

Employment, Efficiency and Productivity
of
Indian Textile Industry: An Empirical Analysis

Abstract

The present thesis deals with the Indian Textile Industry (ITI) and explored three important aspects of Yarn and Fabrics producing sector using firm-level data from 1991 to 2015. **First**, it investigated growth of employment (E) examining the true nature of the employment series, testing convergence and also checking presence of structural break using endogenous structural break model and also determines the factors explaining E. **Secondly**, it estimated Output-oriented Technical Efficiency (OTE) using Data Envelopment Analysis (DEA) and also determines the factors influencing such OTE. **Thirdly**, it estimated Total factor productivity growth (TFPG) from Malmquist Productivity Index using DEA and determines factors influencing such TFPG. Factors influencing E, TE and TFPG for both sectors are determined in a panel set up under seemingly unrelated regression and simultaneous framework. All the estimated equations of the models are found to be nonlinear.

The results suggest **for E (chapter 3)**, in both sectors the series are of trend stationary type. The major breaks occur for yarn and fabrics at or between the years 1999-00 and 2004-07 respectively and E increased after break for both may be the effect of dismantling of Multi-fibre Agreement (MFA) in different phases (1995-2005). Profitability Ratio (PR), Output Growth (Y) in previous period, Net Export Intensity (NXI), Firm Size (FS), Capital-Sales ratio in previous period $(C/S)_{t-1}$ and Raw material Intensity (RI) have favourable effect on E in Yarn producing sector. For fabrics producing sector, RI, Y, FS and $(C/S)_{t-1}$ have favourable effect but NXI had unfavourable effect on E. There exists a simultaneity between E and NXI for both sectors. **For TE (chapter 4)**, on average 77% and 76% of the maximum producible output are being produced by Yarn and Fabrics producing sector respectively. TE of Yarn producing sector increases with increase in Advertising Intensity in previous period $(ADV)_{t-1}$, FS, Research and Development Intensity (RDI) and Firm Age (FA) but falls with NXI increase. For Fabrics producing sector ADV_{t-1} , FS, RDI, NXI in previous period and MEI in previous period have favourable effect on TE. Simultaneity is involved between (i) TE and FS and (ii) TE and RDI for both sectors. **For TFPG (chapter 5)**, productivity increases at rate of 5.4% and 7.2% per annum respectively for yarn and the fabrics producing sector. For both sectors, the prime source of productivity increase is scale efficiency change. TFPG of Yarn producing sector increases with increase in ADV_{t-1} , FS, NXI_{t-1} and FA but

falls with RDI increase. TFPG of Fabrics producing sector increases with rise in ADV_{t-1} , FS, NXI_{t-1} , FA and MEI_{t-1} but falls with RDI increase. There exists simultaneity between (i) TFPG and FS and (ii) TFPG and RDI for both sectors. For both sectors, dismantling of MFA has favourable impact on E but negative impact on TE and TFPG compared to the MFA period. The common variables affecting E, TE and TFPG for both sectors are FS and NXI, effect of FS being positive. Any policy changes leading to FS increase may help in fostering E, TE and TFPG for both sectors.

Key Words: Indian Textile Industry, Employment, Technical Efficiency, Total Factor Productivity Growth, Data Envelopment Analysis