NATIONAL OPEN UNIVERSITY OF NIGERIA

INDUSTRIAL ECONOMICS
COURSE CODE: ECO 722

FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS

Course Content Developer
Dr. Ijaiya, Mukaila Adebisi
Department of Entrepreneurship and Business Studies, School of Entrepreneurship and Management Technology
Federal University of Technology, Minna, Niger State

Course Content Editor
Professor Jonathan Avreson Angbas
Department of Economics
Faculty of Social Sciences
Plateau State University, Bokkos, Plateau State

National Open University of Nigeria,
Headquarters,
University Village,
Plot 91, Cadastral Zone,
Nnamdi Azikiwe Expressway,
Jabi, Abuja.

Lagos Office
14/16 Ahmadu Bello Way,
Victoria Island, Lagos.

e-mail: centralinfo@nou.edu.ng
URL: www.nou.edu.ng

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CONTENT

Introduction

Welcome to ECO 722 INDUSTRIAL ECONOMICS.

ECO 722: Industrial Economics is a two-credit and one-semester postgraduate diploma course for Economics students. The course is made up of fifteen units spread across twelve lectures weeks. This course guide gives you an insight to Industrial Economics in a broader way and how to study and make use and apply industrial economics in achieving organisational goals. It tells you about the course materials and how you can work your way through these materials. It suggests some general guidelines for the amount of time required of you on each unit in order to achieve the course aims and objectives successfully. Answers to your tutor marked assignments (TMAs) are therein already.

Course Content

This course is basically on Industrial Economics because as you are aspiring to become an industrial economist, you must be able to apply the knowledge of industrial economics to sustainable and development of industry. The topics covered include Scope, methodology of industrial economics, industrial structure, definitions, problems and measurement theories of the firm; the growth of the firm, diversification in mergers and innovation, investment economics, risk, and uncertainty, the cost of capital, sources of finance, industrial pricing and marketing, pricing and marketing public goods, government intervention in industry and public policy, industrial location; industrial practices and policies in Nigeria and factors of fixed investment demand.

Course Aims

The aim of this course is to give you in-depth understanding of the industrial development as regards:

Scope, methodology of industrial economics, industrial structure, definitions, problems and measurement theories of the firm; the growth of the firm, diversification in mergers and innovation, investment economics, risk, and uncertainty, the cost of capital, sources

of finance, industrial pricing and marketing, pricing and marketing public goods, government intervention in industry and public policy, industrial location; industrial practices and policies in Nigeria and factors of fixed investment demand.

- Scope, methodology of industrial economics
- Industrial structure
- Definitions, problems and measurement theories of the firm;
- The growth of the firm
- Diversification
- Innovation
- Investment economics, risk, and uncertainty
- The cost of capital
- Sources of finance
- Industrial pricing and marketing
- Pricing and marketing public goods
- Government intervention in industry
- Public policy
- Industrial location;
- Industrial practices and policies in Nigeria
- Investment demand.

Course Objectives

To achieve the aims of this course, there are overall objectives which the course is out to achieve though, there are set out objectives for each unit. The unit objectives are included at the beginning of a unit; you should read them before you start working through the unit. You may want to refer to them during your study of the unit to check on your progress. You should always look at the unit objectives after completing a unit. This is to assist the students in accomplishing the tasks entailed in this course. In this way, you can be sure you have done what was required of you by the unit. The objectives serve as study guides; such that student could know if he is able to grab the knowledge of each unit through the sets of objectives in each one. At the end of the course period, the students are expected to be able to:

• Explain the scope of Industrial Economics

• Know the methodology of industrial economics

- Understands the structure of industrial economics
- The meaning of a Firm
- Objectives of a Firm
- Organisation of a Firm
- Define theory of the firm
- Understand the problems and measurement of the theories of the firms
- Explain the theories of the firms.
- Explain the need for growth of the firm
- Describe the factors affecting the size of the firm
- Examine the constraints to the growth of the firm
- Discuss the measurement of growth of an industrial unit
- Meaning of diversification
- Why do firm diversify
- Advantages and disadvantages of diversification
- Types of diversification
- Understand the concept of innovation
- Explain the process of innovation
- Understand the stages of innovation
- Explain the measurement of innovation activities
- Economics Risk and Uncertainty
- Meaning of Risk and Uncertainty
- Factors that affect investment
- Meaning of Cost of Capital
- Classification of Cost of capital
- Important of Cost of Capital
- Measurement of Cost of Capital
- Understand the meaning of sources of finance
- State and explain various sources of finance
- The definition of Industrial Marketing

• Characteristics of Industrial and Consumer Marketing
• Demand in Industrial Market
• Types of Industrial Customers
• Industrial Products and Services
• Identify a public good using non-excludable and non-rivalrous as criteria
• Explain the free rider problem
• Identify several sources of public goods
• Understand the meaning of Government intervention
• Objectives for Government intervention in Industry
• Instruments of Government Intervention
• Rationales for Economic Regulation
• Effects of Government intervention in Industry
• Meaning and nature of public policy
• Features of Public Policy
• Types of Public Policy
• Importance of Public Policy
• Meaning industrial location
• Factors that influence industrial location
• Important of industrial location
• Weber's theory of industrial location
• Meaning of Industrial policy in Nigeria
• Meaning of economic policy in Nigeria
• Features of Industrial Policy in Nigeria and other developing countries
• Major Industrial policies in Nigeria since 1960 – 2010
• The meaning of Investment Demand
• Types of Investment Demand
• Determinants of Investment Demand

Working Through the Course

To successfully complete this course, you are required to read the study units, referenced books and other materials on the course.

Each unit contains self-assessment exercises called Student Assessment Exercises (SAE). At some points in the course, you will be required to submit assignments for assessment purposes. At the end of the course there is a final examination. This course should take about 15weeks to complete and some components of the course are outlined under the course material subsection.

Course Material

The major component of the course, what you have to do and how you should allocate your time to each unit in order to complete the course successfully on time are listed follows:

1. Course guide
2. Study unit
3. Textbook
4. Assignment file
5. Presentation schedule

Study Unit

There are 15 units in this course which should be studied carefully and diligently.

MODULE ONE

UNIT 1 SCOPE AND METHODOLOGY OF INDUSTRIAL ECONOMICS

UNIT 2 THEORIES OF THE FIRMS

UNIT 3 GROWTH OF THE FIRMS

UNIT 4 DIVERSIFICATIONS

MODULE TWO

UNIT 1 INNOVATION

UNIT 2 INVESTMENT ECONOMICS, RISK AND UNCERTAINTY

UNIT 3 COST OF CAPITAL

UNIT 4 SOURCES OF FINANCE

MODULE THREE

UNIT 1 INDUSTRIAL MARKETING

UNIT 2 PRICING AND MARKETING PUBLIC GOODS

UNIT 3 GOVERNMENT INTERVENTION IN INDUSTRY

UNIT 4 PUBLIC POLICY

MODULE FOUR

UNIT 1 INDUSTRIAL LOCATION

UNIT 2 INDUSTRIAL PRACTICES AND POLICIES IN NIGERIA

UNIT 3 INVESTMENT DEMAND

Each study unit will take at least two hours, and it include the introduction, objective, main content, self-assessment exercise, conclusion, summary and reference. Other areas border on the Tutor-Marked Assessment (TMA) questions. Some of the self-assessment exercise will necessitate discussion, brainstorming and argument with some of your colleagues. You are advised to do so in order to understand and get acquainted with historical industrial economics event as well as notable periods.

There are also textbooks under the reference and other (on-line and off-line) resources for further reading. They are meant to give you additional information if only you can lay your hands on any of them. You are required to study the materials; practice the self-assessment exercise and tutor-marked assignment (TMA) questions for greater and in-depth understanding of the course. By doing so, the stated learning objectives of the course would have been achieved.

Textbook and References

For further reading and more detailed information about the course, the following materials are recommended:

Abdulkadiroglu, A. and T. Sonmez (2013), Matching Markets: Theory and Practice, Advances in Economics and Econometrics, Edit by Daron Acemoglu et al.

Ajayi, D. D. (2007). Recent trends and patterns in Nigeria's industrial development. *Africa Development, 32*(2).

Arnold V., Benford T. & Sutton S. (2011) The role of enterprise risk management and organizationalstrategic flexibility in easing new regulatory compliance.International Journal of accountinginformation systems 12 (3)171 – 188.

Altman (2009),Risk and uncertainties in businessdecisions.. http://www.en.wikipedia.org/wiki/Risk

Besanko, D.; Dranove, D. ;Shanley, M.and Schaefer, S.(2013) Economics of Strategy. Wiley

Carlton, D.W and Perloff, J.M (1994) Modern Industrial Economics. Scott, Freeman/ Little, Brown

Church and Ware (2009) Industrial Strategy

Clarke, R (1993) Industrial Economics, Blackwell

Cowen, Tyler. *Average Is Over: Powering America Beyond the Age of the Great Stagnation*. Dutton Adult, 2013.

Deeson A.(2012),Risk and uncertainties. www/nytime.com2011/Wikipedia

Dennis W. Carlton and Jeffery M. Perloff, Modern Industrial Organization,4rd edition, N.Y.: HarperCollinsPublisher, 2004web site: http://wps.aw.com/aw_carltonper_modernio_4

Devine, P.J et al (1993) An Introduction to Industrial Economics, Routledge

Dixit, A; Skeath S and D.H. Reily (2009). Games of Strategy. W.W. Norton and Company

Eneanya, A.N. (2010). Policy Research, Analysis and Effective Public Policy-Making in Nigeria. Lagos: Concept Publications Ltd.

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Ferguson, P.R and Ferguson, G.J. (1988) Industrial Economics: Issues and Perspectives. MacMillan press

F.H. Knight, Risk, Uncertainty and Profit, Univ.of London, London, 1921

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Hardin, Garret. "The Tragedy of the Commons." *Science* 162 (3859): 1243–48 (1968).

Ikelegbe, A.O.(1994).Public Policy-making and Analysis. Benin-City: UriPublishing Ltd

Ihesiulo, O. S., 2005, "The Principles of Business Finance", Owerri: Barloz Publishers

Jhingan, M. L., 2006, "Macroeconomic Theory", New Delhi: Vrinda Publishers.

Kogut, B., Zander, U. 1992. Knowledge of the firm, combinative capabilities and the replication of technology. Organization Science 3, 383-397.

K. Sivprasad and K. Sreeram a Murty (1993), Regional Planning and Industrial Development, Chugh Publication Allahbad India

Lipczynski, J; Wilson, J and Goddard, J (2007) Industrial Organization: Competition, Strategy, Policy. (2nd Edition) Prentice Hall, Financial Times) see also www.pearsoned.co.uk/lipczynski

Okorie, G. C., 2014, "Finance, Investment, and Economic Growth: The Nigerian Experience", Journal of Empirical Economics Research Academy of Social Science Vol. 2 No. 2, 2014, 63-69

Pepall, L.; Richards, D and Norman, G (2008) Industrial Organization: Contemporary Theory and Empirical Applications. Blackwell Publishing.

Pepall, L, Richards, D and Norman, G (2011) Contemporary Industrial Organization: A Quantitative Approach. John Wiley and Sons, Inc.

Peter M. Chisnall (1985), ―Strategic Industrial Marketing‖, Prentice-Hall International, 1985.

Peltzman, Sam (August 1976). "Toward a more general theory of regulation". Journal of Law and Economics19 (2): 211-240

Posner, Richard A. (1974). "Theories of economic regulation" (http://www.jstor.org/stable/3003113). The Bell Journal of Economics andManagement Science5 (2): 335-358. Retrieved 2010-04-16.

P.G. Marvania, Industrial Location and Regional Development Gujarat PP15-35

Richard M.Hiii, Ralph S.Alexander & James S.Cross (2003), ―Industrial Marketing‖(4th ed.), All India Traveller Book Seller Publishers And Distributors, Delhi.

Robert R.Reeder, Edward G.Brierty & Betty H.Reeder (2001), ―Industrial Marketing‖ (2nd ed.) , Prentice-Hall of India Private Limited, New Delhi

Romans, J.T. (December 1966). "Moral suasion as an instrument of economic policy" (http://www.jstor.org/stable/1815305). TheAmerican Economic Review56 (5): 1220-1226. Retrieved 2010-04-15.

Sandhya S (2007). Weber's Theory of Industrial Location (With Criticism) | Economics

Sapru, R.K. (2010). Public Policy: Formulation, Implementation and Evaluation, (2nd edition). New Delhi: Sterling Publishers Private Limited

Shraddha Bajracharya, "Effect of Government Intervention," in *Businesstopia*, January 10, 2018, https://www.businesstopia.net/economics/micro/effect-government-intervention

Schumpeter, J. A. (1990). TOM BOTTOMORE. *Political Economy in the Twentieth Century*, 116.

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Stigler, George J. (1971). "The theory of economic regulation" (http://www.jstor.org/stable/3003160). The Bell Journal of Economics and Management Science2 (1): 3-21. Retrieved 2010-04-16

Surendar, V., 'Indian Industries - A study in growth structure and location.' B.R. Publishing Corporation, Delhi, 1986, PP 201-204.

Woodruffe, Helen (2000), ―Service Marketing: Operation, Management and Strategy‖, Macmillan India Limited, New Delhi.

Assignment File

Assignment files and marking scheme will be made available to you. This file presents you with details of the work you must submit to your tutor for marking. The marks you obtain from these assignments shall form part of your final mark for this course. Additional information on assignments will be found in the assignment file and later in this Course Guide in the section on assessment.

There are four assignments in this course. The four course assignments will cover:

Assignment 1 - All TMAs' question in Units 1 – 4 (Module 1)

Assignment 2 - All TMAs' question in Units 1 – 4 (Module 2)

Assignment 3 - All TMAs' question in Units 1 – 4 (Module 3)

Assignment 4 – All TMAs' question in Unit 1 – 3 (Module 4)

Presentation Schedule

The presentation schedule included in your course materials gives you the important dates for this year for the completion of tutor-marking assignments and attending tutorials. Remember, you are required to submit all your assignments by due date. You should guide against falling behind in your work.

Assessment

There are two types of the assessment of the course. First are the tutor-marked assignments; second, there is a written examination.

In attempting the assignments, you are expected to apply information, knowledge and techniques gathered during the course. The assignments must be submitted to your tutor for formal Assessment in accordance with the deadlines stated in the Presentation Schedule and the Assignments File. The work you submit to your tutor for assessment will count for 30 % of your total course mark.

At the end of the course, you will need to sit for a final written examination of two hours' duration. This examination will also count for 70% of your total course mark.

Tutor-Marked Assignments (TMAs)

There are four tutor-marked assignments in this course. You will submit all the assignments. You are encouraged to work all the questions thoroughly. The TMAs constitute 30% of the total score.

Assignment questions for the units in this course are contained in the Assignment File. You will be able to complete your assignments from the information and materials contained in your set books, reading and study units. However, it is desirable that you demonstrate that you have read and researched more widely than the required minimum. You should use other references to have a broad viewpoint of the subject and also to give you a deeper understanding of the subject.

When you have completed each assignment, send it, together with a TMA form, to your tutor. Make sure that each assignment reaches your tutor on or before the deadline given in the Presentation File. If for any reason, you cannot complete your work on time, contact your tutor before the assignment is due to discuss the possibility of an extension. Extensions will not be granted after the due date unless there are exceptional circumstances.

Final Examination and Grading

The final examination will be of two hours' duration and have a value of 70% of the total course grade. The examination will consist of questions which reflect the types of self-assessment practice exercises and tutor-marked problems you have previously encountered. All areas of the course will be assessed

Revise the entire course material using the time between finishing the last unit in the module and that of sitting for the final examination too. You might find it useful to review your self-assessment exercises, tutor-marked assignments and comments on them before the examination. The final examination covers information from all parts of the course.

Course Marking Scheme

The Table presented below indicates the total marks (100%) allocation.

Assignment	**Marks**
Assignments (Best three assignments out of four that is marked)	30%
Final Examination	70%
Total	**100%**

Course Overview

The Table presented below indicates the units, number of weeks and assignments to be taken by you to successfully complete the course, Industrial Economics (ECO 722).

Units	**Title of Work**	**Week's Activities**	**Assessment (end of unit)**
	Course Guide		
Module 1: SCOPE AND METHODOLOGY OF INDUSTRIAL ECONOMICS, THEORIES OF THE FIRMS, GROWTH OF THE FIRMS, DIVERSIFICATIONS			

1	Meaning and scope of industrial economics, Methodology of industrial economics, Industrial structures	Week 1	Assignment 1
2	Meaning of a Firm, Objectives of a Firm, Organisation of a Firm, Definition of the theories of firms, Theories of firms, Profit-Maximizing Theories, Other Optimizing Theories Baumol's Single Period Sales (Revenue) Maximization subject to Profit Constraint. Williamson's Model and Maximization of Management Utility, Morris's Model of Managerial Enterprise. Non-Optimisation theories	Week 2	Assignment 2
3	The Need for Growth, Desirability of growth at macro level, Size of the Firm, Factors determining the size of the firm Firm size vs Growth rate, Firm size vs Profitability Constraints of the Growth of the Firm, measurement of growth of an industrial unit	Week 3	Assignment 3
4	Meaning of Diversification, Why do firm Diversify, Advantages and Disadvantages of Diversification, Types of diversification Strategy		
Module 2: INNOVATION, INVESTMENT ECONOMICS, RISK AND UNCERTAINTY, COST OF CAPITAL, SOURCES OF FINANCE			
1	The Process of Innovation: Concept and Relationship Stages of Innovation Measurement of Innovation Activities	Week 5	Assignment 1
2	Meaning of Economic risk Meaning of Risk and Uncertainty Relationship between Risk and Uncertainty	Week 6	Assignment 2
3	Meaning of Cost capital Classification of Cost of Capital Importance of Cost of Capital Measurement of Cost of Capital	Week 7	Assignment 3

4	Meaning of sources of finance Types of Sources of Finance Equity Financing Debt Financing	Week 8	Assignment 4
Module 3: INDUSTRIAL MARKETING, PRICING AND MARKETING PUBLIC GOODS, GOVERNMENT INTERVENTION IN INDUSTRY, PUBLIC POLICY			
1	Definition of Industrial Marketing, Characteristics of Industrial and Consumer Marketing, Demand in Industrial Market, Types of Industrial Customers, Industrial Products and Services	Week 9	Assignment 1
2	Definition of Public Goods, Characteristics of Public Goods The Free Rider Problems of Public Goods Role of Government in Paying for Public Goods Positive Externalities in Public Health Programs	Week 10	Assignment 2
3	Definition of Government Intervention, Objectives for Government Intervention, Instruments of Government Intervention, Rationales for Economic Regulation	Week 11	Assignment 3
4	Meaning and Nature of Public Policy, Features of Public Policy, Types of Public Policy, Importance of Public Policy	Week 12	Assignment 4
Module 4. INDUSTRIAL LOCATION, INDUSTRIAL PRACTICES AND POLICIES IN NIGERIA, INVESTMENT DEMAND			
1	Meaning industrial location, Factors that influence industrial location, Weber's theory of industrial location	Week 13	Assignment 1
2	Meaning industrial policy, meaning of economic policy in Nigeria, Features of Nigeria Industrial Sectors, Major Industrial Policies in Nigeria Since 1960-2010		Assignment 2
3	Meaning investment Demand, Types of Investment Demand, Determinants of Investment Demand.		Assignment 3

	Examination	Week 14 & 15	

How to Get the Most from This Course?

In distance learning the study units replace the university lecturer. This is one of the great advantages of distance learning; you can read and work through specially designed study materials at your own pace and at a time and place that suit you best.

Think of it as reading the lecture instead of listening to a lecturer. In the same way that a lecturer might sent you some reading to do, the study units tells you when to read your books or other material, and when to embark on discussion with your colleagues. Just as a lecturer might give you an in-class exercise, your study units provides exercises for you to do at appropriate points.

Each of the study units follows a common format. The first item is an introduction to the subject matter of the unit and how a particular unit is integrated with the other units and the course as a whole. Next is a set of learning objectives. These objectives let you know what you should be able to do by the time you have completed the unit.

You should use these objectives to guide your study. When you have finished the unit you must go back and check whether you have achieved the objectives. If you make a habit of doing this, you will significantly improve your chances of passing the course and getting the best grade.

The main body of the unit guides you through the required reading from other sources. This will usually be either from your set books or from a readings section. Some units require you to undertake practical overview of historical events. You will be directed when you need to embark on discussion and guided through the tasks you must do.

The purpose of the practical overview of some certain historical economic issues are in twofold. First, it will enhance your understanding of the material in the unit. Second, it will give you practical experience and skills to evaluate economic arguments, and understand the roles of history in guiding current industrial policies and debates outside your studies. In any event, most of the critical thinking skills you will develop during studying are applicable in normal working practice, so it is important that you encounter them during your studies.

Self-assessments are interspersed throughout the units, and answers are given at the ends of the units. Working through these tests will help you to achieve the objectives of the unit and prepare you for the assignments and the examination. You should do each self-

assessment exercises as you come to it in the study unit. Also, ensure to master some major historical dates and events during the course of studying the material.

The following is a practical strategy for working through the course. If you run into any trouble, consult your tutor. Remember that your tutor's job is to help you. When you need help, don't hesitate to call and ask your tutor to provide it.

1. Read this Course Guide thoroughly.
2. Organize a study schedule. Refer to the `Course overview' for more details. Note the time you are expected to spend on each unit and how the assignments relate to the units. Important information, e.g. details of your tutorials, and the date of the first day of the semester is available from study centre. You need to gather together all this information in one place, such as your dairy or a wall calendar. Whatever method you choose to use, you should decide on and write in your own dates for working breach unit.
3. Once you have created your own study schedule, do everything you can to stick to it. The major reason that students fail is that they get behind with their course work. If you get into difficulties with your schedule, please let your tutor know before it is too late for help.
4. Turn to Unit 1 and read the introduction and the objectives for the unit.
5. Assemble the study materials. Information about what you need for a unit is given in the `Overview' at the beginning of each unit. You will also need both the study unit you are working on and one of your set books on your desk at the same time.
6. Work through the unit. The content of the unit itself has been arranged to provide a sequence for you to follow. As you work through the unit you will be instructed to read sections from your set books or other articles. Use the unit to guide your reading.
7. Up-to-date course information will be continuously delivered to you at the study centre.
8. Work before the relevant due date (about 4 weeks before due dates), get the Assignment File for the next required assignment. Keep in mind that you will learn a lot by doing the assignments carefully. They have been designed to help you meet the objectives of the course and, therefore, will help you pass the exam. Submit all assignments no later than the due date.

9. Review the objectives for each study unit to confirm that you have achieved them. If you feel unsure about any of the objectives, review the study material or consult your tutor.

10. When you are confident that you have achieved a unit's objectives, you can then start on the next unit. Proceed unit by unit through the course and try to pace your study so that you keep yourself on schedule.
11. When you have submitted an assignment to your tutor for marking do not wait for it return `before starting on the next units. Keep to your schedule. When the assignment is returned, pay particular attention to your tutor's comments, both on the tutor-marked assignment form and also written on the assignment. Consult your tutor as soon as possible if you have any questions or problems.

12. After completing the last unit, review the course and prepare yourself for the final examination. Check that you have achieved the unit objectives (listed at the beginning of each unit) and the course objectives (listed in this Course Guide).

Tutors and Tutorials

There are some hours of tutorials (2-hours sessions) provided in support of this course. You will be notified of the dates, times and location of these tutorials. Together with the name and phone number of your tutor, as soon as you are allocated a tutorial group.

Your tutor will mark and comment on your assignments, keep a close watch on your progress and on any difficulties you might encounter, and provide assistance to you during the course. You must mail your tutor-marked assignments to your tutor well before the due date (at least two working days are required). They will be marked by your tutor and returned to you as soon as possible.

Do not hesitate to contact your tutor by telephone, e-mail, or discussion board if you need help. The following might be circumstances in which you would find help necessary. Contact your tutor if.

• You do not understand any part of the study units or the assigned readings
• You have difficulty with the self-assessment exercises
• You have a question or problem with an assignment, with your tutor's comments on an assignment or with the grading of an assignment.

You should try your best to attend the tutorials. This is the only chance to have face to face contact with your tutor and to ask questions which are answered instantly. You can raise any problem encountered in the course of your study. To gain the maximum benefit from course tutorials, prepare a question list before attending them. You will learn a lot from participating in discussions actively.

Summary

The course, Industrial Economics (ECO 722), expose you to the meaning and scope of industrial Economics, you will also be introduced to the historical root and current industrial policies in Nigeria. This course also gives you an insight into overview of theoretical perspectives of the firms. Thereafter it shall enlighten you about introduction to the theories of firms and the growth of the firm in an economy. Also, diversification, innovation, investment economics, risk and uncertainty were all highlighted in this course. Finally, the cost of capital, sources of finance, industrial marketing, pricing and marketing public goods, government intervention in industry, public policy, industrial location, industrial practices and policies in Nigeria, investment demand

On successful completion of the course, you would have developed critical thinking skills with the material necessary for efficient and effective discussion on Industrial Economics: overview of theoretical perspectives of industrial economics, introduction to the theories of the firms and the growth of firms.

However, to gain a lot from the course please try to apply anything you learn in the course to term papers writing in other economics courses. We wish you success with the course and hope that you will find it fascinating and handy.

TABLE OF CONTENTS

MODULE ONE

UNIT 1 SCOPE AND METHODOLOGY OF INDUSTRIAL ECONOMICS

CONTENTS

1.0 INTRODUCTION

Industrial Economics is the study of firms, industries, and markets. It looks at firms of all sizes – from local corner shops to multinational giants such as WalMart or Tesco. And it considers a whole range of industries, such as electricity generation, car production, restaurants and service sectors.

When analysing decision making at the levels of the individual firm and industry, Industrial Economics helps us understand such issues as:

- the levels at which capacity, output, and prices are set;
- the extent that products are differentiated from each other;
- how much firms invest in research and development (R&D)
- how and why firms advertise
- how firms employ
- How firm negotiate to pay wages as well as how they settle disputes.

Industrial Economics also gives insights into how firms organise their activities, as well as considering their motivation. In many microeconomics courses, profit maximisation is taken as given, but many industrial economics courses examine alternative objectives, such as trying to grow market share.

There is also an international dimension – firms have the option to source inputs (or outsource production) overseas. As such, while industrial economics more frequently uses skills and knowledge from microeconomics courses, macroeconomic concepts are sometimes employed.

One of the key issues in industrial economics is assessing whether a market is competitive. Competitive markets are normally good for consumers (although they might not always be feasible) so most industrial economics courses include analysis of how to measure the extent of competition in markets. It then considers whether regulation is needed, and if so the form it should take. There is again an international dimension to this, as firms that operate in more than one country will face different regulatory regimes.

Industrial Economics uses theoretical models to understand firm and regulatory decision making, and so students should expect to use diagrams and maybe some basic mathematical models, including game theory. In addition, researchers often develop empirical statistical models to identify relationships between variables of interest: for example, to understand the relationship between product price, advertising, and profits. While most courses will not require students to conduct their own empirical analysis (that is left to the econometrics courses) understanding and interpreting empirical results is an important skill.

2.0 OBJECTIVES

At the end of this unit, the students will be able to:

i. explain the scope of Industrial Economics
ii. know the methodology of industrial economics
iii. understands the structure of industrial economics

3.0 MAIN CONTENTS

3.1 SCOPE OF INDUSTRIAL ECONOMICS

Industrial economics is a distinctive branch of economics which deals with the economic problems of firms and industries, and their relationship with society. In economic literature, it is known by several names with marginal differences such as ‘Economics of Industries’, ‘Industry and Trade’, ‘Industrial Organization and Policy’, ‘Commerce’ and ‘Business Economics’ etc. The name ‘Industrial Economics’ was adopted in the early fifties perhaps through the writings of P.W.S. Andrews. Although this name is becoming popular day by day some authors, particularly in the American circle, prefer ‘Industrial Organization’ as a title of the subject. At present there is no clear-cut consensus on the name of the subject.

There are two broad elements of industrial economics. The first one, known as the descriptive element, is concerned with the information content of the subject. It aims at providing the industrialist or businessman with a survey of the industrial and commercial organizations of his own country and of the other countries with which he might come in contact. It would give him full information regarding the natural resources, industrial climate in the country, situation of the infrastructure including lines of traffic, supplies of factors of production, trade and commercial policies of the governments and the degree of competition in the business in which he operates. In short, it deals with the information about the competitors, natural resources and factors of production and government rules and regulations related to the concerned industry. The second element of the subject is concerned with the business policy and decision-making. This is the analytical part dealing with topics such as market analysis, pricing, choice of techniques, location of plant, investment planning, hiring and firing of labour, financial decisions, product diversification and so on. It is a vital part of the subject and much of the received theory of industrial economics is concerned with this. However, this does not mean that the first element, i.e. descriptive industrial economics, is less important. The two elements are interdependent, since without adequate information no one can take proper decision about any aspect of business.

SELF ASSESSMENT EXERCISE

What did you understand by the scope of industrial economics?

3.2 METHODOLOGY OF INDUSTRIAL ECONOMICS

Industrial Economics uses theoretical models to understand firms and regulatory decision making, and so students should expect to use diagrams and maybe? some basic mathematical models, including game theory. In addition, researchers often develop empirical statistical models to identify relationships between variables of interest: for example, to understand the relationship between product price, advertising and profits. While most courses will not require students to conduct their own empirical analysis (that is left to the econometrics courses) understanding and interpreting empirical results is an important skill.

There are three major approaches to the study of industrial organization: the first approach is primarily descriptive and provides an overview of industrial organization. The second, price theory, uses microeconomic models to explain firm behaviour and market structure. The third approach is oriented to public policy as to economic regulation, antitrust law and more generally, the economic governance of law in defining property rights, enforcing contracts, and providing organizational infrastructure.

3.3 INDUSTRIAL STRUCTURE

Industry structure pertains to the number and size distribution of competitors in an industry, according to University of Maryland University College. Some industries, such as the restaurant and retailing industries, contain many firms or competitors. Other industries contain relatively few competitors. Industries may also be comprised of different-sized competitors. The number and size of competitors and several other key factors are extremely important in determining a firm's profitability.

Rivalry Intensity

Some firms exist in industries with intense rivalry levels. There may be three major competitors that make up the industry, for example. It is usually difficult for companies to dramatically increase profits in this type of industry. The firms are usually larger and well-established in their markets. Smaller firms may have been forced out because of their inability to compete. Larger companies usually enjoy lower cost structures because (of economies of scale) they purchase in volume. Another factor may be product life cycle, which is the lifespan of a product. Sales are typically stagnant in the maturity or third stage of the product life cycle. This can have a negative

impact on profits. Companies in this type of industry environment also have less flexibility in lowering prices. Lower prices may set off price wars, furthering diminishing profitability.

Ease of Entry

The importance of industry structure is also evident with an industry's ease of entry. And the ease of entry is greatest in new industries. New industries also provide the best profit opportunities for smaller businesses. Sales are usually strong in a new industry because demand is relatively high among consumers. A smaller competitor may even be the industry leader, especially if it created a new technology or product. In contrast, industries that are difficult to enter have a negative impact on profits. Smaller companies may not have easy access to distribution. They may also lack the necessary capital for expanding their businesses, according to QuickMBA.com, an online business reference site.

Availability of Substitutes

Another industry structure element influencing a firm's profitability is the availability of substitutes. Consumers will pay higher prices for certain products if no substitutes exist. Hence, companies in the industry earn greater profits. For example, pharmaceutical companies possess 20-year patents on new drugs, according to a 2002 article by Forbes.com. This means companies cannot manufacturer generic substitutes for two decades. Conversely, consumers may seek cheaper substitutes when available, and this which has a negative impact on profits.

Considerations

Competitors within the same industry often have similar organizational structures. These organizational structures can also determine the profitability of competing firms. For example, major competitors in an industry may use a more decentralized structure to better serve customers in certain geographical regions. Companies that conform to this type of structure may stand to gain the most from a profitability standpoint. Those that stay centralized may sacrifice potential profits, because they may not know the exact needs of consumers in different geographical regions.

SELF ASSESSMENT EXERCISE

Examine factors that determine firm's profitability in terms of structure

4.0 CONCLUSION

This unit concludes that industrial economics is the study of firms, industries, and markets, is a distinctive branch of economics which deals with the economic problems of firms and industries, and their relationship with society and it uses theoretical models to understand firm and regulatory decision making, and so it is expected to use diagrams and maybe some basic mathematical models, including game theory. Also, industry structure pertains to the number and size distribution of competitors in an industry, according to University of Maryland University College. Some industries, such as the restaurant and retailing industries, contain many firms or competitors.

5.0 SUMMARY

In this unit, we have discussed industrial economics as a distinctive branch of economics which deals with the economic problems of firms and industries, and their relationship with society. We also discussed the three broad elements of industrial economics, which includes; the descriptive element, this is concerned with the information content of the subject, it aims at providing the industrialist or businessman with a survey of the industrial and commercial organizations of his own country and of the other countries with which he might come in contact and the second element of the subject is concerned with the business policy and decision-making, while the third approach is oriented to public policy as to economic regulation, antitrust law and more generally, the economic governance of law in defining property rights, enforcing contracts, and providing organizational infrastructure.

6.0 TUTOR-MARKED ASSIGNMENT

1. Critically examine the scope of industrial economics

2. List and discuss the main factors of industrial structure

3. Discuss the methodology adopted in of industrial economics

7.0 REFERENCES/FURTHER READINGS

Dennis W. Carlton and Jeffery M. Perloff, Modern Industrial Organization,4rd edition, N.Y.: HarperCollinsPublisher, 2004web site: http://wps.aw.com/aw_carltonper_modernio_4

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UNIT 2 THEORIES OF THE FIRMS

CONTENTS

1.0 INTRODUCTION

In the theory of the firm, the behavior of any company is said to be driven by the desire for profit maximization. The theory (of the firm) governs decision making in a variety of areas including resource allocation, production techniques, pricing adjustments, and the volume of

production. In this unit, the students will lean the definition, problems, measurement and the theories of firms.

2.0 OBJECTIVES

At the end of this unit, the students will be able to Know:

i. The meaning of a Firm
ii. Objectives of a Firm
iii. Organisation of a Firm
iv. Define theory of the firm
v. Understand the problems and measurement of the theories of the firms
vi. Explain the theories of the firms.

3.0 MAIN CONTENTS

3.1 WHAT IS A FIRM?

There are many theories of the firm that have developed in microeconomics. They seek to explain/model why firms are of a certain size, why they are organized in a certain way, what type of firm behavior they engage in, how they influence the market structure or, alternatively, are influenced by it.

(1) Traditional Definition--Input/Output: A firm is an "organization that translates inputs that it purchases from the market into outputs that it sells into the market."

(2) Minimum efficient scale of production: the size and number of firms in an industry is in part related to the degree of "economies of scale and scope". For example, higher levels of production may permit the use of more efficient (cost-effective) techniques and the use of common resources.

(3) Minimize transactions costs: Firms are established to minimize the transactions costs associated with various functions, including securing supplies, distribution, sales, transportation, etc.

(4) Contracts: Firms as "a series of contracts between a number of parties, including (a) the workers, (b) the managers and (c)the suppliers of capital.

(5) Theory of incomplete contracts: whereby firms are established because it is not possible for the parties (wholesalers, retailers, suppliers of inputs) to write complete contracts to govern transactions or obligations between them.

(6) Loophole for the Exercise of Market Power: Firms resulting from vertical or horizontal integration may be motivated primarily by the ability to reduce competition, increase their market power and avoid government intervention.

3.2 OBJECTIVES OF THE FIRM

- Maximize profits (or rather expected profit)
- Maximize future profits
- Maximize sales
- Maximize growth (e.g. AOL, Amazon)
- Maximize stock price
- Further the careers or lifestyles of top managers
- Others?

-defined objective function (such as profit maximization).

