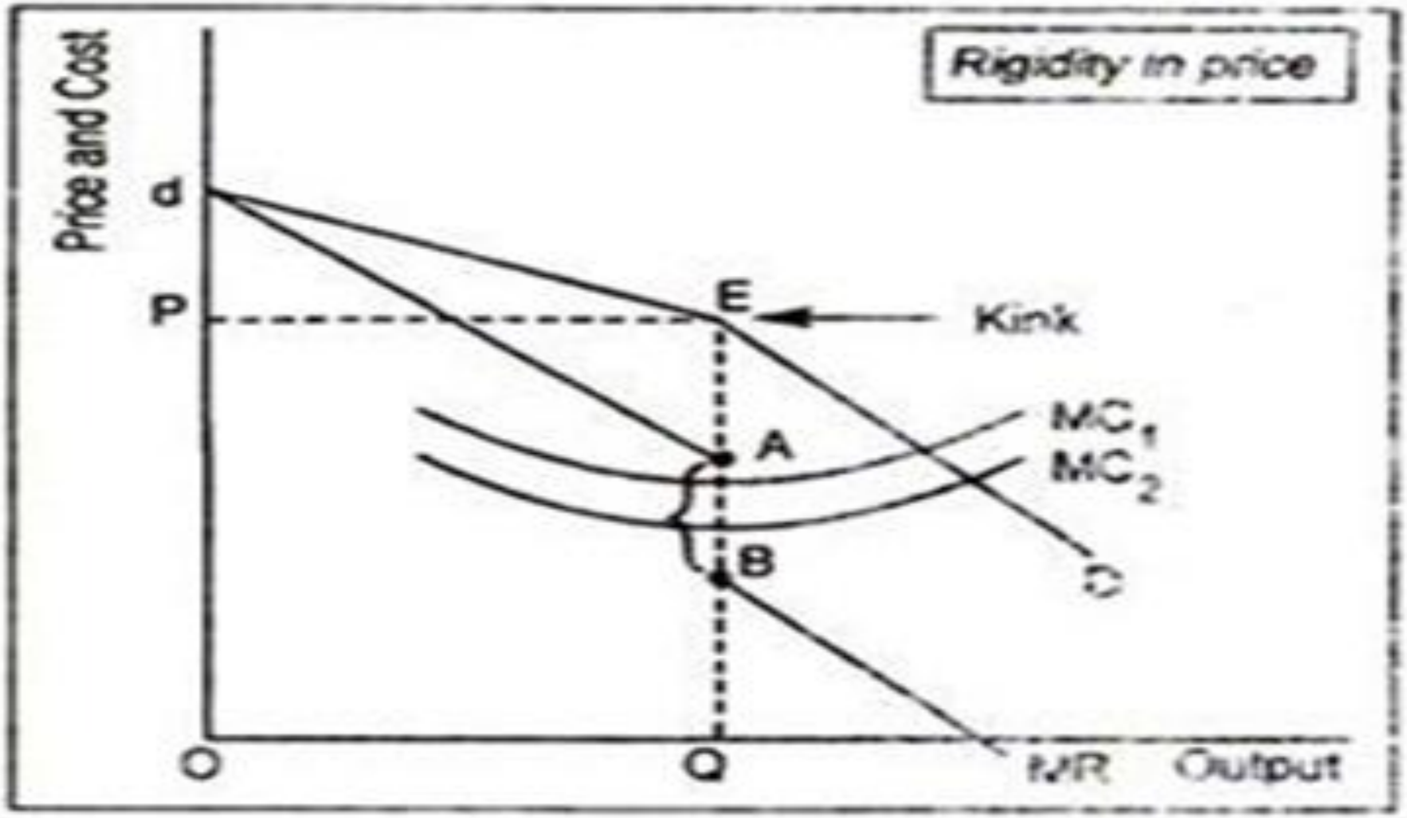

Fig. 5.19: Kinked Demand Curve and Oligopoly Equilibrium

Economicsdiscussion.net/oligopoly

The Kinked demand curve (Cont…)

- Figure 5.19 shows demand curve dEC
- At price **above** P, small price rise leads to big decrease in quantity sold (portion of demand curve (dE) is relatively elastic). Other businesses keep price at P & this cause business which increased price above P to lose market share.
- Price **below** P results in smaller increase in quantity sold- portion of demand curve (EC) is relatively inelastic. Firm gets no price advantage over its competitors

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The Kinked demand curve (Cont…)

- Demand curve is also the AR curve. Since the demand curve (AR) consists of 2 portions – the **MR** curve also has **2 sections**
- Kink in demand curve at point E creates a break in MR
- Profits are **maximised when MR=MC**
- At quantity Q, MC curve passes through the gap A B in MR curve.
- When MC fluctuates between A & B, like MC1 & MC2 in fig.5.19, firm does not change its price or output.
- Whether costs increase or decrease, both quantity produced and price will remain the same thereby confirming that prices in oligopoly are rigid.
- Reluctant to decrease price

The Kinked demand curve (Cont…)

- Businesses are reluctant to decrease price since
  - decrease in price may lead to a price war which will drive prices down
  - decreased price can result in lower profits
    - due to the kinked nature of the demand curve, they will lose more revenue than they would gain via increased sales
- Only if MC fluctuates outside the range A B will a firm change its price and output.
- Kinked demand curve predicts that price & quantity are insensitive to a small cost change

Comparison of oligopoly with perfect competitor

	Perfect Competition	Oligopoly
Demand curve	Horizontal	Kinked demand curve slopes downwards from left to right. It comprises of two portions of the two demand curves
Products	Homogeneous	Homogeneous & heterogeneous/ differentiated
Prices	Price-taker. Prices are lower	Price maker. Prices are higher
Output	Output is fairly high	Output is fairly low
Non-price competition	Price competition is used.	Compete on the basis of non-price competition

Revision of NSC Exam papers

2017 - 2019 NSC Question Papers for revision

E.Gs of Questions on oligopolistic markets				
Year & Nature	Section (B & C) & marks	Qn Number	Marks	Memo
2017 NSC Nov	Sect. B Section C	Q4.2	10	Available
EC June 2018	Section C	Q.5	40	Available
TRIAL 2018 GP	Section C	Q.5	40	Available
EC Trial 2018 EC Trial 2019	Sect. B	Q 4.3 Q4.2	10 10	Available Available

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Conclusion

- Kinked demand curve – results from high degree **of interdependence** and high level of **uncertainty** about how competitors will react to price changes
- No general theory to explain behavior oligopolists
- Oligopolist – downward sloping demand curve with two sections (relatively elastic & relatively inelastic demand curves)

References

- Economics Grade 12 CAPS: the Answer Series
- Enjoy Economics Grade 12 Learner's Book (CAPS)
- Oxford Successful Economics-Learner's Book CAPS
- Via Afrika Economics-Grade 12 Learner's Book
- Mind the Gap 2014-Economics Study Guide
- NSC Question Papers & Marking Guidelines

Thank you / Ke ya leboha / Ndiyabulela / Dankie