may therefore dominate the market for the product. This dominant firm wields a great influence over the market for the product, while other firms are small and are incapable of making any impact on the market. As a result, the dominant firm estimates its own demand curve and fixes a price which maximises its own profits. The other firms which are small having no individual effects on the price, of the product, follow the dominant firm and accepting the price set by it and adjust their output accordingly.

8.13 VARIOUS PRICING POLICIES FOR A NEW PRODUCT

Pricing is a crucial managerial decision. There is need to follow certain additional guidelines in the pricing of the new product. The marketing of a new product poses a problem for any firm because new products have no past information. When the company introduces its product for the first time, the whole future depends heavily on the soundness of initial pricing decision. Top management is accountable for the new product's success record.

The price fixed for the new product must:

i) Earn good profits for the firm over the life of the product.

ii) Provide better quality at a cheaper price and at a faster speed than competitors.

iii) Satisfy public criteria such as consumer safety and ecological compatibility.

The firm can select two types of strategy:

A) Skimming Pricing

B) Penetration Pricing

A) Skimming Pricing: Skimming pricing is known as charging high price in initial stages. This can be followed by a firm by charging skimming price for a new product in pio-neering stage. When demand is either unknown or more inelastic at this stage, market is divided into segments on the basis of different degree of elasticity of demand of different consumers.

For example, in the beginning the prices of computers, T.Vs, electronic calculators, etc., were very high but now they are declining every year. A high initial price together with heavy promotional expenditure may be used to launch a new product if conditions are appropriate.

B) Penetration Pricing: Penetration price is known as charging lowest price for the new product. This is aimed to quick in sales, capture market share, utilise full capacity and economies of scale in productive process and keep the competitors away from the market. Penetration price is a long term pricing strategy and should be adopted with great caution. When a firm adopts a penetrating pricing policy, adjustments to price throughout the product life cycle are minimal.



8.14 LET US SUM UP

In this unit we have discussed the following aspects–

- Monopolistic competition as a market structure was first identified in the 1930s by American economist **Edward Chamberlin**, and English economist **Joan Robinson**. Monopolistic competition is a type of imperfect competition such that many producers sell products that are differentiated from one another as goods but not perfect substitutes.
- The important characteristics of monopolistic competition are– 1) Many Sellers, 2) Product Differentiation, 3) Selling costs, 4) Freedom of Entry and Exit, 5) Lack of Perfect Knowledge and 6) Non-Price Competition.
- Under monopolistic competition, many firms selling closely related but differentiated products makes the demand curve downward sloping. It implies that a firm can sell more output only by reducing the price of its product. Demand curve in monopolistic competition is more elastic compared to monopoly market.

- A firm under monopolistic competition may earn supernormal, normal and may also suffer losses during short run. However, all firms in the long run will earn only normal profit.
- Group equilibrium relates to the equilibrium of the "industry" under a monopolistic competitive market.
- The doctrine of excess capacity is associated with monopolistic competition in the long-run and is defined as "the difference between ideal (optimum) output and the output actually attained in the long-run."
- Oligopoly refers to a market situation in which there are a few firms selling homogeneous or differentiated products.
- In many oligopolistic industries prices remain sticky or inflexible, that is, there is no tendency on the part of the oligopolists to change the price even if the economic conditions undergo a change. Many explanations have been given of this price rigidity under oligopoly and most popular explanation is the so-called kinked demand curve hypothesis.
- Price leadership is an important form of collusive oligopoly. Under it, one firm sets the price, others follow it. Price leadership also comes into existence either through tacit or formal agreement.
- Skimming pricing is known as charging high price in initial stages. This can be followed by a firm by charging skimming price for a new product in pio-neering stage.
- Penetration price is known as charging lowest price for the new product. This is aimed to quick in sales, capture market share, utilise full capacity and economies of scale in productive process and keep the competitors away from the market.



8.15 FURTHER READING

1) Ahuja, H.L. (2007); *Advanced Economic Theory: Microeconomic Analysis*; New Delhi: S. Chand & Company Ltd.

2) Chopra, P.N. (2008): *Micro Economics*; Ludhiyana: Kalyani Publication.
3) Keats and Young (2004): *Managerial Economics*; Pearson Education.
4) Koutsoyiannis, A. (1994): *Modern Microeconomics*; Macmillan.
5) Peterson et al. (2008): *Managerial Economics*; Pearson Education.
6) Pindyck, R.S and D.L. Rubinfeld (2004): *Microeconomics*; Prentice-Hall India.



8.16 ANSWERS TO CHECK YOUR PROGRESS

Ans. to Q. No. 1: a) Edward Chamberlin, Joan Robinson,
b) Product differentiation, c) Many

Ans. to Q. No. 2: a) True, b) False, c) True, d) False

Ans. to Q. No. 3: 1) (d) Group, 2) (a) Optimum,
3) (c) Average Production cost

Ans. to Q. No. 4: a) Few, b) differentiated, c) interdependent,
d) indeterminate.



8.17 MODEL QUESTIONS

A) Very Short Answer Type Questions (1 mark):

Q.1: Define a monopolistic market with the help of an example.

Q.2: Define oligopoly with the help of an example.

Q.3: What is duopoly?

Q.4: Define a group

Q.5: What is collusive oligopoly?

Q.6: Distinguish between Pure and differentiated oligopoly.

Q.7: What is product differentiation?

Q.8: What do you mean by non-price competition?

Q.9: What is selling cost?

Q.10: What is excess capacity?

Q.11: What is price rigidity?

Q.12: Define skimming and penetrating pricing.