More recent developments in micro theory include the recognition that their other non-standard variables (such as prestige, ego, number of subordinates, size of budget, conviviality) that may influence managers' behavior. Furthermore, firms may not have access to the information required (or it may be very expensive to obtain) to maximize or even define or measure the variables in the traditional micro models, even if they wanted to. Indeed, firms may not have a well-defined objective function that they maximize but rather follow rules of thumb or "satisficing" techniques.

SELF ASSESSMENT EXERCISES

What is a Firm?

3.3 ORGANIZATION OF THE FIRM

1. Level of vertical integration

Definition: When a firm relies on itself rather than others (i.e. purchases from the market) to produce an input.

Reasons for vertical integration:

- "If you want something done right, do it yourself"
- Lower transactions costs

This is one of the most important reasons for vertical integration: a firm will choose to undertake an activity itself rather than rely on the market when the transactions costs of doing the latter are higher. Transactions costs: non-price costs of trading with others including the costs of negotiating, writing and enforcing contracts and searching for the lowest price.

- Secure supply of an input
- Ensure quality (McDonald's franchises)
- Avoid government restrictions, regulations or taxes
- Exploit market power

Monitoring Costs: Firms that choose to perform activities internally rather than rely on markets have to take into account the costs of monitoring internal efficiency (rather than relying on the efficiency of the market) and ensure that these monitoring costs are less than the transactions costs of using markets.

2.Internal Organization

- Organization of management–chain of control, who reports to whom
- Functional separation: separate divisions for each activity of production such as (1) production, (2) transportation, (3) sales
- Divisional separation: divisions based on the outputs produced rather than the activity. E.g. Time Warner: books/magazines/television/music.
- Compensation/incentive system: Straight salary based on hours, piece-rate compensation, % of sales (commission) above a certain threshold, equity stake (stock ownership). The compensation system can (1) increase output, (2) increase productivity, (3) decrease internal monitoring costs.

3.Forms of ownership

- sole proprietorship
- partnership
- corporation

Sole proprietorships account for approximately 75% of all firms in the US but only for6% of all sales. Corporations account for less than 20% of all firms but 90% of sales. Corporations are

companies whose capital is divided into shares that are owned by individuals who have limited responsibility for the debts of the company. This is known as limited liability: if the corporation fails the shareholders' losses are limited to the price paid for the stock. The shareholder is not liable for the debts of the corporation. Because of this limited liability feature, individuals are more willing to buy shares than they otherwise would be if they could lose more money than what they had spent to acquire the shares. This has allowed corporations to attract shareholders and grow much bigger than under the other 2 forms of ownership.

The limited liability feature accounts in part for the fact that the expected returns to bondholders always exceed the expected returns to stockholders.

Benefits:

Ability to take advantage of economies of scale and scope, enter large markets, make acquisitions, raise money more cheaply.

Costs:

(1) Monitoring costs, (2) internal conflicts e.g. with regard to firm objectives, (3) separation of ownership from control. The owners of the corporation, i.e. the shareholders are typically not the managers of the company. Shareholders elect a board of directors but who monitors the board, really. Managers may be focused on short-term performance which coincides with the time horizon of their own employment. Class action suits.

Objectives for Corporations

1. With regard to corporations, the shareholders of the firm are the owners of the corporation through the ownership of shares in the corporation. What is the shareholders' objective? Presumably, it is maximization of the stock price. That is, the typical buyer of corporate stock does so with the expectation (hope) that the stock price will increase.

The stockholder has little if anything to do with the day to day running or managing of the corporation (unless he or she owns a significant % of the corporation's outstanding equity).

2. Corporations are typically run by managers under the oversight of a corporate board. Thus, we have a situation known as separation of ownership (stockholders)from control (management/board who run the company.)

The management's objectives may differ from those of the stockholders.

3. Checks on managerial discretion:

- Yardstick competition: comparison of performance of other similar companies

- Threat of takeovers: if the firm does not perform well in terms of its stock price, the firm may be taken over and the manager will lose his/her job.
- Managers' concerns for their own careers
- Compensation in the form of stock options (but this can also lead to perverse incentives to inflate the price of the stock—see posted articles.)

Risks and returns to shareholders'/debt holders of corporations:

Generally, expected pay-offs are greater for shareholders than for debt holders because shareholders assume more risk than bond holders. (See sample problem below.)

4.Mergers and Acquisitions: Mergers and acquisitions (M&A) are defined as consolidation of companies. Differentiating the two terms, Mergers is the combination of two companies to form one, while Acquisitions is one company taken over by the other.

In other words, Mergers and acquisitions (M&A) is a general term used to describe the consolidation of companies or assets through various types of financial transactions, including mergers, acquisitions, consolidations, tender offers, purchase of assets and management acquisitions. The term M&A also refers to the desks at financial institutions that deal in such activity.

Reasons for M&A:

- Increase efficiency in optimal scale, economies of scope, improved management
- Tax advantages (e.g. profitable firms merge with ones that have tax losses in order to reduce tax burden.)
- Increase in market share

Types of mergers:

- Vertical: firm combines with its supplier or distributor
- Horizontal: between firms in the same businesses
- Conglomerate: firms in unrelated lines of business

5. Firm Strategic Behavior

Strategies pursued by firms including: strategies with regard to pricing, capital investment, marketing, entry into new markets or expansion in existing markets, investments in R&D.

SELF ASSESSMENT EXERCISE

Discuss forms of Business ownership

3.4 DEFINITION OF THE THEORIES OF FIRMS

The theory of the firm is the microeconomic concept founded in neoclassical economics that states that a firm exists and make decisions to maximize profits. The theory holds that the overall nature of companies is to maximize profits meaning to create as much of a gap between revenue and costs. The firm's goal is to determine pricing and demand within the market and allocate resources to maximize net profits.

3.5 THEORIES OF FIRMS

There are three main theories of firm. These theories are: 1. Profit-Maximizing Theories 2. Other Optimizing Theories 3. Non-Optimizing Theories.

3.5.1 Profit-Maximizing Theories:

The traditional objective of the business firm is profit-maximization. The theories based on the objective of profit maximization are derived from the neo-classical marginalist theory of the firm.

The common concern of such theories is to predict optimal price and output decisions which will maximize profit of the firm. In essence the theories based on the profit- maximization goal suggests that firm seeks to make the difference between total revenue (or sales receipt) and total cost (outgo) as large as possible.

However, one pertinent question here is: does the firm attempt to maximize long term profit or short- term profit? The basic valuation model of the firm is based on the fundamental assumption that the firm seeks to maximize its long-term profit.

According to this model, a firm seeks to maximize its discounted present value. To arrive at an estimate of discounted present value of the firm we reduce future profits by a discount factor or weight, to make future profits comparable with present profits. Let PV_f refer to the present value

of the firm and π_1, π_2, ..., π_n refer to profits in the next n time periods. Therefore, we can express PV_f as: $PV_f = W_1 \pi_1 + W_2 \pi_2 + \ldots + W_n \pi_n$

where W_1, W_2…. W_n are the weights we assign to future profits to be able to make inter-temporal comparisons of money sums. One complication that arises in this context is that the choice of weights largely depends on the firm's rate of time preference, i.e., how the firm values present profits compared to future profits.

The short-run profit maximization hypothesis is based on the famous marginalist rule. A firm maximizes profit when by producing and selling one more unit it adds as much as to revenue as to cost.

The addition to revenue is called marginal revenue and the additional cost marginal cost. Thus, a firm maximizes profit when MR = MC. If this condition holds and if the MC curve intersects the MR curve from below and not from above, total profit (i.e., π = TR – TC) will be maximum.

However, if the periods are dependent (i.e., if current decisions or actions affect future decisions of the firm) short-run profit maximization will lead to incorrect decisions because of lack of provision for the future. For instance, the firm could generate higher profits now by not replacing capital goods, delaying payment on due accounts etc. all of which will surely reduce the size of future profits.

By contrast, if profits are independent in different time periods, long-run profit maximization would simply amount to maximizing the series of short-term profits. But such a situation does not prevail in the real world. All firms which have made huge capital investments will observe that profits in different time periods are interdependent.

There is a trade-off between short-term and long-term profit. If more (or a steady flow of) profit is derived in the long run, adequate provision has to be made for depreciation (capital consumption) and short-term dues are to be cleared. If more profit is to be made in the short run, some long-term profit has to be sacrificed.

With the above complications in mind we may now briefly discuss the traditional theory. The essence of the traditional approach is to compare cost and revenue of a firm at different levels of output and to select the one which maximizes the absolute differences between the two.

The short-run profit maximization hypothesis is illustrated in Figure 7.1. The TC and TR are shown on the vertical axis and output on the horizontal axis. The firm produces a level of output OQ* for which TR = OR* and TC = OJ and the gap between the two (R*J) is maximum. Thus Q* is indeed the profit-maximizing level of output.

The slope of the TR curve measures MR and the slope of the TC curve measures MC. At points A and B, two curves have the same slope. Thus at OQ*, MR = MC. This can be verified by passing two tangents — one through A and the other through B and ensuring that they are parallel.

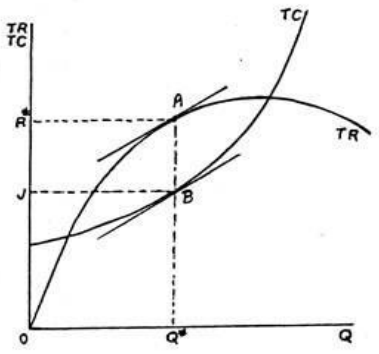

Figure 1: Single period profit maximization model

The total cost curve is always non-linear and has got nothing to do with the market structure. The slope of the revenue curve depends on elasticity of demand and is crucially dependent on the market structure. Since most real life markets are imperfectly competitive we assume non-linear total revenue function, too.

Subtracting the TC curve from the TR curve we derive the total net profit curve π which cuts the horizontal axis where TR = TC. We reach the top of the profit hill when Q* is the level of output that is produced and sold.

In Figure 1, the firm produces OQ* units and makes a total revenue of OR* by charging a price of OR*/OQ*. At this stage total profit is R*J which is maximum.

The hypothesis is based on a number of assumptions. Prima facie, the decision-maker (manager or entrepreneur) is supposed to have relevant information about cost and revenue on the basis of which an optimal decision can be made. Secondly, he is assumed to have sufficient power to make a decision and implement it properly.

However, the external or market forces which are beyond the control of a firm or its management are the major determinants of the firm's optimal decision on price and quantity. This theory is universally applicable.

SELF ASSESSMENT EXERCISE

1. With the aid of a graph, critically examine profit maximization theory of the firm
2. Why Maximum Profit?

From the above hypothesis we may provide two important rationales for maximizing profit.

Firstly, in a single owner firm, where the entrepreneur is both owner and manager, maximizing profit will maximize his own income. For a given amount of effort this is considered to be rational behaviour, irrespective of the structure of the market (or nature of competition).

If, however, the magnitude of profit varies with the amount of entrepreneurial effort expended, and effort has negative utility (disutility) for the entrepreneur, rational behaviour would dictate something else. He must find an optimal trade-off between effort and profit to maximize entrepreneurial utility which is unlikely to lead to maximum profit.

Secondly the impact of competition from rival firms forces the entrepreneur to maximize profits. Profit maximization therefore is not an aspect of discretionary behaviour (choice) but rather a compelled necessity. The entrepreneur is forced to maximize profit for his long-term survival.

Thus, the justification for profit maximization depends upon the nature of competition. If competition is absent (as in monopoly) there is no such pressure, although the previous argument

still holds. Under highly competitive conditions the entrepreneur has to maximize profit just for survival.

Criticisms of Marginalist Theory of the Firm:

The profit maximization hypothesis developed during 1874-1890 by Leon Walras, W. S. Jevons and Alfred Marshall has formed the basis of the neoclassical (marginalist) theory of the firm. It has not been challenged up to the 1920's. But from early 1930s it has been subject to various criticisms.

Critics have argued that profit maximization is not the only objective of a firm. Modern business firms and their managers pursue certain other goals, too. Thus profit-maximization as the only goal of a firm is no longer a tenable hypothesis.

Being dissatisfied with both of the justifications, modern economists and management specialists have suggested various alternatives to profit- maximization.

Criticisms of the Modern Approach:

Although this view has been accepted by many modern economists, the trend towards this type of change in power is not universal. Supporters of the traditional viewpoint would argue that the shareholders have ultimate power and, if properly motivated, can exert considerable influence.

At times, at the annual general meeting of a company, shareholders are able to put a lot of pressure on managerial decisions. Secondly, it has been argued that an increase in the number of firms does not necessarily imply growing competition.

There may be keen competition among 3 to 4 dominant firms in an industry. Thus the need for making maximum profit is not stronger under pure competition than under oligopoly.

Those who believe that the profit- maximization is no longer a tenable hypothesis has suggested a number of alternatives.

These fall into two broad categories:

(1) Those who hold that something else other than profit is maximized and

(2) Those who postulate non- maximizing behaviour.

3.5.2 Other Optimizing Theories:

There are various alternative approaches to profit maximization. Here we restrict ourselves to the most important ones.

3.5.2.1 Baumol's Single Period Sales (Revenue) Maximization subject to Profit Constraint:

One alternative to profit maximization has been suggested by W.J. Baumol that firms operating in oligopoly will seek to maximize sales revenue subject to a profit constraint.

His argument is largely, if not entirely, based on "public statements by businessmen and on a number of a priori arguments as to the disadvantages of declining sales, for example, fear of customers shunning a less popular product, less favourable treatment from banks, loss of distributors and a poorer ability to adopt a counter strategy against a competitor."

Baumol's basic argument is summarized in Figure 2, which enables us to understand the difference between profit maximization and sales maximization.

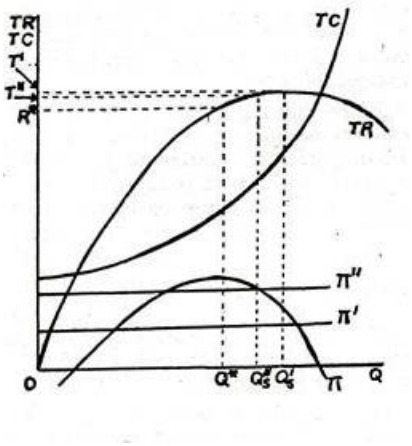

Figure 2: Baumol's sales maximizing model

Total profit is maximized when the firm produces OQ* units of output (as in Figure 2)

Sales maximization, on the other hand, refers to maximization of total revenue (= P x Q), rather than maximization of Π (It is because if a firm quote zero price it can sell an astronomical amount but its total revenue will be zero.) Total revenue is maximum when MR = 0, and MR = 0 when the demand for a company's product is unitary elastic.

In Figure 2 we observed that if the firm wishes to maximize total revenue (without profit constraint) it will choose output Q's, where TR is maximum (i.e., the slope of the TR curve is zero or MR = 0). However, Baumol has argued that, a constraint operates from shareholders. They require a minimum sum as dividend which would keep them content.

Alternatively put, shareholder demand a level of absolute profit of some amount which is exogenous (i.e., determined outside the model). If this minimum acceptable level of profit were π', the firm could produce Q''_s and still generate profits greater than π'. Hence in this situation it will be worthwhile to produce Q'_s.

Likewise, if the minimum acceptable profit is π", Q'_s will not generate sufficient profits. The firm will have to reduce output to Q''_s which is indeed the optimal output with the profit constraint specified.

Baumol's model thus predicts that profits will be sacrificed for revenue. The sales-maximizing level of output will exceed the profit-maximizing level and can only be sold at a lower price under imperfectly competitive market conditions.

In fact, the first main difference between the profit maximizer and a constrained sales maximizer is that the latter can charge a lower price to sell the extra (OQ''_s – OQ*) output. This has to be the case if both have the same demand (AR) curve.

In terms of Figure 2, the profit maximizer produces OQ* and charges a price of OR*/OQ* (= total revenue + output). Alternatively, the sales maximizer produces (in the π" constrained case) Q''_s and sells at a price of OT''/OQ''_s.

Rationale:

Baumol's model no doubt carries enormous good sense. The motivation to maximize sales revenue is justified on the ground that the managers of large firms stand to gain more from this strategy than from profit maximization. Sales maximization implies expanding the size of the organization, enhancing the status of managers as also their promotion prospects.

Again their wages and compensation are directly related to responsibility, which, in its turn, is again an increasing function of size. Conversely, as Baumol argues, it is quite irrational for managers to maximize profits for shareholders when they will get hardly anything themselves. (It is just 'head I win, tail you lose' type of affair — one-sided game, that is).

Implications and Limitations:

Baumol's' model is a single-period sales maximizing model. It applies at a single moment of time — i.e., it is static in nature. However, the model can be made dynamic for an in-depth study of multi-period optimization.

For this it will be necessary to consider various combinations of sales and revenues over time. In that case profit would be endogenous (i.e., determined from within the model) and would form the vehicle for growth through reinvestment of funds. This would enable us to predict an optimal combination of profits and growth rate of revenue. Such a dynamic model is appended below.

With Advertising:

Secondly, advertising has been integrated into Baumol's model with consequent effect on the total revenue curve. Baumol's model has the implication that the sales-maximizing firm will spend more on advertising than the profit-maximizing firm.

Here Baumol simply assumes that advertising does not affect the market price of the product. But it leads to increase in the volume of sales (with diminishing returns). Hence it is assumed that advertising will always lead to a rise in TR, i.e., MR will never be negative. Baumol's extended model is illustrated in Figure 3.

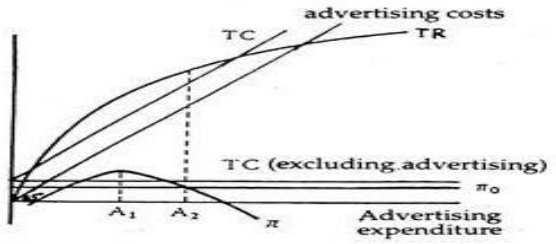

Figure 3: Sales maximization with advertisement

Here the TC line is derived on the basis of the assumption that advertising (selling cost) does not affect total non-advertising cost. Now we measure advertising expenditure on the horizontal axis, and profit, revenue and cost on the vertical axis.

The TC curve is derived by superimposing the curve showing advertising cost, on the original TC (excluding advertising curve). Since there is positive (though not perfect) correlation between TR and advertising expenditure, the TR curve is upward sloping (its slope is positive though diminishing after a certain point due to diminishing returns).

Since advertising will always increase TR, the businessman will go on increasing advertising expenditure until prevented by the profit constraint.

In Baumol's model, therefore, A_1 will be the profit maximizing level of advertising expenditure, which, if falls short of maximum profits, will invariably be less than the constrained maximizer's expenditure A_2.

Baumol's model, however, is not free from defects. It is inconsistent in one point at least. If advertising leads to greater output sold, non- advertising costs would be expected to rise. Yet, Baumol, in his simplified model, assumed that they would not.

Example 1:

Given the demand function $P = 20 - Q$ and the total cost function $C = Q^2 + 8Q + 2$, answer the following questions:

(a) What output, Q_π, maximizes total profit and what are the corresponding values of price, P_π, profit, Π_π, and total revenue (sales), R_π?

(b) What output, Q_r, maximizes sales and what are the corresponding values of price P_r, profit, Π_r, and total revenue, R_r?

Solution:

(a) Now total profit = $\pi = PQ - C$

$= -Q^2 + 20Q - Q^2 - 8Q - 2 = -2q^2 + 12Q - 2$

In order to maximize profit, we require

$$\frac{d\pi}{dQ} = -4Q + 12 = 0 \quad \text{or} \quad Q_\pi = 3.$$

and so

$P_\pi = 20 - Q_\pi = 17$

$\Pi_\pi = -2Q^2_\pi + 12Q_\pi - 2 = -18 + 36 - 2 = 16$

$R_\pi = Q_\pi P_\pi = 3 \times 17 = 51$

(b) Here total revenue = $R = PQ = -Q^2 + 20Q$.

Therefore, to maximize sales, R, we require

$$\frac{dR}{dQ} = -2Q + 20 = 0 \quad \text{or} \quad Q_r = 10,$$

and direct substitution yields

$P_r = 10, \quad \Pi_r = -32, \quad R_r = 100$

Example 2:

Suppose that a firm has a linear demand function such as $P = 20 - Q$ and total cost is $TC = .5Q^2$. The unit cost functions will be $MC = Q$ and $AC = .5Q$. Find out the profit maximising level of price and output for this firm.

Solution:

The price/output combination that would maximize profit can be determined as

$$\pi = R - TC$$
$$\pi = P \cdot Q - TC$$
$$\pi = 20Q - Q^2 - .5Q^2$$
$$\frac{d\pi}{dQ} = 20 - 2Q - Q = 0$$
$$20 - 2Q = Q \quad (\text{i.e., } MR = MC)$$
$$3Q = 20$$
$$Q_\pi = 6.67$$
$$P_\pi = 13.33$$
$$\pi_\pi = 66.67$$

The price/output combination that maximizes sales revenue is found by simply taking the first derivative of revenue (R) with respect to output (Q).

$$R = P \cdot Q$$
$$R = 20Q - Q^2$$
$$\frac{dR}{dQ} = 20 - 2Q = 0$$
$$2Q = 20$$
$$Q_R = 10$$
$$P_R = 10$$
$$\pi_R = 50$$

Example 3:

Suppose in example 2 that the firm wants to maximize sales revenue subject to a specific rate of profit (perhaps designed to achieve a particular rate of return). We assume that the firm wishes to constrain their profit to 20 percent of the total unit cost of production. Find out the level of profit.

Solution:

$$\frac{\pi^*}{Q} = .2AC$$
$$\pi^* = (.2AC)(Q)$$

Given the total cost function above, $AC = .5Q$ so that

$\pi^* = .1Q^2$

But we know also that profit is defined as revenue minus cost ($\pi = R - TC$). Thus in our example,

$$\begin{aligned} R - TC &= .1Q^2 \\ 20Q - Q^2 - .5Q^2 &= .1Q^2 \\ 1.6Q &= 20 \\ Q_\pi^* &= 12.5 \\ P_\pi^* &= 7.5 \\ \pi^* &= 15.63 \end{aligned}$$

The Dynamic Model:

The multi-period model of Baumol is based on the following assumptions:

The objective of the firm is to maximize the rate of growth of sales revenue over its life cycle.

There is no profit constraint; profit is the main source of financing growth of sales. Profit is thus an instrumental variable whose value is endogenously determined.

Demand and cost curves have traditional shape; average revenue is downward-sloping and average cost is U-shaped.

Suppose sales revenue (R) grows at a rate of growth (g) per cent.

Over its whole life the firm will have the following stream of revenues:

$R, R(1 + g), R(1 + g)^2 \ldots R(1 + g)^n$

The present value of this stream of future revenues can be computed by applying the usual discounting procedure.

$$R, R\left(\frac{1+g}{1+r}\right), R\left(\frac{1+g}{1+r}\right)^2, \cdots, R\left(\frac{1+g}{1+r}\right)^n$$

where r is the rate of discount determined by the level of expectations and risk preferences of the firm.

The total present discounted value of all future revenues is expressed as:

$$S = \sum_{i=0}^{n} R\left(\frac{1+g}{1+r}\right)^i$$

The firm seeks to maximize s by choosing an appropriate combination of current values of R and g. It is pretty obvious that

$$\frac{\partial S}{\partial R} > 0 \quad \frac{\partial S}{\partial g} > 0$$

Also note that g = g (π, R) is the growth function and π = π (R, C, g, r) is the profit function. The-growth function is derived from the profit function. Growth is mainly financed by ploughed back profits which depend on current level of revenue (R), cost(C), growth rate of sales (g) and the discount rate (r). To maximize S, the firm can choose a particular combination of R and g out of a set of alternatives.

These combinations are plotted along the growth curve, shown in figure 7.6. In this diagram up to point a, which corresponds to maximum profit level, R and g increase simultaneously. Beyond A, R increases but g tends to fall. Thus beyond $R_{\pi n}$ sales revenue level and growth rate become conflicting goals.

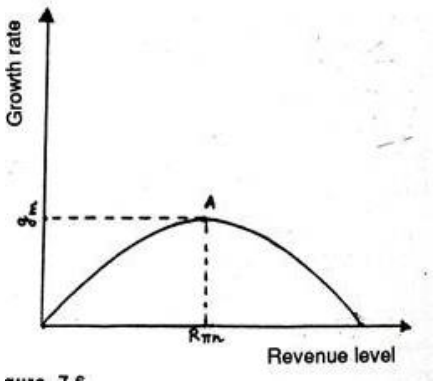

Figure 3: The growth curve

The optimum combination of R and g may not be a feasible one and vice-versa. Actual choice depends both on desirability and on feasibility. The desirability may be defined in terms of iso-present value curve. This curve is a locus of points showing alternative combinations of g and R which yield the same S.

Here S, the aggregate discounted present value of revenue, depends on R and g, given the exogenously determined discount rate. Thus we may assume that

$$S = a \cdot g + b \cdot R \cdots \text{such that}$$
$$g = \frac{1}{a}S - \frac{b}{a}R \quad \text{and} \quad R = \frac{1}{b}S - \frac{a}{b}g$$

This is an equation of the iso-present value curve in the slope-intercept form. Thus, it is possible to think of a family of such curves, the highest one representing the maximum present value of S and the lowest one representing the minimum present value. The slope of this straight-line is given by a/b along a given curve, the level of S remains the same.

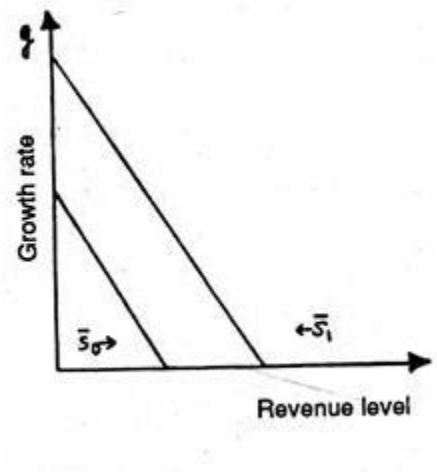

Figure 5: The Iso-present value curve

In order the choose the optimum combination of R and g, it is necessary to put the previous two diagrams together and design it as a case of growth- constrained iso-present value of revenue maximization.

In this case, the equilibrium solution is reached at point E at Figure 7.8 from which it appears that the firm will choose a combination of R* and g* to reach the highest possible level of S, subject to the growth function constraint.

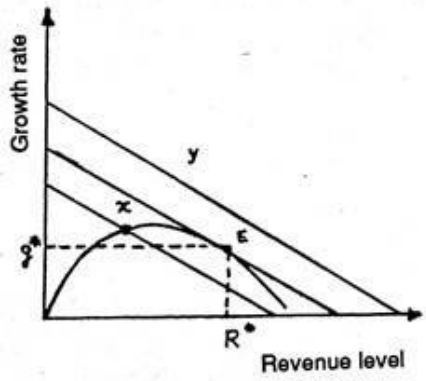

Figure 6: Growth constraint revenue maximization

Empirical Evidence:

Two major studies have both verified and falsified Baumol's hypothesis.

In 1962, McGvire, Chiv and Elling have discovered "that correlation between executive incomes and sales revenue is stronger than the correlation between executive income and profits". However, such correlation does not necessarily imply causation.

In 1967, M. Hall in a comprehensive study has attempted to test the hypothesis, implicit in Baumol's model, that if profits above the minimum constraint are earned, ceteris paribus, firms pursue policies (for example, cut prices, increase advertising and investment) in order to increase their sales revenue. The regression results of Hall failed to justify this hypothesis.

Reconciling Short and Long-term Profitability:

There are, of course, a few practical problems in reconciling profit maximization in the short run with the long-term interest of the firm. A realistic strategy seems to be to always increase its profits in the short term by cutting down costs which ensure its long term survival, i.e., maintenance and investment. Simply put, there is danger of offending customers by excessive profit-making openly in the short run.

3.5.2.2 Williamson's Model and Maximization of Management Utility:

In his article, 'Management Discretion and Business Behaviour' in American Economic Review (1863), O.E. Williamson presents a model of managerial discretion.

His model is based on the same assumption as Baumol's: a weak competitive environment, a divorce of ownership from control, and a minimum profit constraint imposed by the shareholders. He argues that managers of such large firms conduct the affairs of the firm to serve their own interests.

In other words, managers are concerned with the goodwill of the firm only to the extent that it favours their own personal motives and ambitions. He argues that the most important motives of businessmen are desires for salary, security, dominance and professional excellence. All these yield additional utility or satisfaction to the manager.

These can be gained by incurring additional expenditure on staff, managerial emoluments and discretionary investment. Williamson argues that managers have discretion in pursuing policies

which maximize their own utility rather than seeking the maximization of profits which maximize the utility of most shareholders (i.e., the owners of the company).

In Williamson's model, each manager is supposed to have a utility function — i.e., a set of factors which provide managerial satisfaction. Such utility arises from certain aspects of the management task — e.g. responsibility, prestige, status, power, salary, etc.

These aspects can be reduced to three component terms in the utility function as follows:

$U = f\ (S, M, I_d)$

where U = managerial utility, S = staff, M = Managerial slack, absorbed as a cost, and I_d = discretionary power for investment. Of these, only staff is measurable. Others are non-momentary and non-operational. Still these can be measured indirectly in terms of other variables. The objective of the manager is to maximize U.

An increase in the staffing level — or an expansion of the 'span of control' (i.e., the number of people under the direct control and supervision of the manager) confers benefits to the managers in the form of higher salary. Usually other things being equal, a manager, in charge of a team of 30 people is paid more than another manager in charge of a smaller team.

However, there are other positive aspects of the staff term (S) such as the higher status of managing a bigger team, and the stronger chance of promotion which comes from greater responsibility and authority.

In short, the quality and number of staff reporting to a manager enables him to gain promotion, salary and dominance as also security through greater confidence as to his departments' survival, and greater professional excellence which a large staff, by providing better services. Thus the staff term is a much wider one than simply measuring managerial salary.

The second term management emolument (M) represents the type and amount of perquisites the manager usually enjoys (such as luxurious, decorated and equipped offices, personal security, allowances for the use of a car, expense account for entertainment) beyond the level necessary for efficient operation.

The term M reflects the utility derived by the manager from being able to authorize expenditure of the firm to serve his own needs. The greater the M, the greater the status, prestige and satisfaction of the manager. (This is what goes by the name of managerial slack).

The third component — discretionary investment expenditure (l_d) or the power to make such investment — involves 'unnecessary' expenditure by the firm to serve the ends of the manager. Here the term l_d refers to that investment which exceeds that necessary to achieve the minimum after tax profits demanded by shareholders.

The manager is often able to undertake projects which appeal to him in particular but which may not necessarily be the best in terms of generating profits for the firm. Examples of such investment are terminals linked to a computer, mini-computers, automated equipment for data processing and record keeping.

Such projects do not provide any monetary benefit to the manager but reflect his fascination for what is 'new', what can be deemed as 'scientific progress' and what may put him above other managerial staff in terms of esteem and status. Such investments permit managers to pursue their personal investment preferences and to exercise their power. Hence I_d provides utility.

In Williamson's model, the utility function is maximized subject to the constraint that satisfactory profits are earned to fulfil the shareholders' expectations. He predicts from his model that in most normal situations the firm will act in such a fashion that M and are both positive. The implication is that 'unnecessary' expenditure is tolerated by the shareholders.

The normal situation is supposed to be one in which the firm enjoys discretionary 'power' in fixing output and price if there is not much competition in the market. In such a situation S is also positive, which implies that excess staff has a positive effect on managerial utility.

In times of business recession, it becomes difficult to earn satisfactory profits. Hence the components of the utility function are appropriately adjusted for cost reduction. Excess staff is laid off, expense accounts are made more stringent, and unnecessary prestige investments are cut back or postponed.

Comparison with Other Models:

Williamson's model can be compared with the traditional model presented by the marginalist school. In a highly competitive environment, M and l_d would have to fall to zero if profit is to be maximized. Moreover, excess staff has to be removed. In this limited case the predictions of Williamson's model would be similar to that of the traditional marginal approach. But this is unlikely to happen in reality.

Williamson's model may also be compared with Baumol's. Whereas the profit-maximizing firm of the traditional model and the sales maximizing firm of the Baumol's model report actual profits, Williamson's firm announces only 'reported' profits.

Reported profits, i.e., the profits admitted by the firm equal actual profits less M. M is deducted because it is an expenditure and is also a deductible one for tax purposes. It is interesting to note that in Williamson's model, actual profits may not equal maximum profits if, as the model predicts, S exceeds the profit maximization level.

Implication of the Model:

E. Penroe, in his book 'The Theory of Growth of the Firm' describes all types of growth (internal and external) to the availability of managerial resources to plan growth. At any time, there will be a range of opportunities for expansion open to the firms.

Since all these cannot be exploited, choices must be restricted to those which can be effectively planned. The implication is that there must be available spare managerial capacity at the right level over and above that needed for the smooth conduct of current operations.

In her scheme the ultimate limit to growth, under static conditions (i.e., when there is no change in the state of knowledge or in the quality of managerial services), is set by managerial discretion. If, however, improvements in these occur under more realistic conditions, the limits recede to the background for extended periods of time.

3.5.2.3 Marris's Model of Managerial Enterprise:

An alternative managerial theory of the firm has been developed by Robin Marris. It also stems from the so-called dichotomy between ownership and control. He suggests that a possible goal which has connections with both sales and profits is that of growth of the firm. So managers will have varying objectives apart from profit.

These non-profit objectives are strongly correlated with the size of the firm, examples being salary, power and status. An important exception is that of security, since in recent years' managers, even in larger firms, have found themselves declared redundant.

In fact, Marris, like Williamson, hypothesizes that managers have a utility function in which salary, prestige, status, power, security, etc. all assume significance. On the contrary, the owners (shareholders) are usually more concerned with profits, market share and output.

In contrast to Williamson, Marris suggests that on one aspect at least, there is no conflict between the two groups — the management team and the shareholders. Rather there is harmony of interest.

They have a common interest in the size of the firm. Thus he postulates that members of the management team will be primarily concerned with maximization of the rate of growth of size. By size he means: 'corporate capital, that is, the book value of fixed assets, plus inventory, plus net short- term assets, including cash revenue.

Managers feel interested in growth rate of size because positive growth is supposed to enhance the promotion prospects of managers. In Marris' model the stress is on an alleged preference of managers for internal promotion (rather than through changing firms). This is possible if and only if the firm expands rapidly over time.

However, Marris suggests that there are certain factors which operate within the firm to limit the growth process such as:

(1) The ability of managers to cope with and administer a rapidly growing organization without any loss of control,

(2) The ability of managers to develop and introduce new products to neutralize the losses inflicted by products experiencing falling market shares and

(3) The ability of the research and development expenditure to generate an expanding flow of potential new products.

However, the major constraint on growth seems to stem from the managers' desire for security, which largely, if not entirely, depends on the financial side of the enterprise. Managers of big companies do not want to lose their jobs. Thus they never pursue the growth objective beyond limit so that the company suffers from financial stringency and its very existence is at stake.

In other words, the desire of the management for job security implies a deliberate brake on the growth process. If job security is accorded the highest priority among managerial objectives the firm has to grow in such a fashion that its financial side is not damaged.

Since excessive dependence on external finance (i.e., on the capital market) implies loss of control or too much borrowing (by selling bonds or debentures) may enhance the chance of take-over by another firm and pose a threat to the job-security motivation of the managers. Hence there is desire for growth financed mainly from the profit levels being generated by the existing products.

Hence Marris postulated a theory of balanced growth, i.e., growth in demand for the firm's products (arising from the development and launching of new products), balanced by growth in supply (i.e., growth in stock of capital necessary to introduce new products).

The need for balanced growth is felt for two reasons. Prima facie, there are risks in expanding too fast by undertaking very risky projects, by putting undue pressure on the managerial input, and/or by incurring huge debt to finance the expansion.

By contrast, there are dangers associated with slow growth such as lack of initiative in identifying new products or markets, excessive revenues not being invested into new projects, and, above all, allegations of slack or uninventive management.

The failure on the part of a firm to expand rapidly enough could lead to take-over bids by other firms with more active, energetic and dynamic managers who are aware of the potential which is not being utilized in the slow-growing firm.

