

Reg No.....  
[17CCP102 / 17CMP102]

**KARPAGAM ACADEMY OF HIGHER EDUCATION**

(Established Under Section 3 of UGC Act 1956)

Coimbatore – 641 021

(For the candidates admitted from 2017 onwards)

**I M. Com & M.com CA**

**First Semester**

**First Internal Test, August - 2017**

**Managerial Economics**

Time: 2 hours

Maximum: 50 marks

Date: 29/08/2017

**PART –A (20 X 1=20 Marks)**

**Multiple Choice Questions**

- 1 There is scope for observation and \_\_\_\_\_  
a. Valuation                      b. **Verification**                      c. collection                      d. Alteration
- 2 Economic development and economic growth are used as \_\_\_\_\_  
a. **Stable change**                      b. . Secular change                      c. Structure change                      d. Unstructured change
- 3 Economic growth refers to the \_\_\_\_\_ of the process of development  
a. **beginning**                      b. middle                      c. end                      d. long
- 4 Company is an \_\_\_\_\_  
a. natural Person                      b. **artificial person**                      c. normal person                      d. non-natural
- 5 Shareholders are the \_\_\_\_\_ of the Company  
a. **Creditors**                      b. Owners                      c. Debtors                      d. Financiers
- 6 Economics is often defined as  
a. **Science**                      b. social                      c. **resource**                      d. mankind
- 7 Human beings exercise the \_\_\_\_\_  
a. **Increasing usage**                      b. personal influence  
c. problem affects                      d. existence of resource
- 8 Managerial economics has followed \_\_\_\_\_ of main theory  
a. **Policies**                      b. Subject matter                      c. Principles                      d. brief knowledge
- 9 Economics as the study of  
a. **human nature**                      b. mankind                      c. social action                      d. ordinary business
- 10 \_\_\_\_\_ is a method in which influences are drawn from indisputable facts

- a. **Deductive method**                      b. Inductive method  
c. Proper method                              d. Dynamic method
- 11 Growth refers to more of the \_\_\_\_\_  
a. **consumption**                      b. production                      c. marketing                      d. sales
- 12 Economic development is a process of change in \_\_\_\_\_  
a. **quantitative improvement**                      b. qualitative improvement  
c. normative improvement                      d. none of these
- 13 Managerial economics deals with  
a. **economic development**                      b. economic issues  
c. economic changes                      d. economic growth
- 14 Firms has to spend a lot of money in the purchase of \_\_\_\_\_  
a. **sales**                      b. production                      c. consumption                      d. utilization
- 15 Micro economics is concerned with behaviour of \_\_\_\_\_  
a. **micro variables**                      b. macro variables  
c. producing variables                      d. output variables
- 16 Micro economics and macro economics deals with \_\_\_\_\_  
a. **observation**                      b. aggregation                      c. conservation                      d. distribution
- 17 Firms often like to become \_\_\_\_\_ in the respective line of business  
a. **competitors**                      b. leaders                      c. producer                      d. profit taker
- 18 Firms are restrict \_\_\_\_\_ in order to discourage field  
a. **loss**                      b. products                      c. profit                      d. sales
- 19 Maximum profit create \_\_\_\_\_ for nationalizing the firms  
a. **supply**                      b. attitude                      c. exploit firm                      d. public demand
- 20 Customers \_\_\_\_\_ is valued more than anything else  
a. **Goodwill**                      b. willingness                      c. consumption                      d. appropriation

### **PART – B (3 X 2 = 6 Marks)**

#### **Answer All the Questions**

21. Define a Managerial Economics

**Managerial economics** is the "application of the economic concepts and economic analysis to the problems of formulating rational managerial decisions". ... As such, it bridges economic theory and economics in practice. It draws heavily from quantitative techniques such as regression analysis, correlation and calculus.

22. Write a Short note on Flow of Economic Activity.

The circular flow of economic activity is a model showing the basic economic relationships within a market economy. It illustrates the balance between injections and leakages in our economy. Half of the model includes injections, and half of the model includes leakages. The circular flow model shows where money goes and what it's exchanged for. The model includes households, businesses and governments. We also have the banking system that facilitates the exchange of money and, as we'll see in a minute, helps to productively turn savings into investment in order to grow the economy

23. Write a Short note on Demand Elasticity.

**Demand** measures the responsiveness of the quantity demanded for a good or service to a change in the income of the people demanding the good, *ceteris paribus*. It is calculated as the ratio of the percentage change in quantity demanded to the percentage change in income

**PART – C (3 X 8 = 24 Marks)**

**Answer All the Questions**

24. a) Define Managerial Economics? Explain its Scope in detail.

- Risk analysis
- Production
- Pricing analysis
- Capital budgeting

**(OR)**

b) Explain the Economic Profit. Explain its merits and demerits.

Profit or normal profit is a component of (implicit) costs and not a component of business profit at all. It represents the opportunity cost, as the time that the owner spends running the firm could be spent on running a different firm. The enterprise component of normal profit is thus the profit that a business owner considers necessary to make running the business worth his or her while, i.e., it is comparable to the next-best amount the entrepreneur could earn doing another job. Particularly if enterprise is not included as a factor of production, it can also be viewed a return to capital for investors including the entrepreneur, equivalent to the return the capital owner could have expected (in a safe investment), plus compensation for risk. In other words, the cost of normal profit varies both within and across industries; it is commensurate with the riskiness associated with each type of investment, per the risk-return spectrum.

25. a) Discuss the price with demand .

$$D_x = a + bP_x$$

Where a and b are constants. 'a' is intercept and 'b' quantifies the relationship between  $D_x$  and  $P_x$ .

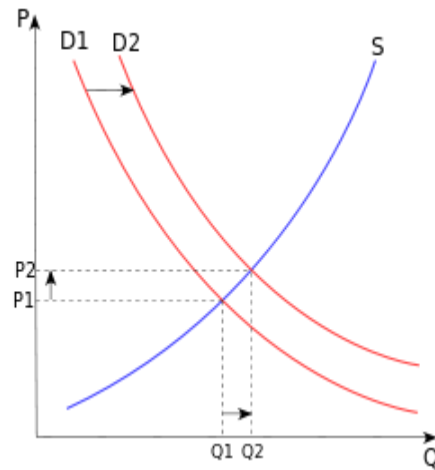
$$\Delta P_x \rightarrow \Delta Q_{dx}$$

$$\uparrow P_x \rightarrow \downarrow Q_{dx}$$

$$\downarrow P_x \rightarrow \uparrow Q_{dx}$$

**(OR)**

b) Explain the application of the supply in business.



26. a) Describe the Role and responsibilities of Managerial economist in the globalize economy.

1. Demand decision.
2. Production decision.
3. Theory of exchange or price theory.
4. All human economic activity.

**(OR)**

b) Discuss the objectives of business firm.

1. assessment of investible funds
2. selecting business area
3. choice of product
4. determining optimum output
5. Sales promotion.

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**I M. Com & M.com CA**  
**First Semester**  
**First Internal Test, August - 2017**  
**Managerial Economics**

Time: 2 hours  
Date: 29/08/2017

Maximum: 50 marks

**PART –A (20 X 1=20 Marks)**  
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a. Goodwill              b. willingness              c. consumption              d. appropriation

**PART – B (3 X 2 = 6 Marks)**

**Answer All the Questions**

21. Define a Managerial Economics  
22. Write a Short note on Flow of Economic Activity.  
23. Write a Short note on Demand Elasticity.

**PART – C (3 X 8 = 24 Marks)**

**Answer All the Questions**

24. a) Define Managerial Economics? Explain its Scope in detail.

**(OR)**

b) Explain the Economic Profit. Explain its merits and demerits.

25. a) Discuss the price with demand .

**(OR)**

b) Explain the application of the supply in business.

26. a) Describe the Role and responsibilities of Managerial economist in the globalize economy.

**(OR)**

b) Discuss the objectives of business firm.



**Karpagam Academy of Higher Education**  
**(Established Under section 3 of the UGC Act, 1956)**  
**Pollachi Main Road, Eachanari (Post),**  
**Coimbatore – 641 021**

**DEPARTMENT OF COMMERCE**

**I M.COM CA & M.COM**

**MANAGERIAL ECONOMICS**

**Subject Code : 17CCP102 / 17CMP102**  
**Class : I M.Com (CA)**

**Academic Year: 2017 -2018**  
**Semester I**

**LECTURE PLAN**

**UNIT-1**

<b>S. No.</b>	<b>LECTURE DURATION (Periods)</b>	<b>TOPICS TO BE COVERED</b>	<b>SUPPORT MATERIALS</b>
1.	1	Nature, Objectives and Scope of Managerial Economics	T1(PG 1-7)
2.	1	Role and Responsibilities of Managerial Economist	T1(PG 22-27)
3	1	Role and Responsibilities of Managerial Economist	T1(PG 22-27)
4	1	Role and Responsibilities of Managerial Economist	T1(PG 22-27)
5	1	Role and Responsibilities of Managerial Economist	T1(PG 22-27)
6	1	Role and Responsibilities of Managerial Economist	T1(PG 22-27)
7	1	Circular Flow of Economic Activity	R2(PG 385-390)
8	1	Circular Flow of Economic Activity	R2(PG 385-390)
9	1	Nature of the Firm	R1(PG 3 -8)
10	1	Economic Profit	R2(PG 334-335)
11	1	Profits in the Market System	R2 (PG 336-347)
12	1	Recapitulation and discussion of important questions	
<b>Total no. of hours planned for unit-1</b>			<b>12 Hours</b>



## UNIT-2

S. No.	LECTURE DURATION (Periods)	TOPICS TO BE COVERED	SUPPORT MATERIALS
1.	1	Demand Theory and Analysis	T1 (PG 28-29) T1 (PG 30-32)
2.	1	Demand Theory and Analysis	T1 (PG 28-29) T1 (PG 30-32)
3.	1	Demand Theory and Analysis	T1 (PG 28-29) T1 (PG 30-32)
4.	1	Demand Theory and Analysis	T1 (PG 28-29) T1 (PG 30-32)
5.	1	Demand Theory and Analysis	T1 (PG 28-29) T1 (PG 30-32)
6.	1	Supply Theory and Analysis	T1 (PG 73) T1 (PG 67-84)
7.	1	Supply Theory and Analysis	T1 (PG 73) T1 (PG 67-84)
8.	1	Supply Theory and Analysis	T1 (PG 73) T1 (PG 67-84)
9.	1	Supply Theory and Analysis	T1 (PG 73) T1 (PG 67-84)
10	1	Supply Theory and Analysis	T1 (PG 73) T1 (PG 67-84)
11	1	Supply Theory and Analysis	T1 (PG 73) T1 (PG 67-84)
12	1	Recapitulation and discussion of important questions	
		<b>Total no. of hours planned for unit-2</b>	<b>12 Hours</b>

### UNIT-3

S. No.	LECTURE DURATION (Periods)	TOPICS TO BE COVERED	SUPPORT MATERIALS
1.	1	Production Theory	R2:94-100
2.	1	Cost Theory	W1
3.	1	Cost Concept	T1(PG 94-108)
4.	1	Cost Output Relationship	T1(PG 94-108)
5.	1	Cost Output Relationship	T1(PG 94-108)
6.	1	Cost Output Relationship	T1(PG 94-108)
7.	1	Break Even Analysis	R2(PG 338-340) R2(PG 349-360)
8.	1	Break Even Analysis	W1
9.	1	Break Even Analysis	W1
10.	1	Break Even Analysis	W1
11	1	Break Even Analysis	W1
12.	1	Recapitulation and discussion of important questions	
		<b>Total no. of hours planned for unit-3</b>	<b>12 Hours</b>

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(Under Section 3 of UGC Act 1956)

**UNIT-4**

<b>S. No.</b>	<b>LECTURE DURATION (Periods)</b>	<b>TOPICS TO BE COVERED</b>	<b>SUPPORT MATERIALS</b>
1.	1	Perfect Competition	R2(PG 174-176) R2(PG 183-186)
2.	1	Monopoly	R2(PG 187-189)
3.	1	Monopolistic Competition	R2(PG 205)
4.	1	Oligopoly,	R2(PG 216-222) W1
5.	1	Oligopoly,	R2(PG 216-222) W1
6.	1	Duopoly	R2(PG 222- 228) W1
7.	1	Duopoly	R2(PG 222- 228) W1
8.	1	Bilateral Monopoly	W1
9	1	Bilateral Monopoly	W1
10	1	Monopsony	T1(PG 184 -187)
11	1	Monopsony	W1
12	1	Recapitulation and discussion of important questions	
		<b>Total no. of hours planned for unit-4</b>	<b>12 Hours</b>

## UNIT-5

S.No	LECTURE DURATION (Periods)	TOPICS TO BE COVERED	SUPPORT MATERIALS
1	1	Pricing Decision	R1(PG 135-140)
2	1	Pricing of Goods and Services	R2(PG 323-333)
3	1	Pricing and Employment of Inputs	W1
4	1	Pricing in Public	T1(PG 222)
5	1	Risk and Decision Making	T1 (PG 386-389)
6	1	Input – Output Analysis	T1(PG 423-444)
7.	1	Input – Output Analysis	T1(PG 423-444)
8.	1	Pricing in Public Sector – Risk and Decision Making – Input – Output Analysis	T1(PG 222) T1 (PG 386-389) T1(PG 423-444)
9.	1	Recapitulation and discussion of important questions	
10.	1	<b>Revision</b> : Discussion of ESE question papers	
11.	1	Discussion of ESE question papers	
12.	1	Discussion of ESE question papers	
		<b>Total no. of hours planned for unit-5 &amp; Question Paper Discussion</b>	<b>12 hours</b>

### TEXT BOOK

**T1:Varshney and Maheswari** (2016) Managerial Economics, Sultan Chand and Sons, New Delhi

### REFERENCES

**R1:** G.S.Guptha (2015) – Managerial Economics, Tata MC Graw Hill Publications, New Delhi.

**R2:** R.Cauvery (2015) Dr. U.K. Sudha Nayak, Dr. M.Girija – Managerial Economics, Mangal Deep Publications, Jaipur

### Websites:

**W1:** [www.wikipedia.com](http://www.wikipedia.com)

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Reg. No.....

[09MBAP107]

## KARPAGAM UNIVERSITY

(Under Section 3 of UGC Act 1956)

COIMBATORE – 641 021

(For the candidates admitted from 2009 onwards)

### MBA DEGREE EXAMINATION, APRIL 2010

First Semester

#### BUSINESS ADMINISTRATION

#### MANAGERIAL ECONOMICS

Time: 3 hours

Maximum : 60 marks

#### PART – A (20X ½ = 10 Marks)

Answer ALL the Questions

1. Economics according to Robbins is  
a. Normative science b. Positive science c. Applied science d. Experimental science
2. Price theory is also called  
a. business economics b. monetary economics c. microeconomics d. macro economics
3. Economics is a  
a. Science b. Art c. both d. physical science
4. The activities which a man undertake to satisfy his wants are called  
a. special activities b. economic activities c. political activities d. social activities
5. The main objective of firm is  
a. profit b. consumer satisfaction c. sales d. welfare
6. The hypotheses is that firm seek to maximize their sales revenue, owes its origin  
a. W.J.Baunol b. J.S.Baumol c. W.J.Hicks d. J.W.Baumol
7. One of the assumptions of cardinal utility theory may be  
a. rationality assumption b. constant utility of money  
c. diminishing marginal utility assumption d. all the above
8. Modern approach of firms, prefer maximization of  
a. sales revenue b. cost and revenue c. welfare d. market share
9. Variable cost is also called as  
a. prime cost b. supplementary cost c. overhead cost d. fixed cost



10. The other name to average revenue is  
a. profit curve b. demand curve c. average cost curve d. marginal revenue curve
11. If TR stands for the total revenue Q stands for output, then MR is equal to  
a.  $DQ/DTR$  b.  $DTR/DQ$  c.  $TR/Q$  d.  $Q/TR$
12. The marginal revenue curve of imperfect competition  
a. is above the demand curve b. coincides with the demand curve  
c. is below the demand curve d. cut the demand curve one
13. Duopoly is a marketing situation when  
a. there is only one producer of a given product b. there are few producers  
c. more than two producers d. two producers of a given product
14. Normal profit is considered a  
a. social cost b. implicit cost c. explicit cost d. private cost
15. A firm has no control over price of its product under  
a. perfect competition b. monopolistic competition c. oligopoly d. monopoly
16. The competition among the buyers each trying to get enough of the product to satisfy the wants tends to mean  
a. the consumers price b. the market price c. the equilibrium price d. all the above
17. Risk theory was propounded by  
a. Knight b. J. B. Clark c. Schumpeter d. Walker
18. Profit is a reward paid for  
a. the owner of the capital b. owner of the land c. entrepreneurial ability d. laborers
19. The most liquid asset is  
a. money b. time deposits c. shares d. bonds
20. Labour is demanded because of its  
a. productivity b. capacity c. usefulness d. quality

**PART B ( 5 X 4= 20 Marks)**

**Answer ALL the Questions**

21. a. Define Managerial Economics? How does it differ from Traditional Economics?  
(Or)  
b. Explain the main objectives of a Firm.
22. a. What do you understand by Demand Analysis? What are its objects?  
(Or)  
b. What are the factors involved in Demand Forecasting?



23.a. Explain various types of Production Function.

(Or)

b. State the features of the Long-Run average cost curve.

24.a. What are the characteristics of Oligopoly?

(Or)

b. What is the Monopolistic Competition?

25.a. Suggest measures to Control Inflation.

(Or)

b. Explain the measures to Control Trade Cycle.

**PART C (3 x 10 = 30 Marks)**

**Answer any THREE Questions**

26. Discuss the role and responsibilities of a Managerial Economist.

27. State and explain the Law of Demand. What are its exceptions?

28. Discuss the equilibrium of the firm with the techniques Isoquant.

29. Explain price determination under perfect competition with diagrams.

**30. CASE STUDY : Compulsory**

Easy Start Batteries (EB) is selling 4,000 car batteries per month for a long time. It is currently producing below full capacity and is confining itself to the North Indian market where it is making reasonable profits with average cost and price for their battery being Rs. 1,000 and Rs. 1,100 respectively. With a view to have better utilization of their production capacity the management of EB has started negotiating with a company having vast network of sales of car spares in western part of India. This agreement would involve a minimum delivery of 2,000 batteries per month, going up to the maximum of 6,000 batteries per month as per demand at going price of Rs. 1,100 per battery.

EB's present plant can supply up to 10,000 batteries per month, but would prove to be too expensive to run the plant for beyond full capacity EB's also considers an alternative course of action, it would buy and install a new plant to manufacture batteries with a total cost of Rs. 5,40,00,000 with a life of years (no scrap value). The new machine would not add to current overhead cost of Rs. 15,00,000 per month. The managerial economist for EB has estimated the variable costs for the present and the proposed plant.



Output/ Month	Total variable cost per month (Rs. In Lakh)	
3,000	24	-
4,000	25	-
5,000	28	-
6,000	33	35
7,000	40	36
8,000	50	38
9,000	64	42
10,000	80	48
11,000	-	55

You being the managerial economist of EB, its management would like to know from you:

- Average cost of production and monthly profits of the two alternative plants.
- Your advise about the strategy the management should follow. State clearly the assumption and limitations that underlie your recommendations.

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### 30. CASE STUDY : Compulsory

Easy Start Batteries (ESB) is selling 4,000 car batteries per month for a long time. It is currently producing below full capacity and is contending itself to the North Indian market where it is making reasonable profits with average cost and price for their battery being Rs. 1,000 and Rs. 1,100 respectively. With a view to have better utilisation of its production capacity, the management of ESB has started negotiating with a company having vast network of car spares in western part of India. This agreement would involve a minimum delivery of 2,000 batteries per month, going up to the maximum of 6,000 batteries per month as per demand at some price of Rs. 1,100 per battery.

ESB's present plant can supply up to 10,000 batteries per month, but would prove to be too expensive to run the plant for beyond full capacity. ESB's also considers an alternative course of action, it would buy and install a new plant to manufacture batteries with a total cost of Rs. 2,40,00,000 with a life of years (no scrap value). The new machine would not add to current overhead cost of Rs. 12,00,000 per month. The managerial economist for ESB has estimated the variable costs for the present and the proposed plant.



17CCP102 / 17CMP102	MANAGERIAL ECONOMICS	Semester – I			
		L	T	P	C
		4	-	-	4

### **Programme outcome**

- ❖ The course includes Demand and Supply theory, Production and Cost theory, Market competitions and pricing decisions

### **Programme learning outcome**

- ❖ To gain sound knowledge in basic Economic theories, concepts and models.
- ❖ To gain sound knowledge to apply economic theories and models to execute Production functions
- ❖ To enable students to obtain managerial problem solving skills.

### **Unit - I**

Nature, Objectives and Scope of Managerial Economics – Role and Responsibilities of Managerial Economist – Circular Flow of Economic Activity – Nature of the Firm – Economic Profit – Profits in the Market System.

