LINK BETWEEN GROWTH AND ASYMMETRIC INFORMATION OF TEXTILE INDUSTRY IN INDIA

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Abstract: The Indian textile industry contributed a very important role in Indian economy. It is the world's second largest producer of textiles and garments after China.
By virtue of being among the earliest established industries in the country, and being a major sector responsible for rapid growth of the newly industrialized countries, the textile industry plays a significant role in the Indian economy. This industry has a rich past in India, in addition to its dimensions in culture and heritage, so much so that any study of Indian history would be incomplete without a detailed treatment of the country's textile trade. Textile production has been an integral part of the lives of millions of poor people, including farmers, in India for centuries and ages. In addition, textile production has backward linkages with agriculture and allied activities, at least in the case of natural fibers. A strong and diverse raw material base, cheap labour, an ever-growing domestic market and relatively better technologies than some of the other developing countries are the key strengths of the Indian textile sector that have resulted in such a pronounced prominence of this industry. The development of a modern textile industry in India gained momentum after a similar trend in Britain, owing to the availability of indigenous cotton, cheap labour, access to British machinery and a well-developed mercantile tradition in India.

Introduction: Despite being among the world leaders in textile production during 1950s, the country had been steadily losing ground in the world textile market, together with a loss of importance in industrialization at home. The decline of the Indian textile industry is very conspicuous relative to the country's other industries as well as the textile industries of other countries in the developing world, as is evident from the steep fall in the share of Indian textiles in the international market and in total Indian exports (Narayanan (2006)).
In the 1980s the Indian textile industry faced a severe recession, both in terms of employment as well as in the number of operational mills/factories, which continued during the mid-1980s and 1991 despite fundamental changes in the tariff structure among other policy aspects. (Sen, 1983) Although symptoms of recovery have been of late, owing to the market expansion resulting from the phasing out of MFA quotas, there was an astonishing decline in export growth from more than 16 per cent in 2005/06 to 10.53 per cent in 2006/07 (Ministry of Textiles, 2007).
Hence the growth of the Indian textile industry in the last decade has been considerably more than the previous decades, primarily on account of liberalization of trade and economic policies initiated by the Government in the 1990s and the scenario started changing after the economic liberalization of Indian economy in 1991. The opening up of economy gave the much needed thrust to the Indian textile industry. This is now successfully became one of the largest industries in the world. Various factors affected annual growth rate of Textile Industry, global recession is one of them. The impact of the global and domestic economic slowdown directly affect the performance of the industry. While cost of raw materials and inputs remain in competitive in comparison with competing countries, the output and profitability of the industry have taken a nose dive in recent times.
The agricultural crop or the agricultural sector, constitutes nearly 25 per cent of the export earnings and caters to one of the basic needs of the population (Sickness in Indian Textile Industry Causes and Remedies, Anubhai, 1989). The demand for raw cotton is derived from the demand for yarn, cloth etc. The textile industry thus have an important bearing on the behavior of cotton prices. Fluctuation in cotton prices has a powerful impact on the production of textile industry. The cotton and textile industry has a cause and effect relationship. Development of one depends on the other (Recession In Textile Industry, Sharma). The domestic producers whose choice for access to new technology was limited. Various kinds of restrictions on trade policies affected the handloom weavers, and further crippled the integrated spinning-cum-weaving mills in a number of ways, leading to wide spread bankruptcy. As a result the quality of the textiles reduced considerably by world standards in the year 1980's. There has also been a change of preference pattern in favor of textile especially cotton textiles in the post-reform period. The improvement in consumption was led by higher income growth specially years 1993-94 1994-95 and 1995-96 (Economic Reforms and Textile Industry in India, Roy, 1998).

Statement of problem review of literature and theoretical underpinning:

Statement of Problem:

A. Due to lack of unimproved technology and

physical infrastructure creates an information asymmetry. As a result farmers, traders and consumers, face problem of information failure and inadequate institutional/financial support.

B. The Indian cotton quality are not matching as per the international markets according to the International Textile Manufacturers Federation (ITMF) . Therefore the inherited advantages of abundant raw material and cheap, surplus labour is converting as a disadvantage.

C. The Profitability of the textile industry is been highly affected by restrictive trade policies and high excise tariffs, difficulties in contractual labour and restrictive labour laws are hindering its profitability.