Formal Presentation of the Model:

Thus, Marris has presented a dynamic model of the firm, by stating clearly the objectives and constraints. However, he presents his model formally in mathematical and/or graphical form. We present below the model in a simple mathematical form.

Objectives and Constraints:

In Marris's model the optimization goal of the firm is maximization of the balanced rate of growth (G) which internally depends on two factors: the rate of growth of demand for the firm's product (G^d), and the rate of growth of capital supply (G^s). Thus

$G = G^d = G^S$

The firm seeks to pursue this balanced growth objective, subject to two major constraints: managerial and financial. The managerial constraint is set by the skill and efficiency of available manager's team. The financial constraint is set by the desire of managers to attain the maximization of their own utility function and their owner's utility function.

In a modern organization, there is separation of ownership from management (control). This is why owners and managers are supposed to have conflicting interests. But at times there may be harmony of interests. One such common area of interest, not only ensures fair returns on owner's capital but also continued trust and faith in managers who have succeeded in achieving it.

If the firm is unable to achieve balanced growth, managers run the risk of losing their jobs as owners' capital is at stake. Thus when the goals of managers and that of owners coincide, they may collaborate in their endeavor to achieve a common goal, viz., balanced growth of the firm.

It is against this backdrop that Marris specifies two different utility functions one of the manager and the other for the owner.

The utility functions of the manager (U_m) include such variables like salaries, power, status, job security etc., while treat of the owner (U_0) includes variables like profits, capital, output, market-share, public esteem, etc. But in the ultimate analysis most of these explanatory variables are related to the size and steady growth of the firm.

Thus in Marris model we have:

$U_m = m(G^d, S)$

$U_0 = O(G^s)$

At the outset, Marris treats S as an exogenously determined constraint by assuming that there is a saturation level of job security. Above that critical level, $(\partial U_m/\partial s) = 0$, while below that level, $(\partial U_m/\partial s) = \alpha$. If this assumption is made the managerial utility function may be expressed as $U_m = m\,(G^d)^{\bar{s}}$ where

$s = \bar{s}$ is the job security constraint.

We may now have a fresh look at the above constraints. We may first focus on the managerial constraint. Marris adopts Penrose's thesis that there exists a definite limit on the rate of managerial expansion such that 'managerial ceiling' sets an upper limit to the growth of a firm.

Secondly the financial constraint can also set a limit to growth and this constraint originates in the job- security considerations. In view of job-security, the managers become risk-averters by choosing a prudent financial policy which consists of determining optimum levels of the following critical financial ratios:

1) Operating Leverage or Debt Ratio	r_1	= value of debts/ Total assets
2) Liquidity Ratio	r_2	= liquid assets/ Total assets
3) Retention Ratio	r_3	= Retained profits/ Total profits

These three ratios may now be combined into a single parameter, r, to represent the financials security constraint.

To affect the balanced growth of the firm, Marris make use of instrumental variables.

r, the financial security co-efficient

d, the rate of product diversification

p, the average profit margin.

Now by combining the set of objectives, constraints and instruments, we may present the complete model thus:

Structure of the Model:

(1) Demand growth equation	:	$G^d = D(P,d)$
(2) Profit equation	:	$\pi = \pi(p,d)$
(3) Supply of capital equation	:	$G^s = r[\pi(p,d,)]$
(4) Security constraint	:	$\bar{r} \leq r$
(5) Balanced growth equilibrium condition	:	$G^d = G^s$

In this model the level of profit, n, is endogenously determined, i.e., determined from within the system whereas the security constraint, r, is exogenously determined by the attitude of the managers toward risk. Given this, the balanced growth can be ensured through the operation of two instrumental variables, p and d.

In balanced growth formulation we have, in fact, one equation in two unknowns:

$D(p, d) = \bar{r}[\prod(p,d)]$

Comments:

Thus from Marris' dynamic model emerges the possibility of an optimum growth rate of the firm through time in a more or less unchanged environment.

In finding this optimum Marris has referred to two major constraints — management capacity to successfully generate greater demand (i.e., managerial constraint) and ability of existing products to generate sufficient after-tax profit for reinvestment (i.e, financial constraint).

There is also a third constraint, namely, profit. On this point Marris' model resembles that the Baumol and Williamson very closely. Likely them, Marris also includes a profit constraint so that if the growth-maximizing solution fails to generate sufficient profits, growth will have to be sacrificed somewhat to increase current dividend payments so as to fulfill the expectations of shareholders.

From the point of management Marris's model throws light on two important factors: the attitude to risk and uncertainty and the desire for utility (subject to security maximization) which may not be maximized by the pursuit of maximum profits.

We have noted that the most celebrated managerial models are those of Baumol, Marris and Williamson. They are distinguished primarily by the assumed objectives of the managers. Baumol suggested that managers maximise sales revenue, while Marris believe that they maximise growth, and Williamson say they maximise a utility function including 'staff or 'emoluments'.

In each case, the existence of monitoring from outside and limits to managerial discretion were explicitly recognised. Baumol included a minimum profit constraint in his model, and Marris similarly incorporated a valuation ratio constraint to reflect external pressure, i.e., from shareholders. The value of the assets of a firm. According to Marris too low ratio will involve a risk of takeover 'unacceptable' to the management.

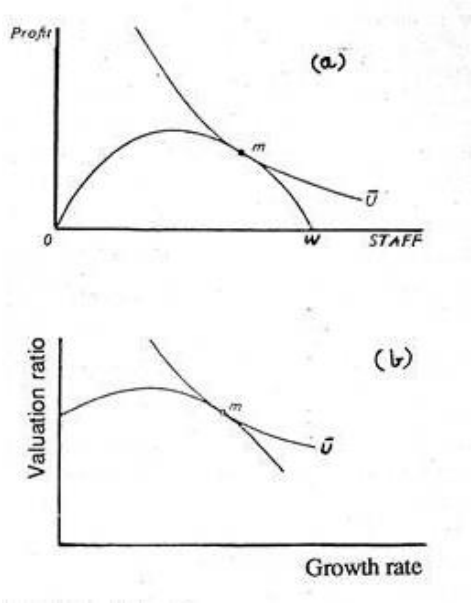

Figure 7 a & b: Staff model and growth model

In many ways figure (7a) is absolutely typical of diagrammatic representations of managerial models of the firm. In Williamson's managerial firms the constraint OW [Figure 7(a)] is derived as the summation of marginal revenue minus marginal cost.

In other words, Williamson's firm is a monopolist. For Marris the diagram is again basically the same with the horizontal axis now measuring the rate of growth and the vertical axis the valuation ration [Figure 7(b)]. The constraint is not supposed to emanate from the origin but is likely to have the same concave shape.

If growth is pushed past a certain point the value of shares on the market will fall as diseconomies associated with staff training and encountered (Penrose effects) and as a greater proportion of earnings are retained in the firm to finance expansion instead of being distributed as dividends to shareholders.

3.5.3 Non-Optimizing Theories:

By criticizing the profit-maximization hypothesis modern economists have developed certain theories of the firm which do not hypothesize any optimizing behaviour. We have noted that the most celebrated managerial models are those of Baumol, Marris and Williamson.

They are distinguished primarily by the assumed objectives of the managers. Baumol suggested that managers maximise sales revenue, Marris, that they maximise growth, and Williamson, that they maximise a utility function including staff or 'emoluments'.

In each case the existence of monitoring from outside and limits to managerial discretion were explicitly recognised. Baumol included a minimum profit constraint in his model, and Marris similarly incorporated a valuation ratio constraint to reflect external pressure, i.e., from shareholders.

The valuation ratio is the market value of outstanding equity shares divided by the book value of the assets of a firm. According to Marris too low a ratio will involve a risk of takeover 'unacceptable' to the management.

In many ways figure 7a is absolutely typical of diagrammatic representations of managerial models of the firm. In Williamson's managerial firms the constraint OW [Figure 7 (a)] is derived as the summation of marginal revenue minus marginal cost.

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If growth is pushed past a certain point the value of shares on the market will fall as diseconomies associated with staff training are encountered (Penrose effects) and as a greater. proportion of earnings are retained in the firm to finance expansion instead of being distributed as dividends to shareholders.

Satisficing:

Being dissatisfied with the profit- maximization models of economists in 1955, H. A. Simon (the 1978 Nobel Laureate in Economics) has put forward the hypothesis that firms run by single

enterprisers (who are also the owners) are likely to have different objectives from firms operated by modern executives in large corporations (who are supposedly not the owners).

Simon argues that managers in most cases have imperfect knowledge and inadequate information on the basis of which to take decisions.

In fact, if perfect knowledge and complete information were not available, the calculations involved in the decision-making process would be too complex to be practicable; and that, given this and the other inevitable uncertainties surrounding the decision making process in reality, business people can never be confident whether they are maximizing profits or not. Instead, business people "satisfice" rather than maximize, i.e., their aim is to earn just satisfactory profits.

Simon basically puts forward the proposition that firms have an 'aspiration level' which they seek to reach. In fact, what the satisfactory aspiration level of profits will be depends on past experience and will take account of future uncertainties, too. This level may be in terms of sales, market share, profits, etc. For any -fixed period of time actual results are compared with the aspiration level.

If actual performance exceeds the aspiration level, no corrective action is called for. Instead the aspiration level for the next period is revised upward. On the contrary, if actual performance falls short of the aspiration level, the firm attempts to identify or search out the causes of discrepancy by spending sufficient time, effort and money.

Alternatively, if no apparent inefficiency is found (and the shortfall is believed to be due to external factors — factors beyond the control of the firm or its management) the firm will be constrained to revise its aspiration level for the next period downward. The aspiration level is, of course, the consensus of what can reasonably be expected in near future in the light of past performance.

However, since the cost of gathering information is high, all the alternatives will not be explored. A satisfactory alternative course of action if likely to be selected. This will probably not be the profit- maximising alternative.

Simon also argues that if neither search behaviour nor the lowering of aspiration levels quickly results in the achievement of a 'satisfactory' situation then the manager's behaviour pattern will become one of apathy or of aggression. In this sense this model does not have managerial usefulness.

Simon has also argued that the effort of trying to squeeze the last rupee of profitability out of the operation of the firm is likely to put extra strains and stresses on the business manager which is most cases, may not be liked by him.

He therefore seeks to reach a level of profit which yields an income which he regards as satisfactory and does not put any special effort to extract any extra rupee of benefit. He satisfies rather than maximises.

The validity of Simon's hypothesis (i.e., the desire of businessmen for quiet life) largely depends on the business environment. In a highly competitive environment, a businessman has to work hard in order to safeguard his position (and thus protect his market share), whether he likes it or not.

On the contrary, if there is not much competitive rivalry in the area of business in which he is operating, he can afford the luxury of 'quiet life' and Simon's hypothesis may carry enormous good sense.

However, a related point may be noted in this context. In a single-owner firm (i.e., sole proprietorship concern) it is possible for the owner-manager to 'satisfice' rather than maximize. But it is not possible for the head of a managerial team in a joint stock company to behave like this.

He may well be subject to various pressures from below to pursue a more expansionist policy. The pressure may come from those who are ambitious but are placed less comfortably than he is (i.e., at a lower point in the organization chart).

Shareholders may also demonstrate this type of 'satisficing' behaviour. A private shareholder is always at liberty to sell the share of a company if he is not satisfied with its performance and feels that he can secure a better return on his investment elsewhere.

But he is usually constrained by a lack of information. Thus he tends to act as a 'satisficer' so that if, for instance, dividends are held at a customary level, shareholders do not usually inquire whether they should be higher if management were better.

Comments:

Simon's hypothesis is not altogether wrong. There are firms or business people in reality which pursue 'satisficing' behaviour. As noted by W. D. Reekie and J. N. Clook, "It does help explain why some firms, faced with a falling market share, act more vigorously than competitors, in an attempt to halt the decline, while others, conversely, in the same situation, act as though they were commercially moribund."

However, Simon's theory of satisficing rather than optimising behaviour forms the basis for a more detailed analysis of the objectives of firms as spelled out by Cyert and March in their behavioural theory of the firm. We may now turn to the behavioural theory.

The Behavioural Theory of the Firm:

In their book A Behavioural Theory of the Firm (1963), Cyert and March go a step ahead of Simon in making an in-depth study of the way in which decisions are made in the large modern (multi- product) firm (characterized by divorce of ownership from management) under uncertainty in an imperfect, market.

They have expressed more concern in the decision making process than in the objectives or motivations of such firms (e.g., profit/sales maximization and satisficing). They look at the bureaucratic structure of the firm and study the nature of interrelationships of its various parts.

At the outset Cyert and March declare that if we are to develop a theory that predict and explain business decision making behaviour, the following two points have to take note of:

(i) People (i.e., individuals) like organizations have goals,

(ii) In order to define a theory of organizational decision making, we need something analogous — at the organizational level — to individual goals at the individual level.

Cyert and March set the formation of organizational goals through the notion of a coalition. The firm itself is visualized as a coalition of individuals who are organized in sub-coalitions. So they differ from Baumol and Simon who have assumed that the firm is dominated by a single person who makes the decisions and whose authority is unquestioned.

Instead Cyert and March assume that the firm is a decision-making entity in its own right. They have recognized that management must achieve an objective, or possibly a set of objectives, through the efforts of a group of persons or through a coalition.

The coalition consists of the various units or parties associated with the firm such as managers, workers, shareholders, customers, suppliers as also professional people like accountants, auditors, lawyers, etc.

As with most others, such coalitions are not necessarily stable. Membership may change over time and also when particular decisions are involved. Within any group there is unlikely to be any permanent unanimity of purpose, although it may be worthwhile or expedient to act for a time as though there were. There is still less chance of acceptance of the goals of the firm by all the members of the coalition.

Thus the overriding problem of the leader of the coalition, who may be designated as the entrepreneur, is to attempt to resolve the conflict of goals and to keep all members pulling, more or less, in some direction as long as possible. However, he must always be prepared for an un-foreseen situation or sudden emergency.

The starting point of the behavioural theory is"where the entrepreneur makes a contract with the individual whereby the latter agrees to carry out instructions and to accept the organizational goal, or goals, as interpreted by the entrepreneur." In order to get full support from the subordinates, the entrepreneur has to make 'side payments'.

Alternatively put, the goals keep on changing through a process of bargaining, in which side payments are involved. Side payments not only involve money but non-pecuniary benefits also like authority, personal treatment, etc.

At the management level these involve matters outside the normal contract of employment (salaries, paid holidays, hours of work, etc.). The most important one seems to be policy commitments of one kind or another. This is known as policy side payment.

Finally, a winning coalition forms and the goals are set. However, the position is not static. Due to continuous changes in circumstances the bargaining is going on most of the time so that the coalition and its goals are liable to alter frequently.

In other words, a process of unrestricted bargaining would be inconsistent with stability in the organization. However, stability can be secured by working outside payments for those situations that are thought likely to occur.

There is, of course, likely to be conflict within such a coalition. Thus it is quite likely that some of the goals may be incompatible. However, such conflict resolution is possible in two ways. Firstly, decisions may be decentralised into divisions and departments.

Therefore, conflict may be isolated geographically to ensure that all conflicts do not arise within the same unit. Secondly, crises and conflicts may be dealt with sequentially, i.e., they can be spaced out intertemporally (i.e., over time) and can be tackled as and when they arise.

Five Goals:

Cyert and March go a step further and postulate that the firm may be pursuing the following five basic common goals:

(a) Production goal:

This goal will be set as a target for the period and will have two aspects: level and smoothness. For example, a division may be set up to reach a specified goal (say, producing 100 units of a commodity per day) with the restriction that output should not deviate by more than 10% from this figure.

(b) Inventory goal:

Business firms have to hold inventories because production and sales do not always coincide. It is absolutely essential to hold sufficient stocks of finished goods to meet consumer demand (as

and when it arises). At the same time, it is to be ensured that there is no excessive stock holding at high cost.

This goal may be specified in terms of a target level and upper and lower limits may be set.

(c) Sales goal:

This goal may be specified for the future either in volume or in value terms. Moreover, it may again be expressed in terms of a level and/or range.

(d) Market share goal:

The firm may set a target related to its share of the market (i.e., the industry of which it is a part for the product concerned). In some cases, this may be a substitute for the sales goal, but in other cases it may be a supplementary goal.

(e) Profit goal:

The purpose of setting this goal is twofold: to measure the effectiveness of management and to act as a source of payment of dividends to shareholders.

Search Activity:

The behavioural theory does not postulate goal maximization but seeks sub-optimization or attainable goals. Like Simon, Cyert and March state that firms compare performance with goals. What will be sought at any time largely depends on the level of aspirations. If the goal is met no action will be taken. But in practice the level of aspirations, in most cases, outstrip achievements.

In contrast, if achievement improves rapidly, then it may outstrip aspirations, which may then be revised upwards. In a like manner, where achievement worsens there may be a tendency for a downward revision of aspirations to occur. There is thus likely to be a certain adjustment of goals in the light of experience.

If, however, performance falls short of aspirations (i.e., the goal is not met) a search activity is initiated to identify the causes of non- attainment. If the reason is within the firm’s compass,

steps are taken to rectify the non-attainment (i.e., alternative courses of action will be stimulated). This imposes extra costs on the firm and will not be carried beyond the point where a satisfactory solution is found.

If a number of alternatives are found, the best one will be selected and no additional search will be carried out to see whether any further improvement is possible. If the reason is outside the control of the firm (e.g., depressed market conditions due to recession in the economy) the goal for the next period may be revised downward.

Organizational Slack:

Cyert and March argue that the coalition will remain viable so long as the payments are sufficient to keep the members within the organization. So it is absolutely essential to develop a satisfactory 'package' of money together with other benefits which will prevent the individual manager from looking for openings elsewhere.

In practice, however, there is likely to be disparity between the actual payment which is made and that which is necessary to keep the individual in the organization.

However, it is not that easy to calculate side payments accurately. Usually payments made, tend to exceed what is really necessary. Such excess payment is termed organizational slack. The concept is of considerable importance in rectifying the non-attainment of goals.

The following three examples bear relevance in this context:

(i) Shareholders are often paid more than what is required to keep them holding shares.

(ii) Wages are often in excess of those required to keep workers within the organization.

(iii) Executives in most cases are provided with luxuries and services in excess of what they really need.

Cyert and March argue that organizational slack (OS) grows naturally as the firm itself grows and prospers over time; it is not a deliberate objective. However, when circumstances become more and more adverse, OS provides the first means of making economies on costs.

Under difficult conditions there will be real pressure to reduce those side payments which can no longer be afforded at their original level. This slimming operation will, in all likelihood, reduce the organizational slack, while, at the same time, still leave the members of the organization sufficiently satisfied to stay within it.

Conclusion:

The behavioural approach of Cyert and March is a dynamic one.

Three major points that emerge from the approach are as follows:

1. The goals and objectives of a firm will emerge from the coalition in existence, at any given point of time.

2. However, there is likely to be a change in coalition, and with it, the objectives pursued by the organization as a whole.

3. Hence, not only different firms will have different objectives at the same point of time, but the same firm may have different aims and objectives at various time periods.

4.0 CONCLUSION

In this unit, we examined the theory of the firm which is the concept of microeconomics founded in neoclassical economics that states that a firm exists and make decisions to maximize profits. The theory holds that the overall nature of companies is to maximize profits meaning to create as much of a gap between revenue and costs. The unit also concludes that there are three main theories of the firm, these includes: 1. Profit-Maximizing Theories 2. Other Optimizing Theories 3. Non-Optimizing Theories.

5.0 SUMMARY

In this unit, we have discussed the meaning of a firm, the objectives of a firm, organization of a firm, we looked at the theory of the firm, which is a concept of microeconomics that stated that firm exist and make decision to maximize profit. The theories are based on the objective of profit maximization are derived from the neo-classical marginalist theory of the firm. The common

concern of such theories is to predict optimal price and output decisions which will maximize profit of the firm. In essence the theories based on the profit- maximization goal suggests that firm seeks to make the difference between total revenue (or sales receipt) and total cost (outgo) as large as possible.

6.0 TUTOR-MARKED ASSIGNMENT

1. Briefly give an overview definition of a firm and theory of the firm

2. Critically examine the profit maximization theory of the firm

3. Suppose that a firm has a linear demand function such as $P = 30 – Q$ and total cost is $TC = .10Q^2$. The unit cost functions will be $MC = Q$ and $AC = .10Q$. Find out the profit maximising level of price and output.

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UNIT 3 GROWTH OF THE FIRMS

CONTENTS

1.0 INTRODUCTION

A firm is an organization owned by one or jointly by a few or many individuals engaged in productive activities of any kind for the sake of profit or some other well-defined aim. Most of the firms owned by private individuals in manufacturing, trade, services will aspire for profits but there may be some others such as government companies where profit motivation will be secondary or missing altogether. Growth is an imported dimension of a firm whether it is small or a large one. Optimum growth may be the goal of the firm or an instrument to achieve some other goals like maximisation of profit or sales or managerial utility, etc. In this unit, the students will learn about the concept of growth of the firm, its relation to size and profitability and its constraints.

2.0 OBJECTIVES

After going through this unit, the students will be able to:

i. Explain the concept of (need for) growth of the firm

ii. Describe the factors affecting the size of the firm
iii. Examine the constraints to the growth of the firm
iv. Discuss the measurement of growth of an industrial unit

3.0 MAIN CONTENTS

3.1 THE CONCEPT OF NEED FOR GROWTH

The concept of growth of the firm refers to the continuous expansion of such firm with respect to its size in share capital, sales volume, scale of operation, profits and employments. which occurs over time. Most of the large firms that we see around were small when they were established. In the course of time they grew continuously and attained their present status. Some of them are big multinational giant corporations having assets or annual turnover of income much more than that of many nations in the world. Why do firms grow at all? This is a natural process as seen in biological growth of organism. There are certain market forces which compel a firm to grow over time.

3.1.1 The desirability of growth at macro level: - There is no doubt about the fact that every country in the world irrespective of its political ideology, pattern of economy, and size, aspires for rapid economic growth. There is no other social goal as important for a country as the economic growth which is conventionally measured as the annual rate of increase in the gross national product. The gross national product of a nation constitutes the final goods and services which are purchased by the consumers in order to meet their needs.

The need for an increase in quantity of such goods and services arises because of increase in population or improvement in the standard of living and purchasing power of existing population as a result of which consumption of goods and services increases. A country has to increase the necessary production capacity for goods and services to sustain the increase in their demand. This means growth of economy of the country. The increase in productive capacity for goods and services may be either by establishing new firms on by new entrepreneur or by expanding the existing size of firms in industries. When new firms join an industry, it implies an increase in competition among the sellers. The market power of an individual seller decreases with the increase in competition in the industries. This eventually may lead to a situation when every firm

loses its market power completely as we find under perfect competition. The firm will thus be a passive entity in the industries satisfying with only normal profit in the long run and thus maintaining its bare survival. The existing firms in the industry may not like such situation. They will rather expand themselves and block the entry of new firms in order to maintain or increase their market power for greater profits in future, provided there are no institutional restrictions for this. But established in business, they will be having numerous advantages over the new firms on several aspects such as resourcefulness, managerial ability, and markets etc. Because of this, or being better equipped in business than the new firms, they will avail the opportunity of growth by expanding themselves. It is a natural inducement which the market provides to the existing firms for growth.

Market Forces: - There is a strong case for growth of a firm under competitive pressure not only from the potential firms but from the existing ones also. Though growth, the firms will be able to enlarge its size. The larger the firm the more perfect the control it assumes over its environment and the higher the efficiency with which it plans its overall activities. A growing firm may be able to increase its market share in the industry. It may acquire more market power which will have favourable effects on earnings of the firm. Introduction of new products, new production processes and organisational techniques as parts of the growth strategy of the firm, will enhance the competitive power of the firm as a result of which it will be able to withstand or survive in the process of 'the creative destruction' as Schumpeter argued. Growth is therefore, very much desirable for the firm to stay in business otherwise it will be relegated to non-entity by the dynamic competitive forces of the market.

Ownership and Management: - In corporate economy where there is a separation between ownership and management, firms will be having growth as a major objective, since this suits the managers or what Galbraith calls them as 'the techno-structure'. Managers want more pay, perks and subordinates, etc., which accrue to them when the firm grows larger and larger. While maximising their own utility, the managers have to take the interest of the shareholders of the company into account. For this, they use a minimum profit constraint or stock market value constraint. If this overlooked by them and if profit or value of the firm in the stock market declines, the firm will be having a threat of being taken over by the other firms. In this case, the job security of the managers will be in danger. So what the managers of the firms would be doing is simply to maximise a managerial utility function in which the rate of growth of the firm

of the firm acts as a proxy for income, power, prestige and accompanying managerial gains from growth and the stock-market value acts as a proxy for job security. If we accept the proposition, then the firm has to grow as it will be the sole objective of the firm in the market.

On the basis of the situations or facts mentioned above, we may say that there is a genuine need for growth to a firm. The earning capacity of the firm increases when it grows. The market power of the firm increases with its growth which makes it stronger to face the competitive environment effectively. Growth is a long–run survival conditions for the firm particularly in an uncertain and constantly changing environment. It is a natural process but reinforced considerably by the competitive environment of the market. At any moment of time, there will be some firms that are stagnant or in decline, but it is precisely such firms whose survival potential will be most in doubt as compared to the growing firms. The firms in general, therefore, cannot ignore growth.

SELF ASSESSMENT EXERCISE

Briefly explain the desirability of growth for firms

3.2 SIZE OF THE FIRM

The size of the firm is one of such elements which affect the efficiency of the firm in a variety of ways, or there is a set of variables which affect the size of the firms in the industry. The size of the firm is an important determinant of efficiency and profitability. It is more common to classify different firms by their size as large and small firm.

3.2.1 Factors Determining the Size of Firm

Following are the main factors which determine the size of an industrial unit:

1. Scope of the Market: - The Size of firm depends upon the scope of the market. If the scope of market is limited, then the size of firm will also be limited and vice-versa.

2. Managerial Factors: - A small firm run by a proprietor or few partners can be managed by one man or a few. In companies a team of professional managers have specialisation in different aspect of the business such as finance, marketing, production, personnel management. to utilise the capacity of the management cadre fully the firm must have appropriately large in size otherwise indivisibility existing as a result of this will make the firm inefficient.

3. Employment Factors: - If a firm is large it will attract efficient and experienced employees which in turn will be affecting its overall productivity positively. Such firms offer more scope for promotion and variety of occupation, border benefits and facilities of work. The small firm may face scarcity of qualified and skilled staff in a greater degree than a larger one.

4. Nature of the Demand: - The size of firm depends on the nature of demand. If the nature of produced goods is perishable, then the size of firm would be small and vice-versa.

5. Nature of the Industry- The size of a firm depends upon the nature of the industry. From this point of view, consumer industry is comparatively at a small –scale compared to capital and basic industries, which carry operations at larger-scale. In addition, the nature of some firm is such that production is often not practically possible at small level. For example- Iron and Steel Industry, Jute Industry, Cotton Textile Industry, etc.

6. Localisation of Industrial Unit/ Firm: - If the industrial unit/Firm is situated in a densely populated area from where it can distribute finished goods at minimum cost, then the size of such unit will continue to increase till it reaches at an optimum point.

7. Economic Forces- Due to competition and continuous increase in the outlay of capital, the size of industrial unit is often larger than the earlier established similar venture.

8. Efficiency and Ability of Entrepreneur: - The size of any industrial unit/Firm depends upon the efficiency and ability of entrepreneur. If it is established by efficient and able entrepreneur, then the size of industrial unit would be large and vice-versa.

9. Financial Factor: - The size of a large firm measurement in terms of value of its assets will enable it to obtain long term finance and other credits at more favourable term then a smaller firm. Apart from this actual administrative cost of raising fund fall with the size of the issue i.e. quantity of money raised in the financial market decline with the level of output. A larger firm gets benefits from this. Greater the size of the firm will be the confidence of the financial market in the strength of the firm, hence lower will be the risk premium.

10. Risk Factor: - A business is normally full of risk and uncertainty. Larger the firm, stronger it will be to face such situation. Risk and certainty come in variety of ways. There may be an

unforeseen change in the demand they may be changed in the demand. There may be change in production, technology or product itself. Government policy and environment change.

Large firm can fight all such risk and uncertainty. It will be able to diversify its market, its product, its resources of supply without losing much of the economies of large scale production. A bigger firm will have better chances to off-set the random losses. It may be able to predict such losses on the basis of the law of average and maintain the necessary mechanism to avoid them.

11. Government Policy: - The size of an industrial unit/Firm is also affected by the government policy. If the government reserves the right to establish some of industries in public sector, then the size of such industries will be large enough due to monopoly of the Government. If the government has given permission for the establishment of industrial unit at small level, then the size of such units will be small. Likewise, discriminating tax policies also affect the size of an industrial unit.

3.3 Firm Size Vs Growth Rate

The size of the firm is a relevant determinant of its growth rate. The hypothesis that is normally used for this purpose is known as Gibrat's Law or law of proportionate effect. According to this law, the probability of a given firm's growing at a rate of say X% is independent of the size of that firm. This implies that the probability of a large firm growing at X rate per year is not different from the probability of a small firm growing at the same rate during the time period. It also implies that the variance of the growth rate of various size classes of firms should be equal, though this implication is not crucial in the context of the size and growth rate relationship.

To test the Gibrat's law empirically many attempts were made. Hymer and Pashigian and Mansfield tested it for the American firm where it was found valid.

That is, they found no systematic difference in the mean growth rate of different sized firms. However, the viability of the growth rate was found declining with the size of the firm. Similar conclusions were obtained for U.K. firms by Singh and Whittington but opposite result by Samuels i.e larger firms growing at faster rate than the smaller ones and uniform variances of the growth rate within a given size class for the smaller and larger firms. This means issue is still open for further enquiries, though overwhelming support is being seen for the validity of the

Gibrat's law in practice. The question arises why the smaller firms do not register faster rate of growth than the bigger one to take the advantages of the economies of scale till optimum size is achieved. Lack of finance due to low profitability may be one explanation for this. Further let us assume that larger firms show higher profitability than the smaller firms and growth depends on profitability. It means larger firm should grow at a faster rate than the smaller ones because of their high profitability. But this is also not seen in practice. it means either the larger firms are not more profitable or there is something else which hamper the growth of the larger firms. Marcus provided simple answer for this- According to him the growth rate of a firm depends on jointly on its profitability and market share. A large market share will restrict the growth of the firm because the larger firm's actions greatly affect the market conditions and market price. Further the large firm maybe afraid of being caught under monopoly laws if it grows more and more. Marcus empirically verified his explanation.

Attempts made by Kumar, Hall, Evans and Dunne and Allen in finding the relationship between the size of the firm and growth rate. Gibrats law is weakly rejected for the smaller firms in Hall's sample of firms and accepted for the larger firms. Evans found that firm growth decreases at a diminishing rate with firm size even after controlling for the exit of slow growing firms from the sample. Gibrat law therefore fails although the severity of the failure decreases with the firm size.

Thus in conclusion we may say that more empirical work required to say definitely about the relationship between size and growth of the firm.

3.4 Firm Size Vs Profitability

There is an interesting but questionable debate about this issue. According to one group of economists led by Steindl and Baumol, the market power conferred by large firm size and the increased money capital which put the firm in a higher level of imperfectly competing capital group will tend to increase the firm's profit rates.

According to this group, large firms are capable of en-cashing the investment opportunities which bring larger profit rates but the smaller firms cannot take them because of financial difficulties. Prof. Gale observed that the size of the firm when measured through its market share provides better product differentiation opportunities to it, allows the firm to operate in the oligopolistic bargaining power and other activities and provides scope to gain the advantages

from pecuniary benefits, advertisement and economic of scale or marketing if not in the decreasing zone of the cost curve. The net result of all these as one expects is to show greater profitability for the larger firms. The other group of economists led by Marshall, Robinson and Kaldor, however, contended that very large firms would experience lower profit rates because of diminishing returns to the fixed factors of production management.

The empirical evidences about this relationship are equally divided into these two opposite contentions. According to Hall and L. Weiss, firm's profit rates are determined by many factors, size of the firm being one of them. Using a cross-section of 341 out of 500 largest firms in U.S.A for the period 1956-1962, and multiple regression frameworks for the profitability equation, they discovered either a strong positive association between size of the firm and profit rate or a Â" shaped relationship between them. Haines, however, from similar data for the 500 largest US firms for the period of 1956-67 discovered negative correlation between the two variables. The studies conducted by H.O. Stekler, J.M. Samuels and D.J. Smyth, A.Sing and G.Whittington and Whittington also show the negative relationship or no relationship between the size of the firm and profitability. On the other hand, Gale and Shepherd by taking size of the firm in term of market share found the positive relationship between them. There are many other such studies supporting either controversy. Nothing can be said confidently about the size of the firm and profitability. Perhaps it will take more efforts to establish the fact on size of firm and profitability relationship.

SELF ASSESSMENT EXERCISE

What do you understand by the size of firm?

3.5 Constraints of the Growth of the Firm

The constraints to the size of the firm become operative when diseconomies of scale in production set are causing the average cost curve to rise. The factors that contribute in constraint the size of a firm are following-

Capital Formation: - Finance is the pre-requisite of the growth of the firm. Generally, more amount of capital is invested in big size of firm and less amount of capital is invested in small size of firm. There can be no growth in the absence of finance resources. In the backward

economy capital formation is very low. Capital equipment requires huge amount of financial resources. Due to lack of financial resources firms are unable to acquire adequate amount at reasonable rate so the firm's growth is very low in underdeveloped countries.

1. Market Forces: - Market forces support the large size of the industrial units. Large size of industrial units obtains adequate economies in purchase and sale at a large scale. But if size of an industrial unit is increased after that point then in place of economy losses will start.

2. Managerial Forces: – Assuming that the firm has achieved the appropriate size to have cent per cent efficiency of management. any increase in size of the firm beyond this point is likely to put strain on the management which may deteriorate the efficiency causing the average cost to rise. Decision take longer time communication between different units of the firm becomes more complex and indirect and the coordination process become less effective.

A management system of large firms will be hierarchical in nature. It will be a team of management with decentralisation in the decision making and action process. As the size of the firm increases the hierarchy pattern becomes more intensive in the sense that either it expands or the span of control at each hierarchy level increases. There will be more and more managers dealing with the complex administrative work at every level of the hierarchy or in every department of the firm. If size of the firm is large enough, it may be difficult to achieve these managerial functions efficiently. Again the size of the firm goes above the optimum level and more and more autonomy is given to the lower levels of decision making units, a power clash may develop among the managers to assert themselves. This may strain the relations among them and thus there is every possibility of the firm's efficiency to be impaired by the recalcitrance, excessive zeal, discontent and over ambitious of the individual administrative officials. All this leads to the internal inefficiency.

3. Lack of Initial Capital: - It may be very difficult for a new firm to raise the adequate funds for investment initially which restricts its choice to go for a large size. An established firm will be in a better position in this regard because of the economies of being established. So it can go on expanding its size. In general, financial constraints may be operative in limiting the size of majority of the firm in an industry.

4. Technical Forces: - There will be some technical constraints in expanding the size of the plant. Technical forces related to production process determined the technical size of the firm. If there is higher possibility of mechanisation in the industry larger will be the size of the technical industrial unit. Bigger the machines, greater will be the requirement of the space to house them. Hence, bigger will be the building which needs stronger foundation. It can be increased and benefits of economies can be obtained up to a limit, but it is not necessary that such sequence is maintained perfectly.

There is every possibility of having disproportionate growth of inputs when size of the plants expands over time. It makes the average cost curve to rise upward because of diseconomies of scale.

5. Labour Constraints: - Size of the firm depends upon the skilled labours. Small firm may not able to find the skilled labour at affordable wages. Large size firm can manage skilled labour and provide training them according to the requirement. Greater the size stronger will be the pressure from the trade union on the management of the firm. The union because of its strength may penalise the large firm for its size resulting in a welfare transfer of profits from the firms to its members in the form of higher wages. the instrument of strike and other ways of collective bargaining are generally used for such transfers. Afraid of such labour power which Galbraith conceived as countervailing power. The entrepreneur may prefer smaller plants at different location rather than one large plant at a particular place.