B) Short Answer Type Auestions (2-5 mark):

Q.1: What are the characteristics of monopolistic market?

Q.2: Explain the concept of product differentiation with the help of an example.

Q.3: Explain price rigidity through a kinked demand curve.

Q.4: What do you mean by oligopoly market? What are the main features of oligopoly?

Q.5: Explain various pricing policies for a new product.

Q.6: What are the different types of oligopoly market?

Q.7: Explain the concept of price leadership.

Q.8: Explain the role of selling cost in monopolistic market.

Q.9: Explain the significance of selling cost in monopolistic market.

Q.10: Explain the idea of Group equilibrium.

C) Long Answer Type Questions (6-10mark):

Q.1: Explain how a firm determines price and output in a monopolistic market during short-run period.

Q.2: Explain how a firm determines price and output in a monopolistic market during long-run period.

Q.3: Explain the features of oligopoly market.

Q.4: Discuss price rigidity with the help of kinked demand curve.

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UNIT 9: THEORY OF DISTRIBUTION

UNIT STRUCTURE

9.1 Learning Objectives

9.2 Introduction

9.3 Personal Distribution

9.4 Functional Distribution

9.5 Concepts of Factor Productivity and Factor Cost

- 9.5.1 Marginal Physical Product
- 9.5.2 Marginal Revenue Product
- 9.5.3 Value of Marginal Product
- 9.5.4 Average Factor Cost
- 9.5.5 Marginal Factor Cost

9.6 Let Us Sum Up

9.7 Further Reading

9.8 Answers to Check Your Progress

9.9 Model Questions

9.1 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- derive the meaning of Personal distribution and Functional distribution
- state the difference between Personal distribution and Functional distribution
- discuss the concept of Marginal Physical product
- describe the concept of Marginal revenue product and value of marginal product
- explain the concepts of Average factor cost and marginal factor cost.

9.2 INTRODUCTION

Traditionally, Economic theory has been divided into four parts: Production, Consumption, Exchange and Distribution. Economist studied

these four parts separately. In the fourth part 'Distribution', the pricing of 'factors of production' was often discussed as distinct from the pricing of 'product' because it was believed that the pricing of factors was something quite different from product pricing. Thus, the part of economic theory dealing with pricing of commodities was called 'Price theory' while the one concerning factor pricing was known as 'Distribution'. In short, the theory of factor prices is popularly known as *the theory of distribution*. The distribution may be functional or personal. The concept of functional distribution should be carefully distinguished from that personal distribution. In this unit we shall try to discuss the concepts of functional and personal distribution, factor productivity and factor cost.

9.3 PERSONAL DISTRIBUTION

By personal distribution we mean the distribution of income and wealth among various individuals, no matter from which sources it is derived. We all know that national income is not equally distributed among various individuals in the country. Some are rich while others are poor. In fact, there are great inequalities of income between various individuals. The theory of Personal distribution studies how personal incomes of individuals are determined and how the inequalities of income emerge .Under personal distribution, we study the pattern of the distribution of national income and the shares received by different sections of people.

In the words of *Professor Jan Pen*, "Personal Distribution (or the size distribution of income) relates to individuals persons and their incomes. The way in which that income was acquired often remains in the background. What matters is how much someone earns, not so much whether that income consists of wages, interest, profit, pension or whatever. And further special attention is paid to income recipients as a collective body, in which regular patterns are sought"[1]

9.4 FUNCTIONAL DISTRIBUTION

Functional Distribution of income refers to the distinct shares of national income which people receive as compensation for the unique

function which their services or service of their property perform in the process of production. In other words, it relates to the distribution of rewards for the services of factors of production. Rent ,wages , interest and profits are the reward for the services of land , labour, capital and organization respectively. Algebraically it can be stated as:

$$P = f(A, B, C, D)$$

where total output (P) is a function of Land (A), Labour (B), Capital (C), organization (D).

Thus, functional distribution studies the forces underlying the determination of the prices and shares of the various factors of production.

In the words of *Professor Jan Pen*, "In functional distribution we are no longer concerned with individuals and their individual income, but with factors of production: land, labour, capital and something else that may perhaps best be called entrepreneurial activity. The price of a unit of labour, a unit of capital, a unit of land and being an extension of price theory, it is sometimes called the theory of factor prices."

Personal Distribution Vs Functional Distribution: The distribution theory with which we are concerned in this unit is the *theory of functional distribution.* The concept of functional distribution should be carefully distinguished from that of personal distri-bution. Personal distribution of national income or what is known as 'size distribution of incomes' means the distribution of national income among various individuals or persons in a society. As you know that national income is not equally distributed among various individuals in the country. Some are rich, while others are poor. In fact, there are large inequalities of income between various individuals. The theory of personal distribution studies how personal incomes of individuals are determined and how the inequalities of income emerge. On the other hand, in the theory of functional distribution we study how the various factors of production are rewarded for their ser-vices or functions performed in the production process. Factors of production have been classified by economists under four major heads, viz., land, labour, capital and organization. Thus, in the theory of functional distribution we study how the relative prices of these factors of production are determined. The

prices of land, labour, capital and entrepreneurship are called rent, wages, interest and profit respectively. Thus, in the theory of functional distribution we also discuss how the rent of land, wages of labour, interest on capital and profits of entrepreneur are determined.

The question that now arises is: Is it not the functional distribution that determines the personal distribution of national income. Personal distribution of income only partly depends upon func-tional distribution. How much income an individual will be able to get depends not only on the price of a particular factor he has but also on the amount of that factor he owns as well as the prices and amounts of other productive factors which he may possess.

