Chapter I

INTRODUCTION

It is widely held that theoretical formulation of economic models and their empirical estimation greatly helps policy makers to design suitable policies for accomplishing desired objectives at various levels, whether pertaining to an economy, an industry, a firm or a market. The utility of econometric models, as observed by Johnston (1972, p.2), also lies in the "hope that from the understanding that the model gives of the system we may predict the future movements of the system and possibly control those movements to improve economic welfare."

With regard to India's exports, a number of researchers have examined her export performance in the past, following the model building approach at different levels. For instance at the macro level for all exports, Singh (1964), Dutta (1964) and Swamy (1966) have analysed India's export performance during the 1950s.\(^1\)

India's exports experienced considerable growth both in value and volume as a result of product diversification during the 1960s and the 1970s. Exports of non-traditional products including engineering goods, chemicals, handicrafts, vegetable oils and unmanufactured tobacco. See Bhagawati and Desai (1970, pp.368-379).

\(^1\)During this period, India was pursuing the policies of import-substitution with almost no emphasis on export growth, except for a limited number of traditional products such as cotton textiles, tea and jute manufactures, leather and leather manufactures, vegetable oils and unmanufactured tobacco. See Bhagawati and Desai (1970, pp.368-379).
and readymade garments have exhibited encouraging trends since the rupee devaluation in 1966. Simon (1968), Staelin (1972), Nayyar (1973), Frankena (1973), Panchmukhi (1974), Wadhva and Sharma (1975), Reddy (1978) and Rao (1980) have focused on India's export performance at the disaggregated level for selected products. Further, in most studies, the emphasis is on designing export models and explaining the underlying structure by estimating the models empirically at macro level. However, Paul and Mote (1967, 1970), Krueger (1970) and Wadhva (1981) have attempted a micro level approach.

It should be stressed that in the context of India's exports Panchmukhi (1982, p.220) has pointed out that "we have no information on the behaviour of trade activity at the micro level. What are the determinants of export and import behaviour at the firm level? Why do some firms within an industry flourish as exporters, while the others do not? What are the responses at the micro level of firms, traders, industry associations, export houses, consumers etc., to the prices, various government policies and decisions? There is an urgent need for recasting the received theoretical constructs so as to make them relevant --- for a developing economy like India."

The main purpose of this study is to partly fill this gap by examining the case of India's exports of cotton
fabrics and readymade garments at both industry and firm levels.

SUBJECT MATTER

Cotton fabrics and readymade garments are selected in this study mainly because

(a) exports of mill-made cotton fabrics have shown a declining trend over time which may therefore, be a cause of concern for the policy makers and thus a detailed examination of underlying causal factors may be useful to arrive at a set of possible alternatives to improve their future performance;

(b) exports of handloom fabrics have shown an increasing trend over time, though less in volume and value as compared to mill-made fabrics but no attempt has been made earlier to study this export sector;

(c) India's exports of readymade garments have shown very high growth rates over time particularly since the mid-sixties and have become an important source of foreign exchange and an indirect source of demand for cotton fabrics. Thus, the underlying factors need to be analysed in detail to explore whether there exists a scope for sustaining the high growth rates achieved.
OBJECTIVES

The main objectives of the present study are:

(1) To hypothesise export demand and supply of mill-made cotton fabrics in a simultaneous equation framework and explain India's export structure by estimating the underlying parameters using time series data; and to use the estimated models for forecasting future movements of export quantity.

(2) To explain export performance of India's handloom fabrics through a macro econometric model and use it to generate forecasts for future.

(3) To hypothesise an export demand relationship for readymade garments at macro level and test it by estimating the underlying structure.

(4) To examine in detail India's export supply behaviour of readymade garments at micro level considering a cross-section of garment exporters through a sample survey and to identify differential characteristics affecting export performance at firm level.

SCOPE

The focus of the study is on India's export performance of mill-made cotton fabrics, handloom cotton fabrics and readymade garments.
Cotton fabrics are India's traditional exports. The study covers the period from 1957 to 1981. India's exports of handloom cotton fabrics have, however, grown since the mid-sixties. Therefore, the study is conducted using the data for the period 1967 to 1982. Similarly, India's exports of readymade garments have shown a high growth rate only since the mid-sixties. In this case, the study covers a shorter period from 1968-69 to 1979-80.