6. Transportation costs and Market Density: - Transport cost will be operative in limiting the size of the plant when their proportion in the total cost of production is quite high, market density for the product of the plant is low enough and inputs supply sources are widely spread. The firm has to pay higher transportation charges for getting the increased supplies of the material from the greater and greater distance if it expands its plant. It has to pay higher transportation cost for selling its output to the more distant consumers. After a certain optimal size of the plant such transportation cost will be significant factors for restraining further growth of the size because

of the diseconomies of scale.

7. Risk and Fluctuation: -Risk and fluctuation also affect the size of the firm. Risk and fluctuation are chiefly of three kinds: Economic uncertainty- the fluctuation in the price of the product and the demand of product; Natural calamities- Flood, drought, fire etc; Human uncertainties- war. Economic fluctuations are four kinds- cyclical changes, short-term changes taking place in demand, seasonal fluctuation the demand of some goods are only in a particular season, fixed changes big changes in the production method due to heavy capital investment, uncertain changes- due to uncertainties in demand. Forces of risks favour small size firms if they are compared to large size of units because small units can modify themselves according to the changes.

8. Personal Constraint: - Entrepreneurial ability and ambition play an important role in business. some entrepreneur prefer small size for their firm as such firm can be managed effectively by them. they will not prefer the large size of the firm as that needs more efforts, new skills of coordination, loss of effective control over the business and so on. They may not like all these extra troubles because either they are incapable of facing them or feel satisfied with their income.

9. Social and Institutional Constraint: - Greater the size of the firm more will be its monopoly power in the market. A government may not like to develop such situation, particularly in the private sector as this will be detrimental to the interest of the society. To avoid the concentration of economic power, the states normally regulate the size of the firm through legislations. Medium size firm preferred for the decentralisation of the economic power and restriction are put on the growth of larger firms. The economic efficiency viewed at from the social view point become the overriding factor to determine the size of the firm as against technical efficiency

SELF ASSESSMENT EXERCISE

Describe the main constraints of the growth of a firm.

3.6 DIFFERENT STANDARDS TO MEASURE THE SIZE OF AN INDUSTRIAL UNIT/ FIRMS

Following are the different standards which are used to measure the size of an Industrial Unit:

(1) Amount of Capital Invested: Total capital invested is a good standard to measure the size of a firm, Generally, more amount of capital is invested in big size of firm and less amount of capital is invested in small size of firm.

This standard is simple but cannot be said to apply universally because (i) it is difficult to have correct assessment of capital invested. And (ii) suitable adjustments will have to be made on changes in the value of money otherwise, this standard will present wrong conclusion.

(2) Volume of Output: It is an important standard for measuring the size of a firm, but this standard can only be used in those industries where same kind of goods are produced, for example- Sugar Industry, Cement Industry, Coal Industry, etc. Opposite to this, the industries where products are heterogeneous this basis is not suitable, for example- Chemical Industry, Engineering Industry, Machine Manufacturing Industry. etc.

(3) Value of Output: The size of industrial unit can also be measured on the basis of value of output. This standard is good for comparing the size of such industries which are having homogenous production, for this, value of output or total sales value can be taken. This standard also has two limitations:(i) In spite of equal area of two industrial units, their size may be different due to difference in cost value of output, (ii) Even on equal production in two years within as industrial unit, value of output may have differences due to change in market price.

(4) Number of Workers: The size of two different industrial units can also be compared on the basis of number of workers. On the basis of this standard, the industrial unit which has more number of workers, the size of that unit will be greater than the other industrial unit which has less number of workers. This standard is also not suitable because some industries are of labour intensive nature. As a result of this, the number of workers will be more in labour intensive industry. However, if it is compared to the number of workers with the capital intensive industries, then the result may be wrong.

(5) Amount of Power Used: The amount of power is also the standard of measurement of size of industrial units. It is natural that the amount of power used in large size industrial unit will be higher if it is compared to a small size industrial unit. This standard is also not suitable because it can be used only in those industrial units in which the progress of mechanisation is equal and there is use of same kind of power.

(6) Quantity of Raw Materials: The size of industrial units can also be measured of quantity of raw-materials used by the industrial units during certain period of time. But this standard can only be used on the conditions, when same kind of raw materials and production processes are used by the industrial units. For example, on the basis of crushing capacity of the sugarcane, the size of different sugar mills can be measured.

(7) Number of Plants and Equipment's: The size of industrial units can also be measured on the basis of number of plants and equipment's. For example, on the basis of spindles and handlooms, the size of cotton textile industrial units can be measured.

(8) Complexity of the Management Arrangement: The more complex the management arrangement, the larger will be the size of industrial units. The main defect of this standard is, that this basis is not the arithmetic estimation but qualitative estimation of industrial units.

From the above discussion, it is clear that there is as such no universal standard which can be used equally for all times, to all kinds of industrial units and to all set of circumstances. In reality, on the basis of any one standard, the industrial unit should be determined by selecting more than one standard.

SELF ASSESSMENT EXERCISE

Explain the different standards that are used to measure the size of an industrial unit/ firms

4.0 CONCLUSION

This unit concludes that, most of the large firms that we see around were small when they were established. In the course of time they grew continuously and attained their present status. Some of them are big multinational giant corporations having assets or annual turnover of income much more than that of many nations in the world. It's also concludes that the size of the firm is one of such elements which affect the efficiency of the firm in a variety of ways, or there is a set of variables which affect the size of the firms in the industry.

5.0 SUMMARY

In this unit, we have discussed the need for growth of the firm. We looked at firm size and growth rate, which stated that size of the firm is a relevant determinant of its growth rate. We

also discussed firm size and profitability, which believe that the market power conferred by large firm size and the increased money capital which put the firm in a higher level of imperfectly competing capital group will tend to increase the firm's profit rates. Constraint of the growth of the firm was also discussed, and this shows that most firms find it difficult to grow based on these constraints

6.0 TUTOR-MARKED ASSIGNMENT

1. Critically examine the constraints of growth of firm.

2. List and explain factors that determine the size of a firm

3. Explain the rationale for growth of the firm

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UNIT 4 DIVERSIFICATIONS

CONTENTS

1.0 INTRODUCTION

Diversification is an act of an existing entity branching out into a new business opportunity. This corporate strategy enables the entity to enter into a new market segment which it does not already operate in. The decision to diversify can prove to be a challenging decision for the entity as it can lead to extraordinary rewards with risks.

2.0 OBJECTIVES

After going through this unit, the students will be able to understand:

i. Meaning of diversification
ii. Why do firm diversify
iii. Types of diversification
iv. Advantages and disadvantages of diversification

3.0 Main Content

3.1 Meaning of Diversification

Diversification can be understood as the corporate strategy that a company implements to increase the market share and sales volume by introducing new products in new markets or industry, which is distinct from its core business.

3.2 Why Do Firms Diversify?

The following are the reasons why firms opt for diversification:

- For growth in business operations
- To ensure maximum utilization of the existing resources and capabilities
- To escape from unattractive industry environments

On gaining knowledge on the concept of diversification, let's have a look at the advantages and disadvantages of the same.

3.3 Types of Diversification Strategies

The following are the types of diversification strategies:

Horizontal Diversification

This strategy of diversification refers to an entity offering new services or developing new products that appeal to the firm's current customer base. For example, a dairy company producing cheese adds a new variety of cheese to its product line.

Vertical Diversification

This form of diversification takes place when a company goes back to a previous or next stage of its production cycle. For example, a company involved in the reconstruction of houses starts selling construction materials and paints. It may be forward integration or backward integration.

Concentric Diversification

In this form of a diversification strategy, the entity introduces new products with an aim to fully utilize the potential of the prevailing technologies and marketing system. For example, a bakery making bread starts producing biscuits.

Conglomerate diversification

In this form of diversification, an entity launches new products or services that have no relation to the current products or distribution channels. A firm may adopt this strategy to appeal to an all-new group of customers. The high growth scope and return on investment in a new market segment may prompt a company to take this option

SELF ASSESSMENT EXERCISE

List and explain types of diversification

3.4 Advantages and Disadvantages of Diversification

The following are the advantages of diversification:

- As the economy changes, the spending patterns of the people change. Diversification into a number of industries or product line can help create a balance for the entity during these ups and downs.
- There will always be unpleasant surprises within a single investment. Being diversified can help in balancing such surprises.
- Diversification helps to maximize the use of potentially underutilized resources.
- Certain industries may fall down for a specific time frame owing to economic factors. Diversification provides movement away from activities which may be declining.

The following are the disadvantages of diversification:

- Entities entirely involved in profit-making segments will enjoy profit maximization. However, a diversified entity will lose out due to having limited investment in the specific segment. Therefore, diversification limits the growth opportunities for an entity.
- Diversifying into a new market segment will demand new skill sets. Lack of expertise in the new field can prove to be a setback for the entity.
- A mismanaged diversification or excessive ambition can lead to a company over expanding into too many new directions at the same time. In such a case, all old and new sectors of the entity will suffer due to insufficient resources and lack of attention.

- A widely diversified company will not be able to respond quickly to market changes. The focus on the operations will be limited, thereby limiting the innovation within the entity.

On understanding the advantages and disadvantages of diversification, we'll see the types of diversification strategies.

SELF ASSESSMENT EXERCISE

What are the advantages and disadvantages of diversification?

4.0 CONCLUSION

This unit concludes that a diversification must be a well thought out step for an entity. It can boost the growth of the firm thereby leading it towards wealth maximization. However, it can also prove to be a costly failure for certain entities. A detailed analysis of the potential market must be conducted before opting for diversification

5.0 SUMMARY

In this unit, we have discussed diversification of a firm as the existing entity branching out into a new business opportunity. The decision to diversify can prove to be a challenging decision for the entity as it can lead to extraordinary rewards with risks. Also, advantages and disadvantages of diversification were well spell out.

6.0 TUTOR-MARKED ASSIGNMENT

1. What is diversification?
2. Why do firms diversify?
3. What are the advantages and disadvantages of diversification

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MODULE TWO

UNIT 1 INNOVATION

CONTENTS

1.0 INTRODUCTION

J.A. Schumpeter found innovation as the outstanding fact in the economic history of capitalistic society. Innovation is not confined to such a society only. It is a common feature in almost every economic system whether capitalistic or socialistic or something else. Science and technology are the instruments for rapid economic progress of a society. They become operative through innovation.

2.0 OBJECTIVES

At the end of this unit, the students will be able to:

v. Understand the concept of innovation

vi. Explain the process of innovation

vii. Understand the stages of innovation

viii. Explain the measurement of innovation activities

3.0 MAIN CONTENTS

3.1 THE PROCESS OF INNOVATION: CONCEPT AND RELATIONSHIP

Innovation is a multi-dimensional concept. There are three terms used in the process of innovation.

A. Invention

B. Innovation and

C. Imitation.

A. Invention: The most important concept of innovation is invention. An invention is the creation of new technology. By technology we mean any tool or technique, any product process, any physical equipment or method of doing or making, by which human capability is extended. It is an intellectual act which involves a perception of a new image, of a new connection between old conditions, or of a new area for action. All invention small or big are made for some practical uses. The process of adopting an invention in a practical use is called innovation. Innovation is a multi-dimensional concept.

B. Innovation: It is a very broad and multi-dimensional concept.

i. Product Innovation: - If the existing product line is changed by a firm, i.e. it introduces a new product with or without displacement of the old ones, then it is defined as product innovation.

ii. Process Innovation:-If new method is initiated to produce existing products then it is called process-innovation. Both of these are the element of technological Innovation.

iii. Market Innovation: - When a firm makes changes in its marketing strategy it is defined as market-innovation. The entrepreneur or manager when performs the act of innovation is called

iv. Innovator. He invests source for the innovation and takes the risks involved in that. This is very important role indeed a pivotal one for the growth of industries.

Thus the concept of innovation is very broad. In Schumpeter's terminology, it is the intrusion into the system of new production functions "by exploiting an invention or more generally an

untried technological possibility by opening up new source of supply of materials or new outlet for products by re-organising an industry and so on.

3. Imitation: -All the three terms-invention, innovation and imitation are the successive stages of the process of innovation or technological changes i.e. imitation is not possible without innovation which in turn is not possible without invention.

SELF ASSESSMENT EXERCISE

What are terms used in the process of innovation?

3.2 STAGES OF INNOVATION

The invention will be usually a lonely activity of an individual or team of individuals requiring intensive mental exploration. The entire process of innovation from invention to imitation comes under the Research and Development (R&D) activity of the firm There are three stages of innovation process. Each stage of this process is a process itself.

1. First Stage -The first stage of progress, that is invention, is carried on by individuals or corporate bodies like research institute, universities, government bureaus and companies. In a broad sense we may call invention as output of the research industry. if so, an invention will be a goal oriented activity. A government or corporation will be making invention for solving some social problems or for the sake of extra profit or money. To achieve the goal of invention a series of steps will be taken beginning from the definition of the problem, the alternative routes to its solution and finally the output in the form of the invention.

Development of a new process of product may involve a series of inventions or discoveries. Some of such inventions may be autonomous or random, coming into existence as 'by-products' of some other invention process. Uses of penicillin to kill some bacterial culture, vulcanisation of rubber, some uses of radiation are few examples of such inventions which have been developed in the past. All such invention will be unanticipated. They work backward from intriguing phenomena rather than forward from well-defined objectives. But once they come into existence, their applications become forward looking and goal oriented. The number of such inventions may not be much as compared to the induced inventions.

Some recent inventions which came into existence during and after 1950sare worthy of being mentioned here. Commercial jet aircrafts and container services revolutionalised movement of people and goods across countries, electronic mass media, internet and mobile telephony virtually shrinked the whole world, the boom of computerisation and information technology changes the lives of people and introduction of ATM brought the banks to doors of mass.

2. Second Stage: - Innovation is a logical extension of the first one. When an invention is made, its fruits are made available to the society through innovation. An entrepreneur or corporation comes forward, makes the required investments for the innovation. Innovation may be in product of process of manufacturing or any other activity of corporation. It involves risk and uncertainties. An innovation bears them and it is precisely on this ground that economists justify existence of excess profits for him.

Process-innovation and product innovation are two important types of innovation.

Process-innovation: - The necessity of process innovation arises when relative prices of factors of production change. If labour becomes costly, the firm may think of cost saving by adopting capital intensive technique and vice-versa. There will not be any R&D expenditure involved in this, as technology will not change. a firm may change the process of sequence or process completely to reduce the cost of production. Only equilibrium situation for the least cost combination output changes. Further if technology changes, this means a new production function causing a shift of the isoquants.

Product innovation: - Product innovation is necessitated because of a variety of reasons. Primarily, a product change may be stimulated either by change in relative prices of existing products or new technology. Change in consumer preference and cost of production are the sources of change in relative prices of the product. If product is costly for the firm and at the same time its prices decline in the market because of unfavourable circumstances hence is likely to be replaced by new one.

This stage of innovation is a planned one. It has a well-defined goal and the adaptation of the new technology or product to achieve the goal is an orderly management function of the firm. The process of innovation takes time and cost money. It is just like gambling where output of the game is uncertain, yet the activity is undertaken with a hope of future gains.

3. Third Stage: - The third stage of the process of technological change or innovation or diffusion. The innovation, initiated by an innovator, spreads in the market. The rate of diffusion depends on market structure. If technology is freely available, there are no rigid patent practices and investment requirements for new technology are not alarming, the rate of diffusion will be fairly high. On the other hand, if there are rigid patent practices and the government assistance in technological progress is negligible, then it will be expecting a low rate of diffusion of the innovation.

The process of technological change constitution the above three stage invention, innovation and imitation- may be different in different industries. Some industries provide better opportunities for innovation or change as compared to others.

SELF ASSESSMENT EXERCISE

Explain the three main stages of innovation

3.3 MEASUREMENT OF INNOVATION ACTIVITIES

Like any other economic activity, we need to define measurement of innovation in order to estimate its extent. There is no unique method of the measurement of innovation but researchers have tackled the problem by measuring either inputs, put in the process of research and development or the output of these activities. Following are some measurements for measuring innovation:

1. The number of scientist and engineers: - In this method the number of scientist and engineers, engaged in the R& D department is taken as a measurement of innovation activities. According to this method the greater the number of scientist and engineers more will be the R&D activities of the firm or research organisation.

Limitation of the method: - This index does not accept the contributions made by non-scientists or non-engineers. Similarly, an individual doing research work dependently, who neither belongs to a research organization nor is any corporate is to be left out by this index.

2. The Statistics of Research and Development Expenditure: - This is very simple and widely used method. In this method the statistics of expenditure on research and development is consider to measure of innovation activity. It may be absolute or a proportion of total annual budget of the firm. According to this method larger the volume of R&D expenditure more will

be the innovation activities, particularly at the first stage. The investment made by the firm for adapting invention whether related to processing technology or product variation at the second stage and third stage of innovation should be included in R&D expenditure otherwise it will be a partial index of measurement for innovation. This method is very useful if all R&D activities are in organised manner.

3. Number of Patents: - To measure the innovation or research and development activities one may use either the number of patents issued or sale of new products.

Limitation of the Method: - Limitation of this method are following: -

i. This method does not imitate innovation and diffusion stages properly.
ii. It does not reflect the quality of innovation.
iii. If there is no need to use the patent immediately then the innovation sequence of the invention may be deferred for some time.
iv. Registration of patent varies between firms and industries. There is no common pattern for the registration of patent. All inventions are not equally patentable
v. Inventions made by R&D departments of government and be used by all. A firm can use them for its innovation plans.
In spite of drawbacks the index is popular for empirical studies.

4. Sale of New Products: The index of sales of new product is another measurement of R&D output. This is also a partial index reflecting product side innovation. It does not explain changes in the process of manufacturing and saving of costs arising as a result of innovation. Some other methods of measuring innovation have also been suggested such as the frequency of publications in scientific or trade journals and estimation savings of inputs per unit output of an industry. Due to more short comings this measure has not been used very frequently. The final choice of the method to be used for measuring innovation is left to the convenience and judgment of the researchers.

SELF ASSESSMENT EXERCISE

Discuss the different methods measurement of innovation activities

4.0 CONCLUSION

In this unit, we have discussed innovation as the outstanding fact in the economic history of capitalistic society. We also, concludes that innovation is not confined to such a society only. It is a common feature in almost every economic system whether capitalistic or socialistic or something else. Three process of innovation were also discussed, these includes: Invention, Innovation and Imitation

5.0 SUMMARY

In this unit, we have discussed innovation and how it can help firms improve in their performance, also the process of innovation, the stages of innovation and measurement of innovation were well spell out.

6.0 TUTOR-MARKED ASSIGNMENT

1. What are the measurement of innovation
2. Critically examine the process of Innovation
3. Explain the main stages of Innovation

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UNIT 2 INVESTMENT ECONOMICS, RISK AND UNCERTAINTY

CONTENTS

1.0 INTRODUCTION

Investing is this kind of activity which can bring increased effects in the future on the basis of the benefits postponed in time. The benefits obtained in present time can be considered as constant, and the benefits being possible to achieve in the future are regarded only as the probable. Due to the fact that the investment decisions concern the future events, it is necessary to predict the changes which can appear on the market in surroundings of subjects taking the decisions about the realization of investment enterprise.

2.0 OBJECTIVES

At the of this unit, the students would be able to understand:

i. Economics Risk and Uncertainty
ii. Meaning of Risk and Uncertainty
iii. Factors that affect investment

3.1 MEANING OF ECONOMIC RISK AND UNCERTAINTY

Economic risk is the chance of loss because all possible outcomes and their probability of happening are unknown. Uncertainty exists when the outcomes of managerial decisions cannot

be predicted with absolute accuracy but all possibilities and their associated probabilities are known.

Economic uncertainty implies the future outlook for the economy is unpredictable. When people talk of economic uncertainty, they usually imply there is a high likelihood of negative economic events

3.2 MEANING AND TYPES OF RISK

Risk can be referred to like the chances of having an unexpected or negative outcome. Any action or activity that leads to loss of any type can be termed as risk. There are different types of risks that a firm might face and needs to overcome. Widely, risks can be classified into three types: Business Risk, Non-Business Risk, and Financial Risk.

1. **Business Risk:** These types of risks are taken by business enterprises themselves in order to maximize shareholder value and profits. As for example, Companies undertake high-cost risks in marketing to launch a new product in order to gain higher sales.
2. **Non- Business Risk:** These types of risks are not under the control of firms. Risks that arise out of political and economic imbalances can be termed as non-business risk.
3. **Financial Risk:** Financial Risk as the term suggests is the risk that involves financial loss to firms. Financial risk generally arises due to instability and losses in the financial market caused by movements in stock prices, currencies, interest rates and more.

Financial Risk is one of the high-priority risk types for every business. Financial risk is caused due to market movements and market movements can include a host of factors. Based on this, financial risk can be classified into various types such as Market Risk, Credit Risk, Liquidity Risk, Operational Risk, and Legal Risk.

- **Market Risk:**

  This type of risk arises due to the movement in prices of financial instrument. Market risk can be classified as Directional Risk and Non-Directional Risk. Directional risk is caused due to movement in stock price, interest rates and more. Non-Directional risk, on the other hand, can be volatility risks.

- **Credit Risk:**

  This type of risk arises when one fails to fulfill their obligations towards their counterparties. Credit risk can be classified into Sovereign Risk and Settlement Risk. Sovereign risk usually arises due to difficult foreign exchange policies. Settlement risk, on the other hand, arises when one party makes the payment while the other party fails to fulfill the obligations.

- **Liquidity Risk:**

  This type of risk arises out of an inability to execute transactions. Liquidity risk can be classified into Asset Liquidity Risk and Funding Liquidity Risk. Asset Liquidity risk arises either due to insufficient buyers or insufficient sellers against sell orders and buys orders respectively.

- **Operational Risk:**

  This type of risk arises out of operational failures such as mismanagement or technical failures. Operational risk can be classified into Fraud Risk and Model Risk. Fraud risk arises due to the lack of controls and Model risk arises due to incorrect model application.

- **Legal Risk:**

  This type of financial risk arises out of legal constraints such as lawsuits. Whenever a company needs to face financial losses out of legal proceedings, it is a legal risk.

SELF ASSESSMENT EXERCISE

List and explain types of Risk

3.3 MEANING OF UNCERTAINTY

Uncertainty is defined as doubt. When you feel as if you are not sure if you want to take a new job or not, this is an example of uncertainty. When the economy is going bad and causing

everyone to worry about what will happen next, this is an example of an uncertainty-which is a lack in expressing for sure the results of actions and decision. The application of probability to the uncertainties gives a quantification of the risk involved in the decision made. Uncertainty refers to epistemic situations involving imperfect or unknown information. It applies to predictions of future events, to physical measurements that are already made, or to the unknown. Uncertainty exists when the outcomes of managerial decisions cannot be predicted with absolute accuracy but all possibilities and their associated probabilities are known. Under conditions of uncertainty, informed managerial decisions are possible. Experience, insight, and prudence allow managers to devise strategies for minimizing the chance of failing to meet business objectives.

3.4 DIFFERENCE BETWEEN RISK AND UNCERTAINTY

1. Distinction in Nature:

Prof. Knight has said—" Uncertainty is an unknown risk, while Risk is a measurable uncertainty."

2. Probability of Quantitative Measurement:

Risk: Can be quantitatively measured by any form.

Uncertainty: Cannot be measured in any form.

3. Insurance and Insurability:

Risk: There are certain risks that can be fully covered by taking insurance policies such as fire, flood, draught, theft, robbery etc.

Uncertainties: While in uncertainty the insurance is not possible.

4. Transferability:

Risk: Risk can be transferred into another risk.

Uncertainty: But uncertainty cannot be transferred.

5. Elements of Cost:

Cost of Risk: According to Prof. Knight—" Cost of production includes the cost of risk bearing also. Entrepreneur does not get any profit for risk bearing.

Uncertainty: Uncertainty on the other-hand is not included in the cost of production The reality is that the profit is the reward of the entrepreneur for bearing uncertainty.

6. Subjective and Objective:

Risk is objective while uncertainty is subjective as Risk can be measured while Uncertainty can only be realised.

7. Knowledge of Alternatives:

In Risk: All the possible alternatives of a problem are known to the economists in advance.

In Uncertainty: But in uncertainty such previous knowledge is not possible.

8. Nature of Decisions:

Decisions taken under the conditions of uncertainty are more important than the Risk decisions taken under the conditions of Risk because measurement of alternatives is not possible in case of uncertainty.

SELF ASSESSMENT EXERCISE

What are the differences between risk and uncertainty?

4.0 CONCLUSION

In this unit, we examined economic risk and economic uncertainty. We conclude that Economic risk is the chance of loss because all possible outcomes and their probability of happening are unknown. Uncertainty exists when the outcomes of managerial decisions cannot be predicted with absolute accuracy but all possibilities and their associated probabilities are known. Also, an example of an uncertainty is when the economy is going bad and causing everyone to worry about what will happen next, uncertainty is a lack in expressing for sure the results of actions and decision.

5.0 SUMMARY

In this unit, we have discussed investment economics, risk and uncertainty, economic risk, economic uncertainty, types of risk and different between risk and uncertainty. All these were well spell out for the understanding of the risk and uncertainty in the business environment.

6.0 TUTOR-MARKED ASSIGNMENT

1. What is economic risk and uncertainty?
2. Critically examine the differences between risk and uncertainty
3. List and explain types of Risk

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UNIT 3 COST OF CAPITAL

CONTENTS

1.0 INTRODUCTION

An investor provides long-term funds (i.e., Equity shares, Preference Shares, Retained earnings, Debentures etc.) to a company and quite naturally he expects a good return on his investment. In order to satisfy the investor's expectations, the company should be able to earn enough revenue. Thus, to the company, the cost of capital is the minimum rate of return that the company must earn on its investments to fulfill the expectations of the investors.

If a company can raise long-term funds from the market at 10%, then 10% can be used as cut-off rate as the management gains only when the project gives return higher than 10%. Hence 10% is the discount rate or cut-off rate. In other words, it is the minimum rate of return required on the investment project to keep the market value per share unchanged. In order to maximise the shareholders' wealth through increased price of shares, a company has to earn more than the cost of capital. The firm's cost of capital can be determined by working out weighted average of the different costs of raising different sources of capital.

2.0 OBJECTIVES

At the end of this unit, the students would be able to know:

i. Meaning of Cost of Capital
ii. Classification of Cost of capital
iii. Important of Cost of Capital
iv. Measurement of Cost of Capital

3.0 MAIN CONTENTS

3.1 MEANING OF COST CAPITAL

As it is evident from the name, cost of capital refers to the weighted average cost of various capital components, i.e. sources of finance, employed by the firm such as equity, preference or debt. In finer terms, it is the rate of return, that must be received by the firm on its investment projects, to attract investors for investing capital in the firm and to maintain its market value.

In other word, the cost of capital is the minimum rate of return which a company is expected to earn from a proposed project so as to make no reduction in the earning per share to equity shareholders and its market price.

The factors which determine the cost of capital are:

- Source of finance
- Corresponding payment for using finance.

On raising funds from the market, from various sources, the firm has to pay some additional amount, apart from the principal itself. The additional amount is nothing but the cost of using the capital, i.e. cost of capital which is either paid in lump sum or at periodic intervals.

3.2 CLASSIFICATION OF COST OF CAPITAL

There are two classifications of cost of capital, these are:

1.**Explicit cost of capital:** It is the cost of capital in which firm's cash outflow is oriented towards utilisation of capital which is evident, such as payment of dividend to the shareholders, interest to the debenture holders, etc.

2.**Implicit cost of capital:** It does not involve any cash outflow, but it denotes the opportunity foregone while opting for another alternative opportunity. To cover the cost of raising funds

from the market, cost of capital must be obtained. It helps in assessing firm's new projects because it is the minimum return expected by the shareholders, lenders and debt holders for supplying capital to the business, as a consideration for their share in the total capital. Hence, it establishes a benchmark, which must be met out by the project. However, if a firm is incapable of reaping the expected rate of return, the value of shares in the market will tend to decline, which will lead to the reduction in the wealth of the shareholders as a whole.

SELF ASSESSMENT EXERCISE

Describe the term cost of capital

3.3 IMPORTANCE OF COST OF CAPITAL

The concept of cost of capital plays a vital role in decision-making process of financial management. The financial leverage, capital structure, dividend policy, working capital management, financial decision, appraisal of financial performance of top management etc. are greatly influenced by the cost of capital.

The following are the significance or importance of cost of capital

1. Maximisation of the Value of the Firm:

For the purpose of maximisation of value of the firm, a firm tries to minimise the average cost of capital. There should be judicious mix of debt and equity in the capital structure of a firm so that the business does not to bear undue financial risk.

2. Capital Budgeting Decisions:

Proper estimate of cost of capital is important for a firm in taking capital budgeting decisions. Generally, cost of capital is the discount rate used in evaluating the desirability of the investment project. In the internal rate of return method, the project will be accepted if it has a rate of return greater than the cost of capital.

In calculating the net present value of the expected future cash flows from the project, the cost of capital is used as the rate of discounting. Therefore, cost of capital acts as a standard for

allocating the firm's investible funds in the most optimum manner. For this reason, cost of capital is also referred to as cut-off rate, target rate, hurdle rate, minimum required rate of return etc.

3. Decisions Regarding Leasing:

Estimation of cost of capital is necessary in taking leasing decisions of business concern.

4. Management of Working Capital:

In management of working capital the cost of capital may be used to calculate the cost of carrying investment in receivables and to evaluate alternative policies regarding receivables. It is also used in inventory management also.

5. Dividend Decisions:

Cost of capital is significant factor in taking dividend decisions. The dividend policy of a firm should be formulated according to the nature of the firm— whether it is a growth firm, normal firm or declining firm. However, the nature of the firm is determined by comparing the internal rate of return (r) and the cost of capital (k) i.e., $r > k$, $r = k$, or $r < k$ which indicate growth firm, normal firm and decline firm, respectively.

6. Determination of Capital Structure:

Cost of capital influences the capital structure of a firm. In designing optimum capital structure that is the proportion of debt and equity, due importance is given to the overall or weighted average cost of capital of the firm. The objective of the firm should be to choose such a mix of debt and equity so that the overall cost of capital is minimised.

7. Evaluation of Financial Performance:

The concept of cost of capital can be used to evaluate the financial performance of top management. This can be done by comparing the actual profitability of the investment project undertaken by the firm with the overall cost of capital

SELF ASSESSMENT EXERCISE

What are the importance of cost of capital?

3.4 MEASUREMENT OF COST OF CAPITAL:

Cost of capital is measured for different sources of capital structure of a firm. It includes cost of debenture, cost of loan capital, cost of equity share capital, cost of preference share capital, cost of retained earnings etc.

The measurement of cost of capital of different sources of capital structure is discussed:

A. Cost of Debentures:

The capital structure of a firm normally includes the debt capital. Debt may be in the form of debentures bonds, term loans from financial institutions and banks etc. The amount of interest payable for issuing debenture is considered to be the cost of debenture or debt capital (K_d). Cost of debt capital is much cheaper than the cost of capital raised from other sources, because interest paid on debt capital is tax deductible.

The cost of debenture is calculated in the following ways:

(i) When the debentures are issued and redeemable at par: $K_d = r (1 – t)$

where K_d = Cost of debenture

r = Fixed interest rate

t = Tax rate

(ii) When the debentures are issued at a premium or discount but redeemable at par

$K_d = I/NP (1 – t)$

where, K_d = Cost of debenture

I = Annual interest payment

t = Tax rate

Np = Net proceeds from the issue of debenture.

(iii) When the debentures are redeemable at a premium or discount and are redeemable after ‘n’ period:

K_d

$I(1-t)+1/N(R_v – NP) / ½ (R_V – NP)$

where K_d = Cost of debenture.

I = Annual interest payment

t = Tax rate

NP = Net proceeds from the issue of debentures

Ry = Redeemable value of debenture at the time of maturity

Example:

(a) A company issues Rs. 1,00,000, 15% Debentures of Rs. 100 each. The company is in 40% tax bracket. You are required to compute the cost of debt after tax, if debentures are issued at (i) Par, (ii) 10% discount, and (iii) 10% premium.

(b) If brokerage is paid at 5%, what will be the cost of debentures if issue is at par?

(a) We know, Cost of Debenture $K_d = \frac{I}{NP}(1-t)$

(i) Issued at par : $K_d = \frac{\text{Rs. } 15,000}{\text{Rs. } 1,00,000}(1 - 0.4) = 0.09$ or 9%.

(ii) Issued at discount of 10%

$K_d = \frac{\text{Rs. } 15,000}{\text{Rs. } 90,000}(1 - 0.4) = 0.10$ or 10%

(iii) Issued at 10% premium

$K_d = \frac{\text{Rs. } 15,000}{\text{Rs. } 1,10,000}(1 - 0.4) = 0.0818$ or 8.18%.

(b) If brokerage is paid @ 5% and debentures are issued at par

$K_d = \frac{\text{Rs. } 15,000}{\text{Rs. } 95,000 \text{ (i.e., Rs. } 1,00,000 - \text{Rs. } 5,000)}(1 - 0.4) = 0.0947$ or 9.47%.

SELF ASSESSMENT EXERCISE

ZED Ltd. has issued 12% Debentures of face value of Rs. 100 for Rs. 60 lakh. The floating charge of the issue is 5% on face value. The interest is payable annually and the debentures are redeemable at a premium of 10% after 10 years.

What will be the cost of debentures if the tax is 50%?

B. Cost of Preference Share Capital:

For preference shares, the dividend rate can be considered as its cost, since it is this amount which the company wants to pay against the preference shares. Like debentures, the issue expenses or the discount/premium on issue/redemption are also to be taken into account.

(i) The cost of preference shares (K_P) = D_P / NP

Where, D_P = Preference dividend per share

NP = Net proceeds from the issue of preference shares.

(ii) If the preference shares are redeemable after a period of 'n', the cost of preference shares (K_P) will be:

$$K_P = \frac{D_P + \frac{1}{n}(R_V - NP)}{\frac{1}{2}(R_V + NP)}$$

where NP = Net proceeds from the issue of preference shares

R_V = Net amount required for redemption of preference shares

D_P = Annual dividend amount.

There is no tax advantage for cost of preference shares, as its dividend is not allowed deduction from income for income tax purposes. The students should note that both in the case of debt and preference shares, the cost of capital is computed with reference to the obligations incurred and proceeds received. The net proceeds received must be taken into account while computing cost of capital.

Example:

A company issues 10% Preference shares of the face value of Rs. 100 each. Floatation costs are estimated at 5% of the expected sale price.

What will be the cost of preference share capital (K_P), if preference shares are issued (i) at par, (ii) at 10% premium and (iii) at 5% discount? Ignore dividend tax.

Solution:

We know, cost of preference share capital (K_P) = D_P/P

(i) **When preference shares are issued at par** i.e., at Rs. 100 per share, $K_p = \frac{\text{Rs. } 10}{\text{Rs. } 95}$ = 0.1052 or 10.52%, where, D_p = 10% of Rs. 100 = Rs. 10, P = Rs. 100 – 5% of Rs. 100 = Rs. 95.

(ii) When preference shares are issued at 10% premium (i.e., at Rs. 110 per share)

$K_p = \frac{\text{Rs. } 10}{\text{Rs. } 104.50} = 0.0956$ or 9.56%,

where D_p = 10% of Rs. 100 = Rs. 10. P = Rs. 110 – 5% of Rs. 110 = Rs. 104.50.

(iii) When preference shares are issued at 5% discount (i.e., at Rs. 95 per share)

$K_p = \frac{\text{Rs. } 10}{\text{Rs. } 90.25} = 0.1108$ or 11.08%.

where D_p = 10% of Rs. 100 = Rs. 10, P = Rs. 95 – 5% of Rs. 95 = Rs. 90.25.