Thus, the personal income of a landlord depends not only on the rent but also on the amount of land he owns. Given the rent per acre, the greater quantity of land he owns, the greater will be his income. Further, the landlord may have lent some money to others for which he may be earning interest.

Despite these differences between personal and functional distribution, there is a close relation between the two. The personal distribution in a country is ultimately affected by its functional distribution of income. If the rewards to the factors of production are just and equitable, the distribution of personal income is also just and equitable. As a result individual incomes are high. There is great demand for products and services leading to more investment, more employment which increases production and national income. Higher personal income means higher standard of living and greater efficiency in production. On the other hand, if the functional distribution of income is unjust and based on the exploitation of factors of production, the personal distribution of income is also unjust and inequitable. As a result, the majority of the people will be poor. There will be diminution of economic and social welfare, and loss of peace and prosperity in the country due to a continuous struggle between the rich and the poor.



CHECK YOUR PROGRESS

Q.1: State whether the following statements are True (T) or False (F):

i) The theory of factor prices is popularly known as the theory of distribution. (T/F)

ii) Functional distribution in a country is ultimately affected by its Personal distribution of income. (T/F)

Q.2: Define Functional Distribution. (Answer in about 40 words)

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Q.3: Define Personal Distribution. (Answer in about 40 words)

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9.5 CONCEPTS OF FACTOR PRODUCTIVITY AND FACTOR COST

Before turning to the detailed study of how prices of factors of production are determined under different market conditions, it is essential to know the different concepts of factor productivity and factor cost. In the following we shall explain some of the important concepts relating to factor productivity and factor cost.

9.5.1 Marginal Physical Product (MPP)

Marginal Physical Product (MPP) of a factor is the increase in total output caused by employing an additional unit of the factor, quantity of other factors remaining fixed. In other words, MPP is the addition made to total output by employing an additional unit of a variable factor. It is defined as:

$$MPP = TPP_n - TPP_{n-1}$$

Where MPP is the Marginal Physical Product, TPP_n the total Physical Product of nth unit, TPP_{n-1} is the total Physical Product of $(n-1)^{th}$ unit.

Example: Suppose in a particular cotton factory 25 workers produce 900 meters of cloth. An additional worker is added to it. Now cloth production becomes 926 meters. In this case, the additional 26 meters will be the marginal physical product.

i.e. MPP $= TPP_{26} - TPP_{25}$

$= (926-900)$ meters.

$= 26$ meters.

9.5.2 Marginal Revenue Product (MRP)

Marginal Revenue Product (MRP) is the increment in the total value of the product caused by employing an additional unit of a factor, the expenditure on other factors remaining unchanged. MRP is the marginal physical product of the factor multiplied by marginal revenue. It is defined as:

$$MRP = MPP \times MR$$

Where MRP is the Marginal Revenue Product, MPP is the Marginal physical Product, and MR is the marginal revenue.

The above equation can also be defined as:

$$MRP = TRP_n - TRP_{(n-1)}$$

Where TRP_n $TRP_{(n-1)}$ is the Total renenue product of n and (n-1) unit respectively.

Example 1: Suppose in a cotton factory 10 workers produce 1000 meters of cloth. An additional worker is added to it. Now the production of cloth in the factory becomes 1100 meters. If the marginal revenue of 1100^{th} unit of cloth is 100 then the Marginal Revenue Product(MRP) will be–

Marginal Revenue Product (MRP) $= (1100-1000) \times 100$

$= 100 \times 100 = 10000$

Example 2: Suppose the TRP of 10th worker is Rs30,000/- and that of 11th worker is Rs 35,000/-then the MRP of 11th worker is–

MRP = Rs (35,000-30,000)

= Rs 5,000

9.5.3 Value Of Marginal Product (VMP)

Value of Marginal Product (VMP) is the money value of the addition to the physical product by the use of one more unit of a factor input. Thus, it is the money value of MPP. It can be measured as :

$$VMP = MPP \times P$$

Where, VMP is the Value of Marginal Product, MPP is the Marginal physical product and P is the Market Price.

Example: Suppose in a cotton factory, 30 workers produce 900 meters of cloth and 31 workers produces 925 meters of cloth, then MPP of 31th worker is 925 – 900 = 25 meters.

If the market price is Rs 60 then VMP will be–

VMP = 25X60

=1500

Relationship between MRP & VMP: Under pure and perfect competition, MRP is same as VMP because the firm can sell any amount of its output at the given and constant price. This means, when MR = P,

MRP = MPP x MR = MPP x P = VMP.

But in case of imperfect competition, difference between MRP and VMP emerges. This is because in this case, the additional output obtained through the employment of one more unit of a factor input will have to be sold at a price lower than the one on which previous output was sold. The VMP and MRP curves in the two market conditions have been shown in Figure 1.1.