### **Unit – II**

Demand Theory and Analysis – Supply Theory and Analysis.

### **Unit – III**

Production Theory – Cost Theory – Cost Concept – Cost Output Relationship – Break Even Analysis.

### **Unit – IV**

Perfect Competition, Monopoly, Monopolistic Competition, Oligopoly, Duopoly, Bilateral Monopoly – Monopsony.

### **Unit – V**

Pricing Decision – Pricing of Goods and Services – Pricing and Employment of Inputs – Pricing in Public Sector – Risk and Decision Making – Input – Output Analysis.

### **SUGGESTED READINGS**

#### **Text Book**

**Varshney and Maheswari (2014).** *Managerial Economics*. New Delhi, Sultan Chand and Sons.

#### **References**

**Heynes, Mole and Paul (2007).** *Managerial Economics*. New Delhi, Tata Mc Graw Hill Publishing Company Limited.

**Joel Dean (2011).** *Managerial Economics*. Jaipur, Mangal Deep Publications.

**Sumitra Pal (2011).** *Managerial Economics*. New Delhi, Macmillan India Limited.

Managerial Economics  
**17CCP102 / 17CMP102 - I M.Com & M.Com CA**  
Unit 1

**Managerial economics** is the "application of the economic concepts and economic analysis to the problems of formulating rational managerial decisions". As such, it bridges economic theory and economics in practice. It draws heavily from quantitative techniques such as regression analysis, correlation and calculus.

**Nature of Managerial Economics:**

The primary function of management executive in a business organization is decision making and forward planning.

Decision making and forward planning go hand in hand with each other. Decision making means the process of selecting one action from two or more alternative courses of action. Forward planning means establishing plans for the future to carry out the decision so taken.

The problem of choice arises because resources at the disposal of a business unit (land, labor, capital, and managerial capacity) are limited and the firm has to make the most profitable use of these resources.

The decision making function is that of the business executive, he takes the decision which will ensure the most efficient means of attaining a desired objective, say profit maximization. After taking the decision about the particular output, pricing, capital, raw-materials and power etc., are prepared. Forward planning and decision-making thus go on at the same time.

A business manager's task is made difficult by the uncertainty which surrounds business decision-making. Nobody can predict the future course of business conditions. He prepares the best possible plans for the future depending on past experience and future outlook and yet he has to go on revising his plans in the light of new experience to minimize the failure. Managers are thus engaged in a continuous process of decision-making through an uncertain future and the overall problem confronting them is one of adjusting to uncertainty.

In fulfilling the function of decision-making in an uncertainty framework, economic theory can be, pressed into service with considerable advantage as it deals with a number of concepts and principles which can be used to solve or at least throw some light upon the problems of business management. E.g is profit, demand, cost, pricing, production, competition, business cycles,

national income etc. The way economic analysis can be used towards solving business problems, constitutes the subject-matter of Managerial Economics.

### **Objectives and scope of Managerial Economics.**

Risk analysis – various models are used to quantify risk and asymmetric information and to employ them in decision rules to manage risk.

- Production analysis – microeconomic techniques are used to analyze production efficiency, optimum factor allocation, costs, and economies of scale and to estimate the firm's cost function.
- Pricing analysis – microeconomic techniques are used to analyze various pricing decisions including transfer pricing, joint product pricing, price discrimination, price elasticity estimations, and choosing the optimum pricing method.
- Capital budgeting – Investment theory is used to examine a firm's capital purchasing decisions.

At universities, the subject is taught primarily to advanced undergraduates and graduate business schools. It is approached as an integration subject. That is, it integrates many concepts from a wide variety of prerequisite courses. In many countries it is possible to read for a degree in Business Economics which often covers managerial economics, financial economics, game theory, and business forecasting and industrial economics.

### **Scope of managerial economics**

Managerial economics to a certain degree is prescriptive in nature as it suggests course of action to a managerial problem. Problems can be related to various departments in a firm like production, accounts, sales, etc.

1. Demand decision.
2. Production decision.
3. Theory of exchange or price theory.
4. All human economic activity.

### **Role and responsibility of Managerial economist**

Managerial economics is the "application of the economic concepts and economic analysis to the problems of formulating rational managerial decisions". It is sometimes referred to as business

economics and is a branch of economics that applies microeconomic analysis to decision methods of businesses or other management units. As such, it bridges economic theory and economics in practice. It draws heavily from quantitative techniques such as regression analysis, correlation and calculus. If there is a unifying theme that runs through most of managerial economics, it is the attempt to optimize business decisions given the firm's objectives and given constraints imposed by scarcity, for example through the use of operations research, mathematical programming, game theory for strategic decisions, and other computational methods.

Managerial decision areas include:

1. assessment of investible funds
2. selecting business area
3. choice of product
4. determining optimum output
5. Sales promotion.

### **Circular flow of economic activity**

The circular flow of economic activity is a model showing the basic economic relationships within a market economy. It illustrates the balance between injections and leakages in our economy. Half of the model includes injections, and half of the model includes leakages. The circular flow model shows where money goes and what it's exchanged for. The model includes households, businesses and governments. We also have the banking system that facilitates the exchange of money and, as we'll see in a minute, helps to productively turn savings into investment in order to grow the economy. In the circular flow of the economy, money is used to purchase goods and services. Goods and services flow through the economy in one direction while money flows in the opposite direction.

The factors of production include land, labor, capital and entrepreneurship. The prices that correspond to these factors of production are rent, wages and profit. People in households buy goods and services from businesses in an attempt to satisfy their unlimited needs and wants. Households also sell their labor, land, and capital in exchange for income that they use to buy goods and services that firms produce. Businesses sell goods and services to households, earning revenue and generating profits. Businesses also pay wages, interest and profits to households in return for the use of their factors of production. Governments levy taxes on households and

businesses in order to provide certain benefits to everyone.

### **Nature of the firm**

Given that production could be carried on without any organization, Coase asks, "Why and under what conditions should we expect firms to emerge?" Since modern firms can only emerge when an entrepreneur of some sort begins to hire people, Coase's analysis proceeds by considering the conditions under which it makes sense for an entrepreneur to seek hired help instead of contracting out for some particular task.

The traditional economic theory of the time suggested that, because the market is "efficient" (that is, those who are best at providing each good or service most cheaply are already doing so), it should always be cheaper to contract out than to hire.

Coase noted, however, that there are a number of transaction costs to using the market; the cost of obtaining a good or service via the market is actually more than just the price of the good. Other costs, including search and information costs, bargaining costs, keeping trade secrets, and policing and enforcement costs, can all potentially add to the cost of procuring something via the market. This suggests that firms will arise when they can arrange to produce what they need internally and somehow avoid these costs.

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There is a natural limit to what can be produced internally, however. Coase notices "decreasing returns to the entrepreneur function", including increasing overhead costs and increasing propensity for an overwhelmed manager to make mistakes in resource allocation. This is a countervailing cost to the use of the firm.

Coase argues that the size of a firm (as measured by how many contractual relations are "internal" to the firm and how many "external") is a result of finding an optimal balance between the competing tendencies of the costs outlined above. In general, making the firm larger will initially be advantageous, but the decreasing returns indicated above will eventually kick in, preventing the firm from growing indefinitely.

Other things being equal, a firm will tend to be larger:

- The less the costs of organizing and the slower these costs rise with an increase in the transactions organized.
- The less likely the entrepreneur is to make mistakes and the smaller the increase in mistakes with an increase in the transactions organized.
- The greater the lowering (or the less the rise) in the supply price of factors of production to firms of larger size.

The first two costs will increase with the spatial distribution of the transactions organized and the dissimilarity of the transactions. This explains why firms tend to either be in different geographic locations or to perform different functions. Additionally, technology changes that mitigate the cost of organizing transactions across space will cause firms to be larger—the advent of the telephone and cheap air travel, for example, would be expected to increase the size of firms. On a related note the use of the internet and related modern information and communication technologies seem to lead to the existence of so-called virtual organizations.

### **Economic profit**

Profit or normal profit is a component of (implicit) costs and not a component of business

profit at all. It represents the opportunity cost, as the time that the owner spends running the firm could be spent on running a different firm. The enterprise component of normal profit is thus the

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profit that a business owner considers necessary to make running the business worth his or her while, i.e., it is comparable to the next-best amount the entrepreneur could earn doing another job. Particularly if enterprise is not included as a factor of production, it can also be viewed a return to capital for investors including the entrepreneur, equivalent to the return the capital owner could have expected (in a safe investment), plus compensation for risk. In other words, the cost of normal profit varies both within and across industries; it is commensurate with the riskiness associated with each type of investment, per the risk-return spectrum.

Only normal profits arise in circumstances of perfect competition when long-run economic equilibrium is reached; there is no incentive for firms to either enter or leave the industry.

### **Profit in the Economic Market System**

A market system is any systematic process enabling many market players to bid and ask: helping bidders and sellers interact and make deals. It is not just the price mechanism but the entire system of regulation, qualification, credentials, reputations and clearing that surrounds that mechanism and makes it operate in a social context.

Because a market system relies on the assumption that players are constantly involved and unequally enabled, a market system is distinguished specifically from a voting system where candidates seek the support of voters on a less regular basis. However, the interactions between market and voting systems are an important aspect of political economy, and some argue they are hard to differentiate, e.g. systems like cumulative voting and runoff voting involve a degree of market-like bargaining and trade-off, rather than simple statements



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**UNIT I**

S.no	Questions	Option A	Option B	Option C	Option D	Answer
1	There is scope for observation and	Valuation	Verification	collection	Alteration	verification
2	Economic development and economic growth are used as	Stable change	Secular change	Structure change	Unstructure change	secular change
3	Economic growth refers to the of the process of development	beginning	middle	end	long	end
4	Company is an	natural Person	artificial person	normal person	non-natural	artificial person
5	Shareholders are the of the Company	Creditors	Owners	Debtors	Financiers	owners
6	Economics is often defined as	Science	social	resource	mankind	science
7	Human beings exercise the	Increasing usage	personal influence	problem affects	existence of resource	personal influence
8	Managerial economics has followed of main theory	Policies	Subject matter	Principles	brief knowledge	principles
9	Economics as the study of	human nature	mankind	social action	ordinary business	mankind
10	is a method in which influences are drawn from indisputable facts	Deductive method	Inductive method	Proper method	Dynamic method	deductive method
11	Growth refers to more of the	consumption	production	marketing	sales	production
12	Economic development is a process of change in	quantitative improvement	qualitative improvement	normative improvement	none of these	qualitative improvement
13	Managerial economics deals with	economic development	economic issues	economic changes	economic growth	economic issues
14	Firms has to spend a lot of money in the purchase of	sales	production	consumption	utilisation	production
15	micro economics is concerned with behaviour of	micro variables	macro variables	producing variables	output variables	micro variables
16	micro economics and macro economics deals with	observation	aggregation	conservation	distribution	aggregation
17	Firms often like to become in the respective line of business	competitors	leaders	producer	profit taker	leaders
18	Firms are restrict in order to discourage field	loss	products	profit	sales	profit
19	Maximum profit create for nationalising the firms	supply	attitude	exploit firm	public demand	public demand
20	Customers is valued more than anything else	Goodwill	willingness	consumption	appropriation	goodwill
21	Some firms may give greater importance to	profit	financial soundness	huge investment	liquidity	financial soundness
22	Decisions regarding may involve risks	decisions	lose of firm	profit maximisation	proportional earning	profit maximisation
23	of obligation of the business firm have great emphasis	social willingness	social aspects	social responsibility	social programmes	social aspects
24	Specific corporate programmes may undertake at the operational level	social activity	social measures	social powers	social obligation	social measures
25	Businessmen are citizens, they use	corporate powers	corporate responsibility	corporate rules	corporate society	corporate powers
26	Managers are responsible to	customers	shareholders	government	board of directors	shareholders
27	Managerial executives are concerned only	minimising returns	maximising returns	supplying returns	average returns	maximising returns
28	In planned economy have to be utilised for society	returns	profits	resource	goals	resource
29	Firms are the unit of	powers	control	products	functions	control
30	Modern business firm is	organized entity	organizing powwers	commercial activity	industrial product	organized entity
31	Managerial economics is defined as the study of	allocating risk	allocating return	allocating resource	allocating units	allocating resource
32	economics has to examining and regulation	economic policy	economic laws	economic ways	economic solution	economic policy
33	Firms gets for the capital employed	appropriate profit	reasonable profit	accurate profit	stable profit	reasonable profit
34	Managerial economist is expected to make	certain studies	periodical studies	internal studies	external studies	periodical studies
35	The management must undertake	Information	periods	product lines	profit lines	Information
36	in economy's national income and developed countries income increased	decrease	increase	normal	stable	Increase
37	Decision taking in business in reducing risk and uncertainty	Increasing	reducing	growth	normal	reducing
38	Business decide to use two factors that is capital and to produce a product	land	labour	orgaisation	employment	labour
39	Present gain is valued more than	future value	future goods	future gain	future principle	future gain
40	Consumption analysis with special reference to	Production	demand	supply	development	demand
41	sustains the industry over a long period of a firm.	sales	consumption	profit	production	profit
42	Functions of Managerial economist are classified into	one	three	two	four	two
43	Managerial forecasting depends upon the of collected products	Product	data	information	collection	data
44	Economist has to perform many side pertaining to production	programmes	production	functions	planning	functions
45	Economist has to run of business concern	responsibility	objectivity	connectivity	quality	responsibility
46	Maximisation of profit does not mean to earning	normal profit	supernormal profit	accurate profit	appropriate profit	supernormal profit
47	Difficult task of a firm is mobilise	labour	capital	profit	interest	capital
48	The result of losing their job is	proportion	profits	Image	activity	image
49	The resource of the firm have to be chanalized for	social activity	welfare activity	cultural activity	resource activity	welfare activity
50	Maximum profit may create an impression of the	organisation	firm	public demand	governments	firm
51	The first duty of the business is to survive	activating loss	avoiding loss	minimise loss	social loss	avoiding loss
52	Higher profit indicates of the firms	high bonus	high wages	high profit	high payment	high wages
53	Managerial managers will avoid risk which result losing their	profits	interest	jobs	dividend	jobs
54	economy is a role of business	minimum	medium	major	higher	major

55	organisation is made of -----levels	lowest	highest	very lowest	very highest		highest
56	maximising of the firm	size	value	amount	calculation		value
57	owner is a person incharge all the	profits	assets	liabilities	losses		liabilities
58	The word that comes from the Greek word for "one who manages a household is	Market	Consumer	Producer	Economy		Economy
59	Firms aims at to achieve	surplus profit	sufficient profit	average profit	declared profit		sufficient profit
60	Financial footing not available to producers	large	small	low	very low		small

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(Established Under section 3 of the UGC Act, 1956)  
Pollachi Main Road, Eachanari (Post),  
Coimbatore – 641 021  
**DEPARTMENT OF COMMERCE**

**I M.Com & I M.Com CA**

**Managerial Economics**

**Subject Code : 17CCP102 / 17CMP102 Academic Year: 2017 -2018**

**Class : I M.Com & I M.Com CA Semester : I**

**Possible questions: Unit I**

**Part –B (2Marks)**

1. Define –Managerial Economics
2. What you mean by Managerial Economist
3. Define – Firm
4. What is Economic Profit
5. What is market system

**Part –C (6 Marks)**

6. Describe the Role and responsibilities of Managerial economist in the globalize economy.
7. Discuss the objectives of Business Firm.
8. Elucidate the different techniques used in Managerial Economics.
9. How to fix the profits in the market system? Explain it.
10. Elucidate the Economic Profit. Explain its merits and demerits.
11. Explicate the role and responsibilities of Managerial Economist.
12. Distinguish between Managerial Economics and General Economics?
13. Elucidate the micro economics and Macro Economics.



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## Unit 2

### **Demand theory and analysis**

People demand goods and services in an economy to satisfy their wants. All goods and services have wants satisfying capacity which is known as “UTILITY” in economics. Utility is highly subjective concept; it is different from person to person. Utility (level of satisfaction) is measured by means of introspection. By demand for goods and services economists essentially mean is willingness as well as ability of the consumer in procuring and consuming the goods and services. Thus, demand for a commodity or service is dependent upon (a) its utility to satisfy want or desire (b) capability of the prospective consumer to pay for the good or service. In nutshell therefore we can state that -

**When desire is backed by willingness and ability to pay for a good or service then it becomes Demand for the good or service**

Conceptually, demand is nothing but consumer's readiness to satisfy desire by paying for goods or services. A desire accompanied by ability and willingness to pay makes a real or effective demand.

### **Significance of the concept of demand**

Demand is one of the most important decisions making variables in present globalised, liberalized and privatized economy. Under such type of an economy consumers and producers have wide choice. There is full freedom to both that is buyers and sellers in the market. Therefore Demand reflects the size and pattern of the market. The future of a producer is depends upon the well analyzed consumer's demand. Even the firm does not want to make profit as such but want to devote for 'customer services' or 'social responsibilities'. That is also not possible without evaluating the consumer's tastes, preferences, choice etc. All these things are directly built into the economic concept of demand.

The survival and the growth of any business enterprise depend upon the proper analysis of demand for its product in the market. Demand analysis has profound significance to management

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for day today functioning and expansion of the business. Thus the short term and long term decisions of the management are depend upon the trends in demand for the product. Any rise or fall in demand for the product has to be to find out reasons and revised production plans, technology or change in advertisement, packaging, quality etc.

The market system works in an orderly manner because it is governed by certain Fundamental Laws of Market known as Law of Demand and Supply The demand and supply forces determine the price of goods and services in the market. The laws of demand and supply plays very important role in economic analysis .Thomas Carlyle, the famous 19th century historian remarked “It is easy to make parrot learned in economics; teach a parrot to say demand and supply” The most important function of microeconomics is to explain the laws of demand and supply, market mechanism and working of the price system. Here we will discuss the concept of demand and demand analysis.

### **Law of Demand**

Law of demand states that whenever price of a product increases then the demand for that product decreases and vice versa provided other things remain constant. Here these other things are Income of the individual, Price of related goods, Tastes and preferences, Population, Advertisement etc. While studying the law of demand the direct relationship between price and demand is studied. This is because under the economic theory price of a product is considered as the main determinant of demand in the short run period.

### **Understanding Demand Function**

#### **Demand Function**

As per the law of demand, demand is function of price provided other things remain constant

**$D_x = f(P_x)$**   $D_x$  is demand for commodity X, which is dependent variable, and  $P_x$  is the price of X, which is independent variable. The demand function if considered as linear or straight line function can be expressed in the form of following equation:

$$D_x = a + bP_x$$

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Where, a and b are constants. 'a' is intercept and 'b' quantifies the relationship between  $D_x$  and  $P_x$ . The demand price relationship can be both linear and non-linear. The relationship between demand and the price can also be expressed as follows:

$$\Delta P_x \rightarrow \Delta Q_{dx}$$

$$\uparrow P_x \rightarrow \downarrow Q_{dx}$$

$$\downarrow P_x \rightarrow \uparrow Q_{dx}$$

Here  $Q_{dx}$  indicates the change in the quantity of demand if the price changes and as per the law of demand an inverse or opposite relationship between price and quantity demanded of a commodity is assumed. In simple words, if the price of a product is high then its demand will be low and vice versa. This relationship is also exhibited in the diagrammatic representation of the demand curve. To state more clearly, if we are diagrammatically representing demand by taking demand on the X axis and the price of the product on the Y axis then we always get a demand curve sloping downwards from the left to right indicating the price demand relationship as expressed by the law of demand.

### **Understanding Demand Schedule**

#### **Demand Schedule**

A demand schedule is the tabular presentation of the different levels of prices at corresponding levels of quantity demanded of that commodity. It shows at different levels of prices higher or lower how the quantity demanded is different. This shows the relationship between price and quantity demanded of a commodity i. e. law of demand.

#### **Demand Curve**

Demand curve is the graphical representation of the demand schedule. Demand curve is obtained by plotting a demand schedule on a graph. As discussed earlier, demand curve slopes downward from left to right. It has a negative slope. It shows there is inverse relationship between price and quantity demanded of a commodity.

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Again, as discussed earlier, Demand curve can be both Linear or Non-linear - If the Demand Curve is Non-linear then the equation of Demand is as follows:

$$D_x = aP_x^{-b}$$

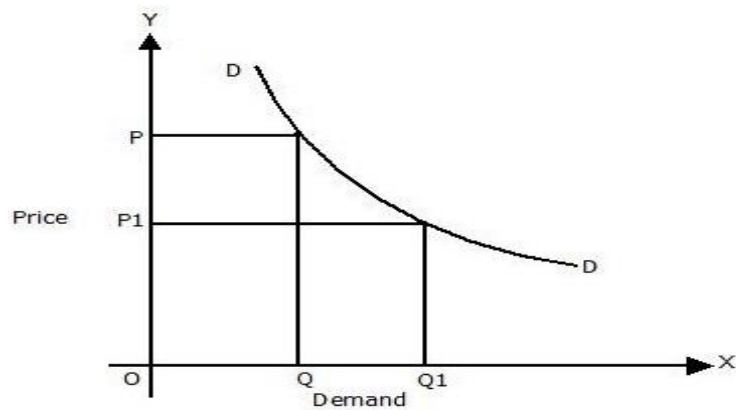
If Demand Curve is Linear, then the equation of Demand curve is taken as follows:

$$D_x = a - bP_x$$

The diagrammatic representation of the Demand Curve can be as follows:

#### **Demand Schedule of Note Books**

<b>Price per Notebook (Px)</b>	<b>Quantity of Notebooks Demanded (Dx)</b>
25	2
20	4
15	8
10	10
8	12



## Variation in Demand

### Expansion and Contraction of Demand

When demand changes due to change in price of that commodity then the phenomenon is known as variation or expansion or contraction in demand whereas when demand changes due to other factors that are known as change in demand.