Review of literature and theoretical under pinning: The survey of literature gives enough evidence to show that enough work has been done on Indian Textile Industry by renowned economists. In this connection, mention should be made of names like Zingale, Mahmood, Iqbal, Shaik (2001), Ganesh (2000), Naik and Abraham (2004), Mrinalini, Sandhya Nath (2001), Chan-Lee and Sutch, Anubhai(1989), Dhawann, R (1999), Khan, M. (1998), Juergen, H. (2000), Mridul, E (1977), Goswami, O. (1990) , Desai Ashok, V. (1983), Reddy, T. C. and Gayathri, S. (2000)

Zingale, kumar and Rajan (2001) showed that an improvement in patent protection in a country is associated with an increase in the size of firms in R&D intensive industries.

Mahmood, Iqbal, Shaik (2001): worked intensively on the textile clusters in Pakistan. The results showed there is a negative growth in manufacturing sector. It further revealed that Government should emphasis on increase in efficiency and productivity with the help of research and development wing.

Naik and Abraham (2004): revealed the need for market reforms and the advantages of grades and standards in the market should be brought about through a comparison of the Indian and the American cotton supply chains. Indian cotton supply chain is creating a detrimental effect in achieving premium price realization in the markets and ensuing a reliable feedback system on quality.

Ganesh (2000): showed empirically that the Indian textile industry is too fragmented and obsolete to benefit from the market openings which will follow the elimination of quota restraints. He concluded textiles should be treated as any other industry, within the larger framework of India's industrial policy.

Mrinalini, Sandhya Nath: (2001) believed through their paper that the effectiveness of organized technology is a supply system for the textile. Industry under the control of the government and managed by the industry associations.

Chan-Lee and Sutch concludes that: Stock markets and the respective valuation ratios have also recovered sharply in major OECD countries, implying that the profit have squeezed.

Anubhai(1989): said through his paper (1) higher utilisation, (2) coarser count, better productivity, and (4) higher technology essential for all round improvement in textile industry.

Dhawan (1999): displayed heterogeneity among the US firms on the basis of their size. This paper found that small firm incurred higher profit and concludes that small firms are more productive than the larger firms and small firms are more risker than the large firms. This analysis feels that if smaller firm can survive market uncertainities and capital constraint they can incur more growth, but this does not mean that large firms should be broken down into smaller counterparts that firms should not merge together to form a large entity.

Khan(1998): displayed double digit inflation and high cost of financing has seriously affected the growth in the textile industry. The lack of production capability, increase in interest rate, energy crisis, devaluation of Pakistani rupee, increasing cost of inputs, political instability, removal of subsidy & internal dispute date rioted the growth and profitability in the textile industry all over the world. Government should provide subsidy for the survival of this industry. The government should not withdraw sales tax and withholding tax exemption on machinery and parts, as it would add cost besides liquidity problem for the industry.

Juergen (2000): displayed an intangibles-based view on enterprise and ecosystem management which can provide valuable insights in the value creation process of an enterprise or ecosystem in order to manage for profitable growth and to maintain growth – even under rapid external change and uncertainty This approach can also bring the necessary degree of rigidity and discipline into the rating, measurement and reporting of intangible, qualitative performance ('customer value added') because it set the qualitative and subjective (intangible) dimension into the context of the financial dimension.

Mridul (1977): shows that percapita consumption has declined over the years. The tentative hypothesis is that changes in the distribution of income and relative prices might be the major causes for the observed trends in the per capita consumption of cloth.

Goswami (1990): concludes that Indian Textile industry experienced stagnation, there has been a steady decline in per-capita purchase of cotton textile, diminishing textile industry is experienced among all the income and expenditure class, regarding fibre types, own price elasticities synthetics

and blended cloth as well as cotton are greater than unity, progressive reduction in price of blended cotton and synthetics would contribute to the per-capita growth in the textile industry.

Desai (1983): concludes that government ideology promotes small-scale production. Discrimination in taxation, licensing against large mills through Khadi and Village Industries Commission and through co-operatives are the various measures adopted. But these policies were not quite successful in promoting the technology mix but affected the firm size composition. The development in Textile Industry have promoted the development of Textile Machinery Industry. As a result demand for ancillary and weaving materials have increased significantly.

Reddy and Gayathri (2000): emphasizes on organisational effectiveness because energy, human-resources, finance are invested in industrial organisations everyday. This paper focuses on organizational size, structure, communication and effectiveness. As per the analysis, large organisations with higher level of bureaucratization are able to communicate all policies and procedures accurately to their members and function effectively, whereas small organisations with relatively less bureaucratization, more open and less accurate in communication are relatively less effective in their functioning. Large Organisation are able to communicate better with their employees because of their bureaucratic structure compared to small organisations.