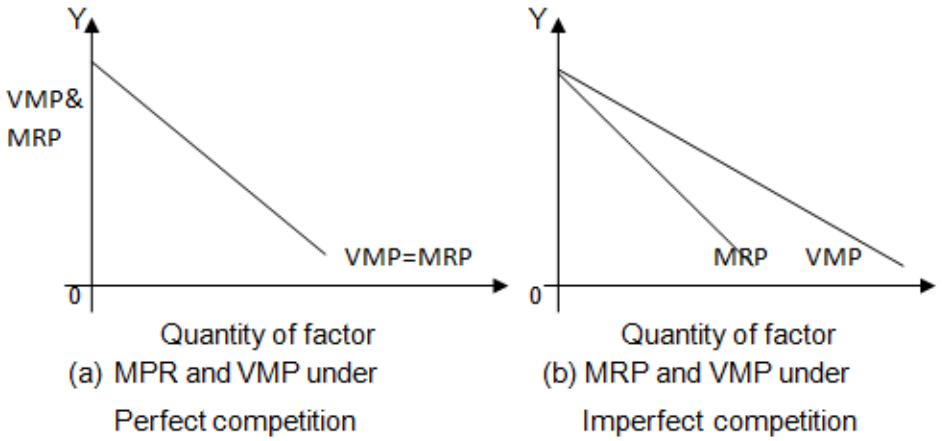


Fig. 9.1: VMP and MRP Curves under different market conditions

9.5.4 Average Factor Cost (AFC)

Average factor cost (AFC) is the per unit cost of the Variable factor employed by a firm. It is obtained by dividing total factor cost by the units of factor employed,

i.e. AFC = TFC / Units of factor employed

where TFC is the total factor cost.

Example: Suppose the TFC is 20 in the 4th unit of employment of labour, then in that case AFC will be–

AFC = 20/4 = 5

9.5.5 Marginal Factor Cost (MFC)

Marginal factor cost (MFC) is the addition to the total factor cost by hiring or purchasing extra unit of that factor. This is also called marginal input cost or marginal expense (ME) of a factor. It can be defined as

$$MFC = TFC_n - TFC_{(n-1)}$$

Where TFC_n and $TFC_{(n-1)}$ is the total factor cost of nth and (n-1)th unit respectively.

Example: Suppose if the TFC of 10 units of a factor is 120 and 11th units is 150, then MFC will be–

MFC = 150 – 120 =30

Relation between AFC & MFC: The relation between AFC and MFC is different in a perfectly competitive factor market and imperfect factor market. In a perfectly competitive factor market, the price of a factor is determined by its demand and supply. The price of that factor is given for the firm at which it buys as many units as are required, Therefore, the supply of the factor is perfectly elastic at the given price and the supply curve of the factor is a straight line parallel to the X-axis. As the price of the factor is assumed to be given and constant therefore, AFC = MFC = Price of the factor.

But in a imperfectly competitive market, factor supply curve (AFC) is upward slopping to the right and MFC curve is above the AFC curve. It means that if the firm wants to employ more units of that factor, it will have to spend more on each additional unit of the factor. Consequently, MFC of that factor will be more than it AFC. Therefore, the MFC will be above the AFC curve. This has been shown with the help of Figure 9.2.

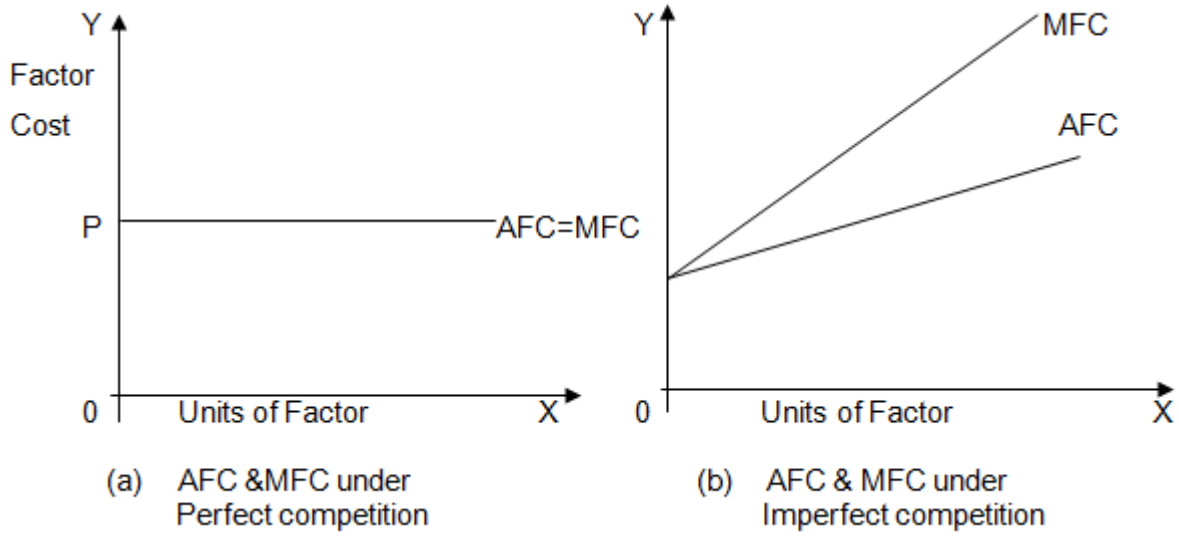


Fig. 9.2: AFC & MFC under different market condition



CHECK YOUR PROGRESS

Q.4: State whether the following statemetns are True (T) or False (F):

i) Under imperfect competition MRP = VMP. (T/F).

ii) AFC and MFC curve under perfect competition is horizontal. (T/F).

Q.5: Explain the relationship between AFC and MFC under perfect competition. (Answer in about 40 words)

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Q.6: Define MPP. (Answer in about 40 words)

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9.6 LET US SUM UP

In this unit we have discussed the following aspects–

- The theory of factor prices is popularly known as the theory of distribution.
- The distribution may be functional or personal.
- By personal distribution we mean that distribution of income and wealth among various individuals no matter from which sources they are derived.
- Functional Distribution of income refers to the distinct shares of national income which people receive as compensation for the unique function which their services or service that their property performs in the process of production.