When we say the variation in demand takes place in the market for a particular product or service means this phenomenon occurs ( that is rise or fall in demand) only because of change in its price. Here consumer remains on the same demand curve. He shifting up or down on the same demand curve as shown in dig. Therefore law of demand is concerned with the phenomenon that is VARIATION IN DEMAND which is accompanied by Rise and Fall in price, or known as expansion and contraction in demand.

### Changes in demand

When we say the change in demand takes place in the market for a particular product or service means due change in its other factors like income, taste, preferences etc and not because of its



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price. Thus due to rise or fall in income of a consumer or change in preferences, taste etc there is rise or fall in demand for a commodity or services. Here quantity demanded of a commodity is more or less at same or higher or lower price. Here consumer shift on higher demand curve to the right or lower demand curve to the left. This phenomenon is known as Change in Demand which is accompanied by increase and decrease in demand.

The reasons behind the law of demand and the shape of demand curve are following.

- **Income Effect** When price of a commodity falls, real income (i.e. purchasing power) of a consumer increases in terms of that commodity. So our rational will consume more of relatively cheaper. Such increase in demand due to increase in real income is called as income effect.
- **Substitution Effect** When price of commodity falls, its becomes relatively cheaper compare to its other close substitutes Rational consumer will definitely buy more units of relatively cheaper good than relatively dearer whose price has remain same to maximize the satisfaction. On account of this factor is known as substitution effect.
- **Diminishing Marginal Utility** This also responsible for the for the increase in demand for a commodity when its price falls. When a person buys a commodity he exchanges his money income with the commodity in order to maximize his satisfaction. He continues to buy goods and services so long as marginal utility of money is less than marginal utility of commodity. ( $MU_m < MU_x$ )

Therefore general shape of demand curve is negatively sloping downward from left to right. It positively slopes upward from left to right in case of inferior, Geffen or complimentary goods.

### **Understanding About Other Determinants of Demand**

Along with price there are many other factors which also influence the demand for a commodity. They are prices of its close substitutes, income of consumer, wealth, size of population, fashion, taste of consumer etc.

Therefore new demand function for long run is :

-----  
 **$D_x = f(P_x, P_y, P_n, Y, W, A, F, Z_p, T, \text{etc})$**  Where:  $D_x$  = Demand for a commodity

$P_x$  = Price of a commodity

$P_y$  = Price of a Y good which is close substitute for X good

$P_n$  = Prices of n number of close substitutes

$Y$  = Income of a consumer and Engle curves

$W$  = Wealth of a consumer

$A$  = Advertisement and Publicity

$F$  = Fashion or demonstration effect

$Z_p$  = Size and composition of population of population

$T$  = Taste and Preferences of a consumer

$Exp$  = Expected price and utility at equilibrium

$Cr$  = Existing short- term credit facilities

And there can be many more similar factors that may impact demand. All the above factors play very important role in the determining demand for a commodity or service if all the above stated factors are taken as variable. Here, it is important to understand that Law of Demand assumes partial equilibrium which means that if other things remains constant then whenever the price of a commodity changes then the demand for that commodity changes in the opposite direction.

If on the other hand, general equilibrium analysis is used in explaining the demand then impact of some of these other factors can be explained as follows:

- Price of a commodity – As the price of commodity falls a commodity becomes cheaper in a market and rational consumer will try to demand more units of the same to maximize his satisfaction and vice- versa when price rises. Therefore rise in price fall in demand and fall in price rise in demand.

- Prices of Close substitute - Demand for a commodity is also depend upon the prices of its close substitutes. If price of close substitute falls then demand for that commodity also falls and vice-versa. Therefore demand is also depends upon the number and degree of close substitutes available in market and the range of price change.
- Income of a consumer - Consumer's income is the basic determinant of the quantity demanded of the product. Generally the people with higher disposable income spend a larger amount of income than those with the lower income. Income demand relationship is more varied nature than that between demand and its other determinants. To explain the varied relationship between income and demand we classify goods and services into four broad categories, viz.(a)essential consumer goods; (b) inferior goods; (c) normal goods; and (d)prestige good or luxury goods. This is shown through Engels law of family expenditure.

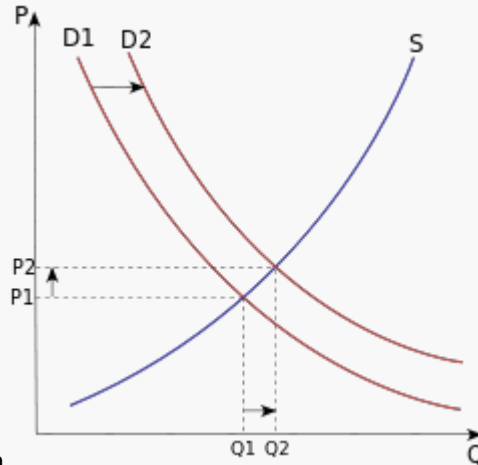
a) Essential Consumers goods b) Inferior goods c) Normal goods d) Prestige or Luxury Goods 4. Wealth of a consumer 5. Advertisement and Publicity 6. Fashion or Demonstration Effect 7. Size and Composition of Population

### **Types of Demand**

#### **TYPES OF DEMANDS**

- Direct demand and Derived demand.
- Individual demand and Market demand.

Domestic and Industrial Demand Autonomous and Induced Demand New and Replacement Demand etc.

**Supply theory and analysis****Graphical representation**

The price  $P$  of a product is determined by a balance between production at each price (supply  $S$ ) and the desires of those with purchasing power at each price (demand  $D$ ). The diagram shows a positive shift in demand from  $D_1$  to  $D_2$ , resulting in an increase in price ( $P$ ) and quantity sold ( $Q$ ) of the product.

In microeconomics, **supply and demand** is an economic model of price determination in a market. It postulates that in a competitive market, the unit price for a particular good, or other traded item such as labor or liquid financial assets, will vary until it settles at a point where the quantity demanded (at the current price) will equal the quantity supplied (at the current price), resulting in an economic equilibrium for price and quantity transacted.

**Graphical representation**

Although it is normal to regard the quantity demanded and the quantity supplied as functions of the price of the goods, the standard graphical representation, usually attributed to Alfred Marshall, has price on the vertical axis and quantity on the horizontal axis.

Since determinants of supply and demand other than the price of the goods in question are not explicitly represented in the supply-demand diagram, changes in the values of these variables are represented by moving the supply and demand curves (often described as "shifts" in the curves).

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By contrast, responses to changes in the price of the good are represented as movements along unchanged supply and demand curves.

### **Supply schedule**

A supply schedule is a table that shows the relationship between the price of a good and the quantity supplied. Under the assumption of perfect competition, supply is determined by marginal cost. That is, firms will produce additional output while the cost of producing an extra unit of output is less than the price they would receive.

A hike in the cost of raw goods would decrease supply, shifting costs up, while a discount would increase supply, shifting costs down and hurting producers as producer surplus decreases.

By its very nature, conceptualizing a supply curve requires the firm to be a perfect competitor (i.e. to have no influence over the market price). This is true because each point on the supply curve is the answer to the question "If this firm is faced with this potential price, how much output will it be able to and willing to sell?" If a firm has market power, its decision of how much output to provide to the market influences the market price, therefore the firm is not "faced with" any price, and the question becomes less relevant.

Economists distinguish between the supply curve of an individual firm and between the market supply curve. The market supply curve is obtained by summing the quantities supplied by all suppliers at each potential price. Thus, in the graph of the supply curve, individual firms' supply curves are added horizontally to obtain the market supply curve.

Economists also distinguish the short-run market supply curve from the long-run market supply curve. In this context, two things are assumed constant by definition of the short run: the availability of one or more fixed inputs (typically physical capital), and the number of firms in the industry. In the long run, firms have a chance to adjust their holdings of physical capital, enabling them to better adjust their quantity supplied at any given price. Furthermore, in the long run potential competitors can enter or exit the industry in response to market conditions. For both of these reasons, long-run market supply curves are generally flatter than their short-run counterparts.

The determinants of supply are:

1. Production costs: how many a goods costs to be produced. Production costs are the cost of the inputs; primarily labor, capital, energy and materials. They depend on the technology used in production, and/or technological advances. See: Productivity
2. Firms' expectations about future prices
3. Number of suppliers

### **Demand schedule**

A demand schedule, depicted graphically as the demand curve, represents the amount of some goods that buyers are willing and able to purchase at various prices, assuming all determinants of demand other than the price of the good in question, such as income, tastes and preferences, the price of substitute goods, and the price of complementary goods, remain the same. Following the law of demand, the demand curve is almost always represented as downward-sloping, meaning that as price decreases, consumers will buy more of the good.

Just like the supply curves reflect marginal cost curves, demand curves are determined by marginal utility curves. Consumers will be willing to buy a given quantity of a good, at a given price, if the marginal utility of additional consumption is equal to the opportunity cost determined by the price, that is, the marginal utility of alternative consumption choices. The demand schedule is defined as the willingness and ability of a consumer to purchase a given product in a given frame of time.

It is aforementioned, that the demand curve is generally downward-sloping; there may be rare examples of goods that have upward-sloping demand curves. Two different hypothetical types of goods with upward-sloping demand curves are Giffen goods (an inferior but staple good) and Veblen goods (goods made more fashionable by a higher price).

By its very nature, conceptualizing a demand curve requires that the purchaser be a perfect competitor—that is, that the purchaser has no influence over the market price. This is true because each point on the demand curve is the answer to the question "If this buyer is faced with this

potential price, how much of the product will it purchase. If a buyer has market power, so its decision of how much to buy influences the market price, then the buyer is not "faced with" any price and the question is meaningless.

Like with supply curves, economists distinguish between the demand curve of an individual and the market demand curve. The market demand curve is obtained by summing the quantities demanded by all consumers at each potential price. Thus, in the graph of the demand curve, individuals' demand curves are added horizontally to obtain the market demand curve.

The determinants of demand are:

1. Income.
2. Tastes and preferences.
3. Prices of related goods and services.
4. Consumers' expectations about future prices and incomes that can be checked.
5. Number of potential consumers.

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**UNIT 2**

S.no	Questions	Option A	Option B	Option C	Option D	Answer
1	consumer's buying behaviour is depends on	relative price	relative goods	relative commodity	relative taste and preference	relative price
2	Demand is meant the or want for something	money	desire	performance	forecasting	desire
3	Demand for a commodity always have a reference to	product	price	ability	purchase	price
4	Consumer demand for a product may be viewed at levels	three	one	two	four	two
5	Market demand for a product,refers to the	particular demand	individual demand	total demand	quantity demand	total demand
6	In market mechanism would be automatically channalised	time	resource	money	economy	resource
7	is always a basic consideration in demand	income	price	tasts	habits	price
8	Demand for a commodity is also affected by	samekind of products	particular products	complementary products	whole products	complementary products
9	The preference of consumer can be altered by	Products	price	advertisement	commodity	advertisement
10	In low market price market demand for the product is	low	high	medium	very low	high
11	There is equal distribution of income and	products	price	wealth	consumption	wealth
12	for a product is greatly affected by scale of production	Particular demand	low level demand	market demand	higher level demand	market demand
13	larger number of will constitute a larger demand	sellers	competitors	producers	buyers	buyers
14	High tax rate would generally mean a low	high demand	medium demand	low demand	very high demand	low demand
15	In modern economy tends to affectthe	new products	substitutes	existing products	obsolete products	existing products
16	Market demand for is affected by fashions	Price	products	commodity	substitutes	products
17	In demand function,economist explains	price-quality relationship	price-quantity relationship	price-goods relationship	price consumer relationship	price-quantity relationship
18	Demand schedule explains purchasing the commodity at	same price	higher price	purchasing price	selling price	purchasing price
19	Demand curve is a of a demand schedule	linear presentation	graphical lines	diagrammatic line	dotted line	graphical lines
20	Demand curve has a slope	positive	negative	positive&negative	normal	negative
21	Market demand curve is derived by	vertical summation	horizontal summation	straight line summation	circular summation	horizontal summation
22	The statement of law states the quantity demand and	income	price	quantity	supplementary goods	price
23	The law of demand is usually referred as	Individual demand	particular demand	market demand	quantity demand	market demand
24	The operation of law should be same	consumer's taste	consumer's income	consumer's preference	consumer's willingness	consumer's income
25	Demand curve indicates relationship between price &demand	Direct	Indirect	inverse	straight line	inverse
26	Demand curve slope under all normal condition	upward	horizontal	downward	normal	downward
27	Certain goods called giffen goods	superior	inferior	substitutes	luxurious	inferior
28	Change in the of substitutes ,change in their prices	demand	quantity	supply	quality	demand
29	A clever by producers affect consumers preferences	publicity	advertisement	change	substitutes	advertisement
30	Government changes its especially that of direct taxes	tax policy	tax evasion	tax structure	tax increase	tax structure
31	Goods demanded by consumers for the direct satisfaction is calles as	consumption goods	producers goods	manufactures goods	sellers goods	consumption goods
32	Demand for consumer's goods is	derived	direct	Indirect	Increase	direct
33	of producers goods are professionals	sellers	labourers	buyers	competitors	buyers
34	goods are not have durability	durable	non-durable	perishable	consumption	perishable
35	Demand for a product depends on demand for some other	goods	commodities	price	services	commodities
36	Derived demand is price elastic	high	normal	less	very high	less
37	Derived demand makes very easy	Demand function	demand forecasting	demand requirements	demand law	demand forecasting
38	refers to the total demand dor the commodity produce by industry	Producers demand	company demand	Industry demand	Aggregate demand	Industry demand
39	Firm's demand is fairly	Inelastic	elastic	substitutes	Perfect Inelastic	elastic
40	Demand for most of the commodities is	Dependent	Independent	Interrelated	Interdependent	Interdependent
41	Two goods are demanded in with one another	complementary	conjunction	supplied	change	conjunction
42	Supply schedule represents relationship between price	Quality	quantity	produce	sell	quantity
43	supply curve shapes	left to right	right to left	right only	left only	right to left
44	Elasticity of supply is the degree of change in of goods	Quantity	price	quality	change	price
45	The relationship between the price &quantity is	Direct	normal	inverse	minimum	inverse
46	A rise in price results big extension of supply	high	normal	small	verysmall	small
47	Supply depends on	usefulness	willingness	scarcity	market demand	scarcity
48	Supply is defined as goods for	purchase	sale	price	product	sale
49	Supply of different quantities placed in market at different	product	quantity	price	demand	price
50	law of supply states that other things are	change	influence	constant	extended	constant
51	large quantities are supplied at prices	low	high	normal	very high	high
52	Supply In a market depends on the number of	producers	firms	sellers	marketers	firms
53	supply depends upon suitable factors of	sales	consumption	production	market quantity	production
54	sellers sells the commodity on the basis of	product	price	sales	consumption	price



55	In lower prices the supply will be	complementary	constant	contracting	falling		complementary
56	Supply is govern by factors	elastic	inelastic	perfectly elastic	imperfect elastic		inelastic
57	Supply curve is vertical to Y axis ,elasticity of supply is	zero	$>1$	$<1$	$=1$		zero
58	depends on many other factors	demand	commodity	supply	price		supply
59	economics are not generated by firm,but	government	business	producers	market		government
60	Aglets are the metal or plastic tips on shoelaces that make it easier to lace your shoes. The d	perfectly elastic	inelastic	elastic but not perfectly e	unit elastic		inelastic

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**I M.Com & I M.Com CA**

**Managerial Economics**

**Subject Code : 17CCP102 / 17CMP102 Academic Year: 2017 -2018**

**Class : I M.Com & I M.Com CA Semester : I**

**Possible questions: Unit II**

**Part B (2 Marks)**

1. What is demand?
2. What is elasticity of demand?
3. What is supply?
4. What is elasticity of demand?
5. What is price?

**Part –C (6 Marks)**

1. Enumerate the factors determining price elasticity of demand.
2. Explicate the three forms of demand with suitable diagrams.
3. Enumerate the different techniques used in demand estimation.
4. Explain the various methods of demand forecasting.
5. Enumerate the factors determining price elasticity of demand.
6. Explicate the three forms of demand with suitable diagrams.
7. What are the reasons for the downward slope of the demand curve?
8. What is functional relationship model? Explain it's with suitable diagrams.

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**Possible questions: Unit III**

**Part –B (2 Marks)**

1. Define production
2. Define cost
3. Define output
4. Define BEP
5. What is manufacturing cost?

**Part –C (8 Marks)**

1. Define cost analysis? Explain the scope of study of cost analysis.
2. Elucidate the break even analysis with suitable diagrams.
3. Explain the concept of cost and its types.
4. What are the cost output relationships in short and long period?
5. Explicate the concept of cost and its types.
6. Explain the demand with suitable diagrams.
7. Explicate the cost output relationship analysis.
8. Describe the theory of production.



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Unit 3

**Production Theory**

**Production theory** is the study of production, or the economic process of converting inputs into outputs. Production uses resources to create a good or service that are suitable for use, gift-giving in a gift economy, or exchange in a market economy. This can include manufacturing, construction, storing, shipping, and packaging. Some economists define production broadly as all economic activity other than consumption. They see every commercial activity other than the final purchase as some form of production.

Production is a process, and as such it occurs through time and space. Because it is a flow concept, production is measured as a “rate of output per period of time”. There are three aspects to production processes:

1. The quantity of the good or service produced,
2. The form of the good or service created,
3. The temporal and spatial distribution of the good or service produced.

A production process can be defined as any activity that increases the similarity between the pattern of demand for goods and services, and the quantity, form, shape, size, length and distribution of these goods and services available to the market place.

Production is a process that combines various material inputs and immaterial inputs (plans, know-how) to make something for consumption (the output). It is the act of creating output, a good or service that has value and contributes to the utility of individuals.

Economic well-being is created in a production process, meaning all economic activities that aim directly or indirectly to satisfy human needs. The degree to which the needs are satisfied is often accepted as a measure of economic well-being. In production, two features explain increasing economic well-being. They are improving quality-price-ratio of commodities and increasing incomes from growing and more efficient market production.

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The most important forms of production are

- market production
- public production
- household production

To understand the origin of the economic well-being, we must understand these three production processes. All of them produce commodities that have value and contribute to well-being of individuals.

The satisfaction of needs originates from the use of the commodities produced. The need satisfaction increases when the quality-price-ratio of the commodities improves and more satisfaction is achieved at a lower cost. Improving the quality-price-ratio of commodities is to a producer an essential way to improve the competitiveness of products but this kind of gain distributed to customers cannot be measured with production data. To the producer, improving product competitiveness often means lower product prices, and therefore losses in incomes, which the producer hopes sales growth will offset.

Economic well-being also increases due to the growth of incomes that are gained from the growing and more efficient market production. Market production is the only one production form that creates and distributes incomes to stakeholders. Public production and household production are financed by the incomes generated in market production. Thus market production has a double role in creating well-being, i.e., the role of producing developing commodities and the role to creating income. Because of this double role market production is the “primus motor” of economic well-being and therefore here under review.

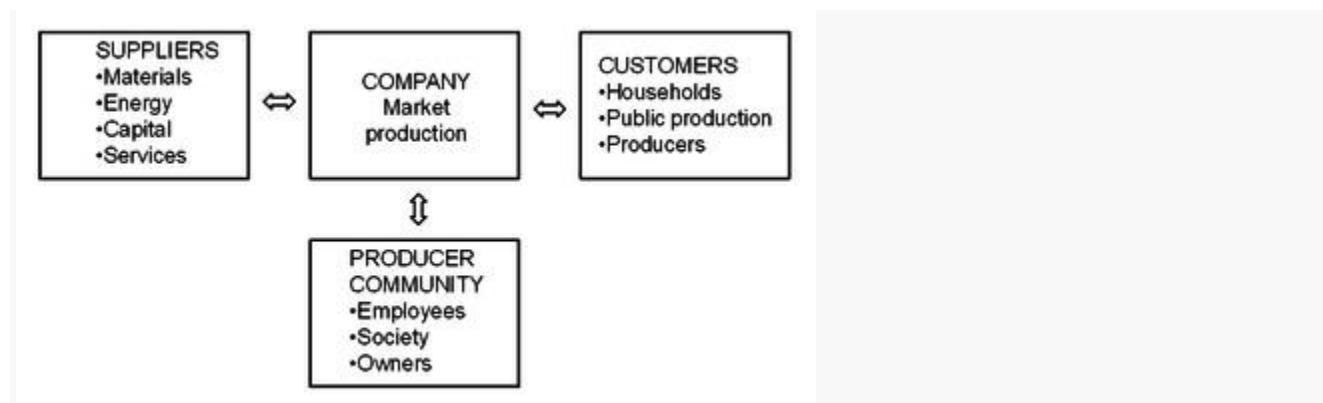
#### Production as a source of economic well-being

In principle there are two main activities in an economy, production and consumption. Similarly there are two kinds of actors, producers and consumers. Well-being is made possible by efficient production and by the interaction between producers and consumers. In the interaction, consumers can be identified in two roles both of which generate well-being. Consumers can be both customers of

the producers and suppliers to the producers. The customers' well-being arises from the commodities they are buying and the suppliers' well-being is related to the income they receive as compensation for the production inputs they have delivered to the producers.