SELF ASSESSMENT EXERCISE

Ruby Ltd. issues 12%. Preference Shares of Rs. 100 each at par redeemable after 10 years at 10% premium.

What will be the cost of preference share capital?

C. Cost of Equity or Ordinary Shares:

The funds required for a project may be raised by the issue of equity shares which are of permanent nature. These funds need not be repayable during the lifetime of the organisation. Calculation of the cost of equity shares is complicated because, unlike debt and preference shares, there is no fixed rate of interest or dividend payment.

Cost of equity share is calculated by considering the earnings of the company, market value of the shares, dividend per share and the growth rate of dividend or earnings.

(i) Dividend/Price Ratio Method:

An investor buys equity shares of a particular company as he expects a certain return (i.e. dividend). The expected rate of dividend per share on the current market price per share is the cost of equity share capital. Thus the cost of equity share capital is computed on the basis of the present value of the expected future stream of dividends.

Thus, the cost of equity shares capital (K_e) is measured by:

K_e = where D = Dividend per share

P = Current market price per share.

If dividends are expected to grow at a constant rate of 'g' then cost of equity share capital

(K_e) will be $K_e = D/P + g$.

This method is suitable for those entities where growth rate in dividend is relatively stable. But this method ignores the capital appreciation in the value of shares. A company which declares a higher amount of dividend out of given quantum of earnings will be placed at a premium as compared to a company which earns the same amount of profits but utilizes a major part of it in financing its expansion programme.

Example:

XY Company's share is currently quoted in market at Rs. 60. It pays a dividend of Rs. 3 per share and investors expect a growth rate of 10% per year.

You are required to calculate:

(i) The company's cost of equity capital.

(ii) The indicated market price per share, if anticipated growth rate is 12%.

(iii) The market price, if the company's cost of equity capital is 12%, anticipated growth rate is 10% p.a., and dividend of Rs. 3 per share is to be maintained.

Solution :

We know, cost of Equity Capital $(K_e) = \frac{D}{P} + g$.

(i) $K_e = \frac{\text{Rs. } 3}{\text{Rs. } 60} + 0.10 = 0.05 + 0.10 = 0.15$ or 15%

(ii) Market Price (P) $= \frac{\text{Dividend (D)}}{\text{Cost of equity capital } (K_e) - \text{Growth rate (g)}}$

$= \frac{\text{Rs. } 3}{15\% - 12\%} = \frac{\text{Rs. } 3}{3\%} = \text{Rs. } 100.$

(iii) Market Price (P) $= \frac{\text{Rs. } 3}{12\% - 10\%} = \frac{\text{Rs. } 3}{2\%} = \text{Rs. } 150.$

SELF ASSESSMENT EXERCISE

The current market price of a share is Rs. 100. The firm needs Rs. 1,00,000 for expansion and the new shares can be sold at only Rs. 95. The expected dividend at the end of the current year is Rs. 4.75 per share with a growth rate of 6%.

Calculate the cost of capital of new equity.

(ii) Earnings/Price Ratio Method:

This method takes into consideration the earnings per share (EPS) and the market price of share. Thus, the cost of equity share capital will be based upon the expected rate of earnings of a company. The argument is that each investor expects a certain amount of earnings whether distributed or not, from the company in whose shares he invests.

If the earnings are not distributed as dividends, it is kept in the retained earnings and it causes future growth in the earnings of the company as well as the increase in market price of the share.

Thus, the cost of equity capital (K_e) is measured by:

$K_e = E/P$ where E = Current earnings per share

P = Market price per share.

If the future earnings per share will grow at a constant rate 'g' then cost of equity share capital (K_e) will be

$K_e = E/P + g.$

This method is similar to dividend/price method. But it ignores the factor of capital appreciation or depreciation in the market value of shares. Adjustment of Floatation Cost There are costs of floating shares in market and include brokerage, underwriting commission etc. paid to brokers, underwriters etc.

These costs are to be adjusted with the current market price of the share at the time of computing cost of equity share capital since the full market value per share cannot be realised. So the market price per share will be adjusted by (1 – f) where 'f' stands for the rate of floatation cost.

Thus, using the Earnings growth model the cost of equity share capital will be:

$K_e = E / P (1 – f) + g$

Example:

The share capital of a company is represented by 10,000 Equity Shares of Rs. 10 each, fully paid. The current market price of the share is Rs. 40. Earnings available to the equity shareholders amount to Rs. 60,000 at the end of a period.

Calculate the cost of equity share capital using Earning/Price ratio.

Solution :

We know, Cost of Equity Capital = $\frac{E}{P}$

E = Earnings per share = $\frac{\text{Rs. } 60,000}{10,000}$ = Rs. 6.

P = Current market price = Rs. 40.

Cost of Equity Capital (K_e) = $\frac{\text{Rs. } 6}{\text{Rs. } 40}$ = 0.15% or 15%.

SELF ASSESSMENT EXERCISE

A company plans to issue 10,000 new Equity Shares of Rs. 10 each to raise additional capital. The cost of floatation is expected to be 5%. Its current market price per share is Rs. 40.

If the earnings per share is Rs. 7.25, find out the cost of new equity.

D. Cost of Retained Earnings:

The profits retained by a company for using in the expansion of the business also entail cost. When earnings are retained in the business, shareholders are forced to forego dividends. The dividends forgone by the equity shareholders are, in fact, an opportunity cost. Thus retained earnings involve opportunity cost.

If earnings are not retained they are passed on to the equity shareholders who, in turn, invest the same in new equity shares and earn a return on it. In such a case, the cost of retained earnings (K_r) would be adjusted by the personal tax rate and applicable brokerage, commission etc. if any.

Therefore, $K_r = K_e (1 - t) (1 - f)$, where $K_e = \frac{D}{P} + g$

t = Shareholders personal tax rate.

f = rate of floatation cost.

Many accountants consider the cost of retained earnings as the same as that of the cost of equity share capital. However, if the cost of equity shares capital i9 computed on the basis of dividend growth model (i.e., D/P + g), a separate cost of retained earnings need not be computed since the cost of retained earnings is automatically included in the cost of equity share capital.

Therefore, $K_r = K_e = D/P + g$.

Example:

It is given that the cost of equity of a company is 20%, marginal tax rate of the shareholders is 30% and the Broker's Commission is 2% of the investment in share. The company proposes to utilise its retained earnings to the extent of Rs. 6,00,000.

Find out the cost of retained earnings.

Solution :

We know that cost of retained earnings

$K_r = K_e(1 - t)(1 - f)$ Here $K_e = 20\% = 0.20$

or $K_r = 0.20(1 - 0.30)(1 - 0.02)$ $t = 30\% = 0.30$

$= 0.1372$ or, 13.72%. $f = 2\% = 0.02$.

E. Overall or Weighted Average Cost of Capital:

A firm may procure long-term funds from various sources like equity share capital, preference share capital, debentures, term loans, retained earnings etc. at different costs depending on the risk perceived by the investors.

When all these costs of different forms of long-term funds are weighted by their relative proportions to get overall cost of capital it is termed as weighted average cost of capital. It is also known as composite cost of capital. While taking financial decisions, the weighted or composite cost of capital is considered.

The weighted average cost of capital is used by an enterprise because of the following reasons:

(i) It is useful in taking capital budgeting/investment decisions.

(ii) It recognises the various sources of finance from which the investment proposal derives its life-blood (i.e., finance).

(iii) It indicates an optimum combination of various sources of finance for the enhancement of the market value of the firm.

(iv) It provides a basis for comparison among projects as a standard or cut-off rate.

F. Computation of Weighted Average Cost of Capital:

Computation of Weighted Average cost of capital is made in the following ways:

(i) The specific cost of each source of funds (i.e., cost of equity, preference shares, debts, retained earnings etc.) is to be calculated.

(ii) Weights (i.e., proportion of each, source of fund in the capital structure) are to be computed and assigned to each type of funds. This implies multiplication of each source of capital by appropriate weights.

Generally, the-following weights are assigned:

(a) Book values of various sources of funds

(b) Market values of various sources of capital

(c) Marginal book values of various sources of capital.

Book values of weights are based on the values reflected by the balance sheet of a concern, prepared under historical basis and ignoring price level changes. Most of the financial analysts prefer to use market value as the weights to calculate the weighted average cost of capital as it reflects the current cost of capital.

But the determination of market value involves some difficulties for which the measurement of cost of capital becomes very difficult.

(iii) Add all the weighted component costs to obtain the firm's weighted average cost of capital.

Therefore, weighted average cost of capital (K_o) is to be calculated by using the following formula:

$K_o = K_1w_1 + K_2w_2 + \ldots\ldots\ldots\ldots$

where K_1, K_2 …….. are component costs and W_1, W_2 …….. are weights.

Example:

Jamuna Ltd has the following capital structure and, after tax, costs for the different sources of fund used:

Source	**Amount (Rs)**	**After-tax Cost**
Equity share capital	600,000	13%
Preference share capital	300,000	8%
Debentures	240,000	5%
Retained earnings	60,000	9%

You are required to calculate the Weighted Cost of Capital.

Solution:

Computation of Weighted Average Cost of Capital

Source (1)	Amount Rs (2)	Proportion (3)	After-tax Cost (4)	Weighted Cost (5) = (3) x (4)
Equity share capital	600,000	0.50	0.13	0.065
Preference share capital	300,000	0.25	0.08	0.02
Debentures	240,000	0.20	0.05	0.01
Retained earnings	60,000	0.05	0.09	0.0045
	120,000	1.00		0.0995

Therefore, Weighted Average Cost of Capital (Ko) = 0.0995 x 100 = 9.95%

4.0 CONCLUSION

In this unit, we examined cost of capital as the weighted average cost of various capital components, i.e. sources of finance, employed by the firm such as equity, preference or debt. In finer terms, it is the rate of return, that must be received by the firm on its investment projects, to attract investors for investing capital in the firm and to maintain its market value. We also discuss important of cost of capital which play a vital role in decision-making process of financial management. We also conclude that financial leverage, capital structure, dividend policy, working capital management, financial decision, appraisal of financial performance of top management etc. are greatly influenced by the cost of capital. We conclude the unit with various measurement of cost of capital.

5.0 SUMMARY

In this unit, we have discussed cost of capital, classification of cost of capital, important of cost of capital and measurement of cost capital. Cost of capital is classified into two, that is explicit cost of capital and implicit cost of capital. Explicit cost of capital is the cost of capital in which firm's cash outflow is oriented towards utilisation of capital which is evident, such as payment of dividend to the shareholders, interest to the debenture holders, etc. While Implicit cost of capital does not involve any cash outflow, but it denotes the opportunity foregone while opting for another alternative opportunity, important of cost of capital which play a vital role in decision-making process of financial management was also examined.

6.0 TUTOR-MARKED ASSIGNMENT

1. Ruby Ltd. issues 12%. Preference Shares of Rs. 100 each at par redeemable after 10 years at 10% premium. What will be the cost of preference share capital?

2. It is given that the cost of equity of a company is 10%, marginal tax rate of the shareholders is 20% and the Broker's Commission is 2% of the investment in share. The company proposes to utilise its retained earnings to the extent of Rs. 6,00,000. Find out the cost of retained earnings.

3. What are the importance of cost of capital?

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UNIT 4 SOURCES OF FINANCE

CONTENTS

1.0 INTRODUCTION

Financing is needed to start a business and ramp it up to profitability. There are several sources to consider when looking for start-up financing; first you need to consider how much money you need and when you will need it.

The financial needs of a business will vary according to the type and size of the business. For example, processing businesses are usually capital intensive, requiring large amounts of capital. Retail businesses usually require less capital

Sources of finance for business are equity, debt, debentures, retained earnings, term loans, working capital loans, letter of credit, euro issue, venture funding etc. These sources of funds are used in different situations. They are classified based on time period, ownership and control, and their source of generation. Sources of capital are the most explored area especially for the entrepreneurs who are about to start a new business. It is perhaps the toughest part of all the efforts.

OBJECTIVES

After going through this unit, the students would be able to:

i. Understand the meaning of sources of finance
ii. State and explain various sources of finance

2.0 MAIN CONTENTS

3.1 MEANING OF SOURCES OF FINANCE

Sources of finance is the provision of finance to a company to cover its short-term working capital requirements and longer-term fixed assets and investments. in financing their business operations, companies typically resort to a mix of internally generated funds and external capital.

Business simply cannot function without money, and the money required to make a business function is known as business funds. Throughout the life of business, money is required continuously. Sources of funds are used in activities of the business. They are classified based on time period, ownership and control, and their source of generation.

3.2 TYPES OF SOURCES OF FINANCE

Debt and equity are the two major sources of financing. Government grants to finance certain aspects of a business may be an option. Also, incentives may be available to locate in certain communities and/or encourage activities in particular industries.

3.2.1 EQUITY FINANCING

Equity involves a form of permanent investment in a company which and is not repaid by the company at a later date. Equity financing refers to the exchange a portion of the ownership of the business for a financial investment in the business. The ownership stake resulting from an equity investment allows the investor to share in the company's profits through dividends.

The investment should be properly defined in a formally created business entity. An equity stake in a company can be in the form of membership units, as in the case of a limited liability company or in the form of common or preferred stock as in a corporation. Companies may establish different classes of stock to control voting rights among shareholders.

Similarly, companies may use different types of preferred stock. For example, common stockholders can vote while preferred stockholders generally cannot. But common stockholders are last in line for the company's assets in case of default or bankruptcy. Preferred stockholders receive a predetermined dividend before common stockholders receive a dividend.

i. Personal Savings

The first place to look for money is your own savings or equity. Personal resources can include profit-sharing or early retirement funds, real estate equity loans, or cash value insurance policies.

ii. Life insurance policies - A standard feature of many life insurance policies is the owner's ability to borrow against the cash value of the policy. This does not include term insurance because it has no cash value. The money can be used for business needs. It takes about two years for a policy to accumulate sufficient cash value for borrowing. You may borrow most of the cash value of the policy. The loan will reduce the face value of the policy and, in the case of death, the loan has to be repaid before the beneficiaries of the policy receive any payment.

iii. Home equity loans - A home equity loan is a loan backed by the value of the equity in your home. If your home is paid for, it can be used to generate funds from the entire value of your home. If your home has an existing mortgage, it can provide funds on the difference between the value of the house and the unpaid mortgage amount. For example, if your house is worth $150,000 with an outstanding mortgage of $60,000, you have $90,000 in equity you can use as collateral for a home equity loan or line of credit. Some home equity loans are set up as a revolving credit line from which you can draw the amount needed at any time. The interest on a home equity loan is tax deductible.

iv. Friends and Relatives

Founders of a start-up business may look to private financing sources such as parents or friends. It may be in the form of equity financing in which the friend or relative receives an ownership interest in the business. However, these investments should be made with the same formality that would be used with outside investors.

v. Venture Capital: Venture capital refers to financing that comes from companies or individuals in the business of investing in young, privately held businesses. They provide capital to young businesses in exchange for an ownership share of the business. Venture capital firms usually don't want to participate in the initial financing of a business unless the company has management with a proven track record. Generally, they prefer to invest in companies that have received significant equity investments from the founders and are already profitable.

They also prefer businesses that have a competitive advantage or a strong value proposition in the form of a patent, a proven demand for the product, or a very special (and protectable) idea. Venture capital investors often take a hands-on approach to their investments, requiring representation on the board of directors and sometimes the hiring of managers. Venture capital investors can provide valuable guidance and business advice. However, they are looking for substantial returns on their investments and their objectives may be at cross purposes with those of the founders. They are often focused on short-term gain.

Venture capital firms are usually focused on creating an investment portfolio of businesses with high-growth potential resulting in high rates of returns. These businesses are often high-risk investments. They may look for annual returns of 25 to 30 percent on their overall investment portfolio. Because these are usually high-risk business investments, they want investments with expected returns of 50 percent or more. Assuming that some business investments will return 50 percent or more while others will fail, it is hoped that the overall portfolio will return 25 to 30 percent. More specifically, many venture capitalists subscribe to the 2-6-2 rule of thumb. This means that typically two investments will yield high returns, six will yield moderate returns (or just return their original investment), and two will fail.

vi. Angel Investors

Angel investors are individuals and businesses that are interested in helping small businesses survive and grow. So their objective may be more than just focusing on economic returns. Although angel investors often have somewhat of a mission focus, they are still interested in profitability and security for their investment. So they may still make many of the same demands as a venture capitalist. Angel investors may be interested in the economic development of a

specific geographic area in which they are located. Angel investors may focus on earlier stage financing and smaller financing amounts than venture capitalists.

vii. Government Grants

Federal and state governments often have financial assistance in the form of grants and/or tax credits for start-up or expanding businesses.

viii. Equity Offerings

In this situation, the business sells stock directly to the public. Depending on the circumstances, equity offerings can raise substantial amounts of funds. The structure of the offering can take many forms and requires careful oversight by the company's legal representative.

ix. Initial Public Offerings

Initial Public Offerings (IPOs) are used when companies have profitable operations, management stability, and strong demand for their products or services. This generally doesn't happen until companies have been in business for several years. To get to this point, they usually will raise funds privately (from the promoters of the company on) one or more times.

x.Warrants

Warrants are a special type of instrument used for long-term equity financing. They are useful for start-up companies to encourage investment by minimizing downside risk while providing upside potential. For example, warrants can be issued to management in a start-up company as part of the reimbursement package. A warrant is a security that grants its bearer the right to buy stock in the issuing company at a pre-determined (exercise) price at a future date (before a specified expiration date). Its value is the relationship of the market price of the stock to the purchase price (warrant price) of the stock. If the market price of the stock rises above the warrant price, the holder can exercise the warrant. This involves purchasing the stock at the warrant price. So, in this situation, the warrant provides the opportunity to purchase the stock at a price below current market price.

If the current market price of the stock is below the warrant price, the warrant is worthless because exercising the warrant would be the same as buying the stock at a price higher than the

current market price. So, the warrant is left to expire. Generally, warrants contain a specific date at which they expire if not exercised by that date.

3.2.1 DEBT FINANCING

Debt financing involves borrowing funds from creditors with the stipulation of repaying the borrowed funds plus interest at a specified future time. For the creditors (those lending the funds to the business), the reward for providing the debt financing is the interest on the amount lent to the borrower. Debt financing may be secured or unsecured. Secured debts have collateral (a valuable asset which the lender can attach to satisfy the loan in case of default by the borrower). Conversely, unsecured debt does not have collateral and places the lender in a less secure position relative to repayment in case of default. Debt financing (loans) may be short term or long term in their repayment schedules. Generally, short-term debt is used to finance current activities such as operations while long-term debt is used to finance assets such as buildings and equipment.

i. Friends and Relatives: Founders of start-up businesses may look to private sources such as family and friends when starting a business. This may be in the form of debt capital at a low interest rate. However, if you borrow from relatives or friends, it should be done with the same formality as if it were borrowed from a commercial lender. This means creating and executing a formal loan document that includes the amount borrowed, the interest rate, specific repayment terms (based on the projected cash flow of the start-up business), and collateral in case of default.

ii. Banks and Other Commercial Lenders: Banks and other commercial lenders are popular sources of business financing. Most lenders require a solid business plan, positive track record, and plenty of collateral. These are usually hard to come by for a start- up business. Once the business is underway and profit and loss statements, cash flow budgets, and net worth statements are provided, the company may be able to borrow additional funds.

iii. Commercial Finance Companies: Commercial finance companies may be considered when the business is unable to secure financing from other commercial sources. These companies may be more willing to rely on the quality of the collateral to repay the loan than the

track record or profit projections of your business. If the business does not have substantial personal assets or collateral, a commercial finance company may not be the best place to secure financing. Also, the cost of finance company money is usually higher than other commercial lenders.

iv. Government Programs: Federal, state, and local governments have programs designed to assist the financing of new ventures and small businesses. The assistance is often in the form of a government guarantee of the repayment of a loan from a conventional lender. The guarantee provides the lender repayment assurance for a loan to a business that may have limited assets available for collateral. The best known sources are the Small Business Administration and the USDA Rural Development programs.

V. Bonds: Bonds may be used to raise financing for a specific activity. They are a special type of debt financing because the debt instrument is issued by the company. Bonds are different from other debt financing instruments because the company specifies the interest rate and when the company will pay back the principal (maturity date). Also, the company does not have to make any payments on the principal (and may not make any interest payments) until the specified maturity date. The price paid for the bond at the time it is issued is called its face value.

When a company issues a bond it guarantees to pay back the principal (face value) plus interest. From a financing perspective, issuing a bond offers the company the opportunity to access financing without having to pay it back until it has successfully applied the funds. The risk for the investor is that the company will default or go bankrupt before the maturity date. However, because bonds are a debt instrument, they are ahead of equity holders for company assets.

SELF ASSESSMENT EXERCISE

List and discuss three sources of finance

4.0 CONCLUSION

In this unit, we examined sources of finance as the provision of finance to a company to cover its short-term working capital requirements and longer-term fixed assets and investments. in financing their business operations, companies typically resort to a mix of internally generated

funds and external capital. Sources of capital are the most explorable area especially for the entrepreneurs who are about to start a new business. It is perhaps the toughest part of all the efforts. We also examined the main types of sources of finance, that equity financing and debt financing.

5.0 SUMMARY

In this unit, we have discussed sources of finance, and the main types of sources of finance. These sources of finance for business are equity, debt, debentures, retained earnings, term loans, working capital loans, letter of credit, euro issue, venture funding etc. These sources of funds are used in different situations.

6.0 TUTOR-MARKED ASSIGNMENT

1. What are sources of finance?
2. Critically examine the main types of sources of finance

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MODULE THREE

UNIT 1 INDUSTRIAL MARKETING

CONTENTS

1.0 INTRODUCTION

The fundamentals of consumer marketing are equally applicable to the industrial marketing. The work of the industrial market is exclusively different, as all the forces of market that affect industrial demand. The managers of industrial market must react in a different way to change the markets, develop products to meet these changes, and market them in exclusively different ways to the target and sophisticate customers while maintaining corporate policies. Therefore, industrial marketers face many distinctive marketing situations not normally encountered in the consumer market. Further, the industrial market has been the backbone of the high standard of living enjoyed by consumers in past or since the industrial revolution at global level. It is dynamic and challenging in any nation ‘s economic growth and development. As and when the principles, knowledge, and practice of marketing cut across all industries, to market effectively in the industrial market than it becomes compulsory for the policy makers to study the industrial marketing differently and to understand the industrial marketing problems.

Industrial marketing is defined as the process of one business marketing a certain good or service to another business. This is not to be confused with consumer marketing, which is the process of a business marketing their goods or services to an individual for personal use

2.0 OBJECTIVES

At the end of this unit, the students are expected to have understand the:

i. The definition of Industrial Marketing
ii. Characteristics of Industrial and Consumer Marketing
iii. Demand in Industrial Market
iv. Types of Industrial Customers
v. Industrial Products and Services

3.0 MAIN CONTENTS

3.1 DEFINITION OF INDUSTRIAL MARKETING

The word Industrial Marketing is also treated as Business-to-Business Marketing, or Business Marketing, or Organizational Marketing. Industrial marketing/business marketing is to market the products and services to business organizations: manufacturing companies, government undertakings, private sector organisations, educational institutions, hospitals, distributors, and dealers. The business organizations, buy products and services to satisfy many objectives like production of goods and services, making profits, reducing costs, and, so on.

In contrary, marketing of products and services to individuals, families, and households is made in consumer marketing. The consumers buy products and services for their own consumption. Further, industrial marketing consists of all activities involved in the marketing of products and services to organizations that use products and services in the production of consumer or industrial goods and services, and to facilitate the operation of their enterprises.

The companies/selling organizations that sell steel, machine tools, computers, courier services, and other goods and services to business firms/buying organizations need to understand the buyers ‘needs, purchasing power/resources, policies, and buying procedures. They have to create value (benefit) for the buying organizations (customers) with products and services and focus on buying organizational needs and objectives. For example, a company manufacturing and marketing precision steel tubes to bicycle, a manufacturer is doing business marketing. Industrial marketer of the precision steel tube company must understand the needs of bicycle

manufacturers such as Hero Cycle and Atlas Cycle, in terms of their quality requirements, applications of tubes, availability or delivery on daily or weekly basis, and so on. Similarly, a small and proprietary firm, giving technical advice (or services) to paint-manufacturers is also doing business marketing.

The needs and objectives of industrial buyers are satisfied through the following exchange processes.

Product Exchange

The features of a product or service involved have a significant impact on the industrial exchange process. The ease of exchange depends upon the ability of the seller to identify the buyer ‘s needs and the product ‘s potential to satisfy those needs. If the exchange is good in terms of price, quality, quantity, and after sale services then it will give a positive symbol for the customer loyalty in terms of product/service loyalty.

Information Exchange

The information consists of technical, economic, and organisational questions: pre and post-sale maintenance and servicing must be exchanged to the participants of business organisations. Products and services must be planned and designed to serve customers efficiently. To achieve it, buyers and sellers tend to work together, exchanging product specific information over long periods of time.

Financial Exchange

The granting of credit or the need to exchange money from one currency to another at the time of dealing with foreign buyers/customers are included in this exchange.

Societal Exchange

Societal exchange is important to reduce uncertainty between buyer and seller, avoiding short-term difficulties, and maintaining the long-term exchange relationship to one another. A number of aspects of an agreement between buyers and sellers in the industrial market are based on arbitration and mutual trust, not fully formalized or based on legal criteria until the end of the transaction period.

3.2 CHARACTERISTICS OF INDUSTRIAL AND CONSUMER MARKETING

The basics of marketing management: deciding the target markets; finding out the needs and wants of the target markets, developing products and services to meet the requirements of those markets, and evolving marketing programmes or strategies to reach and satisfy target customers in a better and faster way than competitors apply to both consumer and industrial marketing. The industrial markets are geographically concentrated; the customers are relatively fewer; the distribution channels are short; the buyers (or customers) are well informed; the buying organisations are highly organized and use sophisticated purchasing techniques; the purchasing decisions are based on observable stages in industrial marketing. Industrial marketing is more a responsibility of general management in comparison to consumer marketing. Sometimes, it is difficult to separate industrial marketing strategy from the corporate (company) strategy. But in case of consumer marketing, many times the changes in marketing strategy are carried out within the marketing department, through changes in advertising, sales promotion, and packaging strategies. However, the changes in industrial marketing strategy generally have company-wide implications.

1.Market Characteristics

Basically, the significant differences exist between industrial and consumer market characteristics that affect the nature of industrial marketing. These differences are: size of market; geographic concentration; and competitive nature of the markets.

Size of the Market*:* Compared to the great number of households that constitute the mass market for consumer goods and services, In the case of industrial markets, it is common to find less than 20 companies to represent the total market for an industrial product or service. In fact, only three or four customers may comprise the major portion of a total market. For example, for a consumer product like toothpaste or soap, a mass market, consisting of all the households in Nigeria, exist. Further, in industrial arena, oligopsonistic buying organisations (very large firms) tend to dominate many markets such as, large power transformers or high-tension switchgears, there are limited numbers of customers-mainly State Electricity Boards, large private and public sector organisations. While there are relatively few industrial customers, they are larger in size, purchase larger quantities, and engage in this volume purchasing on a repeat basis.

Geographical Concentration: Industrial customers also tend to be concentrated in specific areas. Such concentration occurs mainly because of natural resources and manufacturing processes. For example, the geographic location of natural resources explains the concentration patterns of most energy-producing firms. Only a handful of counties in California, Oklahoma. Texas, and Louisiana produce the bulk of our gas and oil. Manufacturers whose production processes add weight to their products tend to locate near customers, while those whose processes subtract weight tend to locate near sources of input. Manufacturers of computers and other advanced electronic products present an interesting case of plant location. They tend to concentrate in areas that have advanced teaching and research facilities and desirable living locales such as the Silicon Valley in Banglore. Such locations are chosen to facilitate the attraction of intelligent, educated employees, who seek both intellectual challenges and physical pleasures.

Competitive Nature: An additional difference between the two markets is the nature of oligopsonistic buying. In the industrial arena, oligopsonistic buying organizations, organizations that are very large firms, tend to dominate many markets. For instance, the small number of large automobile producers in the United States purchase 60 percent of all synthetic rubber, 60 percent of all lead, and 72 percent of all plate glass produced in the United States. These oligopsonists ‘reactions to changes in one another's buying practices affect industrial marketing strategy decisions.

Due to the fact that technological or cost-effective advantages override geo-graphical considerations, industrial organizations are more directly involved in international purchasing. Therefore, the major finished goods for exports of industrialized nations tend to be industrial rather than consumer goods manufacturers. Industrial demand as well as industrial supply, therefore, is more apt to cross international boundaries than are demand and supply in the consumer market. However, because of increasing improvements in foreign technology and marketing skills, subsidized by government policies, worldwide competition makes it more difficult for Indian suppliers of industrial goods to compete not only in foreign markets, but domestically as well. Industrial marketers, then, are more subject to world political, economic, and competitive changes than are their consumer counterparts.

2 Product Characteristics

In industrial marketing, the products or services are generally technically complex and not purchased for personal use. They are purchased as components parts of the products and services to be produced or serve the operations of the organisations. Because of the importance given to the technical aspects of products, the purchases are made based on the specifications evolved by the buyers. The real risk in falling in love with the technical aspects of a product in industrial marketing is to ignore the flexibility in responding to customer's needs in a competitive market. Some companies, as a result, commit the serious mistake of trying to change the customer to fit the product. For example, the quality control manager of a ―cold rolled (C.R.) steel strip‖ manufacturing company informed an important customer (who used C.R. steel strip for the manufacture of luggage bags) that the customer was not justified in rejecting his company product, as it was as per the relevant Indian standard specifications and that the customer‘s product specifications were more rigorous than the Indian standard specifications. However, the customer refused to accept the product, as it was failing at the shop floor operations. The customer, therefore, not only returned the entire rejections but also cancelled the balance orders. Subsequently, other competitors supplied the product as per the needs and specifications of the customer, who placed orders with them. As compared to consumer marketing, industrial customers place a greater importance on service, that is, timeliness, certainly delivery or availability of product, because any delay in supply will have a significant impact on the production or operations.

3. Buyer Behaviour

In industrial marketing, the buying process is more difficult as compared to consumer marketing. The purchase decisions in industrial marketing are based on many factors, such as compliance with product specifications product quality, availability, timely supply, acceptable payment and other commercial terms cost effectiveness, after-sales service, and so on rather than on social and psychological needs. The buying decisions generally take a longer time and involve many individuals from technical, commercial/materials, and finance departments. After the initial offer made by a seller, there are negotiations and exchange of information between the specialists and representatives from both the buyer and the seller organisations. Therefore, inter-organisational contacts take place and interpersonal relationships are developed. The relationships between the sellers and buyers are highly valued and they become stable in the long run because of a high

degree of interdependence. Changes are few and occur relatively slowly. Buyers charge problems in searching out and qualifying suppliers. The cost of selecting a supplier who cannot meet delivery requirements or who delivers an unsatisfactory product can be high. Thus, the purchasing firm must be certain of a potential supplier ‘s technical, administrative, and financial capabilities.

In contrary, in consumer marketing the relationship between a buyer and a seller is non-personal. Consumers change their purchasing habits frequently and the buying decisions are always based on physiological, social and psychological needs of the members of a family household.

4. Channel Characteristics

Inventory or stock control is very much important factor in the business organisations therefore the distribution channels are needed more direct from the manufacturer to the customer in industrial marketing. There are a few channel alternatives, which are feasible in the industrial market than the consumer market. Often, the manufacturers use their own sales/marketing personnel to sell the products directly to major customers. But, in case of selling to small-scale customers or geographically scattered markets, many manufacturers use either distributors/dealers, or agents/representatives, which also helps in minimising the cost of marketing.

In case of consumer marketing, the channel of distribution is longer with multiple levels of intermediaries/middlemen, since the household consumers are geographically dispersed all over the country.

5. Promotional Characteristics

In consumer marketing, the emphasis is given on advertising whereas, in industrial (or business) marketing, the importance is given to the personal selling through the company‘s sales force. As a result, a much larger expenditure budget is provided for advertising in consumer marketing in comparison to industrial marketing. Advertising is used to lay a foundation for the sales call rather than serve as the primary communication tool. Sales people act more as consultants and technical problem solvers, utilizing in-depth product knowledge and technical understanding of the buyers‘ needs, whereas industrial advertising normally stresses more factual and technical data. Some industrial advertisers use television to reach potential consumers, the primary means

of reaching the market is through business magazines, traditional trade journals, and direct mail. Sales promotion activities tend to center on trade shows, trade fairs, catalogs and conducting technical seminars.

6. Price Characteristics

The products are sold through the intermediaries/middlemen to the consumers based on the price list of the manufacturer or the maximum retail price (MRP) for the packaged products in consumer marketing. Sometimes, the retailer reduces the price by passing on to the consumer a part of his discount due to different degrees of intensity of the competition. In industrial marketing, price is less critical factors for purchase decisions. Competitive bidding and price negotiations are very common in industrial marketing and financing arrangements are often considered part of pricing package. When there are no price negotiations in certain Government tenders, the competitive bidding (i.e. quoting a competitive price against a tender enquiry) becomes very important, as only the lowest bidders are considered for placement of orders. In most private sector and some Government organisations, price negotiations are held to decide the prices and the volume of orders to be placed on various supplier firms. The payment and other commercial terms are also negotiated at the time of price negotiation. Dealer discounts, and volume discounts on the price list of standard industrial products are widely used in industrial marketing.

The above discussion clarifies that there are many basic differences exist between consumer and industrial marketing. But, these differences in terms of characteristics do not make a complete analysis. Therefore, it is necessary to understand the concept of industrial demand in the market to analyse completely.

SELF ASSESSMENT EXERCISES

Explain the main characteristics of industrial and consumer marketing

3.3 DEMAND IN INDUSTRIAL MARKET

The demand for industrial products and services do not survive by itself. It is derived from the ultimate demand for consumer goods and services. Therefore, industrial demand is called derived demand. Sometimes, the demand for industrial product is called joint demand, when the demand for a product depends upon its use along with the existence of other product or products. Cross

elasticity of demand exists for some substitute products in industrial market. These concepts are detailed as follows:

1. Derived Demand

The single most important force in marketing of industrial products and services is derived demand. Industrial customers buy goods and services for making the use in producing other goods and services and finally produced product/service sold to the consumers. In industrial marketing, the demand for industrial goods and services is derived from consumer goods and services. For example, the demand for precision steel tubes does not exist in market. It is demanded for the production of bicycles, motorcycles, scooters, and furniture (steel tables and chairs), which are consumed by the consumers. Thus, the demand for precision steel tubes is derived from the forecast of consumer demand for bicycles, motor-cycles, scooters, and furniture. In case of capital goods, such as machinery and equipment (e.g. machine tools, textile machinery, leather machinery, etc.) that are used to produce other goods, the purchases are made not only for the current requirements, but also in anticipation of profit; form the future usage. If businessmen of feel that there may be a recession in near future, their purchases will be drastically curtailed. On the other hand, if the attitude of businessmen is favourable (i.e. they feel the business is on the upswing) their investment in capital goods and other industrial products will increase. Thus, the attitude of businessmen is very important, as it reflects the optimism or pessimism about the future. During the periods of recession, or reduced consumer demand, industrial firms reduce their inventories/stocks, or reduce the production, or do both. On the other hand, during the period of prosperity, there is an increased production and sales of consumer goods, which results in an increased demand for industrial goods. This may be the right time for price increases and building stocks as ready availability and shorter delivery period becomes very important. An. industrial marketing firm should be in close touched customers purchase, finance, quality, R&D and marketing departments, so as to get information on changes in customers‘sales, new product development, financial condition, and the quality of its products.

2. Joint Demand

Joint demand is common in the industrial market because it occurs when one industrial product is useful if other product also exists. For example, a pump sets cannot be used for pumping water, if the electric motor or diesel engine is not availab1e. Similarly, the department of

telecommunication (DoT), which requires a complete kit, consisting of different items, for joining the underground telecom cables, cannot buy only some of the items from a supplier as it does not content the kit. Thus, some industrial products do not have industrial demand, but are demanded only if the other products are available from the industrial supplier.