- Despite the differences between personal and functional distribution, there is a close relation between the two. The personal distribution in a country is affected by its functional distribution of income.
- Marginal Physical Product (MPP) of a factor is the increase in total output caused by employing an additional unit of the factor, quantity of other factors remaining fixed.
- Marginal Revenue Product (MRP) is the increment in the total value of the product caused by employing an additional unit of a factor, the expenditure on other factors remaining unchanged.
- Value of Marginal Product (VMP) is the money value of the addition to the physical product by the use of one more unit of a factor input
- Average factor cost (AFC) is the per unit cost of the variable factor employed by a firm. It is obtained by dividing total factor cost by the unit of factor employed.
- Marginal factor cost (MFC) is the addition to the total factor cost by hiring or purchasing extra unit of that factor. This is also called marginal input cost or marginal expense (ME) of a factor.
- Under perfect competition AFC = MFC = Price of the factor and Under imperfect competition (AFC) is upward slopping to the right and MFC curve is above the AFC curve.



9.7 FURTHER READING

1) Ahuja, H.L. (2007); *Advanced Economic Theory: Microeconomic Analysis*; New Delhi: S. Chand & Company Ltd.
2) Chopra, P.N. (2008); *Micro Economics*; Ludhiyana: Kalyani Publication.
3) Jhingan, M.L. (2007); *Micro Economic Theory;* New Delhi: Vrinda Publications.
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9.8 ANSWERS TO CHECK YOUR PROGRESS

Ans. to Q. No. 1: i) True, ii) False

Ans. to Q. No. 2: Functional Distribution of income refers to the distinct shares of national income which people receive as compensation for the unique function which their services or service of their property perform in the process of production. In other words, it relates to the distribution of rewards for the services of factors of production.

Ans. to Q. No. 3: Personal distribution is the distribution of income and wealth among various individuals no matter from which sources they are derived. The theory of Personal distribution studies how personal incomes of individuals are determined and how the inequalities of income emerge.

Ans. to Q. No. 4: i) False, ii) True

Ans. to Q. No. 5: Under perfect competition, MFC equals AFC. This is because in this market the price of the factor is given to the firm. It can employ as many factors as it wants at this given price. The every additional unit of factor will receive the same factor price.

Ans. to Q. No. 6: Marginal Physical Product (MPP)of a factor is the increase in total output caused by employing an additional unit of the factor, quantity of other factors remaining fixed. In other words MPP is the addition made to total output by employing an additional unit of a variable factor.



9.9 MODEL QUESTIONS

A) Short Questions (Answer each question in about 150 words):

Q.1: Distinguish between personal distribution and functional distribution.

Q.2: Diagrammatically show MRP and VMP under perfect competition and imperfect competition.

Q.3: Diagrammatically show the relationship between AFC and MFC.

B) Essay-Type Questions (Answer each question in 300-500 words):

Q.1: Discuss the different concepts of factor productivity and factor cost.

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UNIT 10: PROFIT

UNIT STRUCTURE

10.1 Learning Objectives

10.2 Introduction

10.3 Basic Concepts in Profit

- 10.3.1 Meaning of Profit
- 10.3.2 Gross Profit
- 10.3.3 Net Profit
- 10.3.4 Differences between Gross Profit and Net Profit

10.4 Theories of Profit

- 10.4.1 Innovation Theory of Profit
- 10.4.2 Risk Theory of Profit
- 10.4.3 Uncertainty Bearing Theory of Profit

10.5 Let Us Sum Up

10.6 Further Reading

10.7 Answers to Check Your Progress

10.8 Model Questions

10.1 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- define profit and discuss its nature
- distinguish between net profit and gross profit
- explain the Risk Theory of Profit
- discuss the Innovation Theory of Profit
- explain Uncertainty Bearing Theory of Profit.

10.2 INTRODUCTION

We have already discussed that the four factors of production viz., land, labour, capital and entrepreneur get rewards for their contribution to production. Land gets rent and labour gets wages as rewards for their services. Similarly, capital gets reward for its services which is termed as interest. This unit discusses the other such reward, i.e., profit.

Profit is the factor income of the entrepreneur. It is the difference between the income of the business and all its costs/expenses. It is normally measured over a period of time. Profit is called the reward to the owners of the business. They have taken risks with their money and time. If there were no profit, then there would be little point in starting up or putting more money into the business; they might as well put the money into a bank and earn interest on the deposit.

In this unit we will discuss the concept of profit, different types of profit and theories of profit.

10.3 BASIC CONCEPTS IN PROFIT

Before we discuss profit in detail, it will be helpful for us to discuss the meaning and nature of the term 'profit', and the concepts of gross profit and net profit.

10.3.1 Meaning & Nature of Profit

We have already stated that profit is the factor income of the entrepreneur. The entrepreneur collects the three factors of production – land, labour and capital and coordinates their activities and undertakes risks of production. Profit is the difference between the income of the business and all its costs/expenses. It is normally measured over a period of time.

The nature of income earned by the entrepreneur is different from that earned by the other factors of production. The important differences are:

- First, rent, wages and interest are known beforehand; profit is unknown.
- Secondly, rent, wages and interest cannot be zero, far less negative; profit may be zero or even negative as well (loss).
- Thirdly, incomes earned by the other factors of production are not residual income, but profit is what remains after making payment to the other factors of production. Thus, profit is a residual income.

10.3.2 Gross Profit

Gross profit is the difference between the revenue earned from the sales of products and the total ***explicit costs*** incurred by the entrepreneur. Thus, costs of purchasing factors of production from the factor markets are excluded from gross profit.

Thus, Gross profit = Total revenue – Total Explicit Cost

Gross profit is used as a performance indicator to help the business make decisions over its pricing policies and use of materials.

