CHAPTER – I

INTRODUCTION

I.1. IMPORTANCE OF THE STUDY

Concept of Productivity has been examined in various dimensions by various researchers. It has been visualized to represent production function. Some others have seen it as labour effectiveness. There is a recent trend to interpret productivity in its broader perspective as representing the performance in totality of an organization considered to work as a system. Industrial revolution made a major departure for society from total dependence on agricultural economy. Man and machine formed the other balancing pivot. Productivity of a plant virtually meant production and productivity from labour. Measurement of production in terms of standard hours produced with reference to hours of labour put in became the landmark and yardsticks of efforts, effectiveness, performance and efficiency came to be referred to as productivity.

Productivity enters in one way or other, virtually every broad economic problem; it affects costs, prices, profits, output, employment and investment and thus assumes a crucial role in economic development. Productivity indices have been accepted not only as a measure of performance but also as an important means of motivating improvements in productive efficiency. Their use in the analysis of the factors that promote productivity and the dynamic economic relationships as a basis
for forecasting trends and making policy decisions, are well recognised and being increasingly used at the level of the firm, the industry and the economy.¹ In order to monitor the progress of an industry or an enterprise, it is essential to make scientific appraisal of the trends in productivity.

The twentieth century and the world war years brought in technological advances in rapid succession. Machine tools with higher work parameters brought an increase in production and rate of production. Measuring production and identifying the sources of growth in terms of production function is a fascinating and rewarding area of study. The aggregate production function is implied to represent input-output relation to an individual industry or even in the economy as a whole. Economists think of productivity in terms of production function that specify the possibilities for making substitution between capital and labour or in other words, a tool which helps in arriving at decisions relating to the choice of techniques of production.²

In recent times, an increasing number of interesting studies has been undertaken which examine the relative contribution of labour, capital and technical change in Paper Industry based on both cross-section and time series data. Though there are a large number of studies at micro level in India, studies at macro level are scanty. Further, in recent year's studies on production function in India indicate the need for detailed studies.

A study of growth, measurement of productivity and estimation of production function in paper industry is desirable because it occupies a unique place in the
industrial structure of India, being the third largest industry next to Sugar and Cotton textiles. It is one of the largest and traditional industries in India.

One of the major outcomes of the liberalization and globalization of the economy is the rapid upgrade of manufacturing capabilities with the end users such as Printing and Publishing industry and Packaging industry. These developments in turn have led to a significance shift in the pattern of demand of paper and paper boards and this shift is likely to be accentuated in the future.

1.2. SCOPE OF THE STUDY

Considering the importance of Paper Industry this study is focused to analyze the pattern and growth of Paper Industry in All India, taking into account input, output, and other related variables. In the present study an attempt has been made to estimate the relative efficiency of different inputs by using partial factor productivity of labour, capital and raw material as well as total factor productivity for the Paper Industry in India for the period from 1979-80 to 1997-98. Further an attempt has been made to estimate the influence of output and technology on factor productivity with the help of multiple regressing frame work. The study also aims to examine and analyze production function in Paper industry in India during 1979-80 to 1997-98. It includes the estimation of partial elasticity of output with respect to labour and capital, returns to scale, technological progress and the sources of output growth at the national level.
I.3. OBJECTIVES OF THE STUDY

The main objectives of the study are:

a) To characterize the trends in output, inputs and other related variables in Paper Industry in India in order to bring out growth in the industry.

b) To measure the efficiency in Paper industry using partial and total factor productivity indices.

c) To find out a suitable model for production function in paper industry among VES, CES and COBB-DOUGLAS production functions.

d) To estimate the returns to scale and technological progress in Paper Industry using Cobb-Douglas production function.

e) To examine the relative contributions of labour and capital in output growths at All India level.

I.4. PLAN OF THE THESIS

The thesis is organised as follows:

Following the introductory chapter, Chapter II presents a brief review of literature on the studies of productivity and production function. The first section of
this chapter mainly accounts for studies on productivity and second section provides studies on production function. A summary review of studies on productivity and production function is given at the end of the respective sections.

In Chapter III, theoretical aspects of partial productivity and total factor productivity and different types of production functions (C.D, CES AND VES) and methods for the analysis of the present study are presented.

Chapter IV deals with the sources of data, definitions and measurement of variables. A review of “Indian Paper Industry” in relation to its historical retrospect, importance, growth of paper industry during plan periods, supply and demand position and the general features of the industry during 1979-80 to 1997-98 are presented in Chapter V. Chapter VI deals with measurement of partial and total factor productivity indices. Chapter VII is devoted to determine the relevant form of the production function for the paper industry and on the basis of which partial elasticity of output with respect to capital and labour, return to scale, neutral technical progress, marginal productivity of labour and capital and sources of output growth are determined. Chapter VIII contains a summary of the findings and some concluding remarks.
FOOTNOTES