### Stakeholders of production

Stakeholders of production are persons, groups or organizations with an interest in a producing company. Economic well-being originates in efficient production and it is distributed through the interaction between the company's stakeholders. Stakeholders of companies are economic actors with an economic interest in a company. Based on the similarities of their interests, stakeholders can be classified into three groups to differentiate their interests and mutual relations. The three groups are:



Interactive contributions of a company's stakeholders (Saari, 2011,4)

- Customers
- Suppliers
- Producers

The interests of these stakeholders and their relations to companies are described briefly below. Our purpose is to establish a framework for further analysis.

#### *Customers*

The customers of a company are typically consumers, other market producers or producers in the public sector. Each of them has their individual production functions. Due to competition, the price-

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quality-ratios of commodities tend to improve and this brings the benefits of better productivity to customers. Customers get more for less. In households and the public sector this means that more need satisfaction is achieved at less cost. For this reason the productivity of customers can increase over time even though their incomes remain unchanged.

### *Suppliers*

The suppliers of companies are typically producers of materials, energy, capital, and services. They all have their individual production functions. The changes in prices or qualities of supplied commodities have an effect on both actors' (company and suppliers) production functions. We come to the conclusion that the production functions of the company and its suppliers are in a state of continuous change.

The inputs or resources used in the production process are called factors of production by economists. The inputs are usually grouped into four categories. These factors are:

- Raw material
- Labor services
- Capital goods
- Land

In the “long run”, all of these factors of production can be adjusted by management. The “short run”, however, is defined as a period in which at least one of the factors of production is fixed.

A fixed factor of production is one whose quantity cannot readily be changed. Examples include major pieces of equipment, suitable factory space, and key managerial personnel.

A variable factor of production is one whose usage rate can be changed easily. Examples include electrical power consumption, transportation services, and most raw material inputs. In the short run, a firm's “scale of operations” determines the maximum number of outputs that can be produced. In the long run, there are no scale limitations.

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*Producer community*

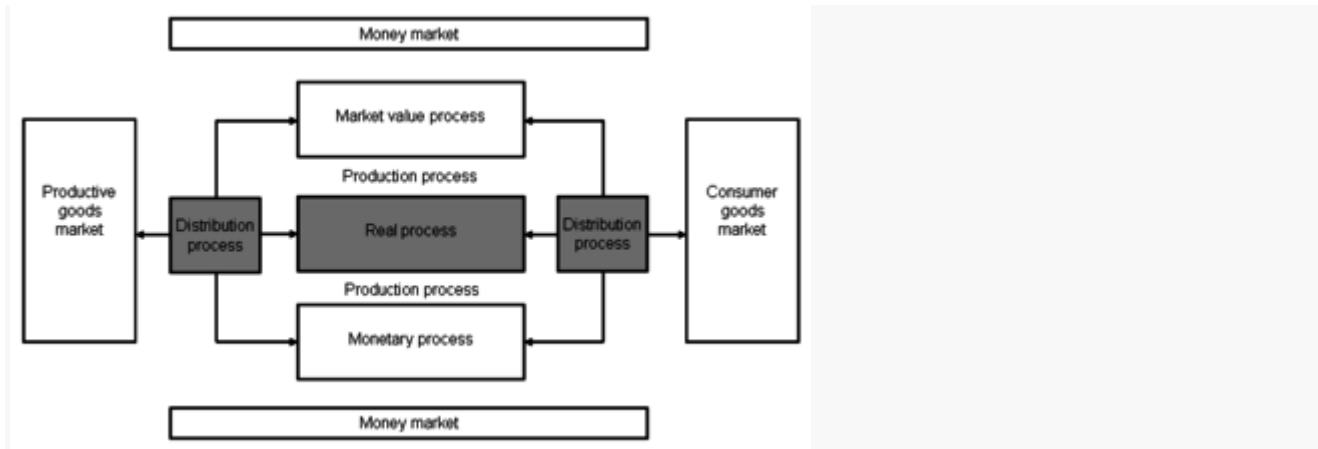
The incomes are generated for those participating in production, i.e., the labour force, society and owners. These stakeholders are referred to here as producer communities or, in shorter form, as producers. The producer communities have a common interest in maximizing their incomes. These parties that contribute to production receive increased incomes from the growing and developing production.

The well-being gained through commodities stems from the price-quality relations of the commodities. Due to competition and development in the market, the price-quality relations of commodities tend to improve over time. Typically the quality of a commodity goes up and the price goes down over time. This development favourably affects the production functions of customers. Customers get more for less. Consumer customers get more satisfaction at less cost. This type of well-being generation can only partially be calculated from the production data. The situation is presented in this study. The producer community (labour force, society, and owners) earns income as compensation for the inputs they have delivered to the production. When the production grows and becomes more efficient, the income tends to increase. In production this brings about an increased ability to pay salaries, taxes and profits. The growth of production and improved productivity generate additional income for the producing community. Similarly the high income level achieved in the community is a result of the high volume of production and its good performance. This type of well-being generation – as mentioned earlier - can be reliably calculated from the production data.

**Main processes of a producing company**

A producing company can be divided into sub-processes in different ways. The following five are main processes, each with a logic, objectives, theory, and key figures of its own. It is important to examine each individually and also as part of the whole to measure and understand them. These main processes of a company are:





Main processes of a producing company

- Real process
- Income distribution process
- Production process
- Monetary process
- Market value process

Production output is created in the real process, gains of production are distributed in the income distribution process and these two processes constitute the production process. The production process and its sub-processes, the real process and income distribution process occur simultaneously, and only the production process is identifiable and measurable by the traditional accounting practices. The real process and income distribution process can be identified and measured by extra calculation, and this is why we must analyze them separately to understand the logic of production and its performance.

Real process generates the production output from input, and it can be described by means of the production function. It refers to a series of events in production in which production inputs of different quality and quantity are combined into products of different quality and quantity. Products can be physical goods, immaterial services and most often combinations of both. The characteristics created into the product by the producer imply surplus value to the consumer, and on the basis of the

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market price this value is shared by the consumer and the producer in the marketplace. This is the mechanism through which surplus value originates to the consumer and the producer likewise. It is worth noting that surplus values to customers cannot be measured from any production data. Instead the surplus value to a producer can be measured. It can be expressed both in terms of nominal and real values. The real surplus value to the producer is an outcome of the real process, real income, and measured proportionally it means productivity.

The concept “real process” in the meaning quantitative structure of production process was introduced in Finnish management accounting in 1960’s. Since then it has been a cornerstone in the Finnish management accounting theory. (Riistama et al. 1971)

Income distribution process of the production refers to a series of events in which the unit prices of constant-quality products and inputs alter causing a change in income distribution among those participating in the exchange. The magnitude of the change in income distribution is directly proportionate to the change in prices of the output and inputs and to their quantities. Productivity gains are distributed, for example, to customers as lower product sales prices or to staff as higher income pay.

The production process consists of the real process and the income distribution process. A result and a criterion of success of the owner is profitability. The profitability of production is the share of the real process result the owner has been able to keep to himself in the income distribution process. Factors describing the production process are the components of profitability, i.e., returns and costs. They differ from the factors of the real process in that the components of profitability are given at nominal prices whereas in the real process the factors are at periodically fixed prices.

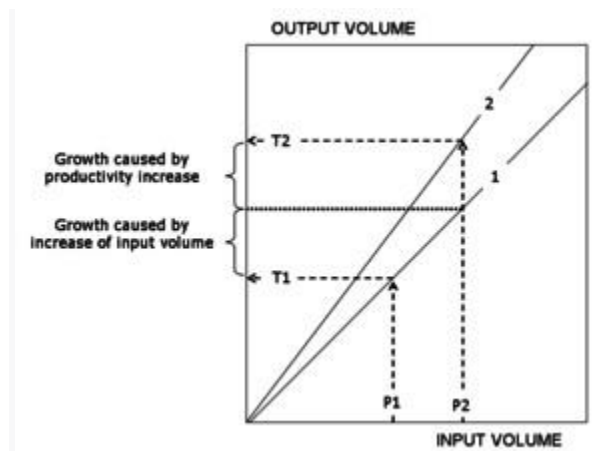
Monetary process refers to events related to financing the business. Market value process refers to a series of events in which investors determine the market value of the company in the investment markets.

### **Production growth and performance**

Production growth is often defined as a production increase of an output of a production process. It is usually expressed as a growth percentage depicting growth of the real production output. The real

output is the real value of products produced in a production process and when we subtract the real input from the real output we get the real income. The real output and the real income are generated by the real process of production from the real inputs.

The real process can be described by means of the production function. The production function is a graphical or mathematical expression showing the relationship between the inputs used in production and the output achieved. Both graphical and mathematical expressions are presented and demonstrated. The production function is a simple description of the mechanism of income generation in production process. It consists of two components. These components are a change in production input and a change in productivity.



Components of economic growth (Saari 2006,2). The production function has shifted from #1 to #2, and input use has increased from P1 to P2.

The figure illustrates an income generation process (exaggerated for clarity). The Value T2 (value at time 2) represents the growth in output from Value T1 (value at time 1). Each time of measurement has its own graph of the production function for that time (the straight lines). The output measured at time 2 is greater than the output measured at time one for both of the components of growth: an increase of inputs and an increase of productivity. The portion of growth caused by the increase in inputs is shown on line 1 and does not change the relation between inputs and outputs. The portion of growth caused by an increase in productivity is shown on line 2 with a steeper slope. So increased

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productivity represents greater output per unit of input.

The growth of production output does not reveal anything about the performance of the production process. The performance of production measures production's ability to generate income. Because the income from production is generated in the real process, we call it the real income. Similarly, as the production function is an expression of the real process, we could also call it "income generated by the production function".

The real income generation follows the logic of the production function. Two components can also be distinguished in the income change: the income growth caused by an increase in production input (production volume) and the income growth caused by an increase in productivity. The income growth caused by increased production volume is determined by moving along the production function graph. The income growth corresponding to a shift of the production function is generated by the increase in productivity. The changes of real income so signifies a move from the point 1 to the point 2 on the production function (above). When we want to maximize the production performance we have to maximize the income generated by the production function.

The sources of productivity growth and production volume growth are explained as follows. Productivity growth is seen as the key economic indicator of innovation. The successful introduction of new products and new or altered processes, organization structures, systems, and business models generates growth of output that exceeds the growth of inputs. This results in growth in productivity or output per unit of input. Income growth can also take place without innovation through replication of established technologies. With only replication and without innovation, output increases in proportion to input. (Jorgenson et al. 2014,2) This is the case of income growth through production volume growth.

Jorgenson et al. (2014,2) give an empiric example. They show that the great preponderance of economic growth in the US since 1947 involves the replication of existing technologies through investment in equipment, structures, and software and expansion of the labor force. Further they show that innovation accounts for only about twenty percent of US economic growth.

In the case of a single production process (described above) the output is defined as an economic

---

value of products and services produced in the process. When we want to examine an entity of many production processes we have to sum up the value-added created in the single processes. This is done to avoid double accounting of intermediate inputs. Value-added is obtained by subtracting the intermediate inputs from the outputs. The most well-known and used measure of value-added is the GDP (Gross Domestic Product). It is widely used as a measure of the economic growth of nations and industries.

### **Absolute (total) and average income**

The production performance can be measured as an average or an absolute income. Expressing performance both in average (avg.) and absolute (abs.) quantities is helpful for understanding the welfare effects of production. For measurement of the average production performance, we use the known productivity ratio

- Real output / Real input.

The absolute income of performance is obtained by subtracting the real input from the real output as follows:

- Real income (abs.) = Real output – Real input

The real income is the increase of the economic value which can be distributed between the production stakeholders. With the aid of the production model we can perform the average and absolute accounting in one calculation. Maximizing production performance requires using the absolute measure, i.e., the real income and its derivatives as a criterion of production performance.

An important conclusion can be drawn. When we try to maximize the welfare effects of production we have to maximize real income formation. Maximizing productivity leads to a suboptimum, i.e., to losses of incomes.

A practical example illustrates the case. When a jobless person obtains a job in market production we may assume it is a low productivity job. As a result, average productivity decreases but the real income per capita increases. Furthermore, the well-being of the society also grows. This example

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reveals the difficulty to interpret the total productivity change correctly. The combination of volume increase and total productivity decrease leads in this case to the improved performance because we are on the “diminishing returns” area of the production function. If we are on the part of “increasing returns” on the production function, the combination of production volume increase and total productivity increase leads to improved production performance. Unfortunately we do not know in practice on which part of the production function we are. Therefore, a correct interpretation of a performance change is obtained only by measuring the real income change.

### Production models

A production model is a numerical description of the production process and is based on the prices and the quantities of inputs and outputs. There are two main approaches to operation the concept of production function. We can use mathematical formulae, which are typically used in macroeconomics (in growth accounting) or arithmetical models, which are typically used in microeconomics and management accounting. We do not present the former approach here but refer to the survey “Growth accounting” by Hulten 2009.

We use here arithmetical models because they are like the models of management accounting, illustrative and easily understood and applied in practice. Furthermore, they are integrated to management accounting, which is a practical advantage. A major advantage of the arithmetical model is its capability to depict production function as a part of production process. Consequently, production function can be understood, measured, and examined as a part of production process.

Different production models describe different interests. Here, we use a production income model and a production analysis model to demonstrate production function as a phenomenon and measurable quantity.

### Production income model

	Period 1			Period 2		
	Quantity	Price	Value	Quantity	Price	Value
Product 1	210.00	7.20	1512	247.25	7.10	1755
Product 2	200.00	7.00	1400	195.03	7.15	1394
Output			2912			3150
Labour	100.00	7.50	750	115.00	7.70	886
Materials	80.00	8.60	688	79.20	8.50	673
Energy	400.00	1.50	600	428.00	1.55	663
Capital	160.00	3.80	608	164.80	3.90	643
Input			2646			2865
Surplus value (abs.)			266.00			285.12
Surplus value (rel.)			1.101			1.100

#### Profitability of production measured by surplus value

The scale of success run by a going concern is manifold, and there are no criteria that might be universally applicable to success. Nevertheless, there is one criterion by which we can generalise the rate of success in production. This criterion is the ability to produce surplus value. As a criterion of profitability, surplus value refers to the difference between returns and costs, taking into consideration the costs of equity in addition to the costs included in the profit and loss statement as usual. Surplus value indicates that the output has more value than the sacrifice made for it, in other words, the output value is higher than the value (production costs) of the used inputs. If the surplus value is positive, the owner's profit expectation has been surpassed.

The table presents a surplus value calculation. We call this set of production data a basic example and we use the data through the article in illustrative production models. The basic example is a simplified profitability calculation used for illustration and modelling. Even as reduced, it comprises all phenomena of a real measuring situation and most importantly the change in the output-input mix between two periods. Hence, the basic example works as an illustrative "scale model" of production without any features of a real measuring situation being lost. In practice, there may be hundreds of products and inputs but the logic of measuring does not differ from that presented in the basic example.

In this context we define the quality requirements for the production data used in productivity accounting. The most important criterion of good measurement is the homogenous quality of the measurement object. If the object is not homogenous, then the measurement result may include changes in both quantity and quality but their respective shares remain unclear. In productivity accounting this criterion requires that every item of output and input must appear in accounting as being homogenous. In other words, the inputs and the outputs are not aggregated in measuring and accounting. If they are aggregated, they are no longer homogenous and hence measurement results may be biased.

Both the absolute and relative surplus value has been calculated in the example. Absolute value is the difference of the output and input values and the relative value is their relation, respectively. The surplus value calculation in the example is at a nominal price, calculated at the market price of each period.

### Production analysis model

		Period 1			$Q_1 \times P_2$	Period 2		
		1	2	3		5	6	7
		Quantity	Price	Value	4	Quantity	Price	Value
a	Product 1	210.00	7.20	1512.00	1491.00	247.25	7.10	1755.48
b	Product 2	200.00	7.00	1400.00	1430.00	195.03	7.15	1394.46
c	Output			2912.00	2921.00			3149.94
d	Labour	100.00	7.50	750.00	770.00	115.00	7.70	885.50
e	Materials	80.00	8.60	688.00	680.00	79.20	8.50	673.20
f	Energy	400.00	1.50	600.00	620.00	428.00	1.55	663.40
g	Capital	160.00	3.80	608.00	624.00	164.80	3.90	642.72
h	Input			2646.00	2694.00			2864.82
i	Surplus value (abs.)			266.00	227.00			285.12
j	Surplus value (rel.)			1.101				1.100
k	Change of distribution (abs.); $i_4 - i_3$				-39.00			
l	Distribution index of output; $c_4/c_3$				1.003			
m	Distribution index of input; $h_4/h_3$				1.018			
n	Distribution index; $i_4/i_3$				0.985			
Distribution process								
p	Productivity; $c_4/h_4$ , $c_7/h_7$				1.084			1.100
q	Productivity index; $p_7/p_4$							1.014
r	Change of productivity (abs.); $(q_7-1) \times c_4$							41.12
s	Volume index of output; $c_7/c_4$							1.078
t	Volume index of input; $h_7/h_4$							1.063
u	Change of input volume (abs.); $(t_7-1) \times h_4$							17.00
Real process								
v	Change of profitability; $p_7/i_3$							0.999
x	Change of returns; $c_7/c_3$							1.082
z	Change of costs; $h_7/h_3$							1.083
Production process								

Production Model



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A model used here is a typical production analysis model that helps calculate the outcome of the real process, income distribution process and production process. The starting point is a profitability calculation using surplus value as a criterion of profitability. The surplus value calculation is the only valid measure for understanding the connection between profitability and productivity or understanding the connection between real process and production process. A valid measurement of total productivity necessitates considering all production inputs, and the surplus value calculation is the only calculation to conform to the requirement. If we omit an input in productivity or income accounting, this means that the omitted input can be used unlimitedly in production without any cost impact on accounting results.

### **Accounting and interpreting**

The process of calculating is best understood by applying the term *ceteris paribus*, i.e., "all other things being the same," stating that at a time only the impact of one changing factor be introduced to the phenomenon being examined. Therefore, the calculation can be presented as a process advancing step by step. First, the impacts of the income distribution process are calculated, and then, the impacts of the real process on the profitability of the production.

The first step of the calculation is to separate the impacts of the real process and the income distribution process, respectively, from the change in profitability ( $285.12 - 266.00 = 19.12$ ). This takes place by simply creating one auxiliary column (4) in which a surplus value calculation is compiled using the quantities of Period 1 and the prices of Period 2. In the resulting profitability calculation, Columns 3 and 4 depict the impact of a change in income distribution process on the profitability and in Columns 4 and 7 the impact of a change in real process on the profitability.

The accounting results are easily interpreted and understood. We see that the real income has increased by 58.12 units from which 41.12 units come from the increase of productivity growth and the rest 17.00 units come from the production volume growth. The total increase of real income (58.12) is distributed to the stakeholders of production, in this case 39.00 units to the customers and to the suppliers of inputs and the rest 19.12 units to the owners.

Here we can make an important conclusion. Income formation of production is always a balance

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between income generation and income distribution. The income change created in a real process (i.e., by production function) is always distributed to the stakeholders as economic values within the review period. Accordingly, the changes in real income and income distribution are always equal in terms of economic value.

Based on the accounted changes of productivity and production volume values we can explicitly conclude on which part of the production function the production is. The rules of interpretations are the following:

The production is on the part of “increasing returns” on the production function, when

- productivity and production volume increase or
- productivity and production volume decrease

The production is on the part of “diminishing returns” on the production function, when

- productivity decreases and volume increases or
- Productivity increases and volume decreases.

In the basic example the combination of volume growth (+17.00) and productivity growth (+41.12) reports explicitly that the production is on the part of “increasing returns” on the production function (Saari 2006 a, 138–144).

Another production model (Production Model Saari 1989) also gives details of the income distribution (Saari 2011,14). Because the accounting techniques of the two models are different, they give differing, although complementary, analytical information. The accounting results are, however, identical. We do not present the model here in detail but we only use its detailed data on income distribution, when the objective functions are formulated in the next section.