Gross profit is composed of a number of elements. These elements are:

- **Wages of Management:** When the entrepreneur himself manages the business, his gross profits will include wages for his management. In reality, wages are not a part of his profits because he could earn them even if he worked in some other firm as a manager. That is why wages for his self management of the business is included in his gross profits; however, the same will be subtracted to derive the net profit.
- **Rent on Entrepreneur's Own Land:** The entrepreneur may start his business on his own land. For utilisation of his land in the business purpose, he is paid rent. Just like wages, rent is also not a part of his profits because he could earn them even if he leases out that piece of land to other entrepreneur as well. That is why rent on entrepreneur's own land for business is a part of gross profit; however, the same will be subtracted to derive the net profit.
- **Interest on His Own Capital:** When the entrepreneur invests his own capital in the business, he earns interests on them. Just like the above two, interest is also not a part of his profits because he could earn them even if he lends his capital to other businesses. That is why, interest on his own capital is included in his gross profits; however, the same will be subtracted to derive the net profit.

- **Windfall Profit:** The un-expected rise in the price of the commodity produced generates larger profit for the entrepreneur. This additional profit will be included in gross profit.
- **Monopoly Profit:** The entrepreneur who enjoys copyright and patent right and who enjoys monopoly right over the quantity and price of the commodity produced will be enjoying a higher income. This income will be a part of gross profit.
- **Production Differentiation:** Advertisement, customer service like home delivery of goods and such other factors cause product differentiation. It may lead to an increase in the demand for the commodity and add to the profits of the entrepreneur. This profit will be included in gross profit.

10.3.3 Net Profit

It is to be noted that there is no unanimous agreement among the economists regarding the components of gross profits and net profit. While some include the elements of windfall profits, monopoly profit, profits arising out of entrepreneur's abilities to bear risk and uncertainties, innovative spirit and product differentiation as parts of gross profit, some include them as part of net profit. However, it has been observed that modern economists often tend to accept the American view of profits as being the reward for purely entrepreneurial functions, i.e., functions which cannot be performed by paid employees. Thus, entrepreneurial abilities viz., risk bearing, uncertainty bearing, bargaining skill, innovation, etc. result in his net profit.

In terms of ***explicit*** and ***implicit costs***, net profit can be shown as:

Net Profit = Gross profit – Implicit costs of production – Depreciation

Net profit consists of a number of elements. These are:

- **Bearing Risks and Uncertainties:** The entrepreneur starts production of a commodity in anticipation of its future demand. The future demand may fall or may not rise up to the desired



Explicit Cost : Cost paid to those factors of production, which are hired from utside sources.

Implicit Cost : Cost paid to those factors of production, which come from within the firm.

level. For undertaking this risk and uncertainty, the entrepreneur will earn an income which will be a part of his net profit.

- **Gains as Superior Bargainer:** The entrepreneur may also gain from bargaining with labourers, capitalists, landlords, suppliers of raw materials and consumers. These gains arise because of his superior skill in bargaining.
- **Innovation:** According to Schumpeter, the innovator entrepreneur will earn a higher income than the ordinary entrepreneur. This extra income will be a part of net profit.

  It is noteworthy that the joint stock company earns pure profit as the share-holders are the owners of this company and they do not supply land, labour and capital to the company.

10.3.4 Differences between Gross Profit and Net Profit

We have already stated that there is no unanimous agreement regarding the components of gross profits and net profit. Hence, clear cut differentiation between the two is not always beyond criticism. However, based on our above discussion, the following distinctions between the two have been shown in Table 4.1.

Table 4.1: Distinction between Gross Profit and Net Profit

Sl. No.	Gross Profit	Net Profit
(1)	(2)	(3)
1)	Gross profit is a wider concept	NP is in fact a part of gross profit
2)	Gross profit includes only explicit costs	NP excludes both explicit and implicit costs
3)	*Formula*: GP = TR – Explicit costs	*Formula*: NP = TR – TC



TR: Total Revenue
TC: Total Cost
GP: Gross Profit
NP: Net Profit



CHECK YOUR PROGRESS

Q.1: State whether the following statements are True (T) or False (F).

a) The nature of income earned by the entrepreneur is different from that earned by the other factors of production. (T/F)

b) Rent, wages and interest are known beforehand; profit is unknown. (T/F)

c) Net profit does not exclude explicit and implicit costs. (TF)

Q.2: Mention any two differences between profit and other factors of production? (Answer in about 30 words)

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Q.3: Why is profit called the reward to the owner of the business? (Answer in about 30 words)

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10.4 THEORIES OF PROFIT

There are many theories of profit– rent theory of profit, wages theory of profit, dynamic theory, innovation theory, marginal productivity theory, risk theory, uncertainty bearing theory and the like. Out of these, we shall discuss here three theories, viz.: the Innovation Theory of Profit, the Risk Theory of Profit and the Uncertainty Bearing Theory of Profit.

10.4.1 Innovation Theory of Profit

We have already stated that innovation is one of the important elements of profit. This theory is associated with *Joseph Schumpeter*. According to him, innovation plays a special role in the earning of profit. It is the innovative spirit of the entrepreneur which can yield the highest profit. *Schumpeter* has considered innovation to be the principal function of the entrepreneur.

Schumpeter has laid a very wide meaning to the term 'innovation'. According to him, innovations refer to any of these:

- introduction of a new product,
- introduction of a new technique of production,
- discovery of a new source of raw materials, and
- discovery of a new market.

Schumpeter points out two types of innovations: *First*, those which bring changes in the production function and, as a result, reduce the cost of production. Innovations in this type include: introduction of new machinery, improved production techniques or process, exploration of new source or type of raw materials, etc.