3. Cross-Elasticity of Demand

Simply, elasticity is the change in demand from a change in price. The demand for most of the industrial goods can be inelastic (i.e. insensitive to changes in prices) for a particular industry, but at the same time, highly elastic (i.e. sensitive to changes in prices) for individual suppliers. This is because, the total industry demand comes from the united needs of all the customers rather than price, and hence it is relatively inelastic. Though, between the various suppliers, a slight change in the price by one firm may create a major change in the quantity and thereby, be highly elastic for anyone firm. Cross-elasticity of demand is the reaction of the sales of one product to a price change in another product. This concern presents in both consumer and industrial marketing, but it is more imperative in industrial marketing as it can have a dramatic impact on the marketing strategy of an industrial firm. For example, the demand for aluminum is related to the prices of wood and steel for the doors and window frames, as they are close substitutes. Apart from other advantages of aluminum doors and windows, the cost comparison with steel and wooden door and window frames play an important role in the purchase decisions in the construction of houses, commercial offices, factories, hotels, hospitals, and so on. Aluminum extrusion companies regularly collect the information on cost of steel and wood, and advertise the advantages of use of aluminum in terms of negligible maintenance cost, elegant looks, environment, friendly in comparison to wood, and so on. Whenever there is a change in the price of aluminum due to changes in excise duty or other input costs, there is an impact on the sales of doors and windows made out of wood or steel. The reverse is applicable for changes in the prices of steel or wood. Thus, the marketing persons working in the aluminum extrusion companies should recognize that the cross-elasticity of demand exists for their products. If the cross-elasticity of substitute products is high, it indicates that these products compete in the same market. An industrial marketer must know how the demand for his products is likely to be affected by the changes in the prices of substitute products. Because of the unique characteristics of derived demand, the industrial marketing persons would anticipate any increase or decrease in the demand for their products, based on the changes in the demand for their customers' products.

They must know that existence of cross-elasticity of demand for their products so as to recognise both direct and indirect competition.

It ought to be clear after going through this lesson that industrial marketing is more multifarious than consumer marketing and the marketing success depends on understanding the intricacies involved in it. Industrial marketing strategy has company-wide implications and is, therefore, more of a general management function, affecting the various departments or functions in an organisation.

SELF ASSESSMENT EXERCISE

Describe the types of demand in industrial market

3.4 TYPES OF INDUSTRIAL CUSTOMERS

Industrial customers are normally classified into four groups: (i) Commercial Enterprises, (ii) Governmental Agencies, (iii) Institutions, and (iv) Co-operative Societies.

1. Commercial Enterprises

Commercial enterprises are private sector, profit-seeking organisations such as IBM, General Motors, Computer Land, and Raven Company, purchase industrial goods and/or services for purposes other than selling directly to ultimate consumers. However, since they purchase products for different uses, it is more useful from a marketing point of view to define them in such a way as to understand their purchasing needs at the time of examination of the varieties of products they purchase and how marketing strategy can be developed to meet their needs.

Thus, it is more logical to look at commercial enterprises: (i) industrial distributors or dealers, (ii) original equipment manufacturers (OEMs), and (iii) users. As and when, these categories tend to overlap; are useful to the industrial marketer because they point out the ways of uses of products and services in buying firms.

2. Industrial Distributors and Dealers

Industrial distributors and dealers take title to goods; thus, they are the industrial marketer ‘s intermediaries; acting in a similar capacity to wholesalers or even retailers. the intermediaries not only serve the consumer market but also they serve other business enterprises, government

agencies, or private and public institutions. They purchase industrial goods and resell them in the same form to other industrial customers.

3. Original Equipment Manufacturers (OEMs)

These industrial customers purchase industrial goods to incorporate OEMs into the products they produce. For instance, a tyre manufacturer (say, MRF), who sells tyres to a truck manufacturer (say, TELCO), would consider the truck manufacturer as an OEM. Thus, the product of the industrial marketer (MRF) becomes a part of the customer ‘s (TELCO ‘S) product.

4. Users

An industrial customer, who purchases industrial products or services, to support its manufacturing process or to facilitate the business operations is referred as a user. For example, drilling machines, press, winding machines, and so on are the products which support manufacturing process, whereas the products which facilitate the operations of business like computers, fax machines, telephones, and others.

In addition to above, sometimes there may be overlapping of categories means a manufacturer can be a user or an OEM. For example, a car manufacturer buys a drilling machine to support the manufacturing operation and is referred to as a user. The same car manufacturer also buys batteries which is incorporated into cars and hence, it can be also referred to as an OEM.

5. Government Customers

In India, the largest purchasers of industrial products are Central and State Government departments, undertakings, and agencies, such as railways, department of telecommunication, defense, Director General of Supplies and Disposal (DGS&D), state transport undertakings, state electricity boards, and so on. These Government units purchase almost all kind of industrial products and services and they represent a huge market.

6. Institutions

Public and private institutions such as hospitals, schools, colleges, and universities are termed as institutional customers. Some of these institutions have rigid purchasing rules and others have more flexible rules. An industrial marketing person needs to understand the purchasing practice of each institute so as to be effective in marketing the products or services.

7. Cooperative Societies

An association of persons forms a cooperative society. It can be manufacturing units (e.g. Cooperative Sugar Mills) or non-manufacturing organisations (e.g. Cooperative Banks, Cooperative Housing Societies). They are also the industrial customers.

3.5 INDUSTRIAL PRODUCTS AND SERVICES

The industrial products and services are classified into three broad groups: (i) materials and parts, (ii) Capital items, (iii) Supplies and services; discussed as follows:

1. Materials and Parts

Goods that enter the product directly consist of raw materials, manufactured materials, and component parts. The purchasing company, as part of manufacturing cost treats the cost of these items.

Raw Materials: These are the basic products that enter in the production process with little or no alternations. They may be marketed as either OEMs or user customer. For instance, when a large bakery purchases natural gas to fire the ovens that are used to produce cakes, it is a user customer. When the same firm purchases sugar for processing the cakes, it is an OEM.

Manufactured Materials: Manufactured materials include those raw materials that are subjected to some amount of processing before entering the manufacturing process e.g., Acids, fuel oil, and steel that are the basic ingredients of many manufacturing activities. For example, an aluminum extrusion unit buys aluminum billets to manufacture aluminum-extruded products such as door and window frames, by using an extrusion press. Thus, aluminum billets are called manufactured materials.

Component Parts: Component parts such as electric motors, batteries and instruments can be installed directly into products with little or no additional changes. When these products be sold to customers who use them in their production processes, they are marketed as OEM goods. The component parts are also sold to the dealers or distributors, who resell them to the replacement market. For example, MICO spark plugs are sold to a truck or car manufacturer, as well as to automotive dealers/distributors throughout India.

2. Capital items

Capital items are used in the production processes and they wear out over certain time frame. Generally, they are treated as a depreciation expense by the buying firm or user customers. These are classified as follows:

Installations/Heavy Equipment: Installations are major and long-term investment items such as factories, office buildings and fixed equipments like machines, turbines, generators, furnaces, and earth moving equipment. These items are shown in the balance sheet as plant and equipment, and are fixed assets to be depreciated over a period of years if they are absolutely purchased. However, if these are leased, the purchaser treats the cost for tax purpose as an expense. As the unit purchase price of capital items is high, borrowing money for a period of time, which is roughly equivalent to the expected life of the fixed assets, finances these items.

Accessories/Light Equipment: Light equipment and tools which have lower purchase prices and are not considered as part of fixed plant, are power operated hand tools, small electric motors, dies; jigs, typewriters and computer terminals. Purchases of accessories are either considered as current expenses with purchase prices taken as operating expenses in the year purchased, or they may be considered as fixed assets and therefore, depreciated over a period of few years.

Plant and Buildings: These are the real estate property of a business/ organisation. It includes the firm ‘s offices, plants (factories), warehouses, housing, parking lots, and so on.

3. Supplies and Services

Supplies and services sustain the operation of the purchasing organisation. They do not become a part of the finished product. They are treated as operating expenses for the periods in which they are consumed.

Supplies: Items such as paints, soaps, oils and greases, pencils, typewriter ribbons, stationery and paper clips come under this category. Generally, these items are standardized and marketed to a broad section of industrial users.

Services: Companies need a broad range of services like building maintenance services, auditing services, legal services, courier services, marketing research services and others.

SELF ASSESSMENT EXERCISE

What the types of industrial products and services?

4.0 CONCLUSION

In this unit, we examined industrial marketing as the process of one business marketing a certain good or service to another business. This is not to be confused with consumer marketing, which is the process of a business marketing their goods or services to an individual for personal use. Industrial marketing/business marketing is to market the products and services to business organizations: manufacturing companies, government undertakings, private sector organisations, educational institutions, hospitals, distributors, and dealers. The unit also conclude by discussing characteristics of industrial marketing, demand in industrial marketing, types of industrial consumer and industrial product and services

5.0 SUMMARY

In all, the concept of industrial marketing may be referred as marketing of goods and services to business organisations: manufacturing companies, service organisations, institutions and middlemen in private and public sector organisations, and Government undertakings. The differences between industrial and consumer marketing exist in certain characteristics such as market, product, buyer behavior, channel, promotional, and price. The demand for industrial products is derived from the ultimate demand for consumer goods and services. It is, therefore, called as derived demand. Joint demand occurs when one industrial product is required, if other product also exists. Cross-elasticity of demand is the reaction of the sales of one product to a price change in another product.Also, selling in the industrial market is complicated by a broad spectrum of customers. Commercial enterprises, governmental organizations, and institutions give buying responsibility to individuals who are quite knowledgeable in their particular markets

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the concept of joint demand and cross-elasticity of demand with examples from industrial marketing

2. Examine the types of industrial products and services

3.List and explain types of industrial customers

4. Explain the main characteristics of industrial and consumer marketing

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UNIT 2 PRICING AND MARKETING PUBLIC GOODS

CONTENTS

1.0 INTRODUCTION

Even though new technology creates positive externalities so that perhaps one-third or one-half of the social benefit of new inventions spills over to others, the inventor still receives some private return. What about a situation where the positive externalities are so extensive that private firms could not expect to receive any of the social benefit? This kind of good is called a public good. Spending on national defense is a good example of a public good. Let's begin by defining the characteristics of a public good and discussing why these characteristics make it difficult for private firms to supply public goods. Then we will see how government may step in to address the issue.

2.0 OBJECTIVES

By the end of this unit, the students will be able to:

- Identify a public good using non-excludable and non-rivalrous as criteria
- Explain the free rider problem
- Identify several sources of public goods

3.0 MAIN CONTENTS

3.1 Definition of Public Goods

Economists have a strict definition of a public good, and it does not necessarily include all goods financed through taxes. To understand the defining characteristics of a public good, first consider

an ordinary private good, like a piece of pizza. A piece of pizza can be bought and sold fairly easily because it is a separate and identifiable item. However, public goods are not separate and identifiable in this way.

Pure public goods: Goods that are perfectly non-rival in consumption and are non-excludable Non-rival in consumption: One individual's consumption of a good does not affect another's opportunity to consume the good. Non-excludable: Individuals cannot deny each other the opportunity to consume a good. Impure public goods: Goods that satisfy the two public good conditions (non-rival in consumption and non-excludable) to some extent, but not fully.

3.2 Characteristics of a Public Goods

Public goods have two defining characteristics: they are non excludable and non rivalrous. The first characteristic, that a public good is non-excludable, means that it is costly or impossible to exclude someone from using the good. If Larry buys a private good like a piece of pizza, then he can exclude others, like Lorna, from eating that pizza. However, if national defense is being provided, then it includes everyone. Even if you strongly disagree with America's defense policies or with the level of defense spending, the national defense still protects you. You cannot choose to be unprotected, and national defense cannot protect everyone else and exclude you.

The second main characteristic of a public good, that it is non-rivalrous, means that when one person uses the public good, another can also use it. With a private good like pizza, if Max is eating the pizza then Michelle cannot also eat it; that is, the two people are rivals in consumption. With a public good like national defense, Max's consumption of national defense does not reduce the amount left for Michelle, so they are non-rivalrous in this area.

A number of government services are examples of public goods. For instance, it would not be easy to provide fire and police service so that some people in a neighborhood would be protected from the burning and burglary of their property, while others would not be protected at all. Protecting some necessarily means protecting others, too.

Positive externalities and public goods are closely related concepts. Public goods have positive externalities, like police protection or public health funding. Not all goods and services with

positive externalities, however, are public goods. Investments in education have huge positive spillovers but can be provided by a private company. Private companies can invest in new inventions such as the Apple iPad and reap profits that may not capture all of the social benefits. Patents can also be described as an attempt to make new inventions into private goods, which are excludable and rivalrous, so that no one but the inventor is allowed to use them during the length of the patent.

SELF ASSESSMENT EXERCISE

What are the two key characteristics of public goods?

3.3 The Free Rider Problem of Public Goods

Private companies find it difficult to produce public goods. If a good or service is non-excludable, like national defense, so that it is impossible or very costly to exclude people from using this good or service, then how can a firm charge people for it?

When individuals make decisions about buying a public good, a free rider problem can arise, in which people have an incentive to let others pay for the public good and then to "free ride" on the purchases of others. The free rider problem can be expressed in terms of the prisoner's dilemma game, which is discussed as a representation of oligopoly in Monopolistic Competition and Oligopoly. Say that two people are thinking about contributing to a public good: is it in production or distribution? Rachel and Samuel. When either of them contributes to a public good, such as a local fire department, their personal cost of doing so is $4 and the social benefit of that person's contribution is $6. Because society's benefit of $6 is greater than the cost of $4, the investment is a good idea for society as a whole. The problem is that, while Rachel and Samuel pay for the entire cost of their contribution to the public good, they receive only half of the benefit, because the benefit of the public good is divided equally among the members of society. This sets up the prisoner's dilemma illustrated in Table 1

Table 1. Contributing to a Public Good as a Prisoner's Dilemma

	Samuel (S) Contribute	Samuel (S) Do Not Contribute
Rachel (R) Contribute	R pays $4, receives $6, net gain +$2 S pays $4, receives $6, net gain +$2	R pays $4, receives $3, net gain –$1 S pays $0, receives $3, net gain +$3
Rachel (R) Do Not Contribute	R pays $0, receives $3, net gain +$3 S pays $4, receives $3, net gain – $1	R pays $0, receives $0 S pays $0, receives $0

If neither Rachel nor Samuel contributes to the public good, then there are no costs and no benefits of the public good. Suppose, however, that only Rachel contributes, while Samuel does not. Rachel incurs a cost of $4, but receives only $3 of benefit (half of the total $6 of benefit to society), while Samuel incurs no cost, and yet he also receives $3 of benefit. In this outcome, Rachel actually loses $1 while Samuel gains $3. A similar outcome, albeit with roles reversed, would occur if Samuel had contributed, but Rachel had not. Finally, if both parties contribute, then each incurs a cost of $4 and each receives $6 of benefit (half of the total $12 benefit to society). There is a dilemma with the Prisoner's Dilemma, though. See the Work it Out feature.

SELF ASSESSMENT EXERCISE

What is the free rider problem?

3.4 The Role of Government in Paying for Public Goods

The key insight in paying for public goods is to find a way of assuring that everyone will make a contribution and to prevent free riders. For example, if people come together through the political process and agree to pay taxes and make group decisions about the quantity of public goods, they can defeat the free rider problem by requiring, through the law, that everyone contributes.

However, government spending and taxes are not the only way to provide public goods. In some cases, markets can produce public goods. For example, think about radio. It is non excludable, since once the radio signal is being broadcast, it would be very difficult to stop someone from receiving it. It is non rivalrous, since one person listening to the signal does not prevent others from listening as well. Because of these features, it is practically impossible to charge listeners directly for listening to conventional radio broadcasts.

Radio has found a way to collect revenue by selling advertising, which is an indirect way of "charging" listeners by taking up some of their time. Ultimately, consumers who purchase the goods advertised are also paying for the radio service, since the cost of advertising is built into the product cost. In a more recent development, satellite radio companies, such as Sirus XM, charge a regular subscription fee for streaming music without commercials. In this case, however, the product is excludable—only those who pay for the subscription will receive the broadcast.

Some public goods will also have a mixture of public provision at no charge along with fees for some purposes, like a public city park that is free to use, but the government charges a fee for parking your car, for reserving certain picnic grounds, and for food sold at a refreshment stand.

In other cases, social pressures and personal appeals can be used, rather than the force of law, to reduce the number of free riders and to collect resources for the public good. For example, neighbors sometimes form an association to carry out beautification projects or to patrol their area after dark to discourage crime. In low-income countries, where social pressure strongly encourages all farmers to participate, farmers in a region may come together to work on a large irrigation project that will benefit all. Many fundraising efforts, including raising money for local charities and for the endowments of colleges and universities, also can be viewed as an attempt to use social pressure to discourage free riding and to generate the outcome that will produce a public benefit.

3.5 Positive Externalities in Public Health Programs

One of the most remarkable changes in the standard of living in the last several centuries is that people are living longer. Thousands of years ago, human life expectancy is believed to have been

in the range of 20 to 30 years. By 1900, average life expectancy in the United States was 47 years. By 2015, life expectancy is 79 years. Most of the gains in life expectancy in the history of the human race happened in the twentieth century.

The rise in life expectancy seems to stem from three primary factors. First, systems for providing clean water and disposing of human waste helped to prevent the transmission of many diseases. Second, changes in public behavior have advanced health. Early in the twentieth century, for example, people learned the importance of boiling bottles before using them for food storage and baby's milk, washing their hands, and protecting food from flies. More recent behavioral changes include reducing the number of people who smoke tobacco and precautions to limit sexually transmitted diseases. Third, medicine has played a large role. Immunizations for diphtheria, cholera, pertussis, tuberculosis, tetanus, and yellow fever were developed between 1890 and 1930. Penicillin, discovered in 1941, led to a series of other antibiotic drugs for bringing infectious diseases under control. In recent decades, drugs that reduce the risks of high blood pressure have had a dramatic effect in extending lives.

These advances in public health have all been closely linked to positive externalities and public goods. Public health officials taught hygienic practices to mothers in the early 1900s and encouraged less smoking in the late 1900s. Many public sanitation systems and storm sewers were funded by government because they have the key traits of public goods. In the twentieth century, many medical discoveries came out of government or university-funded research. Patents and intellectual property rights provided an additional incentive for private inventors. The reason for requiring immunizations, phrased in economic terms, is that it prevents spillovers of illness to others—as well as helping the person immunized.

4.0 CONCLUSION

In this unit, we examined public goods as perfectly non-rival in consumption and are non-excludable. Non-rival in consumption: One individual's consumption of a good does not affect another's opportunity to consume the good. Non-excludable: Individuals cannot deny each other the opportunity to consume a good. Impure public goods: Goods that satisfy the two public good conditions (non-rival in consumption and non-excludable) to some extent, but not fully. We also

discussed the characteristics of a public goods and role played by government in paying for public goods.

5.0 SUMMARY

A public good has two key characteristics: it is non excludable and non rivalrous. Non excludable means that it is costly or impossible for one user to exclude others from using the good. Non rivalrous means that when one person uses the good, it does not prevent others from using it. Markets often have a difficult time producing public goods because free riders will attempt to use the public good without paying for it. The free rider problem can be overcome through measures to assure that users of the public good pay for it. Such measures include government actions, social pressures, and specific situations where markets have discovered a way to collect payments.

6.0 Tutor-Marked Assignment

1. What are the two key characteristics of public goods?
2. Name two public goods and explain why they are public goods.
3. What is the free rider problem?
4. Explain why the federal government funds national defense.

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UNIT 3 GOVERNMENT INTERVENTION IN INDUSTRY

CONTENTS

1.0 INTRODUCTION

Many economists believe that intervention of government in the market place does not solve but create problems. However, there are also economists who argue that intervention of government in an economy is essential. Government may sometimes take regulatory actions in order to interfere with decisions made by individuals and group of individuals concerning social and economic issues. This influence of government made to interrupt and affect the way financial markets and industries operate is known as government intervention

2.0 OBJECTIVES

By the end of this unit, the students will be able to:

1. Understand the meaning of Government intervention
2. Objectives for Government intervention in Industry
3. Instruments of Government Intervention
4. Rationales for Economic Regulation
5. Effects of Government intervention in Industry

3.0 MAIN CONTENTS

3.1 DEFINITION OF GOVERNMENT INTERVENTION

Government intervention is any action carried out by the government or public entity that affects the market economy with the direct objective of having an impact in the economy, beyond the mere regulation of contracts and provision of public goods.

Government intervention advocates defend the use of different economic policies in order to compensate the flaws of the economic system that give way to large economic imbalances. They believe the Law of Demand and Supply is not sufficient in order to ensure economic equilibriums and government intervention should be used to assure a correct functioning of the economy. Examples of these economic doctrines include Keynesianism and its branches such as New Keynesian Economics, which relay heavily in fiscal and monetary policies, and Monetarism which have more confidence in monetary policies as they believe fiscal policies will have a negative effect in the long run. On the other hand, there are other economic schools that believe that governments should not have an active role in the economy, and therefore should limit its intervention, as they believe it will have a negative impact in the economy. They believe that the economy should be left to run in a laissez-faire way and it will find its optimal equilibrium. Advocates of none or limited intervention include liberalism, the Austrian school and New Classical Macroeconomics.

3.2 OBJECTIVES FOR GOVERNMENT INTERVENTION

There are many different objectives that governments might pursue by way of intervention in private markets. These objectives fall under a few broad categories that characterize many of the efforts at government regulation. The following are some of the more commonly observed regulatory objectives.

i. Maximize social welfare

Among the most common set of objectives for government regulatory policy is the maximization of social welfare through the remediation of various types of market failure. For example, agents can gain market power through the creation of monopolies, cartels, or other forms of organization that limit the benefits from competitive markets and trade. Natural monopolies are

one such type of market failure that has been prevalent throughout the historical development of transportation networks, often due to the high fixed costs of developing infrastructure.

ii. Macro-economic objectives

A second set of objectives that are pursued primarily by national governments revolve around macroeconomic performance. Macroeconomic objectives include efforts to control inflation, for example through the adoption of monetary policy. They also include efforts to counteract the effects of economic cycles, for example by adopting policies to maintain employment during periods of recession. Some governments may also seek to actively control their country's balance of payments through the use of policies aimed at promoting or discouraging exports or imports (e.g. through tariffs and subsidies).

iii. Socio-economic objectives

Government may also intervene in order to promote a range of socio-economic objectives. Many of these objectives may be motivated by concerns over fairness, such as efforts to achieve a desired income distribution, or a desire to provide a basic standard of service to all citizens, such as programs that offer mobility to people with mental or physical disabilities. Other interventions may be designed to promote safety where it is thought that market participants are unable to account for certain types of risk. An example of this in the United States is the Consumer Product Safety Commission (CPSC), an agency that has the authority to regulate the sale and manufacture of thousands of consumer products. Still other socio-economic objectives may include things like industrial policy, where governments intervene to promote certain sectors of the economy, or even to promote individual industries or firms.

Other objectives

Apart from the three categories of objectives for intervention listed above, governments may intervene for other reasons broadly related to national interests. Some interventions are undertaken to promote national unity, such as the construction of the Transcontinental Railroad in the US during the Civil War. The provision of national defense which, as noted above is an important type of public good, is almost universally seen as grounds for government intervention.

Finally, some interventions are undertaken in order to promote national prestige. Efforts in many world cities and their respective countries to attract the summer or winter Olympic Games, which may often involve the development of expensive new infrastructure projects, might fall into this category.

SELF ASSESSMENT EXERCISE

Briefly explain the main objectives for government intervention

3.3 INSTRUMENTS OF GOVERNMENT INTERVENTION

Governments have many different instruments of intervention at their disposal in order to pursue the types of objectives outlined in the previous section. These may range in scope from simple instruments such as exhortation and information provision to actual ownership and operation of enterprises in certain industries. Regulation is among these instruments and will be introduced in the context of some of the more common instruments of intervention.

Moral suasion: Moral suasion is an instrument of economic policy, is the act of persuading a person or group to act in a certain way through rhetorical appeals, persuasion, or implicit & explicit threats—as opposed to the use of outright coercion or physical force. In economics, it is sometimes used in reference to central banks.

• speeches, conferences, information,

• advisory and consulting bodies,

• studies/research

• reorganizing agencies

Governments and politicians may influence policy outcomes in ways that involve little or no direct expenditure or regulatory action. The provision of information by itself may sometimes be enough to influence desired outcomes. Public speeches and exhortation may sometimes be used as a way to influence support for a particular policy.

The use of exhortation to influence policy outcomes is one example of a set of policy instruments collectively referred to as moral suasion. Moral suasion strategies may rely on a variety of mechanisms in order to enhance policy success, but they tend to have common elements of the

use of persuasion (such as appealing to moral authority or community spirit), as opposed to outright coercion, in order to achieve desired outcomes.

In addition to exhortation, several other types of instruments of moral suasion are frequently used. These include the promotion of research, organization of academic or professional conferences on a given topic, the establishment of advisory and consulting bodies, and the reorganization of existing agencies. Where regulatory bodies are involved, the threat of regulation (if not actual use) can sometimes be used in order to achieve compliance. While moral suasion in general does not serve as a good substitute for more direct economic incentives, it can complement other types of policy instruments in order to increase the chances of policy success. Romans identifies two necessary conditions for the success of a moral suasion policy:

1. The public must support the government's position

2. The population(s) to be persuaded must be small

Recent successful efforts to promote recycling and discourage smoking include large elements of moral suasion

Government expenditures

One of the more common methods of government intervention is to provide direct expenditures in order to ensure the production of goods considered socially beneficial. Government expenditures may be justified on the grounds that they promote the provision of public goods or quasi-private goods that have some public good aspects, such as education. Grants and subsidies may be used to encourage the production of a good by public or private sector. Often these instruments are combined with the direct public provision of facilities. For example, the US federal government makes grants to state and local governments for the provision of highway and public transit networks, paid for largely with revenues from the Highway Trust Fund. In most cases, the recipients of these funds are public entities that build and maintain these networks. A common rationale for the public provision of these networks is that they display characteristics of natural monopolies.

Regulation - economic and other regulation

Governments may also reserve the right to regulate certain activities for economic, social or other purposes. In the transportation sector, for example, many industries have market structures that inherently limit entry and can lead to concentration or monopoly (e.g. railroads, airlines). Rather than provide these services directly, many governments have chosen instead to maintain private provision, subject to some form of regulation. In the US, the power to regulate transportation derives mostly from the Commerce Clause of the US Constitution.

There are many instruments that governments may use in order to implement and enforce regulation. Most government regulatory bodies promulgate rules or guidelines in order to set standards of firm behavior in a regulated industry. Fines and penalties may be used as tools of compliance in order to punish violations of established rules. In the context of international trade, where sovereign nations may have no formal legal powers over their trading partners, taxes and tariffs may be used in order to influence trade activities. These instruments may also be used by voluntary associations that govern trade activities, such as the European Union and the World Trade Organization.

Government ownership and/or control of enterprise

Where other forms of regulation are deemed infeasible for dealing with potential market failure problems, governments may simply choose to directly provide a good or service through a public agency or state-owned enterprise (sometimes referred to as a crown corporation). The use of public ownership may allow governments to set more efficient prices in cases where production is subject to strong scale economies, or where regulation of an activity through conventional means is particularly difficult. Government provision of a good may rely on direct ownership and operation, or may involve some form of private involvement, perhaps through a lease arrangement with the public owner.

SELF ASSESSMENT EXERCISE

Critically examine the instruments of government intervention

3.4 RATIONALES FOR ECONOMIC REGULATION

Economic regulation is an attempt by government to deliberately alter the allocation of resources and distribution of incomes away from that which would have occurred in the absence of such regulation. It is thus a means by which government can attempt to substitute its judgment of what

constitutes a 'proper' allocation of resources and distribution of income for the outcome yielded by the market. Transportation had been a heavily regulated industry in the US until recently. There are two major opposing theories on why economic regulations exist, consumer protection and industry protection, which are discussed below.

Consumer Protection

The traditional and ideal view is that regulation is a device for protecting the public against the adverse effects of monopoly. This view, as described by Posner, is commonly referred to as the public interest theory of regulation. Nominally, the main objective is to maximize social welfare by correcting market failure, which may occur in several forms. For example, governments may choose to regulate monopolies in order to force them to produce the level of output that maximizes social welfare. Monopolies may arise for a couple of reasons. In some cases, an industry might be inherently "monopolistic" due to the existence of economies of scale, limited markets, or requirements for high levels of initial investment, which may deter entrants. In other cases, industries may exhibit high fixed costs(indivisibilities), common and/or joint costs, which make them prone to monopoly. Another consumer protection rationale for the provision of regulation is the need to correct for externalities. Where negative externalities like pollution are present and serious enough to merit intervention, governments may intervene to correct these externalities by regulating the quantity of pollution emitted, or by setting higher prices to induce less production/consumption of the externality.

Industry Protection

The contrasting and more recent view, that of regulatory capture, is that regulation is procured by politically effective groups (assumed to be composed of the members of the regulated industry itself), for their own protection. The reasoning behind this view is that industry attempts to acquire regulation mainly because regulation will help them generate economic rents. Furthermore, producers in an industry are more likely to have an incentive to influence regulatory activities, given their greater financial interest relative to individual consumers. Thus, producers are far more effective in pressuring government than are general interest consumer groups. Stigler argues that producers essentially "capture" regulatory agencies, stating that "as a rule, regulation is acquired by the industry and is designed and operated for the industry and not

for the "public interest". Therefore, regulatory commissions end up "protecting" industry from consumers, conferring benefits on producers that they would not be able to obtain in more competitive markets. Stigler's ideas were formalized in a later paper by Peltzman

3.5 EFFECTS OF GOVERNMENT INTERVENTION

The effect of government intervention may be positive as well as negative. And given below are few points that show both positive and negative effects.

1. Eliminate market failure

Exploitation of environment by industries is one of the pressing problems of modern world. It is impossible to stop environment unfriendly activities of industries in a laissez faire economic model. However, if government intervenes in economy, such deeds can be controlled and environmental pollution can be abolished. This way, a major market failure can be eliminated with the help of intervention of government

2. Prevent economic swings

Economy is dynamic in nature. Economic fluctuations are unpredictable and inevitable. No individual or group of individuals can ever prevent fluctuations or swings in economy. However, government can help prevent economic swings from getting worse. Involvement of government keeps economy on a balanced track and prevents people from experiencing extreme recessions.

3. Improve market infrastructure

Roads, rail, electricity, water, communication, etc. are important infrastructures that are needed to carry out business activities effectively and efficiently. In this modern world, it is nearly impossible to efficiently run any business firms in absence of these infrastructures.

In a laissez faire economic model, people and companies are free to make any decisions related to their business. However, people won’t be able to pay for the decisions related to construction and improvement of infrastructures for from their own pocket. Thus, government must interfere with economy in order to develop market infrastructure of the nation.

4. Regulation of monopoly power

Monopoly is a state where all or almost all of the market of a particular good or service is controlled by a single company.

If such situation exists in laissez faire market, there are chances that the producers set very high prices and the product becomes unattainable for the consumers of low-income group. Companies may exploit their monopoly power by paying low wages to workers.

Such issues can be easily abolished by the government. The government can either regulate strict laws or establish competing companies in order to regulate monopoly.

5. Equitable Re-distribute of income and wealth

Monopoly power tends to grow in absence of government intervention. Since the power grows at the cost of workers' efforts and consumers' loss rather than ability of the producers, inequality is created in the market.

Government intervention promotes competition, increase economic efficiency and thus promote equitable or fairer distribution of income throughout the nation.

6. Re-direct Economic growth

Government intervention in economy creates different rules and regulations that the individuals or groups of individuals are bound to perform.

Personal freedom of making decisions on how to act and spend is obstructed with the introduction of laws and rules. It becomes harder for individuals to expand their financial activities and thus there will be reduction in economic growth of the nation.

7. Lack of market discipline

In a laissez faire economy, businessmen make business decisions on their own for their utmost benefit. Officials or government personnel may lack the same market discipline as that of an accomplished businessman, and thus government may fail to utilize scarce resources efficiently.

Government is also liable to make inappropriate decisions under the influence of pressure of political groups, and may end up spending nation's budget on inefficient projects leading to inefficient outcome.

SELF ASSESSMENT EXERCISE

List and explain effects of government intervention

3.0 CONCLUSION

In this unit, we examined government intervention as way where government sometimes take regulatory actions in order to interfere with decisions made by individuals and groups of individuals concerning social and economic issues. This influence of government made to interrupt and affect the way financial markets and industries operate is known as government intervention. The unit also discussed the main objectives for government intervention and effects of government intervention in an economy.

4.0 SUMMARY

In this unit, we have discussed government intervention, objectives for government intervention, instrument for government intervention, rational for government intervention. Government intervention is any action carried out by the government or public entity that affects the market economy with the direct objective of having an impact in the economy, beyond the mere regulation of contracts and provision of public goods.

6.0 TUTOR-MARKED ASSIGNMENT

1. What is government intervention?

2, Examine the main objectives for government intervention

3. Critically examine the effect of government intervention in an economy

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UNIT 4 PUBLIC POLICY

CONTENTS

1.0 INTRODUCTION

Public policies are as old as governments. Whatever is the form, oligarchy, monarchy, aristocracy, tyranny, democracy etc., whenever and wherever governments have existed, public policies have been formulated and implemented. To cope with the varied troubles and demands of the people the government has to create several policies, these policies are called public policies.

2.0 OBJECTIVES

At the end of this unit, the students will be able to understand

1. Meaning and nature of public policy
2. Features of Public Policy
3. Types of Public Policy
4. Importance of Public Policy
5 Constraints of public policies

3.0 MAIN CONTENTS

3.1 MEANING AND NATURE OF PUBLIC POLICY

There are several studies in relation to the public policy and several scholars have attempted to describe public policy from dissimilar angles. Before explaining the meaning of public policy, let us first go through some of its definitions. Robert Eyestone conditions public policy as “the

relationship of government unit to its environment. Thomas R. Dye says that “public policy is whatever government chooses to do or not to do” Richard Rose says that “public policy is not a decision; it is a course or pattern of activity. In Carl J. Friedrich‟s opinion public policy is a proposed course of action of a person, group, or government within a given environment providing opportunities and obstacles which the policy was proposed to utilize and overcome in an effort to reach a goal realize an objective or purpose

From these definitions, it is clear that public policies are governmental decisions, and are actually the result of activities which the government undertakes in pursuance of certain goals and objectives. It can also be said that public policy formulation and implementation involves a well-planned pattern or course of activity. It requires a thoroughly close knit relation and interaction flanked by the significant governmental agencies viz., the political executive, legislature, bureaucracy, and judiciary. The following points will create the nature of public policy more clearly in your minds:

Public Policies are goal oriented: Public policies are formulated and implemented in order to attain the objectives which the government has in view for the ultimate benefit of the masses in general. These policies clearly spell out the programmes of government.

Public policy is the outcome of the government’s communal actions: It means that it is a pattern or course of activity or the governmental officials and actors in a communal sense than being termed as their discrete and segregated decisions.

Public policy is what the government actually decides or chooses to do: It is the relationship of the government units to the specific field of political environment in a given administrative system. It can take a diversity of shapes like law, ordinances, court decisions, executive orders, decisions etc.

Public policy is positive in the sense that it depicts the concern of the government and involves its action to a scrupulous problem on which the policy is made. It has the sanction of law and authority behind it. Negatively, it involves decisions through the governmental officials concerning not taking any action on a scrupulous issue.

POLICY AND GOALS

To understand the meaning of policy in a better manner, it is very significant to create a distinction flanked by policy and goals. Goals are what policies aim at or hope to achieve. A goal is a desired state of affairs that a society or an organization attempts to realize. Goals can be understood in a diversity of perspectives. These can be thought of as abstract values that a society would like to acquire. There are also goals that are specific and concrete. Removal of poverty is a goal that the government wants to pursue. Public policies are concerned with such specific goals.