### **Cost concepts**

#### **Various Cost Concepts**

- Opportunity Cost

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- Money Cost and Real Cost
  - Accounting Cost and Economic Cost
  - Private Cost and Social Cost
  - Fixed Cost, Variable Cost, Average Cost and Marginal Cost

### Opportunity Cost

The resources of any firm operating in the market are limited and investment options are many. The firm therefore has to decide or select only those investment opportunities/options which provide the firm with the best return or best income on investment. This means that if a firm can invest money/ resources only in one investment option then the firm will select that investment option which promises best return on investment to the firm. In other words while doing so the firm gives up/rejects the next best option for investing the funds. The opportunity cost of a company is thus this income/ return which the firm could have earned on the next best investment alternative.

This can also be understood by a simple example - Let us assume that an individual has two job offers in hand. One job offer is promising him a salary of Rs. 30, 000 per month while the other job offer will ensure salary of Rs. 25, 000 per month. If the job profile and other factors related to the job offers are more or less same then it can be easily expected that the individual will select the job offer which will provide him with higher salary that is salary of Rs. 30, 000 per month. Thus, in this case, the opportunity cost is the return involved in the next best alternative i.e; Salary of Rs. 25, 000 in the next best job offer.

Concept of opportunity cost is closely related to the concept of Economic profit or Economic Rent. A firm earns or makes Economic profit only when besides covering various costs of operation, a firm is also able to earn more than its opportunity cost (or its possible earnings under the next best investment alternative). Opportunity Cost is also termed as Implicit Cost.

Economic Profit is thus earned only when following is true for the Firm:

Income of a Firm > Various Costs of Operations + Opportunity Cost

OR Economic Profit = Earnings or Revenue of Firm - Economic Costs. Here Economic Cost is

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various expenses of the business plus the opportunity cost

### Money Cost and Real Cost

Money Cost of production is the actual monetary expenditure made by company in the production process. Money cost thus includes all the business expenses which involve outlay of money to support business operations. For example the monetary expenditure on purchase of raw material, payment of wages and salaries, payment of rent and other charges of business etc can be termed as Money Cost.

Real Cost of production or business operation on the other hand includes all such expenses/costs of business which may or may not involve actual monetary expenditure. For example if owner of a business venture uses his personal land and building for running the business venture and he/she does not charge any rent for the same then such head will not be considered/included while computing the Money Cost but this head will be part of Real Cost computation. Here the cost involved is the Opportunity Cost of the land and building. If the promoter of the company had not used the land and building for the business venture then the land and building could have been used elsewhere for some other entire and could have generated some income for the promoter. This income/rent which could have been earned under the next best investment option is the opportunity cost which needs to be considered while calculating the Real Cost for the firm.

### **Cost Theory**

In economics, the cost-of-production theory of value is the theory that the price of an object or condition is determined by the sum of the cost of the resources that went into making it. The cost can comprise any of the factors of production (including labour, capital, or land) and taxation.

The theory makes the most sense under assumptions of constant returns to scale and the existence of just one non-produced factor of production. These are the assumptions of the so-called non-substitution theorem Under these assumptions, the long-run price of a commodity is equal to the sum of the cost of the inputs into that commodity, including interest charges.

Historical development of theory

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Historically, the best-known proponent of such theories is probably Adam Smith. Piero Sraffa, in his introduction to the first volume of the "Collected Works of David Ricardo", referred to Smith's "adding-up" theory. Smith contrasted natural prices with market price. Smith theorized that market prices would tend toward natural prices, where outputs would stand at what he characterized as the "level of effectual demand". At this level, Smith's natural prices of commodities are the sum of the natural rates of wages, profits, and rent that must be paid for inputs into production. (Smith is ambiguous about whether rent is price determining or price determined. The latter view is the consensus of later classical economists, with the Ricardo-Malthus-West theory of rent.)

David Ricardo mixed this cost-of-production theory of prices with the labor theory of value, as that latter theory was understood by Eugen von Böhm-Bawerk and others. This is the theory that prices tend toward proportionality to the socially necessary labour embodied in a commodity. Ricardo sets this theory at the start of the first chapter of his Principles of Political Economy and Taxation. He also refutes the labour theory of value in later sections of that chapter. Taknaga advances a new interpretation that Ricardo had cost-of-production theory of value from the start and presents a more coherent interpretation based on texts of Principles of Political Economy and Taxation. This alleged refutation leads to what later became known as the transformation problem. Karl Marx later takes up that theory in the first volume of Capital, while indicating that he is quite aware that the theory is untrue at lower levels of abstraction. This has led to all sorts of arguments over what both David Ricardo and Karl Marx "really meant". Nevertheless, it seems undeniable that all the major classical economics and Marx explicitly rejected the labour theory of price.

A somewhat different theory of cost-determined prices is provided by the "neo-Ricardian School" of Piero Sraffa and his followers. Shiozawa presented a modern interpretation of Ricardo's cost-of-production theory of value.

The Polish economist Michał Kalecki distinguished between sectors with "cost-determined prices" (such as manufacturing and services) and those with "demand-determined prices" (such as agriculture and raw material extraction).

Market price

Market price is a familiar economic concept: it is the price that a good or service is offered at, or will fetch, in the marketplace. It is of interest mainly in the study of microeconomics. Market value and market price are equal only under conditions of market efficiency, equilibrium, and rational expectations.

In economics, returns to scale and economies of scale are related terms that describe what happens as the scale of production increases. They are different, non-interchangeable the terms.

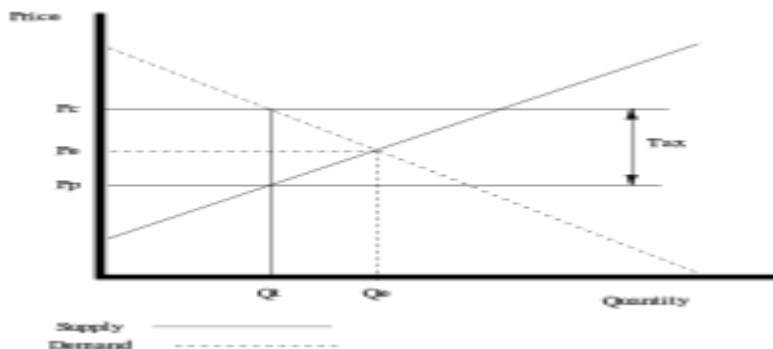
### Labour theory of value

The labor theories of value are economic theories according to which the true values of commodities are related to the labour needed to produce them.

There are many accounts of labour value, with the common element that the "value" of an exchangeable good or service is, or ought to be, or tends to be, or can be considered as, equal or proportional to the amount of labour required to produce it (including the labour required to produce the raw materials and machinery used in production).

Different labour theories of value prevailed among classical economists through the mid-19th century. This theory is especially associated with Adam Smith and David Ricardo. Since that time, it has been most often associated with Marxian economics, while among modern mainstream economists it is considered to be superseded by the marginal utility approach.

### Taxes and subsidies



A supply and demand diagram illustrating taxes' effect on prices.

Taxes and subsidies change the price of goods and services. A marginal tax on the sellers of a good

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will shift the supply curve to the left until the vertical distance between the two supply curves is equal to the per unit tax; other things remaining equal, this will increase the price paid by the consumers (which is equal to the new market price) and decrease the price received by the sellers. Marginal subsidies on production will shift the supply curve to the right until the vertical distance between the two supply curves is equal to the per unit subsidy; other things remaining equal, this will decrease price paid by the consumers (which is equal to the new market price) and increase the price received by the producers.

### **Cost output relationship**

Cost output relations play an important role in business decisions pertaining to cost minimisation or profit-maximisation and optimisation of output. Cost output relations are expressed through a cost function.

#### Short run Cost Output Relations

The basic analytical cost concepts used in the analysis of cost behaviour are total, average and marginal costs. The total costs is defined as the actual cost that must be incurred to produce a given quantity of output. The short run total cost is composed of two major elements: total fixed cost(TFC) and total variable cost(TVC). That is in the short run,

$$TC = TFC + TVC$$

#### Long run Cost Output Relations

By definition, in the long run, all the inputs become variable. The variability of inputs is based on the assumption that in the long-run, supply of all the inputs including those held constant in the short run becomes elastic. The firms are therefore in a position to expand the scale of their production run by hiring a larger quantity of all the inputs. The long run output relations therefore imply the relationship between the total costs and the total outputs, whereas in the short run this relationship is essentially one between the total output and the variable costs because fixed costs remain constant.

### **Break even analysis**

The break-even point (BEP) in economics, business—and specifically cost accounting—is the point at which total cost and total revenue are equal. There is no net loss or gain, and one has "broken even," though opportunity costs have been paid and capital has received the risk-adjusted, expected return. In short, all costs that must be paid are paid, and there is neither profit nor loss.

#### Overview

The break-even point (BEP) or break-even level represents the sales amount—in either unit (quantity) or revenue (sales) terms—that is required to cover total costs, consisting of both fixed and variable costs to the company. Total profit at the break-even point is zero. It is only possible for a firm to Break-even, if the dollar value of sales is higher than the variable cost per unit. This means that the selling price of the good must be higher than what the company paid for the good or its components for them to cover the initial price they paid (variable costs). Once they surpass the break-even price, the company can start making a profit.

The break-even point is one of the most commonly used concepts of financial analysis, and is not only limited to economic use, but can also be used by entrepreneurs, accountants, financial planners, managers and even marketers. Break-even points can be useful to all avenues of a business, as it allows employees to identify required outputs and work towards meeting these.

The Breakeven value is not a generic value and will vary dependent on the individual business. Some businesses may have a higher or lower breakeven point, however it is important that each business develop a break-even point calculation, as this will enable them to see the number of units they need to sell to cover their variable costs. Each sale will also make a contribution to the payment of fixed costs as well.

For example, a business that sells tables needs to make annual sales of 200 tables to break-even. At present the company is selling less than 200 tables and is therefore operating at a



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loss. As a business, they must consider increasing the number of tables they sell annually in order to make enough money to pay fixed and variable costs.

If the business does not think that they can sell the required amount of units, they could consider the following options:

1. Reduce the fixed costs. This could be done through a number of negotiations, such as reductions in rent, or through better management of bills or other costs.
2. Reduce variable costs by, for example, finding a new supplier that sells tables for less.
3. Increase the quantity of tables they sell.

Any of these options can reduce the break-even point so the business need not sell as many tables as before, and could still pay fixed costs.

#### Purpose

The main purpose of break-even analysis is to determine the minimum output that must be exceeded for a business to profit. It also is a rough indicator of the earnings impact of a marketing activity. A firm can analyze ideal output levels to be knowledgeable on the amount of sales and revenue that would meet and surpass the break-even point. If a business doesn't meet this level, it often becomes difficult to continue operation.

The break-even point is one of the simplest, yet least-used analytical tools. Identifying a break-even point helps provide a dynamic view of the relationships between sales, costs, and profits. For example, expressing break-even sales as a percentage of actual sales can help managers understand when to expect to break even (by linking the percent to when in the week or month this percent of sales might occur).

The break-even point is a special case of Target Income Sales, where Target Income is 0 (breaking even). This is very important for financial analysis. Any sales made past the breakeven point can be considered profit (after all initial costs have been paid)

Break-even analysis can also provide data that can be useful to the marketing department of a business as well, as it provides financial goals that the business can pass on to marketers so they can try to increase sales.

Break-even analysis can also help businesses see where they could re-structure or cut costs for optimum results. This may help the business become more effective and achieve higher returns. In many cases, if an entrepreneurial venture is seeking to get off of the ground and enter into a market it is advised that they formulate a break-even analysis to suggest to potential financial backers that the business has the potential to be viable and at what points.

#### Construction

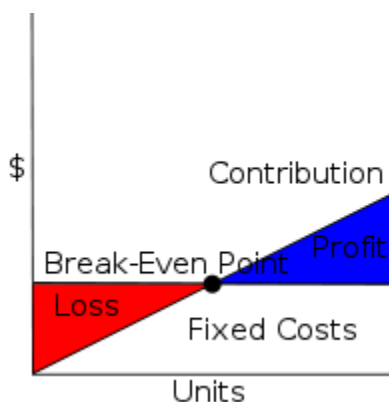
In the linear Cost-Volume-Profit Analysis model (where marginal costs and marginal revenues are constant, among other assumptions), the break-even point (BEP) (in terms of Unit Sales (X)) can be directly computed in terms of Total Revenue (TR) and Total Costs (TC) as:

where:

TFC is Total Fixed Costs,

P is Unit Sale Price, and

V is Unit Variable Cost.



The Break-Even Point can alternatively be computed as the point where Contribution equals Fixed Costs.

To calculate the break-even point in terms of revenue (a.k.a. currency units, a.k.a. sales proceeds) instead of Unit Sales (X), the above calculation can be multiplied by Price, or, equivalently, the Contribution Margin Ratio (Unit Contribution Margin over Price) can be calculated:

#### Margin of safety

Margin of safety represents the strength of the business. It enables a business to know what is the exact amount it has gained or lost and whether they are over or below the break-even point. In break-even analysis, margin of safety is the extent by which actual or projected sales exceed the break-even sales.

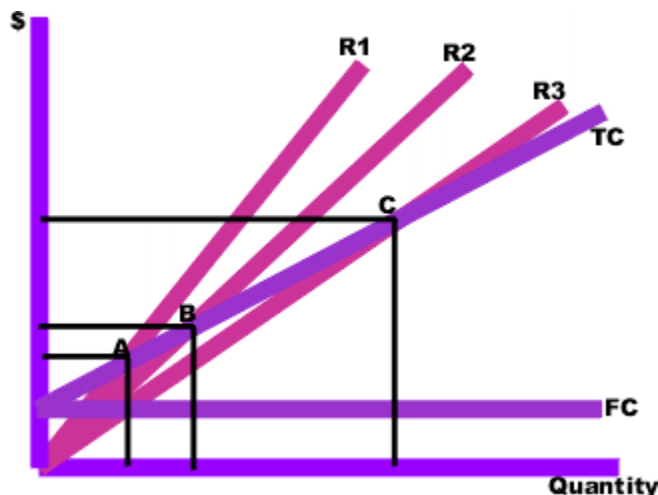
Margin of safety = (current output - breakeven output)

Margin of safety% = (current output - breakeven output)/current output  $\times$  100

When dealing with budgets you would instead replace "Current output" with "Budgeted output"

#### Break-even analysis

By inserting different prices into the formula, you will obtain a number of break-even points, one for each possible price charged. If the firm changes the selling price for its product, from \$2 to \$2.30, in the example above, then it would have to sell only  $1000/(2.3 - 0.6) = 589$  units to break even, rather than 715.



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To make the results clearer, they can be graphed. To do this, draw the total cost curve (TC in the diagram), which shows the total cost associated with each possible level of output, the fixed cost curve (FC) which shows the costs that do not vary with output level, and finally the various total revenue lines (R1, R2, and R3), which show the total amount of revenue received at each output level, given the price you will be charging.

The break-even points (A,B,C) are the points of intersection between the total cost curve (TC) and a total revenue curve (R1, R2, or R3). The break-even quantity at each selling price can be read off the horizontal axis and the break-even price at each selling price can be read off the vertical axis. The total cost, total revenue, and fixed cost curves can each be constructed with simple formula. For example, the total revenue curve is simply the product of selling price times quantity for each output quantity. The data used in these formula come either from accounting records or from various estimation techniques such as regression analysis.

#### Limitations

Break-even analysis is only a supply-side (i.e., costs only) analysis, as it tells you nothing about what sales are actually likely to be for the product at these various prices.

It assumes that fixed costs (FC) are constant. Although this is true in the short run, an increase in the scale of production is likely to cause fixed costs to rise.

It assumes average variable costs are constant per unit of output, at least in the range of likely quantities of sales. (i.e., linearity).

It assumes that the quantity of goods produced is equal to the quantity of goods sold (i.e., there is no change in the quantity of goods held in inventory at the beginning of the period and the quantity of goods held in inventory at the end of the period).

In multi-product companies, it assumes that the relative proportions of each product sold and produced are constant (i.e., the sales mix is constant).

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**UNIT 3**

S.no	Questions	Option A	Option B	Option C	Option D	Answer
1	Production involves the uses of	outputs	inputs	variable	goods	inputs
2	The relation between input and output is called	sales	consumption	production	quantity	production
3	Longrun is defined as sufficiently of time	short period	long period	very short period	very long period	long period
4	The amount of production factors to produce a unit is called	cumulative coefficient	technical coefficient	input coefficient	output coefficient	technical coefficient
5	Iso quant curve shows the all inputs are variable	longrun	short run	very longrun	very normal run	longrun
6	Iso quant curve represent various combinations of	outputs	shorttermoutput	input	longrun input	input
7	The production function concerned with explaining	minimum quantity	maximum quantity	marginal quantity	marginal value	maximum quantity
8	Knowledge of production is very much to managers	diversable	Irdiversable	Indispensable	dispensable	Indispensable
9	Price of one factor risks and the other is	change	normal	slightly change	unchanged	Unchanged
10	Production is the backbone of activity	social	science	economic	managerial	economic
11	A Process of values to natural resource is called production	deleting	adding	multiplying	subtracting	adding
12	Main objective of every producer is	Maximum Income	Maximum profits	Maximum Interest	Lesslosses	maximum profits
13	Producer combines various to produces the output	Input	Factors	profit	Income	Input
14	explains the relation of input and output application	law of returns	law of variable	law of economics	law of supply	law of variable
15	In variable proportion ,varying factor is divided into stages	one	five	two	three	three
16	returns takes place in the first stage of diminishing returns	decreasing	varying	Increasing	supplying	Increasing
17	Law of constant returns line	vertical	proportionate	horizontal	straight line	horizontal
18	utility is created by transporting goods from one place to another	form	place	time	serve	place
19	Service utility is created by	producers	suppliers	professionals	sellers	professionals
20	Production is a in which relates to both goods &service	short term	long term	wider term	very short term	wider term
21	Production goods have values	normal	exchange	less	transform	exchange
22	refers to all kinds of natural resources on the earth	labour	land	capital	enterprise	land
23	Productive activity referred to per unit	rate of input	rate of sales	rate of output	rate of production	rate of output
24	The concept of production function describe possibilities	logical	fractional	conceptual	technological	technological
25	output and size of plant is remaining unchanged	very long period	long period	short period	very short period	short period
26	is defined as a period of time	short term	long term	very short term	very long term	long term
27	made a statistical inquiry into manufacturing industries	Adamsmith	Alfred marshal	cobb-douglas	lionel robins	cobb-douglas
28	Production function is one which one factor is while others are constant	labourer	variable	scale	returns	variable
29	Diminishing marginal returns are reference to	Industry	cultivation	Agricultural	production	agricultural
30	Total number of units of output produced per unit is called	marginal product	total product	decreasing product	average product	total product
31	The average product is refers to factors	constant	marginal	variable	change	variable
32	has to play in Managerial economics	production	sales	cost	revenue	cost
33	refers to the actual financial expenditure	opportunity cost	outlay cost	explicit cost	implicit cost	outlay cost
34	cost are not directly incurred by the firm	explicit	opportunity	outlay	implicit cost	implicit cost
35	In economic sense,real business is the of total revenue	economic profit	loss	expenses	profit	economic profit
36	Fixed cost are the amount spent in in the short run	long run	fixed input	change in input	opportunity input	fixed input
37	are give rise in cash output at certain payments	Incurred fixed cost	recurrent fixed cost	changing fixed cost	allocable fixed cost	recurrent fixedcost
38	variable cost are those cost incurred on factors	fixed	semi-variable	variable	contractual	variable
39	is the original price of plant and materials paid by firm	Replacemnt cost	Incremental cost	shorttruncost	horizontal cost	horizontal cost
40	Cost which is incurred and will not change is called	Incremental cist	marginal cost	sunk cost	controllable cot	sunk cost
41	Marginal cost is defined in in output	normal change	unitary change	sustainable change	complementary change	unitary change
42	is the aggregate of expenditure	Average cost	total cost	fixed cost	variable cost	total cost
43	cost is total fixed cost divided by number of units	marginal	total	average	variable cost	average
44	is also a per unit cost of production	average	marginal	total	variable	total
45	spells out the determination of cost	cost concept	cost schedule	cost function	cost curve	cost function
46	is a statement of variations in levels of output	cost output	cost schedule	cost statement	cost period	cost schedule
47	Opportunity cost concept is useful for taking decisions	very long period	short period	long period	very short period	short period
48	Estimates of are essentially founded on an opportunity cost	cost of capital	debentures	dividend	working capital	cost of capital
49	Out-of-pocket costs are those costs that involve cash payment	future	past	current	pre-post	current
50	Book cost is the cost of self owned factors of	sales	purchase	cost	production	production
51	Cost estimates of an incremental nature only influence decisions.	firms	departments	business	units	business
52	costs include wages and salaries paid payments for raw materials	incremental	sunk	explicit	implicit	explicit
53	Normal implicit costs and return on capital contributed by	Directors	shareholders	employees	government	shareholders
54	Historical valuation is the basis for	final accounts	articles of association	prospectus	policies	final accounts

55	Direct expenses like material, labour etc. are costs.	incremental	sunk	controllable	replacement		controllable
56	Average fixed cost decreases increases	input	price	output	total cost		output
57	ATC Curve is shaped	triangle	U shape	square	circle		U shape
58	is the envelope of shortrun average cost	LAC	LMC	MC	SMC		LAC
59	LAC curve is referred as curve	multiple	envelope	triangle	average		envelope
60	Marginal cost is called	minimum cost	least cost	decreasing cost	extra unit cost		extra unit cost

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Unit -4

**Perfect competition**

In economics and general equilibrium theory, a perfect market is defined by several conditions, collectively called perfect competition. These conditions are

- A large number of buyers and sellers – A large number of consumers with the willingness and ability to buy the product at a certain price, and a large number of producers with the willingness and ability to supply the product at a certain price.
- Perfect information – All consumers and producers know all prices of products and utilities each person would get from owning each product.
- Homogeneous products – The products are perfect substitutes for each other, (i.e., the qualities and characteristics of a market good or service do not vary between different suppliers).
- Well defined Property rights – These determine what may be sold, as well as what rights are conferred on the buyer.
- No barriers to entry or exit
- Every participant is a price taker – No participant with market power to set prices
- Perfect factor mobility – In the long run factors of production are perfectly mobile, allowing free long term adjustments to changing market conditions.
- Profit maximization of sellers – Firms sell where the most profit is generated, where marginal costs meet marginal revenue.
- Rational buyers: Buyers make all trades that increase their economic utility and make no trades that do not increase their utility.
- No externalities – Costs or benefits of an activity do not affect third parties. This criterion also excludes any government intervention.
- Zero transaction costs – Buyers and sellers do not incur costs in making an exchange of goods in a perfectly competitive market.