Second, those innovations, which change the demand or utility function by increasing the demand for the product. Innovation in this type include: introduction of new product or a new variety of old product, new and more effective mode of advertisement, entry into new markets, etc.

Effective innovation in any of the above earns more profit, because through innovation either the cost of production is reduced or the product brings a better price. It is to be noted that profits owing to innovations are temporary. Because, introduction of similar product/technology by competing brands may wipe out the advantages of the initial innovator. However, if the innovation gets patented, the gain remains for a considerable period of time. Thus, the superior entrepreneurs in a dynamic economy gain through innovations.

Another important consideration here is that profits are both the cause and effect of innovations. Prospecting profits serve as an incentive of innovation; hence, profit is the cause of innovation. Again, profit is resulted out of successful innovations; hence profit is also the effect of innovation.

Criticism of the Innovation Theory of Profit: The innovation theory of profit has been criticised on the following grounds:

- The innovation theory of profit ignores uncertainty as a source of profit.
- The role of bearing risk in profit has also been ignored.

10.4.2 Risk Theory of Profit

F. B. Hawley, in his book *"Enterprise and the Productive Process"*, explains the Risk Theory of Profit. According to this theory, the entrepreneur earns profit for undertaking the risks of production. Not many people like to undertake risks. Entrepreneurs undertake risks because of the incentive they enjoy in the form of profit. Industries which involve a high degree of risk will demand higher rates of profit.

Hawley explains four types of risks, viz., replacement, risk proper, uncertainty and obsolescence.

- *Replacement* is also called depreciation. Depreciation cost is calculable and is included into the costs of the firm.
- *Risk proper* is the risk of marketability of the product.
- *Uncertainty* arises due to unforeseen factors in business
- *Obsolescence* is not measurable. Because, anticipation in change in technology is not always possible.

Apart from the above, there are also some risks like: fire, accident, etc. These are called physical risks and can be protected through insurance. But the risks involved in business are not insurable. The businessmen, therefore, is rewarded in the form of profit for undertaking the uninsurable risks.

Criticism of the Risk Theory of Profit: The risk theory of profit has been criticised on the following grounds:

- According to Carver, it is not because of undertaking risks but for minimising risks that the entrepreneurs earn profit. The entrepreneur reduces the amount to risks by means of his professional competence.
- According to Knight, there are two types of risks – insurable and non-insurable. Insurable risks do not give rise to profit; non-insurable risks do. Insurable risks are anticipated and prior action may be taken against these. Fire insurance, accident insurance, riot insurance and such other facilities offered by the insurance companies are examples of risks which do not give rise to profit as they do not reflect the ability of the entrepreneur himself.
- The entrepreneur earns profit not only for undertaking risks, but also for his competence, monopoly power, windfall gains and so on.
- There may be an entrepreneur who sets up industries not to earn high profits but to enjoy a certain degree of freedom in his own enterprise.
- There are many entrepreneurs who consider risk taking to be of secondary importance and the creation of an industrial empire as the primary objective.

10.4.3 Uncertainty Bearing Theory of Profit

Prof. Frank Knight explains the uncertainty bearing theory of profit in his book *"Risk, Uncertainty and Profit"*. Knight has made strict distinction between risks and uncertainty. According to him, risks are those which are foreseeable and which can be insured. Thus, the risks like: death, fire and sinking of ships can be mitigated through opting for insurance for them. The payment of insurance premium in such cases is included in the cost of production. Thus, risks on such cases, does not lie on the entrepreneur; rather, they rest with the respective insurance companies. Therefore, he has

argued that a business does not earn profit for mitigating such insurable risks. But, uncertainties associated with the factors like: marketability of the product (e.g., change in demand due to change in customers' tastes and preferences, etc.) can not be foreseen and insured. According to Knight, an entrepreneur earns profit precisely for bearing such uncertainties in business.

Knight has gone further to include undertaking of uncertainty as a factor of production. According to him, like other factors of production, uncertainty-bearing has a supply price; i.e., unless certain returns are expected, no entrepreneur will be motivated to face uncertainty. The extent of such motivations, however depend on a) temperament of the entrepreneur, b) total resources he possesses and c) the proportion of these resources he is inclined to expose to uncertainty.



LET US KNOW

Uncertainty may arise because of a number of factors. These factors are:

- The industry may be taken by the government particularly when it enjoys monopoly power and the price charged by it is generally considered to be high.
- The introduction of a new technology may cause a loss to the industries using the old technique of production. This uncertainty is also non-measurable.
- Competition thrown up by the entry of new firms into the industry may also eat into the profits of the existing firms and expose them to uncertainties.
- Cyclical fluctuations also introduce an element of uncertainty and affect the amount of profit.

Criticisms of the Uncertainty Theory of Profit: Knight's theory of uncertainty bearing has been criticised on the following grounds:

- Knight has raised uncertainty bearing almost to the status of an independent factor of production. Actually, uncertainty bearing is a part of the real cost of production.
- Uncertainty bearing is one of the elements of profit but not the only element. Other elements like monopoly price, product differentiation etc. can also generate profit.
- Even after bearing uncertainty, the entrepreneur may, at times, be faced with losses.
- Knight has overlooked the distinction between the proprietorship and the share-holders who are the owners of the unit and they therefore bear the uncertainties. Thus, although Knight's theory marks an improvement over Hawley's theory, yet it is not free from the defects as mentioned above.