They are the instruments which lead to the achievement of these goals. If the government announces that its goal is to give housing to all the members „of the deprived sections of society, it does not become a public policy. It is a statement of intention of what the government wants to do. Several at times the government, for political causes, announces goals that it has little desire to achieve. In order to become a policy, the goal has to be translated into action. Programmes have to be intended to achieve specific objectives. As an illustration, let us look at the policy of poverty alleviation. Many programmes have been intended for this, e.g., The integrated Rural Development Programme (IRDP), The National Rural Employment Programme (NREP) etc. Each programme has certain goals to achieve within a specified time and each programme is provided with financial possessions and administrative personnel. These become concrete efforts to achieve a goal. Policy spells out the strategy of achieving a goal. Therefore, policy is essentially an instrument to achieve a goal. Statement of goal does not create it a policy

POLICIES AND DECISIONS

A distinction needs to be drawn flanked by a policy and a decision also. Several at times the conditions are used interchangeably but that is not the correct usage. Individuals, organizations or government are constantly taking decisions. But all the decisions that are taken cannot be described as matters of policy. The essential core of decision-making is to create a choice from the alternatives accessible in order to take an action, if there is only one course of action accessible then there is nothing one can choose from and so, no decision can be taken. A decision can be taken only when there is more than one alternative accessible. Therefore, a decision is the act of making a choice. The whole science of decision-making has been developed in order to analyze the circumstances that can improve this activity and how a

decision maker can improve his choice through expanding the number of alternatives accessible to him.

There can be two types of decisions, programmed and none programmed. Programmed decisions are repetitive and do not require a fresh consideration every time they are taken. These decisions are routine in nature and for these definite procedures can be worked out. Each decision need not be dealt with separately. In programmed decisions, habits, skills, and knowledge in relation to the problem are significant. For instance, once the decision to open the library from 10 a.m. to 5 p.m. is taken, it does not require fresh consideration to keep it open throughout those hours. The decision is incorporated into procedures that are recognized for the purpose. Non programmed decisions are new and unstructured. No well laid-out methods are accessible for such decisions; each issue or question is to be dealt with separately. Such decisions are required in the situations of unprecedented nature, for instance breakdown of an epidemic, occurrence of earthquake, etc. Training in skills, needed for such decisions and innovative skill become relevant in this regard. Both the programmed and non-programmed decisions have to be taken in a broad framework or course of action.

Public policy is the broad direction or perspective that the government lays down in order to take decisions. Each organization or the individual is enjoined to take a decision within a policy framework. Decision can be a one-time action. Policy consists of many decisions that are taken to fulfill its aims. A policy consists of a series of decisions tied jointly into a coherent whole. There can be some parallel in the processes involved in decision making and policy making. Both are concerned with choice in the middle of alternatives and for both similar processes can be followed in generating alternatives. But we should always keep in mind that policy is a more comprehensive term, as it encompasses a series of decisions and has a comparatively longer time perspective.

SELF ASSESSMENT EXERCISE

Examine the meaning and nature of public policy

3.2 FEATURES OF PUBLIC POLICY

The meaning and nature of public policy will become clearer through throwing light on dissimilar features of public policy. Some of the major features of public policy making are:

1. Public Policy Making is a Very Intricate Process: Policy making involves several components, which are interconnected through communication and feedback loops and which interact in dissimilar methods. Some parts of the process are explicit and directly observable, but several others proceed through hidden channels that the officials themselves are often only partly aware of. These hidden procedures are very hard, and often impossible to observe. Therefore, guidelines are often shaped through a series of single decisions that result in a „policy" without any one of the decision makers being aware of that process.

2. It is a Dynamic Process: Policy making is a process that is a continuing activity taking place within a structure; for sustenance, it requires a continuing input of possessions and motivation. It is a dynamic process, which changes with time, the sequences of its sub-processes and stages vary internally and with respect to each other.

3.Policy Making Comprises Several Components: The complexity of public policy making as we know is a significant feature of policy making. Public policy formulation often involves a great diversity of substructures. The identity of these substructures and the degree of their involvement in policy making, vary because of dissimilar issues, circumstances and societal values.

4. Policy Structure creates Dissimilar Contributions: This feature suggests that every substructure creates a dissimilar, and sometimes unique, contribution to public policy. What sort of contribution substructures create, depends in part on their formal and informal features which vary from society to society?

5. Decision-Making: Policymaking is a species of decision-making because it lets us use decision-making models for dealing with policymaking.

6.Lays down Major Guidelines: Public policy, in most cases, lays down general directives, rather than detailed instructions, on the main lines of action to be followed. After main lines of action have been decided on, detailed sub-policies that translate the general theory into more concrete conditions are usually needed to execute it.

7.Results in Action: Decision-making can result in action, in changes in the decision-making itself, or both or neither. The policies of most socially important decision-making, such as most public policy making are planned to result in action. Also policies directed at the policy making tools itself such as efficiency drives in government are action oriented.

8. Directed at the Future: Policy making is directed at the future. This is one of its most significant features since it introduces the ever-present elements of uncertainty and doubtful prediction that establish the basic tone of almost all policy making.

9. Actual policy making tends to formulate policies in vague and elastic conditions; because the future is so uncertain. It permits policy makers to adjust their policy according to emerging facts and enables them to guard against unforeseen circumstances.

10. Mainly Formulated through Governmental Organs: Public policy is also directed, in part, at private persons and non-governmental structures, as when it calls for a law prohibiting a certain type of behavior or appeals to citizens to engage in private saving. But public policy, in most cases, is primarily directed at governmental organs, and only intermediately and secondarily at other factors.

11. Aims at Achieving what is in the Public Interest: Though hard it might be to discover out what the '„public interest" may correctly refer to, the term never the less conveys the thought of a "general" orientation and seems so to be significant and important. Furthermore, there is good evidence that the image of "public interest" powers the public policy making process and is so at least, as conceived through the several public policy making units, a "real" phenomenon, and a significant operational tool for the study of policy making.

12. Use of Best Possible Means: In abstract terminology, public policy making aims at achieving the maximum net benefit for the people. Benefits and costs take in part the form of realized values and impaired values respectively, and cannot in most cases be expressed in commensurable units. Often, quantitative techniques can so not be used in this area of public policy making but neither the qualitative significance of maximum net benefits as an aim nor the necessity to think broadly in relation to the alternative public policies in conditions of benefits and costs is so reduced.

Involvement of Several Bodies/Agencies: Industrial workers, voters, intellectuals, legislators, bureaucrats, political parties, political executives, judiciary etc. are the several organs that participate in public policy making and can power the policy process to a great extent.

3.3 TYPES OF PUBLIC POLICY

Having explained the features of public policy making, we will now explain: the dissimilar types of public policy. There are several types of public policy like substantive, regulatory, distributive, redistributive etc.

Substantive: These policies are concerned with the general welfare and development of the society, the programmes like provision of education and employment opportunities, economic stabilization, law and order enforcement, anti-pollution legislation etc. are the result of substantive policy formulation. These policies have vast areas of operation affecting the general welfare and development of the society as a whole. These do not relate to any scrupulous or privileged segments of the society. Such policies have to be formulated keeping in view the prime character of the constitution socio-economic troubles and the stage of moral claims of the society.

Regulatory: Regulatory policies are concerned with regulation of trade, business, safety events, public utilities, etc. This type of regulation is done through independent organizations that work on behalf of the government. In India, we have Life Insurance Corporation, Reserve Bank of India, Hindustan Steel, State Electricity Boards, State Transport Corporations, State Financial Corporations, etc., which are occupied in regulatory activities. The policies made through the government, pertaining to these services and organizations rendering these services are recognized as regulatory policies.

Distributive: Distributive policies are meant for specific segments of society. It can be in the area of grant of goods, public welfare or health services, etc. These mainly contain all public assistance and welfare programmes. Some more examples of distributive policies are adult education programme, food relief, social insurance, vaccination camps etc.

Redistributive: Redistributive policies are concerned with the rearrangement of policies which are concerned with bringing in relation to the basic social and economic changes. Certain public goods and welfare services are disproportionately divided in the middle of certain segments of the society, these goods and services are streamlined through redistributive policies.

Capitalization: Under the capitalization policies financial subsidies are given through the Union government to the state and local governments, such subsidies are also granted to the central and

state business undertakings or some other significant sphere if necessary. Capitalization policies are dissimilar in nature than the substantive, regulatory, distributive, and redistributive policies as no provision for public welfare services is made through these.

3.4 IMPORTANCE OF PUBLIC POLICY

It is clear from the above sections of the unit that policy is a purposive course of action in dealing with a problem or a matter of concern within a specific time frame. Before going into the question of importance which is attached to policy formulation, implementation and monitoring, it would be better to recapitulate the components of public policy.

Policy is purposive and deliberately formulated. Policy necessity has a purpose or a goal. It does not emerge at random or through chance. Once a goal is decided the policy is devised in such a method that it determines the course of action needed to achieve that goal.

1. A policy is well thought out and is not a series of discrete decisions.

2. A policy is what is actually done and not what is planned or desired, a statement of goals does not constitute a policy.

3. Policy also delineates a time frame in which its goals have to be achieved.

4. Policy follows a defined course of action viz. formulation, implementation, monitoring, and evaluation.

Actually the scope of public policy is determined through the type of role that the State adopts for itself in a society. In the classical capitalist society, State was assigned a limited role and it was expected that the State would merely act as a regulator of social and economic activity and not its promoter. With the advent of planned view of development, State began to be perceived as an active agent in promoting and shaping societies in its several activities. This was measured as a great change in the role of a State. Public policies expanded their scope from merely one of regulation to that of development.

Expansion in scope led to many other consequences like several more government agencies and institutions came into being in order to formulate and implement policies. In Nigeria, the Planning Commission and its attendant agencies came into being in order to formulate policies and develop perspectives that could describe the direction which the country would follow. So,

the first major goal of public policies in our country has been in the area of socio-economic development. Wide ranging policies were formulated in the area of industrial and agricultural development. Several policies were converted into Statutes, like Industrial Development and Regulating Act or Land Tenancy Act. Others were kept as directives in the several plan documents. For all policy directions, the Five Year Plans became the major source. These policies were of two types, one of regulation and the other of promotion. Laws laid down what could be done or not done through the entrepreneurs. This could be in the larger area like what goods can be produced through the public or whether certain goods can be traded only through government agencies. Laws also specified how State agencies themselves were to give goods and services like electricity, transport etc. The State undertook similar responsibility in the social sphere.

SELF ASSESSMENT EXERCISE

List and explain the types of public policy

3.5 CONSTRAINTS OF POLICY IMPLEMENTATION IN NIGERIA

It is important to note that the bane of Nigeria's national development lies in its inability to implement policies effectively, despite the enormous resources at the disposal of the government. Many policies have suffered at the stage of implementation and hardly serve their intended purposes. Many scholars expressed their views on the problems of policy implementation in Nigeria, while some problems are structural, others are environmental and attitudinal. Some of the major problems are highlighted below:

i. **Lack of Clear Definition of Goals;** Various governments in Nigeria have the obvious tendencies of pursuing multiple goals that in most cases are complicated. Policy goals often lack clarity and consistency with demands of the people. Policy makers in Nigeria assume that they know the needs of the target groups whose social situation they are attempting to ameliorate and therefore see no need for clarity of goals. And it is obvious where policy goals are not clear, implementation tend to be more difficult.

ii.**Over Ambitious Policy Goals**: Many policies pursued by government tends to be over ambitious which largely affect how programmes and policy goals arc decided. According to Egomnwan (2009) "the desire to establish the legitimacy of the political regime by providing

tangible evidence of improving conditions, create a situation in which the political leaders are likely espouse policies that led to improvement of conditions of life, but maybe not. realizable because of its overambitious nature", Therefore, the scope, comprehensiveness and operation ability of policies formulated gave rise to serious bottlenecks during implementation. Vision 2020 & the present nine-point agenda are some of such policies.

iii.Lack of Appropriate Technology for implementation: Implementing agencies in most cases lack appropriate modern technology, managerial skill and administrative capacity that are prerequisite for effective policy implementation, the procedures adopted in policy implementation are such that are not consistent with policy goals. And sometimes cultural consideration hampers adoption of modern technology in areas of programme implementation. Examples can be seen in the people's resistance of use of fertilizer because of traditional beliefs some decades ago; or the rejection of polio vaccines in some northern states.

iv. Lack of Continuity Commitment to Policy: Change in government more often is accompanied by change in priorities. The situation tends to make implementation more difficult in terms of switch over to entirely different priorities and objectives which requires new organizations, personnel, resources and technology which are not always easy to provide. This led to abandonment of many policies.

v. Lack of Clear Definition of Responsibility & Coordination: Many policies in Nigeria require the involvement of many agencies at different levels of government. Example includes the policy on poverty reduction that was designed in phases and requires the involvement of so many agencies across the three level of government. And there is absence of coordination and clear definition of responsibility among the various agencies involved This factor led to the failure of the poverty alleviation policy.

vi. Comparison During Implementation: Compromises are made that usually undermines the basic policy goals are detrimental to successful execution of programmes. For example, the successive Housing policies in Kano failed because it turnout to be the means of rewarding party loyalist and other economic and royal elites, thereby negating the basic goals of the policies of providing housing to the general public.

vii. Corruption: The corrupt tendencies of public officials and politicians in connivance with private organizations and individuals have no doubt have a far reaching consequences on effective implementation of policies in the country. Corruption has pervaded every aspect of our societal life. it can be seen not only in inflation of contract figures or percentage negotiations, but outright diversion of billions of naira meant for one programme or another. Agencies like EFCC and ICPC created to control and convert corruption have turnout be toothless bulldogs with nothing to show compared to the high level corruption in the country. These corrupt practices can easily be seen in the diversion of billions of US dollars aimed at providing enough power supply that will boost the national economy, a case which is yet to be investigated.

4.0 CONCLUSION

In this unit, we have discussed the meaning and nature of public policy as be able to cope with the varied troubles and demands of the people the government has to create several policies, these policies are called public policies. Public policy is the broad direction or perspective that the government lays down in order to take decisions. Each organization or the individual is enjoined to take a decision within a policy framework. Various features of public policy were also discussed as well as important of public policy.

5.0 SUMMARY

In this unit, we have examined public policy, features of public policy, types of public policy and important of public policy. Policy is a purposive course of action in dealing with a problem or a matter of concern within a specific time frame. Policy is purposive and deliberately formulated. Policy necessity has a purpose or a goal. It does not emerge at random or through chance. Once a goal is decided the policy is devised in such a method that it determines the course of action needed to achieve that goal.

6.0 TUTOR-MARKED ASSIGNMENT

1. Examine the meaning and nature of public policy
2. List and explain the main types of public policy
3. What are the main features of public policy
4. Briefly explain the important of public policy

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MODULE FOUR

UNIT 1 INDUSTRIAL LOCATION

CONTENTS

1.0 INTRODUCTION

The concept of Industrial location has occupied an important place in economy. It is beneficial for entrepreneurs as it is difficult for them to choice of place for starting business. There are many factors which effects location such as Government Policies, Schemes. Infrastructural facilities, financial provision etc. These have been discussed in this unit

2.0 OBJECTIVES

At the of this unit, the students are expected to have understand the following:

i. Meaning industrial location
ii. Factors that influence industrial location
iii. Important of industrial location
iv. Weber's theory of industrial location

3.0 MAIN CONTENTS

3.1 CONCEPT OF INDUSTRIAL LOCATION AND SITE

There are two terms location and site which are often used as same but distinction should be made. Location refers a wide geographical area within several alternative site can be considered; site word refers a specific area where the project should be set up. The industrial location takes into three consideration (i) public policies (ii) relative weight of and interaction between various factors (e.g. inputs and pertaining to a particular project, (iii) General locational considerations

traditional approach refers the proximity of raw materials and of markets because transport costs are important for industrial location

3.2 FACTORS THAT INFLUENCE INDUSTRIAL LOCATION

There are number of important factors that influence industrial location because of the size may significantly influence the cost of production and distribution efficiency etc. the important factors that influence industrial location are the following:

1) The Role of Public Policies: Government policies are important in developed and developing countries to establish industrial unit. Industrial development in particular region can be encouraged by it. Government policies may attract industries in backward region through some positive steps and discourage by taking negative steps also. Nigeria has a mixed economy and in this economy state policy has been influencing the location pattern of industries.

2) Material and Market orientation: Certain categories of industries tend to be located near the market. Market proximity is important industrial location. This is particularly true of the industries with the manufacturing process that involves an increase in weight or bulk. In such case, the transport and distribution cost can be minimized by being closer to the market. Agro-based products and perishable products are market oriented when the finished product little of weight loosing materials will be located near the sources of raw material. When there are large markets geographically spread, nationally, internationally, manufacturing units may be established in close proximity to the major market.

3) Infrastructural facilities: Infrastructural facilities have a great influence on the location of industries. It is important to establish any unit and therefore the power, transport, water communication, etc. are required.

(i) Transportation Facilities: Industrial location depends upon transport costs also. The location of industries is concentrated where the transport cost is minimum. In a vast country like Nigeria, there may be significant variations in transportation cost between different locations places with a high transport disadvantage are not likely to attract industries. For that government of India is providing transport subsidy to industrial units located in certain hill regions island, with a view to encourage the industrial development of these regions.

(ii) Power and Fuel Supply: Power and fuel supply conditions have important bearing on industrial location, cheap power, attract industrial location. In present power is easily available. It can be transported from one place to another place and can get at reasonable rate electrification of various parts of the country, including the villages, is encouraging decentralization of industries.

(iii) Water: The quality and properties of the available water is as important as the quantity of water available and its supply. Certain industries like paper industry by their very nature require large quantities of water. A number of industries also use the water sources for effluent disposal, while selecting the location, the possibility of the water pollution should also be considered.

(iv) Socio-Economic Environment: Socio-economic environment is also important for industrial location. The location study covers man power, waste disposal, fiscal and legal regulation, climatic condition and so on.

(v) Manpower: Availability of labour and especially or skilled labour and technicians has a great influence on the location of industry in a country. In the case of industries where extremely sophisticated skills are required such as electronic and computer manufacturing industries, the tendency will be move to relatively urban areas where such skills are available. The case of industry where sophisticated skilled are not required, such industries tend to move to areas with abundant supplies of cheap labour. In certain localities and communities, labour turnover and absenteeism are high that affects the smooth functioning of enterprise.

(vi) Waste disposal: It may be a critical factor. They might be in a farm of smoke, fumes etc. They might be in a form of noise and in form of solid also. These are harmful, dangerous and require special treatment

4) Natural and Climatic Factors: Climatic factors also play an important role in the location of certain industries as the absence of these conditions will necessitate additional expenditure to create favorable conditions artificially.

5) Government Policies: Fiscal and Legal regulation may be a significant locational determinant in some case. The corporate and individual income taxes, excise duties, sales tax and other national or local taxes should be ascertained for different locations.

Nigeria has a mixed economy and in this economy, state policy has been influencing the location pattern of industries, government tries to attract entrepreneurs to start an industry in some of districts which are industrially backward area through giving them concession such as lower or no excise duties, no sales tax. Same way by non-tax incentives the government may attract industries in industrially backward regions. This way, state policy takes positive and negative steps to encourage or discourage the locational pattern of industries in Nigeria.

6) Capital and Finance: Capital and finance is also important for industrial location. There are many financial institutions, banking system which can give financial assistance to the project. In the case of private sector, the financial requirement is not same at ail place. As modern large scale industries require large amount of fixed and working capital, they tend generally to move to areas where developed money market and banking system exist. In the case of public sector enterprises, the cost of financing is not such an important factor lack of finance has little influence on the location of an industry.

7) Miscellaneous Factors: There are also a number of other factors that may influence industrial location - the attitude of the local community, proximity of complementary industry, prospects of development of the region, service facilities required by the industry, recreational and social facilities. Proximity to important centres like metropolitan centres, personal factor, historical factors, etc. There are number of important factors to be considered in the selection of the site. These include the load bearing capacity of the site, towards flood and earthquake hazards, access to transport facilities, facilities for water supply and effluent discharge, ecological factors, etc. The nature of the industry has a bearing on the site selection. For example, some industry like paper industry required abundant supply of water. For some industries effluent discharge is a major problem, environmental pollution.

SELF ASSESSMENT EXERCISE

List and explain factors of industrial location

3.3 WEBER'S THEORY OF INDUSTRIAL LOCATION

Alfred Weber a German economist was the first economist who gave scientific exposition to the theory of location and thus filled a theoretical gap created by classical economists. He gave his ideas in his Theory of Location of Industries' which was first published in German language in

1909 and translated into English in 1929. His theory, which is also known as ‘Pure Theory’ has analytical approach to the problem.

The basis of his theory is the study of general factors which pull an industry towards different geographical regions. It is thus deductive in approach. In his theory he has taken into consideration factors that decide the actual setting up of an industry in a particular area.

Weber’s Problems:

Weber was faced with many serious problems. He wanted to find out why did industry moved from one place to another and what factors determined the movement. After considerable thinking he came to the conclusion that causes be responsible for this migration could be Regional Factors Primary Causes and Agglomerative and deglomerative factors (Secondary Factors).

In so far as regional factors were concerned these, among other things, included cost of the ground, buildings, machines, material, power, fuel, labour, transportation charges and amount of interest that the capital would have earned.

i. Regional Factors (Primary Causes):

According to Weber transportation costs play a vital role in the location of an industry. Each industry will try to find location at a place where transportation charges are the barest minimum, both in terms of availability of resources and place of consumption. According to him transportation costs are determined by the weight to be transported on the one hand and distance to be covered on the other.

Then the cost will also depend on the type of transportation system available and the extent to which it is in use. the nature of the region i.e. whether rocky, plain, connected or unconnected with roads etc. the kinds of the roads in the area where the goods are to be transposed; nature of facilities required i.e. whether the goods are to be taken with great care, less care or even without any special care.

Locational Figure:

While discussing regional factors, Weber has discussed the idea of locational figure. According to him every industry will try to see that it is located at a place where raw material is available nearest to the place of consumption on the one hand and most advantageously located material deposits on the other. According to Weber, "Thus locational figures are created. These locational figures, therefore, represent the first and most important basis for formulating the theory.''

Classification of Material:

Weber, before proceeding further, has classified raw material into different categories e.g.:

(a) **Ubiquities material;** which is suitable everywhere e.g. bricks, clay etc., and

(b) **Localised material** e.g., iron ore, mineral etc. which is available in certain regions and not everywhere. Obviously the later play a bigger and important role than the former. He has also categorised raw material as 'Pure' and 'Weight Losing' raw material is one which impart its whole weight to the products e.g. cotton, wool etc. and weight losing materials are those in which only a part of the material enters into the weight.

Laws of Transportation:

Weber, while discussing the theory of location, has also discussed laws of transportation. According to him material index measures the total weight to be moved. From material index he understood the portion of the weight of localised material to the weight of the product. According to him, "All industries whose material index is not greater than one and whose locational weight therefore, are not greater than two lie at the place of consumption."

Causes of Deviation of Location:

Weber was faced with a serious problem namely why the industries deviate from the centre of least transport costs. One such reason could be differences in the labour costs. This labour cost can be cheap either because of differing levels of efficiency and of wages of labour or because of differing levels of efficiency in the organisation and the technical equipment which the labour is required to use. Labour cost can go up and come down due to distribution of population as well.

But whatsoever might be the reason for the low labour cost, according to Prof Kuchhal, deviation "will be possible only when the additional cost of transportation at the new centre is more than compensated by a saving in labour costs… When the labour costs are varied, an industry deviates from its transport locations in proportion to the size of its labour co-efficient".

Weber himself has said that, with a high index of labour costs, a large quantity of labour costs will be available for comparison with correspondingly high critical isodapanes, and therefore we shall find a high potential attracting powers of the labour locations and vice versa.

According to Weber's theory if the behaviour of each industry in respect of labour cost is to be measured than it is necessary to calculate the proportion of labour costs per ton of weight to be moved.

ii. Agglomerative and Deglomerative Factory (Secondary Causes):

We have so far been discussing primary causes of industrial location. Weber has also discussed secondary causes responsible for industrial location. He has taken into account agglomerative and deglomerative factors. An agglomerative factor, according to him is a factor which provides an advantage in production or marketing a commodity simply because industry is located at one place. On the other hand, deglomerative factor is one which gives such advantage because of decentralisation of production.

Agglomerative factors include gas, water etc. and are conducive for concentration of industry and deglomerative factors include land values and taxes and lead to decentralisation. Pulls of agglomerative factors are index of manufacture and locational weight. According to Weber ratio of manufacturing cost of locational weight is co-efficient of manufacture.

According to Weber Agglomeration is encouraged with high co-efficient and deglomeration with low. According to him, we shall do well to bear in mind that labour orientation is one form of deviation from the minimum point; agglomeration to another.

When agglomerative forces appear in an industry oriented towards labour, there takes place a competition between the agglomerative deviation and the labour deviation, a struggle to create,

locations for agglomeration, as compared with labour locations, both bearing upon the foundations of the transportational ground work.

Split in Location:

Weber has considered the possibility of location of an industry at more than open one, particularly when production in an industry can be carried independently at more than one place. According to him in fact single location is an exception and split a rule. It is essential, according to him that all productive processes must go on at one and the same place and it is better that these be carried out at different stages and at number of places. Split is to occur in two stages. In the first stage it is elimination of waste and in the second working up of pure material.

Locational Coupling:

Weber along with split in location has also given the idea of locational coupling, meaning thereby that different types of industries can be coupled in one and the same locality. According to him it is just possible to combine production of different articles in one plant because of the availability of several raw materials from the same source.

This coupling can be possible either due to economic or technical reasons. It is also possible due to connection through material e.g., if the byproduct of one industry happens to be raw material for another then the two industries may select a single place of location. Locational coupling can also be due to market connection between two industries. In such a case product of one industry may enter into another industry without being used as material or half finished product.

Criticism of Weber's Theory:

Weber's Theory of Industrial location has been put to several criticisms.

Some such points of criticism are:

1. Unrealistic Assumptions:

According to critics of this theory, Weber has unrealistically over-simplified the theory of industrial location. Many assumptions in the theory are unrealistic. According to them Weber has taken only two elements for determining the cost of transportation namely weight and distance.

He has not given due to place to the type of transport, quality of goods to be transported, topography, character of region etc.

2. Labour Centres Notion Defective:

Weber's ideas about labour centres have also not been accepted. He has started with the presumption that there are fixed labour centres with unlimited supplies of labour in each of them. Obviously both these assumptions are not correct. There cannot be fixed labour centres, because each industry creates new labour centres. Similarly, there can never be unlimited supplies of labour in any centre.

3. Ideas about Fixed Points of Consumption:

It is argued that Weber's this idea does not work well with the market conditions in a competitive structure. Consumers are always scattered all over the country and thus consumer centres always shift with a shift in industrial population. There can therefore be no fixed point of consumption.

4. Vague Generalisations:

Weber, while expounding his theory of industrial location, has introduced, it is believed, certain vague generalisations. He has given no due place to non-economic factors of industrial location, which play a big role in this regard. Who can deny that there are certain historical and social forces which go a long way while deciding industrial location of an industry, but he has completely ignored them, which has made his theory very unrealistic.

5. Not a Deductive Theory:

Andreas Predohl is of the view that Weber's Theory is only selective and not deductive. According to him he has made an artificial distinction between general and special factors which influence location of an industry. Such a distinction, in fact, has no logical significance. According to Weber transport costs and labour costs are only general costs. He has failed to explain why capital costs and management costs cannot be included or covered under it.

6. Defective Method of Analysis:

Weber has tried to classify material into ubiquities and fixed material. Again the division is arbitrary. According to Robinson who does not know that in actual practice materials are drawn from a large number of alternative fixed points.

7. Overburdened with Technical Considerations:

Dennison is of the view that Weber's theory is heavily over burdened with technical considerations. It has not laid due stress on costs and prices and has over stressed technical coefficients. According to him, "The most important criticism about Weber's analysis is that it is lamentably removed from all considerations of costs and prices and it is formulated mainly in terms of technical coefficients."

Utility of the Theory:

No doubt theory suffers from some serious defects, yet it cannot be denied that it has its own value, importance and significance. It is primarily because the alternatives given are neither comprehensive nor complete. So far it is the only theory which is capable of universal application.

Andreas Predohl has also given his ideas about industrial location and has come to the conclusion that every change of industrial location involves a change in the combination of means of production. But this theory obviously does not provide any guidelines for locating new industries.

SELF ASSESSMENT EXERCISE

Examine Weber's theory of industrial location

4.0 CONCLUSION

In this unit, it has been tried to give the meaning of industrial location and site. There are number of factors influence industrial location that analysed here. Important of Industrial location and Webner's theory of industrial location have been discussed as well. The concept of Industrial location has occupied an important place in economy. It is beneficial for entrepreneurs as it is

difficult for them to choice of place for starting business. There are many factors which effects location such as Government Policies, Schemes. Infrastructural facilities, financial provision

5.0 SUMMARY

This unit have examined the meaning of industrial location, factors that influence industrial location and Weber's theory of industrial location. Industrial location has occupied an important place in economy. It is beneficial for entrepreneurs as it is difficult for them to choice of place for starting business. There are many factors which effects location such as Government Policies, Schemes. Infrastructural facilities, financial provision etc. These have been discussed in this unit. There are numbers of important factors that influence industrial location because of the size may significantly influence the cost of production and distribution efficiency. Weber's theory based his theory on the general factors which pull an industry towards different geographical regions. It is thus deductive in approach. In his theory he has taken into consideration factors that decide the actual setting up of an industry in a particular area.

6.0 TUTOR-MARKED ASSIGNMENT

1. Critically examine factors of industrial location

2. Briefly explain Weber's theory of industrial location

3. What is industrial location?

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UNIT 2 INDUSTRIAL PRACTICES AND POLICIES IN NIGERIA

CONTENTS

1.0 INTRODUCTION

Industrialization is widely believed to be a catalyst for rapid growth and development of any economy. As a process, it also presupposes the provision of appropriate institutions by the state. Several studies have discussed the fact that democratic political regime is a prerequisite for economic development.

Industrialization is a considered as a child of necessity in every nation's economy for it accelerates the process of both Economic growth and Economic of development. The importance of the industrial Sector in the economic development cannot be over-emphasized. Thus, the fortune of every economy lies in its industrial sector which make it the HEATBEAT of economic development.

2.0 OBJECTIVES

By the end of this unit, the students will be able to understand

I. Meaning of Industrial policy in Nigeria
II. Meaning of economic policy in Nigeria
III. Features of Industrial Policy in Nigeria and other developing countries
IV. Major Industrial policies in Nigeria since 1960 – 2010

3.0 MAIN CONTENTS

3.1 MEANING INDUSTRIAL POLICY

An industrial policy (IP) or industrial strategy of a country is its official strategic effort to encourage the development and growth of all or part of the economy, often focused on all or part of the manufacturing sector. Industrial policies are interventionist measures typical of mixed economy countries. Its aims and objectives include; To promote investment. To stimulate non-oil exports and providing a base for private sector led development. To promote efficiency of Nigeria`s industrial sector. Privatization and commercialization of the economy toward the promotion of industrial efficiency. Industrial policy is an element of the global concept of economic development of a country. Its construction and realization entail an assumption that the state, its divisions and institutions, participate in the process of shaping the industrial development. A major dilemma connected with shaping the industrial policy is its scope and the instruments of intervention to be applied.

3.2 MEANING OF ECONOMIC POLICY IN NIGERIA

The adoption of market economy and privatisation policy, which is a refined form of capitalism in its poor and distorted form is the foundation of Nigeria's underdevelopment. The private sector has taken over the role of the government, whereas, both should work independently and complement each other.

SELF ASSESSMENT EXERCISE

What is industrial policy

3.3 FEATURES OF NIGERIA INDUSTRIAL SECTORS

The Nigerian industrial sector is characterized with a number of features. First, in terms of special pattern, established reports from various studies show that industries in Nigeria are concentrated in some areas, especially in big cities and in state capitals. In Nigeria, industries are concentrated mostly in the major cities. The pattern of the distribution of manufacturing industries at the city level indicates that there is a marked concentration of manufacturing establishments in the southern part of the country, especially Lagos, Ibadan and Benin. Other locations of relative high concentration of industrial establishments are Kano and Kaduna in the North, and Enugu and Port Harcourt in South East.

Second feature of the Nigerian industrial sector is the existence of production sub-contracting linkages. The Nigerian experience shows that production subcontracting linkages started in the early 1960s. Initially the rate of adoption of production subcontracting as an industrial production technique in Nigeria was characterized by insignificant growth. Subsequently there was rapid growth. However, there has been marked variation in the adoption of production sub-contracting by industrial groups over the years. An important point to note here is the fact that the number of sub-contractor engaged in sub-contracting activities, varied markedly especially in food, beverages and tobacco, chemicals and pharmaceuticals and textiles, wearing apparel and leather industry groups. This new industrial production technique is believed by industrialists to be very sacrosanct in production activities as it helps bring down the cost of production. The spatial distribution of production sub-contracting activities is significantly explained by the pre-existing characteristics of locations where sub-contractors are found. Here, the number of industrial establishments is the most significant explanatory variable.

Third important feature of industries in Nigeria and in many other developing countries is their inability to revolutionalize production. This is primarily because of the domination of the industrial sectors in these countries by multinational companies.

In addition to these features, the industrial sector in Nigeria like most other developing countries is dominated by industries producing construction materials, clothing's, textiles, footwear and processed foods using simple assembly processes.

In summary, the Nigerian industrial sector has tended to be characterized by routine production activities, spatial pattern of distribution; where industries tend to be concentrated mostly in the cities especially state capitals, production sub-contracting linkages, inability to revolutionalize production, due mainly to low technology, simple assembly processes, low wages, production of light consumer goods and resource and labour-intensive industries.

3.4 MAJOR INDUSTRIAL POLICIES IN NIGERIA SINCE 1960-2010

Achieving sustainable growth in industrial production has been a key pillar of Nigeria's economic reforms. In the early 1960s up to late 1970s the country pursued an inward-looking. In the early 1960s up to late 1970s, industrial policies in the country were inward-looking. The major policies that come to mind include:

1. The Import Substitution Industrialisation (ISI) strategy: The policy, was directed at increasing local production of manufactured goods, generation of employment, preservation of the country's foreign exchange and expansion of the country's domestic market for goods locally manufactured. One thing is, however, obvious.

Industrial production experienced a tremendous boost as the index of industrial production rose from 41.3 in 1970 to 120.3 in 1979.

In real terms, percentage of manufactured in GDP increased from 4.8 percent in 1960 to 8.6 percent in 1979. Compound growth rate of industrial production rose to 9.7 percent between 1970 and 1975 before declining to 6.8 percent in 1976-1980. The share of the manufacturing sector has been on the decline since the 1980s.

This was the first Industrial strategy embarked upon by the Nigeria government immediately after attaining independence. It has the following aims and objectives;

Increasing local production of manufactured goods.
Generation of employment.
Preservation of the country's foreign exchange.
Expansion of the country's domestic market for goods locally manufactured.
To lessen over -dependence on foreign trade.
To save foreign exchange by producing those items that was formerly imported.

2. The Nigerian Indigenisation Policy (1972-1977).

The Nigerian Enterprises Promotion decree (NEPD), 1972 or Nigerian Indigenisation Policy (1972) often regarded as a bench-mark industrial policy came in the wake of the desire to make Nigerians own and control the industrial enterprises in the country. As noted by Ndebbio et al (1991), the indigenization Decree was to give Nigerians the opportunity to demonstrate the ability to assume ownership, control and management of a greater part of the nation's economy.

Its main objectives were to:
The transfer of ownership and control to Nigerians in respect of those enterprises formally wholly or mainly owned and controlled by foreigners.

create opportunities for the Nigerian indigenous businessmen;
maximize local retention of profits;
increase the level of intermediate and capital goods production;
ensure increased participation of Nigerians in the wealth of their nation; and

Create employment opportunities for Nigerians to ensure increased level of self-reliance in the supply of industrial output.