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- Non-increasing returns to scale and no network effects – The lack of economies of scale or network effects ensures that there will always be a sufficient number of firms in the industry.

When conditions of perfect competition hold, it has been proven that a market will reach an equilibrium in which the quantity supplied for every product or service, including labor, equals the quantity demanded at the current price. This equilibrium will be a Pareto optimum, meaning that nobody can be made better off by exchange without making someone else worse off.

Such markets are allocation efficient, as output will always occur where marginal cost is equal to marginal revenue ( $MC = MR$ ). But perfectly competitive markets are not necessarily productively efficient as output will not always occur where marginal cost is equal to average cost ( $MC = AC$ ).

In perfect competition, any profit-maximizing producer faces a market price equal to its marginal cost ( $P = MC$ ). This implies that a factor's price equals the factor's marginal revenue product. It allows for derivation of the supply curve on which the neoclassical approach is based. This is also the reason why "a monopoly does not have a supply curve". The abandonment of price taking creates considerable difficulties for the demonstration of a general equilibrium except under other, very specific conditions such as that of monopolistic competition.

Real markets are never perfect, but range from close-to-perfect to very imperfect. Share and foreign exchange markets are commonly said to be the most similar to the perfect market. The real estate market is an example of a very imperfect market. In such markets, the Theory of the second best proves that if one optimality condition in an economic model cannot be satisfied, it is possible that the next-best solution involves changing other variables away from the values that would otherwise be optimal.

### **Monopoly**

A monopoly (from Greek ("alone" or "single") and ("to sell")) exists when a specific person or enterprise is the only supplier of a particular commodity. This contrasts with a monophony which relates to a single entity's control of a market to purchase a good or service,



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and with oligopoly which consists of a few sellers dominating a market). Monopolies are thus characterized by a lack of economic competition to produce the good or service, a lack of viable substitute goods, and the possibility of a high monopoly price well above the seller's marginal cost that leads to a high monopoly profit. The verb monopolise or monopolize refers to the process by which a company gains the ability to raise prices or exclude competitors. In economics, a monopoly is a single seller. In law, a monopoly is a business entity that has significant market power, that is, the power to charge overly high prices. Although monopolies may be big businesses, size is not a characteristic of a monopoly. A small business may still have the power to raise prices in a small industry (or market).

A monopoly is distinguished from a monopony, in which there is only one buyer of a product or service; a monopoly may also have monopony control of a sector of a market. Likewise, a monopoly should be distinguished from a cartel (a form of oligopoly), in which several providers act together to coordinate services, prices or sale of goods. Monopolies, monopolies and oligopolies are all situations in which one or a few entities have market power and therefore interact with their customers (monopoly or oligopoly), or suppliers (monopony) in ways that distort the market.

Monopolies can be established by a government, form naturally, or form by integration.

In many jurisdictions, competition laws restrict monopolies. Holding a dominant position or a monopoly in a market is often not illegal in itself, however certain categories of behaviour can be considered abusive and therefore incur legal sanctions when business is dominant. A government-granted monopoly or legal monopoly, by contrast, is sanctioned by the state, often to provide an incentive to invest in a risky venture or enrich a domestic interest group. Patents, copyrights, and trademarks are sometimes used as examples of government-granted monopolies. The government may also reserve the venture for itself, thus forming a government monopoly.

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## **Market structures**

In economics, the idea of monopoly is important in the study of management structures, which directly concerns normative aspects of economic competition, and provides the basis for topics such as industrial organization and economics of regulation. There are four basic types of market structures in traditional economic analysis: perfect competition, monopolistic competition, oligopoly and monopoly. A monopoly is a structure in which a single supplier produces and sells a given product. If there is a single seller in a certain market and there are no close substitutes for the product, then the market structure is that of a "pure monopoly". Sometimes, there are many sellers in an industry and/or there exist many close substitutes for the goods being produced, but nevertheless companies retain some market power. This is termed monopolistic competition, whereas in oligopoly the companies interact strategically.

In general, the main results from this theory compare price-fixing methods across market structures, analyze the effect of a certain structure on welfare, and vary technological/demand assumptions in order to assess the consequences for an abstract model of society. Most economic textbooks follow the practice of carefully explaining the perfect competition model, mainly because this helps to understand "departures" from it (the so-called imperfect competition models).

The boundaries of what constitutes a market and what does not are relevant distinctions to make in economic analysis. In a general equilibrium context, a good is a specific concept including geographical and time-related characteristics ("grapes sold during October 2009 in Moscow" is a different good from "grapes sold during October 2009 in New York"). Most studies of market structure relax a little their definition of a good, allowing for more flexibility in the identification of substitute goods.

## **Characteristics**

- Profit Maximize: Maximizes profits.
- Price Maker: Decides the price of the good or product to be sold, but does so by determining the quantity in order to demand the price desired by the firm.

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- High Barriers: Other sellers are unable to enter the market of the monopoly.
  - Single seller: In a monopoly, there is one seller of the good, who produces all the output. Therefore, the whole market is being served by a single company, and for practical purposes, the company is the same as the industry.
  - Price Discrimination: A monopolist can change the price or quantity of the product. He or she sells higher quantities at a lower price in a very elastic market, and sells lower quantities at a higher price in a less elastic market.

### **Sources of monopoly power**

Monopolies derive their market power from barriers to entry – circumstances that prevent or greatly impede a potential competitor's ability to compete in a market. There are three major types of barriers to entry: economic, legal and deliberate.

- Economic barriers: Economic barriers include economies of scale, capital requirements, cost advantages and technological superiority.
- Economies of scale: Decreasing unit costs for larger volumes of production. Decreasing costs coupled with large initial costs, often due to large fixed costs, give monopolies an advantage over would-be competitors. Monopolies are often in a position to reduce prices below a new entrant's operating costs and thereby prevent them from competing. Thus the size of the industry relative to the minimum efficient scale may limit the number of companies that can effectively compete within the industry. If for example the industry is large enough to support one company of minimum efficient scale then other companies entering the industry will operate at a size that is less than MES, and so cannot produce at an average cost that is competitive with the dominant company. Finally, if long-term average cost is constantly decreasing, the least cost method to provide a good or service is by a single company.
- Capital requirements: Production processes that require large investments of capital, perhaps in the form of large research and development costs or substantial sunk costs, limit the number of companies in an industry: this is an example of economies of scale.

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- Technological superiority: A monopoly may be better able to acquire, integrate and use the best possible technology in producing its goods while entrants either do not have the expertise or are unable to meet the large fixed costs (see above) needed for the most efficient technology. Thus one large company can often produce goods cheaper than several small companies.
  - No substitute goods: A monopoly sells a good for which there is no close substitute. The absence of substitutes makes the demand for those good relatively inelastic, enabling monopolies to extract positive profits.
  - Control of natural resources: A prime source of monopoly power is the control of resources (such as raw materials) that are critical to the production of a final good.
  - Network externalities: The use of a product by a person can affect the value of that product to other people. This is the network effect. There is a direct relationship between the proportion of people using a product and the demand for that product. In other words, the more people who are using a product, the greater the probability that another individual will start to use the product. This reflects fads, fashion trends, social networks etc. It also can play a crucial role in the development or acquisition of market power. The most famous current example is the market dominance of the Microsoft office suite and operating system in personal computers.
  - Legal barriers: Legal rights can provide opportunity to monopolies the market in a good. Intellectual property rights, including patents and copyrights, give a monopolist exclusive control of the production and selling of certain goods. Property rights may give a company exclusive control of the materials necessary to produce a good.
  - Manipulation: A company wanting to monopolies a market may engage in various types of deliberate action to exclude competitors or eliminate competition. Such actions include collusion, lobbying governmental authorities, and force (see anti-competitive practices).

In addition to barriers to entry and competition, barriers to exit may be a source of market power. Barriers to exit are market conditions that make it difficult or expensive for a company to end its involvement with a market. High liquidation costs are a primary barrier to exiting. Market exit

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and shutdown are sometimes separate events. Company will shut down if price falls below minimum average variable costs.

### **Monopoly versus competitive markets**

While monopoly and perfect competition mark the extremes of market structures there is some similarity. The cost functions are the same. Both monopolies and perfectly competitive (PC) companies minimize cost and maximize profit. The shutdown decisions are the same. Both are assumed to have perfectly competitive factors markets. There are distinctions, some of the more important of which are as follows:

- **Marginal revenue and price:** In a perfectly competitive market, price equals marginal cost. In a monopolistic market, however, price is set above marginal cost.
- **Product differentiation:** There is zero product differentiation in a perfectly competitive market. Every product is perfectly homogeneous and a perfect substitute for any other. With a monopoly, there is great to absolute product differentiation in the sense that there is no available substitute for a monopolized good. The monopolist is the sole supplier of the good in question. A customer either buys from the monopolizing entity on its terms or does without.
- **Number of competitors:** PC markets are populated by an infinite number of buyers and sellers. Monopoly involves a single seller.
- **Barriers to Entry:** Barriers to entry are factors and circumstances that prevent entry into market by would-be competitors and limit new companies from operating and expanding within the market. PC markets have free entry and exit. There are no barriers to entry, or exit competition. Monopolies have relatively high barriers to entry. The barriers must be strong enough to prevent or discourage any potential competitor from entering the market.
- **Elasticity of Demand:** The price elasticity of demand is the percentage change of demand caused by a one percent change of relative price. A successful monopoly would have a relatively inelastic demand curve. A low coefficient of elasticity is indicative of effective

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barriers to entry. A PC company has a perfectly elastic demand curve. The coefficient of elasticity for a perfectly competitive demand curve is infinite.

- **Excess Profits:** Excess or positive profits are profit more than the normal expected return on investment. A PC company can make excess profits in the short term but excess profits attract competitors, which can enter the market freely and decrease prices, eventually reducing excess profits to zero. A monopoly can preserve excess profits because barriers to entry prevent competitors from entering the market.
- **Profit Maximization:** A PC company maximizes profits by producing such that price equals marginal costs. A monopoly maximizes profits by producing where marginal revenue equals marginal costs. The rules are not equivalent. The demand curve for a PC company is perfectly elastic – flat. The demand curve is identical to the average revenue curve and the price line. Since the average revenue curve is constant the marginal revenue curve is also constant and equals the demand curve, Average revenue is the same as price ( $AR = TR/Q = P \times Q/Q = P$ ). Thus the price line is also identical to the demand curve. In sum,  $D = AR = MR = P$ .
- **P-Max quantity, price and profit:** If a monopolist obtains control of a formerly perfectly competitive industry, the monopolist would increase prices, reduce production, and realise positive economic profits.
- **Supply Curve:** in a perfectly competitive market there is a well defined supply function with a one-to-one relationship between price and quantity supplied. In a monopolistic market no such supply relationship exists. A monopolist cannot trace a short term supply curve because for a given price there is not a unique quantity supplied. As Pindyck and Rubinfeld note, a change in demand "can lead to changes in prices with no change in output, changes in output with no change in price or both". Monopolies produce where marginal revenue equals marginal costs. For a specific demand curve the supply "curve" would be the price/quantity combination at the point where marginal revenue equals marginal cost. If the demand curve shifted the marginal revenue curve would shift as well and a new equilibrium and supply "point" would be established. The locus of these points would not be a supply curve in any conventional sense.

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The most significant distinction between a PC company and a monopoly is that the monopoly has a downward-sloping demand curve rather than the "perceived" perfectly elastic curve of the PC company. Practically all the variations mentioned above relate to this fact. If there is a downward-sloping demand curve then by necessity there is a distinct marginal revenue curve. The implications of this fact are best made manifest with a linear demand curve. Assume that the inverse demand curve is of the form  $x = a - by$ . Then the total revenue curve is  $TR = ay - by^2$  and the marginal revenue curve is thus  $MR = a - 2by$ . From this several things are evident. First the marginal revenue curve has the same y intercept as the inverse demand curve. Second the slope of the marginal revenue curve is twice that of the inverse demand curve. Third the x intercept of the marginal revenue curve is half that of the inverse demand curve. What is not quite so evident is that the marginal revenue curve is below the inverse demand curve at all points. Since all companies maximise profits by equating MR and MC it must be the case that at the profit-maximizing quantity MR and MC are less than price, which further implies that a monopoly produces less quantity at a higher price than if the market were perfectly competitive.

### **Monopolistic competition**

Monopolistic competition is a type of imperfect competition such that many producers sell products that are differentiated from one another (e.g. by branding or quality) and hence are not perfect substitutes. In monopolistic competition, a firm takes the prices charged by its rivals as given and ignores the impact of its own prices on the prices of other firms. In the presence of coercive government, monopolistic competition will fall into government-granted monopoly. Unlike perfect competition, the firm maintains spare capacity. Models of monopolistic competition are often used to model industries. Textbook examples of industries with market structures similar to monopolistic competition include restaurants, cereal, clothing, shoes, and service industries in large cities. The "founding father" of the theory of monopolistic competition is Edward Hastings Chamberlin, who wrote a pioneering book on the subject, *Theory of Monopolistic Competition* (1933). Joan Robinson published a book *The Economics of Imperfect Competition* with a comparable theme of distinguishing perfect from imperfect competition.

Monopolistically competitive markets have the following characteristics:

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- There are many producers and many consumers in the market, and no business has total control over the market price.
  - Consumers perceive that there are non-price differences among the competitors' products.
  - There are few barriers to entry and exit.
  - Producers have a degree of control over price.

The long-run characteristics of a monopolistically competitive market are almost the same as a perfectly competitive market. Two differences between the two are that monopolistic competition produces heterogeneous products and that monopolistic competition involves a great deal of non-price competition, which is based on subtle product differentiation. A firm making profits in the short run will nonetheless only break even in the long run because demand will decrease and average total cost will increase. This means in the long run, a monopolistically competitive firm will make zero economic profit. This illustrates the amount of influence the firm has over the market; because of brand loyalty, it can raise its prices without losing all of its customers. This means that an individual firm's demand curve is downward sloping, in contrast to perfect competition, which has a perfectly elastic demand schedule.

### **Major characteristics**

There are six characteristics of monopolistic competition (MC):

- Product differentiation
- Many firms
- No entry and exit cost in the long run
- Independent decision making
- Some degree of market power
- Buyers and Sellers do not have perfect information (Imperfect Information)

Product differentiation

MC firms sell products that have real or perceived non-price differences. However, the differences are not so great as to eliminate other goods as substitutes. Technically, the cross price



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elasticity of demand between goods in such a market is positive. In fact, the XED would be high. MC goods are best described as close but imperfect substitutes. The goods perform the same basic functions but have differences in qualities such as type, style, quality, reputation, appearance, and location that tend to distinguish them from each other. For example, the basic function of motor vehicles is the same—to move people and objects from point to point in reasonable comfort and safety. Yet there are many different types of motor vehicles such as motor scooters, motor cycles, trucks and cars, and many variations even within these categories.

#### Many firms

There are many firms in each MC product group and many firms on the side lines prepared to enter the market. A product group is a "collection of similar products". The fact that there are "many firms" gives each MC firm the freedom to set prices without engaging in strategic decision making regarding the prices of other firms and each firm's actions have a negligible impact on the market. For example, a firm could cut prices and increase sales without fear that its actions will prompt retaliatory responses from competitors.

How many firms will an MC market structure support at market equilibrium? The answer depends on factors such as fixed costs, economies of scale and the degree of product differentiation. For example, the higher the fixed costs, the fewer firms the market will support.

#### No entry and exit costs

In the long run there are no entry and exit costs. There are numerous firms waiting to enter the market, each with their own "unique" product or in pursuit of positive profits. Any firm unable to cover its costs can leave the market without incurring liquidation costs. This assumption implies that there are low start up costs, no sunk costs and no exit costs.

#### Independent decision making

Each MC firm independently sets the terms of exchange for its product. The firm gives no consideration to what effect its decision may have on competitors. The theory is that any action will have such a negligible effect on the overall market demand that an MC firm can act without

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fear of prompting heightened competition. In other words, each firm feels free to set prices as if it were a monopoly rather than an oligopoly.

#### Market power

MC firms have some degree of market power. Market power means that the firm has control over the terms and conditions of exchange. An MC firm can raise its prices without losing all its customers. The firm can also lower prices without triggering a potentially ruinous price war with competitors. The source of an MC firm's market power is not barriers to entry since they are low. Rather, an MC firm has market power because it has relatively few competitors, those competitors do not engage in strategic decision making and the firm sells differentiated product. Market power also means that an MC firm faces a downward sloping demand curve. The demand curve is highly elastic although not "flat".

#### Imperfect information

No sellers or buyers have complete market information, like market demand or market supply.

#### Market Structure comparison

	Number of firms	Market power	Elasticity of demand	Product differentiation	Excess profits	Efficiency	Profit maximization condition	Pricing power
Perfect Competition	Infinite	None	Perfectly elastic	None	No	Yes	$P=MR=MC$	Price taker
Monopolistic	Many	Low	Highly	High	Yes/No	No	$MR=M$	Price

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competition			elastic (long run)		(Short/Long)		C	setter
Monopoly	One	High	Relatively inelastic	Absolute (across industries)	Yes	No	MR=M C	Price setter

### Inefficiency

There are two sources of inefficiency in the MC market structure. First, at its optimum output the firm charges a price that exceeds marginal costs, The MC firm maximizes profits where marginal revenue = marginal cost. Since the MC firm's demand curve is downward sloping this means that the firm will be charging a price that exceeds marginal costs. The monopoly power possessed by a MC firm means that at its profit maximizing level of production there will be a net loss of consumer (and producer) surplus. The second source of inefficiency is the fact that MC firms operate with excess capacity. That is, the MC firm's profit maximizing output is less than the output associated with minimum average cost. Both a PC and MC firm will operate at a point where demand or price equals average cost. For a PC firm this equilibrium condition occurs where the perfectly elastic demand curve equals minimum average cost. A MC firm's demand curve is not flat but is downward sloping. Thus in the long run the demand curve will be tangential to the long run average cost curve at a point to the left of its minimum. The result is excess capacity.

Socially undesirable aspects compared to perfect competition

- **Selling costs:** Products under monopolistic competition are spending huge amounts on advertising and publicity. Much of this expenditure is wasteful from the social point of view. The producer can reduce the price of the product instead of spending on publicity.
- **Excess Capacity:** Under Imperfect competition, the installed capacity of every firm is large, but not fully utilized. Total output is, therefore, less than the output which is socially

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desirable. Since production capacity is not fully utilized, the resources lie idle. Therefore, the production under monopolistic competition is below the full capacity level.

- **Unemployment:** Idle capacity under monopolistic competition expenditure leads to unemployment. In particular, unemployment of workers leads to poverty and misery in the society. If idle capacity is fully used, the problem of unemployment can be solved to some extent.
- **Cross Transport:** Under monopolistic competition expenditure is incurred on cross transportation. If the goods are sold locally, wasteful expenditure on cross transport could be avoided.
- **Lack of Specialization:** Under monopolistic competition, there is little scope for specialization or standardization. Product differentiation practiced under this competition leads to wasteful expenditure. It is argued that instead of producing too many similar products, only a few standardized products may be produced. This would ensure better allocation of resources and would promote economic welfare of the society.
- **Inefficiency:** Under perfect competition, an inefficient firm is thrown out of the industry. But under monopolistic competition inefficient firms continue to survive.