CHECK YOUR PROGRESS

Q.4: State whether the following statements are True (T) or False (F).

a) F. B. Hawley is associated with the Uncertainty-bearing Theory of Profit. (T/F)

b) According to the Risk-bearing theory of profit, all risks can be insured. (T/F)

c) According to Knight, an entrepreneur earns profit for bearing unpredictable uncertainties, and not for undertaking insurable risks. (T/F)

Q.5: How does an innovation bring profit to the entrepreneur? (Answer within 30 words)

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Q.6: What are the physical risks? (Answer within 30 words)

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Q.7: What are the differences between risks and uncertainties according to Knight? (Answer within 50 words)

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10.5 LET US SUM UP

In this unit we have discussed the following aspects–

- Profit is the income of the entrepreneur.
- Profit is a residual income.
- Net profit is a part of gross profit.
- When the total explicit cost of the entrepreneur is deducted from total revenue, we get gross profit.
- Similarly, when the total cost (explicit cost and implicit cost) is deducted from total revenue, we get net profit.
- Effective innovation earns more profit, because through innovation either the cost of production is reduced or the product brings a better price.
- Profits owing to innovations are temporary. Because, introduction of similar product/technology by competing brands may wipe out the advantages of the initial innovator.
- However, if the innovation is patented, the gain remains for a considerable period of time. Thus, the superior entrepreneur in a dynamic economy gains through innovations.
- Another important consideration here is that, profits are both the cause and effect of innovations. Prospective profits serve as an incentive of innovation; hence, profit is the cause of innovation. Again, profit is the result of successful innovations; hence profit is also the effect of innovation.

- According to the Risk theory of production, the entrepreneur earns profit for undertaking the risks of production.
- Entrepreneurs undertake risks because of the incentive they enjoy in the form of profit. Industries which involve a high degree of risk will demand higher rates of profit.
- Hawley explains four types of risks, viz., replacement, risk proper, uncertainty and obsolescence.
- According to Knight, risks are those which are foreseeable and which can be insured. Therefore according to him, a business does not earn profit for mitigating such insurable risks.
- Uncertainties, on the other hand, are associated with the factors like marketability of the product (e.g., change in demand due to change in customers' tastes and preferences, etc.) which can not be foreseen and insured.
- According to Knight, an entrepreneur earns profit precisely for bearing such uncertainties in business.
- Knight has gone further to include undertaking of uncertainty as a factor of production. According to him, like other factors of production, uncertainty-bearing has a supply price; i.e., unless certain returns are expected, no entrepreneur will be motivated to face uncertainty.
- Profit is the factor income of the entrepreneur.
- Entrepreneurs undertake risks because of the incentive they enjoy in the form of profit.
- According to Knight, there are two types of risks – insurable and non-insurable. Insurable risks do not give rise to profit; non-insurable risks do.
- Although Knight's theory marks an improvement over Hawley's theory, yet it is not free from defects.



10.6 FURTHER READING

1) Ahuja, H.L. (2007); *Advanced Economic Theory: Microeconomic Analysis*; New Delhi: S. Chand & Company Ltd.
2) Chopra, P.N. (2008); *Micro Economics*; Ludhiyana: Kalyani Publication.
3) Dewett, K. K. (2005); *Modern Economic Theory*; New Delhi: S. Chand & Sons.
4) Sundharam, K. P. M., & Vaish, M. C. (1997); *Microeconomic Theory*; New Delhi: S. Chand.



10.7 ANSWERS TO CHECK YOUR PROGRESS

Ans. to Q. No. 1: a) True, b) True

Ans. to Q. No. 2: The nature of income earned by the entrepreneur is different from that earned by the other factors of production. The important differences are:

- First, rent, wages and interest are known beforehand; profit is unknown.
- Secondly, rent, wages and interest cannot be zero, far less negative; profit may be negative as well (loss).

Ans. to Q. No. 3: Profit is called the reward to the owners of the business. They have taken risks with their money and time. If there is no profit, then there would be little point in starting up or putting more money into the business; they might as well put the money into a bank and earn interest on the deposit.

Ans. to Q. No. 4: a) False, b) False,) True

Ans. to Q. No. 5: Effective innovation brings higher profit to the entrepreneur, because through innovation either the cost of production is reduced or the product brings a better price.

Ans. to Q. No. 6: Risks like: fire, accident, etc. are called physical risks. Damaged caused by such risks can be calculated and can be protected through insurance.

Ans. to Q. No. 7: According to Knight, risks are those which are foreseeable and which can be insured. For example: fire, accidents etc. Uncertainties, on the other hand, are associated with the factors like marketability of the product (e.g., change in demand due to change in customers' tastes and preferences, etc.). Uncertainties cannot be foreseen and insured.



10.8 MODEL QUESTIONS

A) Short Questions (Answer each question in about 150 words):

Q.1: Write short notes on:

a) Gross profit & Net profit

b) Innovation & earning of profit

c) Knight's concept of Risk & Uncertainty

Q.2: Show the differences between gross profit and net profit

Q.3: Why according to Knight does an entrepreneur not earn profit as reward for bearing risks?

B) Long Questions (Answer each question in about 300-500 words):

Q.1: Critically discuss the Innovation Theory of Profit.

Q.2: Explain the Risk-bearing Theory of Profit. What are the limitations of the theory?

Q.3: Discuss the Uncertainty-bearing theory of profit. Why has the theory been criticised?

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11) Pindyck, R.S and D.L. Rubinfeld (2004): *Microeconomics*; Prentice-Hall India.
12) Sundharam, K.P.M. & Vaish M.C. (1997); *Microeconomic Theory*; New Delhi: S. Chand & Company Ltd.