The 1972 Act that resulted in the indigenization policy was amended, repealed and replaced by the Nigerian Enterprises Promotion Act, in 1977.This Act gave birth to the indigenization policy of 1977. The 1972 contained II schedules, while the 1977 act contained III schedules. Schedule I of 1977 contained 40 Enterprises, schedule II contained 57 and schedule III contained 39. In 1981 To be precise, the number of Enterprises in each schedule was revised. By this, schedule I had 36 Enterprises, schedule II, 576 Enterprises and schedule III, 456 Enterprises respectively.

This policy, however, suffered setbacks owing largely to insufficient capital, lack of skill manpower and activities of unscrupulous Nigerians who connived with foreign investors to undermine the policy. Consequently, there was distortion in the industrial sector and production index indicated a downward trend. Compound growth rate of industrial production between 1981 and 1986, when the effects of this policy actually manifested, was in the negative, -1.8 percent. It should also be recalled that the huge oil windfall recorded in the mid-1970s actually ceased to flow during this period. The foreign reserve of the country was severely depleted and many industries that relied on imported inputs had to either shut down or operated below full capacity.

3. Structural Adjustment Programme (SAP, 1986)

The IMF engineered Structural Adjustment Policy (SAP) was quick at addressing the issues with the promulgation of the New Industrial policy 1989. This policy tended to reverse some of the provisions of the Nigerian Indigenization Policy and opened up the economy for foreign investors. The policy also provided for empowerment of domestic businesses through the National Economic Reconstruction Fund (NERFUND). The introduction of SAP resulted in very negligible and mild recovery, with mining recording the highest compound growth rate of 0.30 percent. Whatever was gained during the SAP era was destroyed during the Abacha regime. The

destruction was so deep that many years of economic reforms and democracy have not yet been able to fully repair the damage.

This policy came to being in order to right -wrong the weaknesses and ineffectiveness of earlier industrial policies. Its aims and objectives include;

To promote investment.
To stimulate non-oil exports and providing a base for private sector led development.
To promote efficiency of Nigeria`s industrial sector.

Privatization and commercialization of the economy toward the promotion of industrial efficiency.

To develop and utilize local technology by encouraging accelerated development and use of local raw materials and intermediate inputs rather than depend on imported ones.

4. Trade and Financial Liberalization Policy (1989)

This policy was enacted purposely to foster competition and efficiency in the financial sector. Its aims and objectives include;

To foster competition among the domestic firms and between the domestic imports competing firms and foreign firms with view to promote efficiency.
Reduction of levels of both tariff and non-tariff barriers.
Scarping of commodity marketing boards.
Marketing determination of exchanging rate as well as deregulation of interest rates was meant to foster efficiency and productivity.

5. Small and Medium Industries Equity Investment Scheme (SMIEIS, 2000/2001)

The scheme was instituted in response to the Federal Government's concern and policy measures for promotion of small and medium enterprises, as vehicles for rapid industrialization, sustainable economic growth and development, poverty alleviation and employment generation (Anyanwu et al 2003). The scheme was a voluntary initiative, which requires all banks to set

aside 10 percent of their after-tax profit, for equity investment in small and medium enterprises in Nigeria, as part of their contribution towards stimulating economic growth, developing local technology and generating employment. This was set up so as to help in the co-ordination of the scheme with a guideline that 60 percent of the SMIEIS fund should go to core real sector, 30 percent to services, and 10 percent to micro enterprises through NGOs . The objectives of SMIEIS are as follows;

- Increasing per capita income / output and initiating /constituting changes in the structure of business and the society through growth, increased output and employment opportunities.
- Enhancement of Regional economic balance through industrial dispersal.
- Moderating rural/ urban migration.
- Easily adaptable to local technology.
- Promotion of effective resource utilization.
- to facilitate the flow of funds for the establishment of new small and medium investment (SMI) projects.
- To develop and package viable industries with Nigerian entrepreneurs
- To provide venture capital and management that would spearhead the restructuring and
- Financing of the small and medium scale industries (SMI)
- To stimulate economic growth, develop local technology and generate employment.

Although, the scheme has recorded significant improvement in terms of sectoral and geographical distribution of investments, it has also been bedeviled with slow pace of aggregate investment. Other setbacks include high cost of pre-investment activities, such as feasibility studies, assets valuation, etc, which entrepreneurs feared might become wasted fund, if they are not considered; reluctance of banks to make a paradigm shift from short-term financing to long term financing; continued poor state of physical infrastructures, among others.

6. Bank of Industry (BOI- 2000)

The bank was introduced as a development institution to accelerate industrial development through the provision of term loans, equity finances and technical assistance to industrial enterprises. The bank has the combination of the following institutions;

Nigerian Industrial Development Bank (NIDB)

Nigerian bank for Commerce and Industry (NBCI).

Industrial and Insurance Brokers (IDIB)

Leasing Company of Nigerian Limited (LECON) e.t.c.

Other aims and objectives of this bank include;

Making a considerable impact in terms of long term loans.

To assist in employment generation.

Industrial dispersal and promotion of indigenous entrepreneurship.

7. National Economic Empowerment and Development Strategy (NEEDS, 2004)

In an effort to further consolidate the possible achievement by the preceding policy, the Federal Government in 2004 launched an entirely home-groomed package, National Economic Empowerment and Development Strategy (NEEDS). Under this development policy, the private sector was identified as the engine of growth. The private sector is the executor, investor and manager of businesses. While the government is the facilitator and regulator, helping the private sector to grow, create jobs, and generate wealth (NEEDS, 2004).

As contained in NEEDS document, the overriding objectives of this development policy included:

To accelerate the pace of industrial development by increasing value added at every stage of the value chain.

To encourage forward and backward linkages in a few niches.

To provide enabling environment for private sector leadership.

To promote the establishment of efficient small and medium size enterprise sector to enhance sustainable economic development.

To facilitate the development of an industrial sector that is internationally competitive.

The success and/or failure of NEEDS will to a very large extent depends on the successes and/or failure of subsequent industrial policies that evolved thereafter, since NEEDs package is believed to be a “mother package” through which other industrial policies within this period anchored their existence.

8. National Integrated Industrial Development (NIID, 2007)

The continued search for appropriate industrial policy in Nigeria took another turn when the government in 2007 instituted another policy, the National Integrated Industrial Development (NIID) blueprint, as a service framework developed by the United Nations Industrial Development Organization (UNIDO) in collaboration with the Federal Ministry of Industry and other stakeholders. The framework, according to CBN (2007), comprised four integrated programmes, namely:

Industrial governance and public private sector partnership;

Strengthening industry's institutional support base; a cluster development initiative to grow the small and medium enterprises (SME's), using common facilities;

Environmental and energy; addressing the challenges of low power generation and utilization through rural renewable energy; and

Rural private sector agro-industrial development.

Under this new initiative, the Lagos, Kano, Aba and Port Harcourt (LOKAP) industrial action plan was developed to address the problem of infrastructural decay and to focus efforts in addressing the needs of these four industrial cities. The framework also made a provision for the construction of one park in each of the six geo-political zones of the country to boost the development of SMEs.

On-the-spot assessment of this policy has shown that it has not achieved much success. One of such failures is bureaucratic bottleneck in terms of policy implementation. For instance, the slow pace of work at various National Integrated power project sites is a clear testimony to the policy failure. Also, some proposed sites have become fallowed, prompting trespasses by local residents. Another problem is slow pace in the disbursement of loans meant for small and medium scale enterprises by banks. Lastly, the "cluster concept" conceived by this policy is only operational on paper. The designated industrial parks lack operational facilities such as adequate power supply; lack of good transport network; inadequate water supply for both human and industrial uses; lack of sewage system and so on.

9. Industrial Park Development Strategy (IPDS, 2009).

The current industrial policy (referring to 2009) pursued relentlessly by the present government is the industrial park development strategy (IPDs). This is a 'cluster concept" strategy aimed at driving non-oil growth through the creation of industrial parks and special economic zones. As a medium-term strategy, industrial parks are designed in areas with basic infrastructural facilities needed for establishing an industry, thus making such areas more investment friendly. Where the park is near the sea port, it can be made an export processing zone, thus allowing tenants to bring in machinery and raw materials free of duty, provided a certain percentage of the output goes back into export.

As fascinating as the 'cluster concept' seems to portray on paper, it is also beset by a number of possible challenges. One of such problems is the bureaucratic bottlenecks in the provision of basic physical infrastructures in the areas where industrial parks are located. Such delays are capable of obstructing both the taking-off process, as well as, the operational activities of such parks, which in turn could overturn the intended objective of industrial development. Poor electricity generation and distribution is another problem that has strongly hindered industrial development in the country in recent times. The erratic power supply situation in Nigeria is far from being over, despite several efforts by the governments to solve it.

SELF ASSESSMENT EXERCISE

Examine 5 major industrial policies in Nigeria

SOME OF NIGERIA'S INDUSTRIAL POLICY INCENTIVES

As part of government's drive to encourage investments and promote industrial development in Nigeria, various incentive packages have been designed and implemented for the industrial sector of the economy. These incentives are usually in form of fiscal measures like tax deductions and allowances.

TAX HOLIDAY: – This simply means the exemption of infant or new industries from the payment of profit tax for some years of operation such as five years. The aim is to protect them from international competition and enable them build up enough funds for expansion purposes.

First to enjoy this incentive are companies with pioneer status. Such industries are granted five to seven years of tax holidays from the period of their take-offs. For industries involved in Research and Development (R & D), up to 120 percent of expenses on R & D are tax deductible, provided such research and development activities are carried out in Nigeria. For firms involved in local sourcing and utilization of raw materials, 30 percent tax concession for five years is granted firms adopting labour intensive method of production. The rate is graduated such that those employing one thousand persons or more enjoy 15 percent tax concession; those employing two hundred will enjoy 7 percent; while those employing hundred will enjoy 6 percent and so on.

Meanwhile, industries involved in local value added will be allowed 10 percent tax allowance for five years from the date of take-off. This essentially applies to industries that export not less than 6 percent of their products. Generous tax allowance is granted manufacturing companies that incur expenses for purposes of expanding production capacity.

TARIFF PROTECTION: – This is the imposition of heavy import duties on foreign goods so as to protect local industries from international competition.

INVESTMENT GUARANTEES AND EFFECTIVE PROTECTION: Under this, a foreign investor in an enterprise shall be guaranteed unconditional transferability of funds through an authorized dealer in freely convertible currency. Also, no enterprise shall be nationalized or expropriated by any government, unless the acquisition is for national interest or for public purpose.

EXPORT INCENTIVES FOR INDUSTRIES: Under this companies are free to retain the export proceeds in foreign currency in a domiciliary account with any authorized bank of their choice in Nigeria. Special export development fund has been established to offer financial assistance to private exporting companies, to cover their initial expenses in some export promotion activities.

EXPORT PROCESSING ZONE (EPZ): Lastly, export processing zones (EPZs) have been established which allowed interested persons to set up industries with the aim of exporting the goods and services manufactured. Incentives in the zone include tax holiday; restricted

remittance of profits and dividends; no import and export licenses required; up to 100 percent foreign ownership of enterprises, etc.

DIRECT GOVERNMENT PARTICIPATION: - This direct participation of Government in certain strategic industries either alone or through joint participation with foreigners or local entrepreneurs.

RAW MATERIAL RESEARCH AND DEVELOPMENT COUNCIL (RMRDC):- This outfit was set up by government after SAP to aid in research into the use of domestic raw and intermediate materials and to enhance domestic fabrication and usage of machinery and equipment. It was meant to complement the effect of Federal Institute of Industrial Research (FIIRO), Oshodi, and the Product Development Agency (PRODA).

Access to Land:

An incentive policy also guarantees that any company incorporated in Nigeria be allowed access to land in any state of the federation, for industrial purposes. Industrial concerns are required to abide by the regulations on the use of land for industrial purposes and with environmental regulations.

4.0 CONCLUSION

Industrialization is widely believed to be a catalyst for rapid growth and development of any economy. This process of development must be made possible by the provision of appropriate institutions by the state. The institutions must in turn belong to a particular regime type: democratic or autocratic regimes.

Past governments in Nigeria, since after independence, have adopted various policies aimed at promoting industrial development in the country. But the results so far, are far from expectation, prompting arguments about the desired growth in the industrial sector in particular and the economy in general. Given the severity of the challenges facing the industrial sector in Nigeria, such as poor infrastructure development; lack of technical manpower; capacity under-utilization; direct linkage of industrial activities to foreign markets (in terms of both inputs and delivery,

with very few industries being rooted to the local economy); low standard of education; lack of research, etc. It is, therefore, recommended that most veritable path to sustainable growth and development be adopted.

Industrialization should be seen as a process of complete social and economic change whereby a particular society is transformed from pre-industrial and traditional state to an industrial one with all its features. Human capital development must be given serious attention. In the past, the educational institutions which are crucial to human capital development have been virtually neglected in the industrial development plan of the country. This trend should be reversed if our quest for industrialization is genuine. This calls for a review and restructuring of the school curricular, to encourage the study of science and technology related courses. There should also be a programme for the retraining of our traditional craftsmen and artisans.

Finally, serious attention must be given to infrastructural development. Poor transport network and epileptic power supply add to per unit cost of production and makes our product uncompetitive both locally and internationally. To this end, strategic alliance between public and private sectors should be encouraged in the development of the industrial sector. The public sector should champion the course of infrastructural provision and create a conducive business environment for the private enterprises to strive.

5.0 SUMMARY

In this unit, we have discussed industrial policy (IP) or industrial strategy of a country is its official strategic effort to encourage the development and growth of all or part of the economy, often focused on all or part of the manufacturing sector. Industrial policies are interventionist measures typical of mixed economy countries. Its aims and objectives include; To promote investment. To stimulate non-oil exports and providing a base for private sector led development. To promote efficiency of Nigeria`s industrial sector. Privatization and commercialization of the economy toward the promotion of industrial efficiency. The unit also examined the features of industrial sectors in Nigeria as well as some major industrial policy in Nigeria since 1960 - 2010

6.0 TUTOR-MARKED ASSIGNMENT

1. Critically examine 5 major industrial policies in Nigeria
2. Briefly explain industrial policy incentives in Nigeria
3. Examine the features of industrial policy in Nigeria

7.0 REFERENCES/FURTHER READING

Essays, UK. (November 2018). Review The Industrial Development Policies In Nigeria Economics Essay. Retrieved from https://www.ukessays.com/essays/economics/review-the-industrial-development-policies-in-nigeria-economics-essay.php?vref=1

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UNIT 3 INVESTMENT DEMAND

CONTENTS

1.0 INTRODUCTION

Levels of national income and employment in the short run depend upon the level of aggregate demand. In the Keynes's two sector model aggregate demand consists of two constituents-consumption demand and investment demand. Since consumption function is more or less stable in the short run, investment demand is of crucial importance in the determination of income and employment.

2.0 OBJECTIVES

At the end of this unit, the students will be to understand the:

1. The meaning of Investment Demand
2. Types of Investment Demand
3. Determinants of Investment Demand

3.0 MAIN CONTENTS

3.1 MEANING INVESTMENT DEMAND

It is useful to make the meaning of investment clear. When a person buys shares, bonds or debentures of a public limited company from the market, it is generally said that he has made investment. But this is not the real investment which determines income and employment in the country and with which we are here concerned. Buying of existing shares and bonds by an individual is merely a financial investment.

When one individual purchases the shares or bonds, some other one would sell them. Thus, the purchase and sale of the shares merely represents the change in the ownership of assets which already exists rather the creation of new capital assets. It is the new addition to the stock of physical capital such as plant, machines, trucks, new factories and so on that creates income and employment. Therefore, by real investment we mean the addition to the stock of physical capital.

Thus, in economics, investment means the new expenditure incurred on addition of capital goods such as machines, buildings, equipment, tools, etc. The addition to the stock of physical capital i.e., net investment raises the level of aggregate demand which brings about addition to the level of income and employment in the economy. Keynes and many other economists also include the increase in the inventories of consumer goods in the capital of the country and therefore in the investment.

SELF ASSESSMENT EXERCISE

What is Investment Demand?

3.2 TYPES OF INVESTMENT DEMAND

Investment is of three types:

(1) Business Fixed Investment (i.e. investment in fixed capital, such as machines, tools),

(2) Residential Investment i.e., investment in building of houses) and

(3) Inventory Investment (i.e. investment in building stocks of goods and raw materials).

The greater the level of investment, the greater the level of income and employment. According to Keynes, the equilibrium of a capitalist economy is generally not established at the level of full employment, primarily because investment demand is insufficient to fill up the saving gap corresponding to the level of full employment. Therefore, underemployment equilibrium, on which Keynes laid a great stress, is due to the lack of investment demand as compared to the amount of saving at full-employment level of income.

On the other hand, as Keynes later showed, when investment demand is more than the magnitude of saving at full-employment level of income, there emerges an inflationary gap in the economy

which brings about the rise in general price level. We thus see that investment demand plays a vital role in the determination of national income, employment and prices in the country.

Autonomous Investment and Induced Investment:

Keynes further distinguished investments into two types. One is autonomous investment and the second is induced investment. By autonomous investment we mean the investment which does not change with the changes in the income level and is therefore independent of income. Keynes thought that the level of investment depends upon marginal efficiency of capital and the rate of interest. He thought changes in income level will not affect investment. This view of Keynes is based upon his preoccupation with short-run problem.

He was of the opinion that changes in income level will affect investment only in the long ran. Therefore, considering as he was the short-ran problem he treated investment as independent of the changes in the income level. In fact, the distinction between autonomous investment and induced investment has been made by post-Keynesian economists. Autonomous investment refers to the investment which does not depend upon changes in the income level. This autonomous investment generally takes place in houses, roads, public undertakings and in other types of economic infrastructure such as power, transport and communication.

This autonomous investment depends more on population growth and technical progress than on the level of income. Most of the investment undertaken by Government is of the autonomous nature. The investment undertaken by Government in various development projects to accelerate economic growth of the country is of autonomous type. The autonomous investment is depicted in Fig. 1 where it will be seen that whatever the level of national income, investment remains the same at I_a. Therefore, the autonomous investment curve is a horizontal straight line.

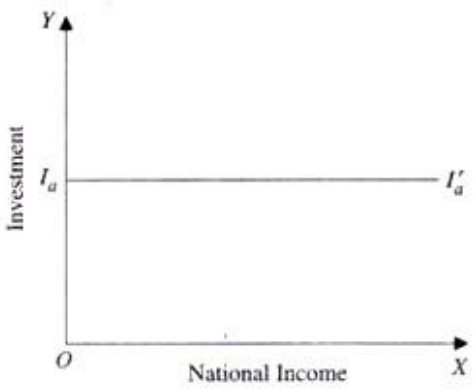

Figure 1. Autonomous Investment

On the other hand, induced investment is that investment which is affected by the changes in the level of income. The greater the level of income, the larger will be the consumption of the community. In order to produce more consumer goods, more investment has to be made in capital goods so that greater output of consumer goods becomes possible. Keynes regarded rate of interest as a factor determining induced investment but the empirical evidence gathered so far suggests that induced investment depends more on income than on the rate of interest.

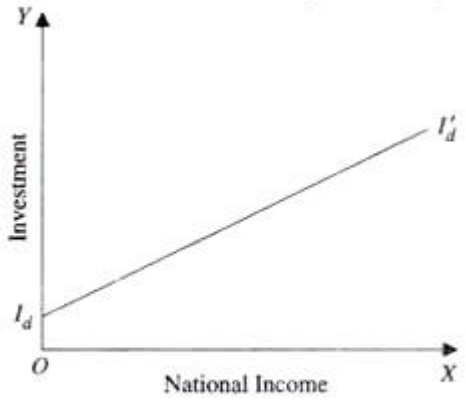

Fig. 8.2. *Induced Investment*

Induced investment is shown in Fig. 2 where it will be seen that with the increase in national income, induced investment is increasing. Increase in national income implies that demand for output of goods and services increases. To produce greater output, more capital goods are re-

quired to produce them. To have more capital goods more investment has to be undertaken. This induced investment is undertaken both in fixed capital assets and in inventories.

The essence of induced investment is that greater income and therefore greater aggregate demand affects the level of investment in the economy. The induced investment underlines the concept of the principle of accelerator, which is highly useful in explaining the occurrence of trade cycles.

3.3 DETERMINANTS OF INVESTMENT DEMAND

Inducement to invest or investment demand depends upon two factors:

(1) Expected rate of profits to which Keynes gives the name Marginal Efficiency of Capital, and

(2) The rate of interest. It can be easily shown that investment is determined by expected rate of profit and the rate of interest.

A person having an amount of savings has two alternatives before him. Either he should invest his savings in machines, factories, etc., or he can lend his savings to others on a certain rate of interest. If investment undertaken in machines or factories is expected to fetch 25% rate of profit, while the current rate of interest is only 15%, then it is obvious that the person would invest his savings in machinery or factory.

It follows from above, if investment is to be profitable than the expected rate of profit must not be less than the current market rate of interest. If the expected rate of profit is greater than the market rate of interest, new investment will take place.

If an entrepreneur does not invest his own savings but has to borrow from others, then it becomes much clear that the expected rate of profit from investment in any capital asset must not be less than the rate of interest he has to pay. For instance, if an entrepreneur borrows funds from others at 15% rate of interest, then the investment proposed to be undertaken will actually be undertaken only if the expected rate of profit from it is more than 15 per cent.

We thus see that investment depends upon marginal efficiency of capital on the one hand and the rate of interest on the other. Investment will be undertaken in any given form of capital asset so long as expected rate of profit or marginal efficiency of capital falls to the level of the current market rate of interest. The equilibrium of the entrepreneur is established at the level of investment where expected rate of profit or marginal efficiency of capital is equal to the current rate of interest. Therefore, the theory of investment is also based upon the assumption that the entrepreneur tries to maximize his profits.

Of the two determinants of inducement to invest, marginal efficiency of capital or expected rate of profit is of comparatively greater importance than the rate of interest. This is because rate of interest does not change much in the short run; it is more or less sticky.

But changes in the expectations of profits greatly affect the marginal efficiency of capital and make it very much unstable and volatile. As a result of changes in marginal efficiency of capital, investment demand is greatly affected which causes aggregate demand to fluctuate very much. The changes in aggregate demand bring about economic fluctuations which are generally known as trade cycles.

When profit expectations of businessmen are good, large investment is undertaken which causes aggregate demand to rise and bring about conditions of boom and prosperity in the economy. On the other hand, when expectations regarding profits are adverse, the rate of investment falls which causes decline in aggregate demand and brings about depression, unemployment and excess productive capacity in the economy. Thus, the changes in the marginal efficiency of capital play a crucial role in causing changes in the investment level and economic activity.

The theory of interest that, according to Keynes, the rate of interest is determined by liquidity preference and the supply of money. The greater the liquidity preference, the greater the rate of interest. Given the liquidity preference curve, the greater the supply of money, the lower will be the rate of interest. We have already studied how the rate of interest is determined. We explain below in detail the concept of marginal efficiency of capital and describe the factors on which it depends.

Marginal Efficiency of Capital:

As has been pointed out above, the concept of marginal efficiency of capital refers to the rate of profit expected to be made from investment in certain capital assets. The rate of profit expected from an extra unit of a capital asset is known as marginal efficiency of capital.

Now, the question is how the marginal efficiency of capital is measured. Suppose an entrepreneur invests money in a certain machinery, how will he estimate the expected rate of profit from it. To estimate the marginal efficiency of capital, the entrepreneur will first take into consideration how much price he has to pay for the particular capital asset.

The price which he has to pay for the particular capital asset is called its supply price or cost of capital. The second thing which he will consider is that how much yield he expects to obtain from investment from that particular capital asset. A capital asset continues to produce goods and yield income over a long period of time. Therefore, an entrepreneur has to estimate the prospective yield from a capital asset over his whole life period. Thus, the supply price and the prospective yields of a capital asset determine the marginal efficiency of capital.

By deducting the supply price from the prospective yield during whole life of a capital asset the entrepreneur can estimate the expected rate of profit or marginal efficiency of capital. Keynes has defined the marginal efficiency of capital in the following words: "I define the marginal efficiency of capital as being equal to that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital asset during its life just equal to its supply price."

Thus, according to Keynes, marginal efficiency of capital is the rate of discount which renders the prospective yields from a capital asset over its whole life period equal to the supply price of that asset.

Therefore, we can obtain the marginal efficiency of capital in the following way:

Supply Price = Discounted Prospective Yields

$C = R_1/1+r + R_2/(1+r)^2 + R_3/(1+r)3 \ldots\ldots\ldots\ldots + R_n/(1+r)^n$

In the above formula, C stands for Supply Price or Replacement Cost and R_1, R_2, R_3, .. R_n etc., represent the annual prospective yields from the capital asset, r is that rate of discount which renders the annual prospective yields equal to the supply price of the capital asset. Thus, r represents the expected rate of profit or marginal efficiency of capital.

The measurement of marginal efficiency of capital can be illustrated by an arithmetical example. Suppose it costs 3000 rupees to invest in a certain machinery and the life of the machinery is two years, that is, after two years it becomes quite useless, having no value. Suppose further that in the first year the machinery is expected to yield income of Rs. 1100 and in the second year Rs. 2420/-. By substituting these values in the above formula, we can calculate the value of r, that is, the marginal efficiency of capital.

Supply Price = Discounted Prospective Yields

$C = R_1/1+r + R_2/(1+r)^2$

$3000 = 1,100/1+r + 2,420/(1+r)^2$

On calculating the value of r in the above equation it is found to be equal to 10. In other words, marginal efficiency of capital is here equal to 10 per cent. If we put the value of r, that is, 10 in the above equation, we obtain the following:

$3,000 = 1100/1.10 + 2,420/ (1.10)^2$

$= 1,000 + 2,000 = 3,000$

Marginal Efficiency of Capital in General:

We have explained above the marginal efficiency of a particular type of capital asset. But we also require to know the marginal efficiency of capital in general. It is the marginal efficiency of capital in general that will indicate the scope for investment opportunities at a particular time in any economy.

At a particular time in an economy the marginal efficiency of that particular capital asset which yields the greatest rate of profit, is called the marginal efficiency of capital in general. In other words, marginal efficiency of capital in general is the greatest of all the marginal efficiencies of

various types of capital assets which could be produced but have not yet been produced. Thus, marginal efficiency of capital in general represents the highest expected rate of return to the community from an extra unit of a capital asset which yields the maximum profit which could be produced.

Keeping in view the existing stock of a capital asset, we can always calculate the marginal efficiency of any particular capital asset. The marginal efficiency of capital will vary when more is invested in a given particular capital asset. In any given period of time marginal efficiency of capital from every type of capital asset will decline as more investment is undertaken in it. In other words, marginal efficiency of a particular type of capital asset will be sloping downward as the stock of capital increases.

The main reason for the decline in marginal efficiency of capital with the increase in investment in it is that the prospective yields from capital asset fall as more units are installed and used for production of a good. Prospective yields decline because when more quantity of a good is produced with the greater amount of capital asset prices of goods decline. The second reason for the decline in the marginal efficiency of capital is that the supply price of the capital asset may rise because the increase in demand for it will bring about increase in its cost of production.

SELF ASSESSMENT EXERCISE

What are the determinants of Investment Demand?

Rate of interest and Investment Demand Curve:

We have explained above how the marginal efficiency of capital is estimated. We can represent diminishing marginal efficiency of capital in general by a curve which will slope downward. This has been done in Fig. 3 in which along the X-axis investment in capital assets is measured and along the X-axis marginal efficiency of capital in general is shown. It will be seen from the figure that when investment in capital asset is equal to 07,, marginal efficiency of capital is i,. When the investment is increased to OI_2, marginal efficiency of capital falls to i_2. Likewise, when investment rises to OI_3, marginal efficiency of capital further diminishes to i_3.

We have seen above that inducement to invest depends upon the marginal efficiency of capital and the rate of interest. With the given particular rate of interest and given the curve of marginal efficiency of capital in general we can show what will be the equilibrium level of investment in the economy. If in Fig. 3 along the Y-axis, rate of interest is also shown, then level of investment can be easily determined.

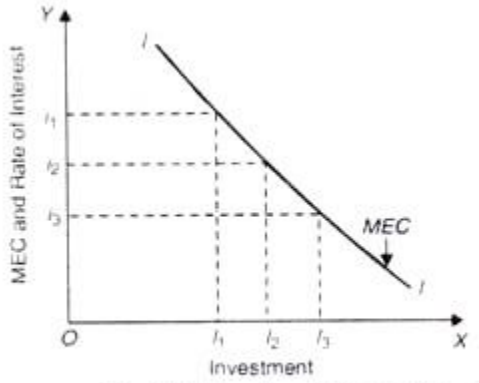

Fig. 8.3. *Investment Demand Curve*

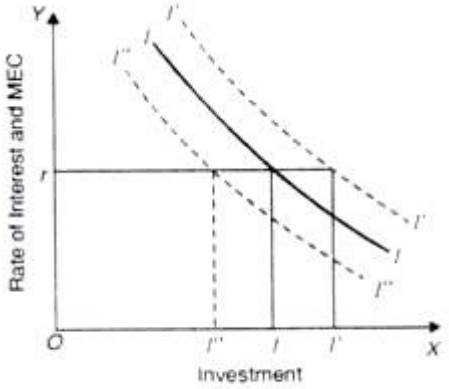

Fig. 8.4. *Shifts in Investment Demand Curve due to Changes Marginal Efficiency of Capital*

The equilibrium level of investment will be established at the point where marginal efficiency of capital becomes equal to the given current rate of interest. Thus, if the rate of interest is i_1 then I_1 investment will be undertaken. Since at OI_1 level of investment marginal efficiency of capital is equal to the rate of interest i_1. If the rate of interest falls to i_2, investment in the capital assets will rise to OI_2, since at OI_2 level of investment the new rate of interest i_2 is equal to the marginal efficiency of capital. Thus, we see that the curve of marginal efficiency of capital in general shows the demand for investment or inducement to invest at various rates of interest.

Hence marginal efficiency of capital curve represents the investment demand curve. This investment demand curve shows how much investment will be undertaken by the entrepreneurs at various rates of interest. If the investment demand curve is less elastic, then investment demand will not increase much with the fall in the rate of interest. But if the investment demand curve or marginal efficiency of capital curve is very much elastic, then the changes in the rate of interest will bring about large changes in investment demand.

Business Expectations and Investment Demand Curve:

We have studied above that the marginal efficiency of capital depends upon the supply price of capital on the one hand and prospective yields on the other. It is important to note here that the prospective yields are greatly affected by the expectations of the entrepreneurial class regarding profit making. These expectations generally change very frequently. Indeed, it is the profit expectations of the entrepreneur which determine the level of investment. When the expectations of the entrepreneur regarding profit making become dim, the marginal efficiency of capital declines and as a result demand for investment falls.

The occurrence of depression is mainly due to the pessimistic expectations of the entrepreneurial class regarding profit making. On the contrary, when the expectations of the entrepreneurs regarding profit opportunities increase, their inducement to invest rises. As a result of the increase in investment, aggregate demand in the economy increases and levels of income and employment increase. We thus see that profit expectations of entrepreneurs greatly affect investment demand and consequently the level of income and employment.

We have explained above that, according to Keynes, marginal efficiency of capital along with rate of interest determines the level of investment and therefore of the levels of income and employment. A significant contribution of Keynes is that he emphasized the important role that business expectations play in determining the prospective yield from assets on which marginal efficiency of capital and therefore the level of investment depends. He drew distinctions between short-term expectations and long-term expectations.

Keynes thought that prospective yields of capital assets depended on partly existing facts which we can assume to be known with a fair degree of certainty and partly on future events which can

be predicted with a degree of uncertainty and involves greater risk. It is the existing facts which are known almost with certainty that determine short-term expectations.

The short-term business expectations about prospective yields from investment depend on (i) the existing stock of capital assets and (ii) the strength of consumer demand for goods which require a good deal of those assets for their production. The investors think that the current consumption demand will continue in immediate future too and base their expectations of prospective yield from investment in capital assets on it.

As regards the state of long term expectations, Keynes emphasized future changes in the stock of capital assets and changes in the level of aggregate demand during the entire future life of the assets whose prospective yields are being estimated.

Business men acquiring new assets which have long life for production of goods are more concerned with long-run forces on which future earnings from capital assets depend. It is these long-run forces which make long-run expectations about future yields that make them quite uncertain. Changes in these long term expectations make investment quite volatile. Therefore, Keynes gave great importance to the state of confidence for determining investment.

It should be carefully noted that when the expectations regarding prospective yields change, the whole curve of the marginal efficiency of capital will shift. If profit expectations fall, the marginal efficiency of capital curve, that is, investment demand curve will shift downward to left, as shown by the shift of the curve from II to I"I" in Fig. 4. On the other hand, when the profit expectations of the entrepreneurial class become better than before, the marginal efficiency of capital curve will shift upward to the right, as shown by the marginal efficiency of capital curve I'I'. Downward shift in the marginal efficiency of capital curve indicates that at the given rate of interest, less investment will be undertaken than before.

And upward shift in the marginal efficiency of capital curve indicates that more will be invested at the given rate of interest than before. In Fig. 8.4 when in the beginning, investment demand curve, that is, marginal efficiency of capital curve is represented by II, at the rate of interest r, demand for investment is OI, As a result of downward shift in the marginal efficiency of capital curve to I"I", investment demand at the rate of interest r falls to OI". When the marginal

efficiency of capital shifts upward to I'I', investment demand at the given rate of interest r rises to OI'.

It follows, therefore, that the rate of investment depends on marginal efficiency of capital and the rate of interest. If investment demand is interest-elastic, a reduction in rate of interest tends to stimulate investment. But it may fail to do so, if marginal efficiency of investment is already lower than the rate of interest (as may well happen during a depression). Of the two determinants of the rate of investment, marginal efficiency of investment is more volatile than the rate of interest.

The rate of interest is usually 'sticky' in the short run, while marginal efficiency of investment can fluctuate from one extreme to another. If there is a divergence between the two, usually the marginal efficiency of investment will adjust to the rate of interest. If, for example, the marginal efficiency of investment is 20 per cent, while the current rate of interest is 12 per cent, forces will be set in motion so as to bring the former to the level of the latter.

In such a situation, there will be more investment because marginal efficiency of investment is greater than the rate of interest, and with the increase in investment, marginal efficiency of investment will fall. At the point where it is just reduced to the level of the current rate of interest, further investment will cease.

4.0 CONCLUSION

In this unit, we have examined investment demand, investment means the new expenditure incurred on addition of capital goods such as machines, buildings, equipment, tools, etc. The addition to the stock of physical capital i.e., net investment raises the level of aggregate demand which brings about addition to the level of income and employment in the economy. Keynes and many other economists also include the increase in the inventories of consumer goods in the capital of the country and therefore in the investment. The unit also concludes that the greater the level of investment, the greater the level of income and employment. According to Keynes, the equilibrium of a capitalist economy is generally not established at the level of full employment, primarily because investment demand is insufficient to fill up the saving gap corresponding to the level of full employment.

5.0 SUMMARY

In this unit, we have discussed investment demand, types of investment as well as determinants of investment. Investment is defining as a means the new expenditure incurred on addition of capital goods such as machines, buildings, equipment, tools. While the types of investment are Business Fixed Investment (i.e. investment in fixed capital, such as machines, tools), Residential Investment i.e., investment in building of houses) and Inventory Investment (i.e. investment in building stocks of goods and raw materials). Also, inducement to invest or investment demand depends upon two factors: Expected rate of profits to which Keynes gives the name Marginal Efficiency of Capital, and the rate of interest. It can be easily shown that investment is determined by expected rate of profit and the rate of interest.

6.0 TUTOR-MARKED ASSIGNMENT

1. With the aid of a graph, discuss the relationship between rate of interest and investments
2. Critically examine the determinants of investment demand
3. List and explain types of investment demand

7.0 REFERENCES/FURTHER READING

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