### **Problems**

Monopolistically competitive firms are inefficient; it is usually the case that the costs of regulating prices for products sold in monopolistic competition exceed the benefits of such regulation. A monopolistically competitive firm might be said to be marginally inefficient because the firm produces at an output where average total cost is not a minimum. A monopolistically competitive market is productively inefficient market structure because marginal cost is less than price in the long run. Monopolistically competitive markets are also allocatively inefficient, as the price given is higher than Marginal cost. Product differentiation increases total utility by better meeting people's wants than homogenous products in a perfectly competitive market.

Another concern is that monopolistic competition fosters advertising and the creation of brand names. Advertising induces customers into spending more on products because of the name

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associated with them rather than because of rational factors. Defenders of advertising dispute this, arguing that brand names can represent a guarantee of quality and that advertising helps reduce the cost to consumers of weighing the tradeoffs of numerous competing brands. There are unique information and information processing costs associated with selecting a brand in a monopolistically competitive environment. In a monopoly market, the consumer is faced with a single brand, making information gathering relatively inexpensive. In a perfectly competitive industry, the consumer is faced with many brands, but because the brands are virtually identical information gathering is also relatively inexpensive. In a monopolistically competitive market, the consumer must collect and process information on a large number of different brands to be able to select the best of them. In many cases, the cost of gathering information necessary to selecting the best brand can exceed the benefit of consuming the best brand instead of a randomly selected brand. The result is that the consumer is confused. Some brands gain prestige value and can extract an additional price for that.

Evidence suggests that consumers use information obtained from advertising not only to assess the single brand advertised, but also to infer the possible existence of brands that the consumer has, heretofore, not observed, as well as to infer consumer satisfaction with brands similar to the advertised brand.

### **Oligopoly**

An oligopoly (from Ancient Greek (oligos), meaning 'few', and (polein), meaning 'to sell') is a market form in which a market or industry is dominated by a small number of sellers (oligopolies). Oligopolies can result from various forms of collusion which reduce competition and lead to higher prices for consumers. Oligopoly has its own market structure.

With few sellers, each oligopolist is likely to be aware of the actions of the others. According to game theory, the decisions of one firm therefore influence and are influenced by decisions of other firms. Strategic planning by oligopolists needs to take into account the likely responses of the other market participants.

Description

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Oligopoly is a common market form where a number of firms are in competition. As a quantitative description of oligopoly, the four-firm concentration ratio is often utilized. This measure expresses, as a percentage, the market share of the four largest firms in any particular industry. For example, as of fourth quarter 2008, if we combine total market share of Verizon Wireless, AT&T, Sprint, and T-Mobile...we see that these firms, together, control 97% of the U.S. cellular telephone market.

Oligopolistic competition can give rise to both wide-ranging and diverse outcomes. In some situations, particular companies may employ restrictive trade practices (collusion, market sharing etc.) in order to raise inflate prices and restrict production in much the same way that a monopoly does. Whenever there is a formal agreement for such collusion, between companies that usually compete with one another, this practice is known as a cartel. A prime example of such a cartel is OPEC, which has a profound influence on the international price of oil.

Firms often collude in an attempt to stabilize unstable markets, so as to reduce the risks inherent in these markets for investment and product development. There are legal restrictions on such collusion in most countries. There does not have to be a formal agreement for collusion to take place (although for the act to be illegal there must be actual communication between companies)—for example, in some industries there may be an acknowledged market leader which informally sets prices to which other producers respond, known as price leadership.

In other situations, competition between sellers in an oligopoly can be fierce, with relatively low prices and high production. This could lead to an efficient outcome approaching perfect competition. The competition in an oligopoly can be greater when there are more firms in an industry than if, for example, the firms were only regionally based and did not compete directly with each other.

Thus the welfare analysis of oligopolies is sensitive to the parameter values used to define the market's structure. In particular, the level of dead weight loss is hard to measure. The study of product differentiation indicates that oligopolies might also create excessive levels of differentiation in order to stifle competition.

Oligopoly theory makes heavy use of game theory to model the behavior of oligopolies:

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- Stackelberg's duopoly. In this model, the firms move sequentially (see Stackelberg competition).
  - Cournot's duopoly. In this model, the firms simultaneously choose quantities (see Cournot competition).
  - Bertrand's oligopoly. In this model, the firms simultaneously choose prices (see Bertrand competition).

#### Characteristics

1. Profit maximization conditions
2. An oligopoly maximizes profits.
3. Ability to set price
4. Oligopolies are price setters rather than price takers.
5. Entry and exit

Barriers to entry are high. The most important barriers are government licenses, economies of scale, patents, access to expensive and complex technology, and strategic actions by incumbent firms designed to discourage or destroy nascent firms. Additional sources of barriers to entry often result from government regulation favoring existing firms making it difficult for new firms to enter the market.

#### Number of firms

"Few" – a "handful" of sellers. There are so few firms that the actions of one firm can influence the actions of the other firms.

#### Long run profits

Oligopolies can retain long run abnormal profits. High barriers of entry prevent sideline firms from entering market to capture excess profits.

#### Product differentiation

Product may be homogeneous (steel) or differentiated (automobiles).

#### Perfect knowledge

Assumptions about perfect knowledge vary but the knowledge of various economic factors can be generally described as selective. Oligopolies have perfect knowledge of their own cost and

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demand functions but their inter-firm information may be incomplete. Buyers have only imperfect knowledge as to price, cost and product quality.

#### Interdependence

The distinctive feature of an oligopoly is interdependence. Oligopolies are typically composed of a few large firms. Each firm is so large that its actions affect market conditions. Therefore, the competing firms will be aware of a firm's market actions and will respond appropriately. This means that in contemplating a market action, a firm must take into consideration the possible reactions of all competing firms and the firm's countermoves. It is very much like a game of chess, in which a player must anticipate a whole sequence of moves and countermoves in order to determine how to achieve his or her objectives; this is known as game theory. For example, an oligopoly considering a price reduction may wish to estimate the likelihood that competing firms would also lower their prices and possibly trigger a ruinous price war. Or if the firm is considering a price increase, it may want to know whether other firms will also increase prices or hold existing prices constant. This anticipation leads to price rigidity as firms will be only be willing to adjust their prices and quantity of output in accordance with a "price leader" in the market. This high degree of interdependence and need to be aware of what other firms are doing or might do is to be contrasted with lack of interdependence in other market structures. In a perfectly competitive (PC) market there is zero interdependence because no firm is large enough to affect market price. All firms in a PC market are price takers, as current market selling price can be followed predictably to maximize short-term profits. In a monopoly, there are no competitors to be concerned about. In a monopolistically-competitive market, each firm's effects on market conditions is so negligible as to be safely ignored by competitors.

#### Non-Price Competition

Oligopolies tend to compete on terms other than price. Loyalty schemes, advertisement, and product differentiation are all examples of non-price competition.

Oligopolies in Countries with Competition laws



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Oligopolies become "mature" when they realize they can profit maximize through joint profit maximizing. As a result of operating in countries with enforced competition laws, the Oligopolists will operate under tacit collusion, being collusion through an understanding that if all the competitors in the market raise their prices, then collectively all the competitors can achieve economic profits close to a monopolist, without evidence of breaching government market regulations. Hence, the kinked demand curve for a joint profit maximizing Oligopoly industry can model the behaviors of oligopolists pricing decisions other than that of the price leader (the price leader being the firm that all other firms follow in terms of pricing decisions). This is because if a firm unilaterally raises the prices of their good/service, and other competitors do not follow then, the firm that raised their price will then lose a significant market as they face the elastic upper segment of the demand curve. As the joint profit maximizing achieves greater economic profits for all the firms, there is an incentive for an individual firm to "cheat" by expanding output to gain greater market share and profit. In Oligopolistic cheating, and the incumbent firm discovering this breach in collusion, the other firms in the market will retaliate by matching or dropping prices lower than the original drop. Hence, the market share that the firm that dropped the price gained, will have that gain minimized or eliminated. This is why on the kinked demand curve model the lower segment of the demand curve is inelastic. As a result, price rigidity prevails in such markets.

### **Duopoly**

A duopoly (from Greek , duo (two) + (to sell)) is a form of oligopoly where only two sellers exist in one market. In practice, the term is also used where two firms have dominant control over a market. it is the most commonly studied form of oligopoly due to its simplicity.

Duopoly models in economics and game theory

There are two principal duopoly models, Cournot duopoly and Bertrand duopoly:

The Cournot model, which shows that two firms assume each other's output and treat this as a fixed amount, and produce in their own firm according to this.

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The Bertrand model, in which, in a game of two firms, each one of them will assume that the other will not change prices in response to its price cuts. When both firms use this logic, they will reach a Nash equilibrium.

Characteristics of duopoly

1. Existence of only two sellers
2. Independence
3. Presence of monopoly elements: so long products are differentiated, the firms enjoy some monopoly power, as each product will have some loyal customers
4. There are two popular modes of duopoly, i.e., Cournot's Model and Chamberlain's Model.

Politics

Modern American politics, in particular the electoral college system has been described as duopolistic since the Republican and Democratic parties have dominated and framed policy debate as well as the public discourse on matters of national concern for about a century and a half. Third Parties have encountered various blocks in getting onto ballots at different levels of government as well as other electoral obstacles, such as denial of access to general election debates.

Examples in business

A commonly cited example of a duopoly is that involving Visa and MasterCard, who between them control a large proportion of the electronic payment processing market. In 2000 they were the defendants in a U.S. Department of Justice antitrust lawsuit. An appeal was upheld in 2004.

Examples where two companies control a large proportion of a market are:

Airbus and Boeing in the market for large commercial airplanes. See also: Competition between Airbus and Boeing.

Televisa and Azteca in the Mexican Television market.

RAI and Mediaset in the Italian Television market.

Radio Televisyen Malaysia and Media Prima in the Malaysian Television market.

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Air Canada and WestJet in the Canadian Aviation market.

Woolworths and Coles in the Australian supermarket market (share 79% of the supermarket market).

Mitre 10 MEGA and Bunnings Warehouse in the Australian and New Zealand retail/trade timber and hardware market (Share 85% of the timber and hardware market).  
Intel and AMD in X86 CPU market and Nvidia and AMD in consumer and professional PC GPU market.

The BNSF Railway and Union Pacific Railroad have a duopoly on freight rail traffic in the Western United States.

Norfolk Southern Railway and CSX Transportation operate a duopoly on freight rail traffic in the Eastern United States Apple and Microsoft in the electronics industry.

Apple's iOS and Google's Android in the mobile operating system market.

Globe Telecom and Smart Communications in the Philippine Telecommunications industry.

First American Financial Corporation and Fidelity National Financial in the American title insurance sector.

DC Comics and Marvel Comics in the superhero genre.

Varian Medical Systems and Elekta in the radiotherapy device industry.

Pepsi and Coca-Cola in carbonated drinks market.

Visa Electron and MasterCard in electronic payment processing market.

Du and Etisalat in the United Arab Emirates telecom space.

Media

In Finland, the state-owned broadcasting company Yleisradio and the private broadcaster Mainos-TV had a legal duopoly (in the economists' sense of the word) from the 1950s to 1993. No other broadcasters were allowed. Mainos-TV operated by leasing air time from Yleisradio, broadcasting in reserved blocks between Yleisradio's own programming on its two channels. This was a unique phenomenon in the world. Between 1986 and 1992 there was an

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independent third channel but it was jointly owned by Yle and MTV; only in 1993 did MTV get its own channel.

In the United Kingdom, the BBC and ITV formed an effective duopoly (with Channel 4 originally being economically dependent on ITV) until the development of multichannel from the 1990s onwards.

Safaricom mobile service provider and Airtel in Kenya are perfect examples of Duopoly market in the African telecommunication industry.

#### Broadcasting

Duopoly is also used in the United States broadcast television and radio industry to refer to a single company owning two outlets in the same city.

This usage is technically incompatible with the normal definition of the word and may lead to confusion, inasmuch as there are generally more than two owners of broadcast television stations in markets with broadcast duopolies. In Canada, this definition is therefore more commonly called a "twinstick".

### **Bilateral Monopoly**

A bilateral monopoly is a market structure consisting of both a monopoly (a single seller) and a monopony (a single buyer).

#### Overview

Bilateral monopoly situations are typically analyzed using the theory of Nash bargaining games, and market price and output will be determined by forces like bargaining power of both buyer and seller, with a final price settling in between the two sides's points of maximum profit. A bilateral monopoly model is often used in situations where the switching costs of both sides are prohibitively high.

#### Examples

An example of a bilateral monopoly would be when a labour union (a monopolist in the supply of labour) faces a single large employer in a factory town (a monopolist).

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A peculiar example exists in the market for nuclear-powered aircraft carriers in the United States, where the buyer (the United States Navy) is the only one demanding the product, and there is only one seller (Huntington Ingalls Industries) by stipulation of the regulations promulgated by the buyer's parent organization (the United States Department of Defence, which has thus far not licensed any other firm to manufacture, overhaul, or decommission nuclear-powered aircraft carriers).

A typical or showpiece example of bilateral monopoly is a lignite (brown coal ) mine and a lignite based power station. Since transport of lignite is not economic, the power station is located close to the mine. The mine is monopolistic in producing lignite and as the only buyer the power station acts as a monopolist.

### **Monopsony**

In economics, a monopsony (from Ancient Greek μόνος (mónos) "single" + ὀψωνία (opsōnía) "purchase") is a market structure in which only one buyer interacts with many would-be sellers of a particular product. In microeconomic theory of monopsony, a single entity is assumed to have market power over terms of offer to its sellers, as the only purchaser of a good or service, much in the same manner that a monopolist can influence the price for its buyers in a monopoly, in which only one seller faces many buyers.

In addition to its use in microeconomic theory, monopsony and monopsonist are descriptive terms often used to describe a market where a single buyer substantially controls the market as the major purchaser of goods and services.

#### **Etymology**

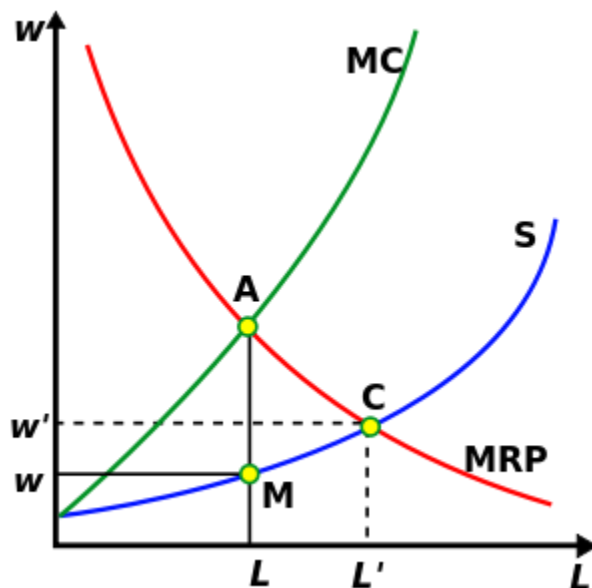
The term was first introduced by Joan Robinson in her influential book, *The Economics of Imperfect Competition*, published in 1933. Robinson credited classics scholar Bertrand Hallward at the University of Cambridge with coining the term.

#### **Overview**

Monopsony theory was developed by economist Joan Robinson in her book *The Economics of Imperfect Competition* (1933). Economists use the term "monopsony power" in a manner similar to "monopoly power" as a shorthand reference for a scenario in which there is one dominant power in the buying relationship, so that power is able to set prices to maximize

profits not subject to competitive constraints. Monopsony power exists when one buyer faces little competition from other buyers for that labor or good, so they are able to set wages and prices for the labor or goods they are buying at a level lower than the marginal revenue created by that labor or good, minimizing costs and maximizing profits. A classic example is a mining town, where the company that owns the mine is able to set wages low since they face no competition from other employers in hiring workers since they are the only employer in the town and geographic constraints prevent workers from seeking employment in other locations. Since there is rarely truly only one employer, more realistic examples include school districts where teachers have little mobility across districts so the district faces little competition from other schools in hiring teachers so they can set salaries lower than they would be in a competitive market. Alternative terms are oligopsony or monopsonistic competition.

Static monopsony in a labor market



A monopsonist employer maximizes profits by choosing the employment level  $L$ , that equates the marginal revenue product (MRP) to the marginal cost  $MC$ , at point  $A$ . The wage is then determined on the supply curve, at point  $M$ , and is equal to  $w$ . By contrast, a competitive labor market would reach equilibrium at point  $C$ , where supply  $S$  equals demand. This would lead to employment  $L'$  and wage  $w'$ .

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The standard, textbook monopsony model refers to static, partial equilibrium in a labor market with just one employer who pays the same wage to all the workers. The employer faces an upward-sloping labor supply curve (as generally contrasted with an infinitely elastic labor supply curve), represented by the S blue curve in the diagram on the right. This curve relates the wage paid, to the level of employment, and is denoted as an increasing function.

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**UNIT I**

S.no	Questions	Option A	Option B	Option C	Option D	Answer
1	There is scope for observation and	Valuation	Verification	collection	Alteration	verification
2	Economic development and economic growth are used as	Stable change	Secular change	Structure change	Unstructure change	secular change
3	Economic growth refers to the of the process of development	beginning	middle	end	long	end
4	Company is an	natural Person	artificial person	normal person	non-natural	artificial person
5	Shareholders are the of the Company	Creditors	Owners	Debtors	Financiers	owners
6	Economics is often defined as	Science	social	resource	mankind	science
7	Human beings exercise the	Increasing usage	personal influence	problem affects	existence of resource	personal influence
8	Managerial economics has followed of main theory	Policies	Subject matter	Principles	brief knowledge	principles
9	Economics as the study of	human nature	mankind	social action	ordinary business	mankind
10	is a method in which influences are drawn from indisputable facts	Deductive method	Inductive method	Proper method	Dynamic method	deductive method
11	Growth refers to more of the	consumption	production	marketing	sales	production
12	Economic development is a process of change in	quantitative improvement	qualitative improvement	normative improvement	none of these	qualitative improvement
13	Managerial economics deals with	economic development	economic issues	economic changes	economic growth	economic issues
14	Firms has to spend a lot of money in the purchase of	sales	production	consumption	utilisation	production
15	micro economics is concerned with behaviour of	micro variables	macro variables	producing variables	output variables	micro variables
16	micro economics and macro economics deals with	observation	aggregation	conservation	distribution	aggregation
17	Firms often like to become in the respective line of business	competitors	leaders	producer	profit taker	leaders
18	Firms are restrict in order to discourage field	loss	products	profit	sales	profit
19	Maximum profit create for nationalising the firms	supply	attitude	exploit firm	public demand	public demand
20	Customers is valued more than anything else	Goodwill	willingness	consumption	appropriation	goodwill
21	Some firms may give greater importance to	profit	financial soundness	huge investment	liquidity	financial soundness
22	Decisions regarding may involve risks	decisions	lose of firm	profit maximisation	proportional earning	profit maximisation
23	of obligation of the business firm have great emphasis	social willingness	social aspects	social responsibility	social programmes	social aspects
24	Specific corporate programmes may undertake at the operational level	social activity	social measures	social powers	social obligation	social measures
25	Businessmen are citizens, they use	corporate powers	corporate responsibility	corporate rules	corporate society	corporate powers
26	Managers are responsible to	customers	shareholders	government	board of directors	shareholders
27	Managerial executives are concerned only	minimising returns	maximising returns	supplying returns	average returns	maximising returns
28	In planned economy have to be utilised for society	returns	profits	resource	goals	resource
29	Firms are the unit of	powers	control	products	functions	control
30	Modern business firm is	organized entity	organizing powwers	commercial activity	industrial product	organized entity
31	Managerial economics is defined as the study of	allocating risk	allocating return	allocating resource	allocating units	allocating resource
32	economics has to examining and regulation	economic policy	economic laws	economic ways	economic solution	economic policy
33	Firms gets for the capital employed	appropriate profit	reasonable profit	accurate profit	stable profit	reasonable profit
34	Managerial economist is expected to make	certain studies	periodical studies	internal studies	external studies	periodical studies
35	The management must undertake	Information	periods	product lines	profit lines	Information
36	in economy's national income and developed countries income increased	decrease	increase	normal	stable	Increase
37	Decision taking in business in reducing risk and uncertainty	Increasing	reducing	growth	normal	reducing
38	Business decide to use two factors that is capital and to produce a product	land	labour	orgaisation	employment	labour
39	Present gain is valued more than	future value	future goods	future gain	future principle	future gain
40	Consumption analysis with special reference to	Production	demand	supply	development	demand
41	sustains the industry over a long period of a firm.	sales	consumption	profit	production	profit
42	Functions of Managerial economist are classified into	one	three	two	four	two
43	Managerial forecasting depends upon the of collected products	Product	data	information	collection	data
44	Economist has to perform many side pertaining to production	programmes	production	functions	planning	functions
45	Economist has to run of business concern	responsibility	objectivity	connectivity	quality	responsibility
46	Maximisation of profit does not mean to earning	normal profit	supernormal profit	accurate profit	appropriate profit	supernormal profit
47	Difficult task of a firm is mobilise	labour	capital	profit	interest	capital
48	The result of losing their job is	proportion	profits	Image	activity	image
49	The resource of the firm have to be chanalized for	social activity	welfare activity	cultural activity	resource activity	welfare activity
50	Maximum profit may create an impression of the	organisation	firm	public demand	governments	firm
51	The first duty of the business is to survive	activating loss	avoiding loss	minimise loss	social loss	avoiding loss
52	Higher profit indicates of the firms	high bonus	high wages	high profit	high payment	high wages
53	Managerial managers will avoid risk which result losing their	profits	interest	jobs	dividend	jobs
54	economy is a role of business	minimum	medium	major	higher	major



55	organisation is made of -----levels	lowest	highest	very lowest	very highest		highest
56	maximising of the firm	size	value	amount	calculation		value
57	owner is a person incharge all the	profits	assets	liabilities	losses		liabilities
58	The word that comes from the Greek word for "one who manages a household is	Market	Consumer	Producer	Economy		Economy
59	Firms aims at to achieve	surplus profit	sufficient profit	average profit	declared profit		sufficient profit
60	Financial footing not available to producers	large	small	low	very low		small

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**DEPARTMENT OF COMMERCE**

**I M.Com & I M.Com CA**

**Managerial Economics**

**Subject Code : 17CCP102 / 17CMP102 Academic Year: 2017 -2018**

**Class : I M.Com & I M.Com CA Semester : I**

**Possible questions: Unit IV**

**Part B (2 Marks)**

1. Define Competition
2. Define Perfect Competition
3. Define Monopoly
4. What is Monopolistic Competition
5. What is Oligopoly
6. What is Duopoly

**Part C (8 Marks)**

1. 'Under perfect completion the firm is a price-taker and not price-maker' - Discuss.
2. Analyze the different forms of market based on competitions.
3. Describe the bilateral monopoly in competition market.
4. Explain the concept of duopoly and monopsony.
5. Explicate the monopolistic competition and oligopoly.
6. Describe in details the oligopoly and duopoly.
7. List out the classifications of market?
8. Discuss the monopoly competition market.