At micro level, India's export behaviour of readymade garments is examined in detail by means of a sample survey of garment exporting units located in and around Delhi. The survey was conducted during May-June 1982 and the sample data used in the analysis refer to the year 1981. Firm level analysis covers *inter alia* discussion on marketing elements such as sales promotion efforts and *inter se* price competition among exporters; it seeks to explain intra-firm variations. Thus, the scope of this study extends to export marketing area as well.

**METHODOLOGY**

We present a survey of literature on empirical models to gain an understanding of the problems of specification of export demand and supply functions at macro level with special emphasis on export models relating to India's exports in general and cotton textiles in particular.
Cotton Fabrics (Mill-Made) Based on earlier research and following Goldstein and Khan (1978), a simultaneous equations model is posited in the case of India's exports of mill-made cotton fabrics.

Export demand for cotton fabrics is specified as a function of India's export price, the export price of her close competitor Hongkong, and world import demand. Export supply is hypothesised to be a function of India's export price, domestic price and government incentives.

The domestic supply function is also estimated separately taking into account all important supply factors such as domestic price of raw cotton, factor productivities and pace of modernisation in the mill(s) etc.

The two variables, quantity exported and export price of cotton fabrics, are treated endogenous to the system and determined jointly, assuming an instantaneous adjustments in the system.

Considering time-series data for the period 1957-1981, the two equations are estimated by the method of Two Stage Least Squares (2 SLS). Reduced form forecasts of export quantity are obtained for the period 1982-1986.

The domestic supply price function is estimated separately by the Ordinary Least Squares (OLS) method, using annual data for the same period.
Handloom Cotton Fabrics
In the case of handloom fabrics, export supply behaviour is examined at macro level, assuming the world demand to be unlimited. Following Ali (1984) with some modifications, India's export supply of handloom fabrics is specified as a function of India's export price vis-a-vis domestic price and a shift variable like share of the handloom sector in total cloth production in the economy or consumption of cotton yarn by the handloom sector.

The supply function is estimated by the OLS method using time-series annual data for the period 1967-1982 and the estimated model is used to generate export forecasts for the period up to 1987.

Readymade garments. At macro level, India's export demand for readymade garments is hypothesised to be a function of her own export price, export price of her competitor South Korea, and world import demand.

Export price of India is assumed to be exogenous as her share in world exports of clothing has been very small (for instance, around 2 per cent in 1978). Under this assumption export demand function is estimated by the OLS method using annual data for the period 1968-69 to 1979-80.

At micro level, export supply functions are specified to explain intra-firm variations in their export performance. The factors included in the model represent differential
characteristics at firm level viz.,

(i) selling efforts by firms such as foreign travel required for business purposes to keep abreast with changing fashions and designs of garments;

(ii) firm's participation in trade fairs abroad and within India;

(iii) efforts to diversify exports to different markets and different categories of garments;

and most importantly

(iv) firm's own export price in relation to an index of other exporters' prices.

The export functions are estimated by employing firm level export data for the year 1981. Sensitivity analysis is conducted by prescribing different values to the independent variables included in the estimated functions and alternative export scenarios are provided for selected firms.

ORGANISATION. This study is divided into six chapters. This chapter gives introduction to the study, the objectives, methodology and organisation of the study.

Chapter II gives a detailed discussion of the methodology adopted by other researchers regarding export specifications and estimation of models for India's exports in general and cotton textiles in particular. This chapter
also presents some selected export models at firm level proposed by other researchers which are relevant for this study.

Chapter III reports the export functions for India's mill-made cotton fabrics. It also provides analysis of results and forecasts made by using the estimated models.

Chapter IV describes the models relating to India's exports of handloom fabrics posited in this study and provides an analysis of the results obtained and forecasts for future.

Chapter V contains the export models for readymade garments to estimate the underlying factors both at macro and firm levels. It also provides a detailed discussion of the differential characteristics analysed on the basis of sample data at firm level. Further, predictions are also provided for export quantity and value for selected firms in the sample prescribing values to the controllable variables used in the model under alternative scenarios.

Chapter VI summarises the findings and conclusions emerging from the study and draws policy implications for future. This chapter also lists the limitations of the models estimated in this study and indicates scope for future work.