Purpose of the study with scope and significance:
The literature review on Indian Textile industry (ITI) suggests that very little attempt has been taken to perform econometric analysis by using the data on ITI. Thus in the present study an attempt has been taken to fill the gap in the existing literature.

In the 1990s, the Indian textile industry faced a severe recession, both in terms of employment as well as in the number of operational mills/factories, which continued during the mid-1980s and 1991 despite fundamental changes in the tariff structure among other policy aspects. However the growth pattern of the Indian textile industry in the last decade has been considerably more than the previous decades, primarily on account of liberalization of trade and economic policies initiated by the Government in the 1990s and the scenario started changing after the economic liberalization of Indian economy in 1991. The opening up of economy gave the much needed thrust to the Indian textile industry. This is now successfully become one of the largest industries in the world. So, the question can be asked after a period of liberalization of a decade or so what happens to the ITI?

To answer this question, the growth performance on each of the variables like gross value added (GVA), Profitability (∏), Capital Intensity (K/L), Productivity of capital (Y/K), Productivity of labour (Y/L) and capital stock series (K) are studied.

The main objective of this study is to focus on the growth rate of the variables like gross value added (GVA), Profitability (∏), Capital Intensity (K/L), Productivity Of capital (Y/K), Productivity of labour (Y/L) and capital stock series (K). Also the paper examines the effect of liberalization on profitability of Indian textile industry and to test the consumer awareness towards the wide variety of textile products/ clothing available in the market.

Objectives of the study and the analytical framework:

The main Objectives of the study are:

A. To focus on the growth rate of the variables like Gross Value Added (GVA), Profitability, capital intensity(K/L), Productivity of Capital(Y/K), Productivity of labour(Y/L) and capital stock series.
B. Effect of liberalization on profitability of Indian Textile Industry
C. To test the consumer awareness towards the wide variety of textile products/ clothing available in the market.

Methodology and the sources of data with sampling techniques, the tools of data collection and analysis:

As per the above stated objectives the study proceeds as follows:

For measuring the growth performance of each of these variables three alternative specification as under have been used which are given below:

- **Year to Year growth rate.**
- **Linear Trend in Growth rate.**
- **Exponential Trend in Growth Rate.**

Year to Year growth rate: Year to year growth rates are rates of change expressed over the corresponding period (month or quarter in relation to the frequency of the data) of the previous year. Year to Year growth rate compares a particular time period with respect to another.

To calculate the year-to-year growth rate, the following steps were used:

- Subtract last year's number from this year's number. This gives you the total difference for the year. Hopefully, it's positive and indicates year-over-year growth, not loss.
- Then, divide the difference by last year's number.
- That gives the year-to-year growth rate.

Growth of a variable is defined as

(Yt-Yt-1)/Yt-1 .....(1.1)

- Where, Yt-Yt-1 is the difference in the magnitude of the variable in period t and t-1.

- Yt-1 is the magnitude of the variable in period t-1.

The linear trend in the growth rate can be estimated from the equation

Y=a+bt .....(1.2)

Where t=Time period.

a denotes the intercept or constant term.

b denotes the slope coefficient or coefficient of time.

In this case, the linear rate of growth of the variable Y will be equal to $(1/Y)(dY/dt)=(1/Y_m)b$ .....(1.3)

The null hypothesis is H_0: a=b=0

The alternative hypothesis is H_1:a≠0,b≠0.

In the expression the mean value of the variable is denoted by Y_m

The exponential trend in growth rate of the variable y can be measured by using the equation

$y=ab^t$ .....(1.4)

Taking the logarithmic value on both sides this non-linear equation can be transformed into linear equation which is given as below:

Log(Y)=Log(a)+Log(b)t + error term .....(1.5)

The null hypothesis is H_0: Loga=Logb=0

The alternative hypothesis is H_1: loga≠0, logb≠0

Growth rate can be calculated by taking antilog of Log (b) and then subtracting one from the resulting value.

The data: The study is based on time series data from the period **1982-83 to 2008-09** collected from

1. The various issues of Annual Survey of Industries (ASI), Central Statistical Organization (CSO), Ministry of Statistics and Program Implementation, Government of India, New Delhi,
2. Statistical Abstracts (several issues),
3. Wholesale Price in India prepared by the Office of Economic Advisor, Ministry of Industry.
4. Annual reports and budget summaries of the Ministry Of Textiles, Government Of India.
5. Various annual reports of Confederation of Indian Textile Industry, Indian Zardari, Indian Jute Industry, etc

The data on capital, number of workers, gross value added and profit has been used.