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Unit-5

**Pricing decisions**

The pricing decision is a critical one for most marketers, yet the amount of attention given to this key area is often much less than is given to other marketing decisions. One reason for the lack of attention is that many believe price setting is a mechanical process requiring the marketer to utilize financial tools, such as spreadsheets, to build their case for setting price levels. While financial tools are widely used to assist in setting price, marketers must consider many other factors when arriving at the price for which their product will sell.

In this part of our highly detailed Principles of Marketing Tutorials, we begin a two-part discussion of the fourth marketing mix variable - price. For some marketers more time is spent agonizing over price than any other marketing decision. In this tutorial we look at why price is important and what factors influence the pricing decision.

**Pricing of goods and services**

Pricing is the process whereby a business sets the price at which it will sell its products and services, and may be part of the business's marketing plan. In setting prices, the business will take into account the price at which it could acquire the goods, the manufacturing cost, the market place, competition, market condition, brand, and quality of product.

Pricing is a fundamental aspect of financial modeling and is one of the four Ps of the marketing mix. (The other three aspects are product, promotion, and place.) Price is the only revenue generating element amongst the four Ps, the rest being cost centers. However, the other Ps of marketing will contribute to decreasing price elasticity and so enable price increases to drive greater revenue and profits.

Pricing can be a manual or automatic process of applying prices to purchase and sales orders, based on factors such as: a fixed amount, quantity break, promotion or sales campaign, specific vendor quote, price prevailing on entry, shipment or invoice date, combination of multiple orders or lines, and many others. Automated systems require more setup and maintenance but may prevent pricing errors. The needs of the consumer can be converted into demand only if the consumer has the willingness and capacity to buy the product. Thus, pricing

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is the most important concept in the field of marketing; it is used as a tactical decision in response to comparing market situations

**Pricing and employment of inputs**

Marketers develop an overall pricing strategy that is consistent with the organization's mission and values. This pricing strategy typically becomes part of the company's overall long-term strategic plan. The strategy is designed to provide broad guidance to price-setters and ensures that the pricing strategy is consistent with other elements of the marketing plan. While the actual price of goods or services may vary in response to different conditions, the broad approach to pricing (i.e., the pricing strategy) remains a constant for the planning outlook period which is typically 3–5 years, but in some industries may be a longer period of 7–10 years.

Broadly, there are six approaches to pricing strategy mentioned in the marketing literature:

Operations-oriented pricing: where the objective is to optimize productive capacity, to achieve operational efficiencies or to match supply and demand through varying prices. In some cases, prices might be set to de-market.

Revenue-oriented pricing: (also known as profit-oriented pricing or cost-based pricing) - where the marketer seeks to maximize the profits (i.e., the surplus income over costs) or simply to cover costs and break even. For example, Dynamic pricing (also known as yield management is a form of revenue oriented pricing.

Customer-oriented pricing: where the objective is to maximize the number of customers; encourage cross-selling opportunities or to recognize different levels in the customer's ability to pay.

Value-based pricing: (also known as image-based pricing) occurs where the company uses prices to signal market value or associates price with the desired value position in the mind of the buyer. The aim of value-based pricing is to reinforce the overall positioning strategy e.g. premium pricing posture to pursue or maintain a luxury image.

Relationship-oriented pricing: where the marketer sets prices in order to build or maintain relationships with existing or potential customers.

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Socially-oriented pricing: Where the objective is to encourage or discourage specific social attitudes and behaviors. e.g. high tariffs on tobacco to discourage smoking.

#### Pricing tactics

When decision-makers have determined the broad approach to pricing (i.e., the pricing strategy), they turn their attention to pricing tactics. Tactical pricing decisions are shorter term prices, designed to accomplish specific short-term goals. The tactical approach to pricing may vary from time to time, depending on a range of internal considerations (e.g. such as the need to clear surplus inventory) or external factors (e.g. a response to competitive pricing tactics). Accordingly, a number of different pricing tactics may be employed in the course of a single planning period or across a single year. Typically line managers are given the latitude necessary to vary individual prices providing that they operate within the broad strategic approach. For example, some premium brands never offer discounts because the use of low prices may tarnish the brand image. Instead of discounting, premium brands are more likely to offer customer value through price-bundling or give-aways.

When setting individual prices, decision-makers require a solid understanding of pricing economics, notably break-even analysis, as well as an appreciation of the psychological aspects of consumer decision-making including reservation prices, ceiling prices and floor prices. The marketing literature identifies literally hundreds of pricing tactics. It is difficult to do justice to the variety of tactics in widespread use. Rao and Kartono carried out a cross-cultural study to identify the pricing strategies and tactics that are most widely used. The following listing is largely based on their work.

#### **Pricing in public sector**

Public economics (or economics of the public sector) is the study of government policy through the lens of economic efficiency and equity. At its most basic level, public economics provides a framework for thinking about whether or not the government should participate in economic markets and to what extent it should do so. In order to do this, microeconomic theory is utilized to assess whether the private market is likely to provide efficient outcomes in the absence of

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governmental interference. Inherently, this study involves the analysis of government taxation and expenditures. This subject encompasses a host of topics including market failures, externalities, and the creation and implementation of government policy. Public economics builds on the theory of welfare economics and is ultimately used as a tool to improve social welfare.

Broad methods:

1. the theory and application of public finance
2. analysis and design of public policy
3. distributional effects of taxation and government expenditures
4. analysis of market failure and
5. Government failure.

Emphasis is on analytical and scientific methods and normative-ethical analysis, as distinguished from ideology. Examples of topics covered are tax incidence, optimal taxation, and the theory of public goods

### **Risk and decision making**

Step 1. Establish the decision structure

Understanding and defining the decision that must be made is critical. This first component of risk-based decision making is often overlooked and deserves more discussion. The following steps must be performed to accomplish this critical component:

Step 1a — Define the decision. Specifically describe what decision(s) must be made. Major categories of decisions include (1) accepting or rejecting a proposed facility or operation, (2) determining who and what to inspect, and (3) determining how to best improve a facility or operation.

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Step 1b — Determine who needs to be involved in the decision. Identify and solicit involvement from key stakeholders who (1) should be involved in making the decision or (2) will be affected by actions resulting from the decision-making process.

Step 1c — Identify the options available to the decision maker. Describe the choices available to the decision maker. This will help focus efforts only on issues likely to influence the choice among credible alternatives.

Step 1d — Identify the factors that will influence the decisions (including risk factors). Few decisions are based on only one factor. Most require consideration of many factors, including costs, schedules, risks, etc., at the same time. The stakeholders must identify the relevant decision factors.

Step 1e — Gather information about the factors that influence stakeholders. Perform specific analyses (e.g., risk assessments and cost studies) to measure against the decision factors.

## Step 2. Perform the risk assessment

Different types of risk are important factors in many types of decisions. Very simply, risk assessment is the process of understanding the following:

- What bad things can happen
- How likely they are to happen
- How severe the effects may be

The bad things of interest can be safety and health losses, property losses, environmental losses, schedule impacts, political issues, etc.

Risk assessment can range from very simple, personal judgments by individuals to very complex assessments by expert teams using a broad set of tools and information, including historical loss data. The key to risk assessment is choosing the right approach to provide the needed information without overworking the problem. The following steps must be performed to assess risk:

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Step 2a — Establish the risk-related questions that need answers. Decide what questions, if answered, would provide the risk insights needed by the decision maker.

Step 2b — Determine the risk-related information needed to answer the questions. Describe the information necessary to answer each question posed in the previous step. For each information item, specify the following:

- Information type needed
- Precision required
- Certainty required
- Analysis resources (staff-hours, costs, etc.) available

Step 2c — Select the risk analysis tool(s). Select the risk analysis tool(s) that will most efficiently develop the required risk-related information.

Step 2d — Establish the scope for the analysis tool(s). Set any appropriate physical or analytical boundaries for the analysis.

Step 2e — Generate risk-based information using the analysis tool(s). Apply the selected risk analysis tool(s). This may require the use of more than one analysis tool and may involve some iterative analysis (i.e., starting with a general, low-detail analysis and progressing toward a more specific, high-detail analysis).

Step 3. Apply the results to risk management decision making

One goal in most decision-making processes is to lower risk as much as possible. Sometimes the risk will be acceptable; at other times, the risk must change to become acceptable. To reduce risk, action must be taken to manage it. These actions must provide more benefit than they cost. They must also be acceptable to stakeholders and not cause other significant risks. The following steps must be performed to manage risk:

Step 3a — assess the possible risk management options. Determine how the risks can be managed most effectively. This decision can include (1) accepting/rejecting the risk or (2) finding specific ways to reduce the risk.



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Step 3b — Use risk-based information in decision making. Use the risk-related information within the overall decision framework to make an informed, rational decision. This final decision-making step often involves significant communication with a broad set of stakeholders.

Step 4. Monitor effectiveness through impact assessment

Impact assessment is the process of tracking the effectiveness of actions taken to manage risk. The goal is to verify that the organization is getting the expected results from its risk management decisions. If not, a new decision-making process must be considered.

Step 5. Facilitate risk communication

Risk communication is a two-way process that must take place during risk-based decision making. At every step in the process, encourage stakeholders to do the following:

- Provide guidance on key issues to consider. Stakeholders identify the issues of importance to them. They present their views on how each step of the process should be performed, or at least provide comments on plans suggested by others.
- Provide relevant information needed for assessments. Some or all of the stakeholders may have key information needed in the decision-making process.
- Provide buy-in for the final decisions. Stakeholders should agree on the work to be done in each phase of the risk-based decision-making process. They can then support the ultimate decisions.

### **Input output analysis**

Input-output analysis ("I-O") is a form of economic analysis based on the interdependencies between economic sectors. This method is most commonly used for estimating the impacts of positive or negative economic shocks and analyzing the ripple effects throughout an economy. This type of economic analysis was originally developed by Wassily Leontief (1905–1999), who later won the Nobel Memorial Prize in Economic Sciences for his work

BREAKING DOWN 'Input-Output Analysis'

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The foundation of I-O analysis involves input-output tables. Such tables include a series of rows and columns of data that quantify the supply chain for sectors of the economy. Industries are listed in the headers of each row and each column. The data in each column corresponds to the level of inputs used in that industry's production function. For example, the column for auto manufacturing shows the resources required for building automobiles (i.e., so much steel, aluminum, plastic, electronics, and so on). I-O models typically include separate tables showing the amount of labor required per dollar unit of investment or production.

#### Three Types of Economic Impact

I-O models estimate three types of impacts: direct, indirect and induced. These terms are another way of saying initial, secondary and tertiary impacts that ripple throughout the economy. By using I-O models, economists can estimate the change in inputs across industries due to a change in output in one or more specific industries. The direct impacts of an economic shock are the initial change in expenditures. For example, building a bridge would require spending on cement, steel, construction equipment, labor and other inputs. The indirect, or secondary, impacts are due to the suppliers of the inputs hiring workers to meet demand. The induced, or tertiary, impacts result from the workers of suppliers purchasing more goods and services.

#### An Example

Here's an example of how I-O analysis works: A local government wants to build a new bridge and needs to justify the cost of the investment. To do so, it hires an economist to conduct an I-O study. The economist talks to engineers and construction companies to estimate how much the bridge will cost, the supplies needed, and how many workers will be hired by the construction company. The economist converts this information into dollar figures and runs numbers through an I-O model, which produces the three levels of impacts. The direct impacts are simply the original numbers put into the model, so for example, the value of the raw inputs (cement, steel, etc.). The indirect impacts are the jobs created by the supplying companies, so cement and steel companies. The induced impacts are the due to the amount of money that the new workers spend on goods and services.

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**UNIT 4**

S.no	Questions	Option A	Option B	Option C	Option D	Answer
1	The _____ of the nation is called national Income	Total Income	Average Income	Marginal income	Aggregate Income	Total income
2	National income of the country is expressed in _____	value terms	quantity terms	money terms	quality terms	money terms
3	Money measures of the _____ of a commodity and service	Net aggregate	Gross average	Total aggregate	average	Net aggregate
4	_____ is consist of all goods and service produced by the commodity in exchange	National service	national product	national income	national price	national product
5	_____ is consist of all incomes, accruing to the factors of production	National service	National income	National dividend	National expenditure	national dividend
6	_____ represents the total spending or outlay of community of goods	National Income	National expenditure	National service	National community	National expenditure
7	One man's income is another man's _____	gain	profit	expenditure	production	expenditure
8	National expenditure constitute of _____ of the national income	Accrued	Disposal	Affiliation	summation	Disposal
9	Income is first earned and spent (or) _____	evaluated	aggregated	distributed	averaged	distributed
10	Money value of goods produced by agents during the year is _____ approach	Total production approach	Income approach	total expenditure approach	distribution approach	Total production approach
11	Net _____ as the sum of expenditure on final consumption	National Income	National expenditure	National service	National product	National expenditure
12	_____ in the increase in inventories plus gross products and equipments	Gross capital	Gross product	Gross investment	Gross consumption	Gross investment
13	The value of _____ are measured in terms of government expenditure	Government service	Government gain	Government benefit	Government product	Government service
14	Difference between total exports and imports is called _____	net import	net exports	net value	net benefit	net exports
15	_____ is the basic social accounting measure of total output	GNP	GDP	GCP	GRP	GNP
16	_____ represent output of _____ firms stocks and finished goods	capital investment	Asset investment	Inventory investment	Domestic investment	Inventory investment
17	_____ refers to the value of net output in the economy	GNP	NNP	NGP	NRP	NNP
18	_____ Means wear and tear of machinery	Gain	loss	depreciation	obsolescence	depreciation
19	_____ means an increase in the value of fixed assets	Revenue appreciation	Capital appreciation	product appreciation	profit appreciation	capital appreciation
20	Deduction _____ from the net product measured at current market price	Direct tax	revenue tax	Indirect tax	aggregate tax	Indirect tax
21	Income by factors of production + depreciation = _____	Net domestic product	Gross domestic product	Net national product	Net value product	Gross domestic product
22	Total income and expenditure are circular flow of _____	economic policy	economic flow	economic activities	economic values	economic activities
23	Factors of production create _____	Average income	real income	marginal income	total income	real income
24	_____ is the total money income received by individuals	disposable income	distributed income	personal income	Undistributed income	Personal income
25	Disposable personal income is sum of _____ and savings of individuals	consumption	production	sales	purchase	consumption
26	Disposable income includes an _____	earned element	unearned element	approximate element	aggregate element	Unearned element
27	Difference between personal income and expenditure is _____	source	revenue	savings	profit	savings
28	_____ method measures the output of the country	output method	consumption method	inventory method	sales method	output method
29	_____ method only final value of goods and service are computed	value added method	final goods method	census method	stock method	final goods method
30	_____ method is a summation of increase in value	Inventory method	final goods method	value added method	double counting method	value added method
31	_____ is widely used in underdeveloped countries	Inventory method	output method	census method	counting method	output method
32	Products kept for _____ by the farmers are estimated by guess work	self production	self sellers	self consumption	self valuation	self consumption
33	_____ is total of all money incomes are totalled up	output method	census method	inventory method	value added method	census method
34	census method is also called as _____	stock method	factor cost method	value added method	output method	factor cost method
35	_____ revenue to the government is subtracted from total income	direct tax	indirect tax	revenue tax	service tax	direct tax
36	National income on expenditure is equal to consumption plus _____	production	consumption method	Investment	sales	Investment
37	Concept of national income is an _____ preparation of issues in inflation	indispensable	accurate	measurable	analyse	Indispensable
38	National income statistics is the _____ of economic progress	accurate value	index numbers	basic value	productive value	index numbers
39	National income statistics contain data on _____ and investment	production	economic flow	consumption	planning	consumption
40	_____ is an important concept of national income	marginal income	percapita income	tax income	economic income	percapita income
41	Per capita income refers to the _____ per head of the country	national income	net income	total income	average income	average income
42	Sectorial distribution of total income shows the components of _____	national income	national trend	national product	national price	national product
43	Primary sector contains fundamental _____ activities	consumption	productive	sales	exchange	productive
44	Secondary sector is concerned with processing of raw materials into _____	finished goods	work-in-progress	domestic product	industrial product	finished goods
45	Tertiary sector relates to _____ activities	sales	productive	distributive	service	distributive
46	_____ of national income is contributed by secondary sector	small part	large part	enlarge part	medium part	large part
47	_____ constitute the span of economic progress	Industrialisation	agricultural	semi materials	productive units	Industrialisation
48	India's national income data are obtained from _____	NFC	NAS	NCS	NDS	NAS
49	A Combination of _____ is used in India for national income	output and expenditure method	output and income method	output and profit method	output and input method	output and income method
50	_____ of the agricultural output is measured by making deductions	Gross value	aggregate value	Net value	Net present value	net value
51	_____ method is adopted for estimating the contributions of foreign sector	expenditure	income	enterprise	output	income
52	The average earnings per head are estimated by _____	questionnaire survey	earnings survey	sample survey	multiple survey	sample survey
53	_____ is computed for rental of houses in urban and rural	house property income	corporate income	salary income	cost income	house property income

54	The moderate method of reducing inequality is _____	moderate method	fiscal method	money value method	monetary plicy method	fiscal method
55	Wages and salaries are raised by _____	maximum wage	average wage	minimum wage	social wage	
56	Extension of _____ is development of low income group	social usage	social service	social extension	social welfare	social service
57	_____ is contrived in a very profressive way of earnings	tax policy	tax earnings	tax structure	tax equality	tax structure
58	Highly progressive _____ should be able to reduce inequalities	Incometax	commodity tax	wealth tax	Inheritance tax	Income tax
59	A system of _____ to meet any eventualities	social usage	social insurance	social service	social inequality	social insurance
60	_____ to alleviate the sufferings	exclusive public expenditure	massive public expenditure	alleviate expenditure	earnings of expenditure	massive public expenditure

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**Managerial Economics**

**Subject Code : 17CCP102 / 17CMP102 Academic Year: 2017 -2018**

**Class : I M.Com & I M.Com CA Semester : I**

**Possible questions: Unit V**

**Part B (2 Marks)**

1. What is pricing?
2. What is a goods?
3. What is service?
4. What is Employment?
5. What is public sector?
6. What is decision making?
7. What is output analysis?

**Part C (8 Marks)**

1. Enumerate the factors determining the export pricing?
2. What is Pricing Policy? Explain the features of Pricing Policy.
3. Explicate in details about the export pricing methods.
4. Elucidate the different methods in Public Utilities.
5. Discuss the risk and decision making.
6. Elucidate the various type of pricing and employment of inputs.
7. Examine the goods and services pricing.
8. List out - producers for fixing pricing.