In this study, output represents gross value added, labour is measured in terms of the total number of workers and the data on Capital stock is obtained by using the Perpetual inventory Accumulation Method which is explained below:

Let B_t denote the book value of fixed assets at the end of year t, D_t is the depreciation allowances made in that year.

$I_t=(B_t-B_{t-1}+D_t)/P_t$ .....(A)

Where t= time, Pt= Price index, It = Investment series.

Capital Stock series can be obtained by using the relation $K_t=K_{t-1}+I_t$ .....(B)

The data on textile industry for gross value added and profit are deflated by the price index of the output and the capital by the price index of capital.

Two measures of partial productivity have been analysed in the present study– capital productivity and labour productivity and also capital intensity.

Capital productivity (Y/K) is the ratio of gross output to gross capital. This gives the amount of output produced from a unit of capital. So Y/K= Output per unit of capital.

Labour productivity (Y/L) is the ratio of gross output to total employment, and measures the extent to which labour has been used for production. So Y/L= Output per unit of labour.

Capital intensity (K/L) is defined as the ratio of gross capital to total number of workers. This reflects the relative size of capital and labour in the industries. Hence K/L= capital per unit of labour.

In the present study Profitability (∏) is defined as the ratio of profit to number of output i.e. ∏= Profit per unit of output.

B. To understand the growth rate of profitability in the three sub periods 1982-83 to 1990-91, 1991-92 to 1999-2000 and 2000-01 to 2008-09, the A.M. of profitability for the three sub periods have been calculated and compared.

To identify the major sources of profitability the following model is used:

$∏=α+β_1(size)+ β_2(k/l)+ β_3(GR)+error\ term$ ..... (1)

The Null Hypothesis is H_0: $α=β_1=β_2=β_3=0$

The Alternative Hypothesis is H_1: $α=β_1=β_2=β_3≠0$

Size is measured by number of factories.

K/L denotes capital intensity.

GR implies year to year growth rate of output measured by GVA.

To understand the effect of liberalization on profitability of Indian textile industry the specification as under is used:

$Y= α +β_1D+ β_2(t)+β_3(Dt)$ .....(2)

The Null Hyopthesis is $α=β_1=β_2=β_3=0$

The Alternative Hypothesis is $α=β_1=β_2=β_3≠0$

Here α =intercept term

$β_2$=coefficient of time

$β_1$, $β_2$ =coefficient of dummy variable

t= time variable

Y= Alternative dependent Variables.

Thus Y can be either of the following type: **gross value added (GVA), Profitability (∏), Capital Intensity (K/L), Productivity Of capital (Y/K), Productivity of labour (Y/L) and capital stock series (K).**

D= 0, for 1982-83 to 1990-91

= 1, elsewhere

Dt = Multiplicative Dummy

Growth rate from 1982-83 to 1990-91is $β_2$ and for post liberalization period is $β_2 + β_3$ if $β_3$is statistically significant. If $β_2 + β_3$ is greater than $β_2$ i.e. if $β_3$ is significant and positive, then there is an increase in

growth rate in post liberalization period compared to pre liberalization period.

The data: The study is based on time series data from the period **1982-83 to 2008-09** collected from

1. The various issues of Annual Survey of Industries (ASI), Central Statistical Organization (CSO), Ministry of Statistics and Program Implementation, Government of India, New Delhi,
2. Statistical Abstracts (several issues),
3. Wholesale Price in India prepared by the Office of Economic Advisor, Ministry of Industry

The data on number of factories, capital, number of workers, gross value added and profit has been used.

In this study, output is measured in gross value added, labour is measured in terms of the total number of workers and capital is measured in fixed capital adjusted by the Perpetual Inventory Accumulation Method explained earlier.

Reasons for market Failure: In the absence of guarentee, warrantee grading and standardization, the problem of asymmetric information in the market intensifies. The buyers and sellers possess incomplete and different levels of information during a particular transactions. Akerlof (1970) states that information asymmetry among producers and consumers make it hard to determine the quality of the product transacted. In this absence of information, low quality good drive high quality goods out of the market. As a result the market efficiency gets distorted. This is known as lemons problems. Asymmetric information means either buyer or seller has better information about the product/ service than the other party has. The problem of adverse selection arises.

Methodology: A questionnaire has been prepared. With a random sample technique 500 individuals has been sampled across various income groups. The income groups has been divided into seven class boundaries. Results showed that almost 75% of consumers are not aware of the quality of the product. So, heavy advertisement and continuous product differentiation sometimes divert the consumer's attention and leads to market failure.

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