

A STUDY OF PRODUCTIVITY GROWTH IN PAPER INDUSTRY OF INDIA

by

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Submitted

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to the



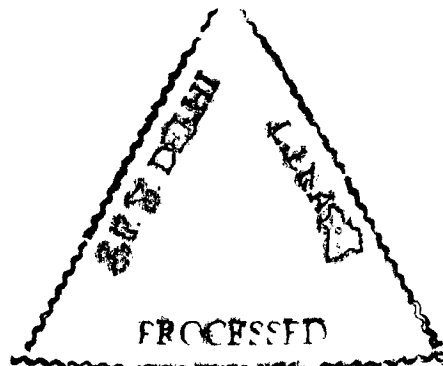
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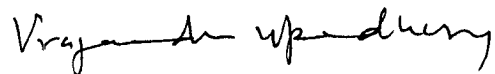
Paper Industry. Indus



CERTIFICATE

Certified that Mr. Kaustuva Barik was permitted to work for his Ph. D. Degree in Economics at IIT, Delhi on the problem entitled, 'A Study of Productivity Growth in Paper Industry in India'. He has faithfully carried out his study under my guidance and supervision and the accompanying thesis is his genuine and original work. The results contained in this thesis have not been submitted, in part or full, to any other university or institute for the award of any degree or diploma.

Mr. Kaustuva Barik has completed necessary coursework and put in the required attendance in this department.



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I am solely responsible for the errors, if any, in the study.


Kaustubh Barik

ABSTRACT

Measured productivity growth obtained through the Solow residual may be at variance with pure technological change in an industry when standard assumptions such as constant returns to scale, full utilisation of capacity and perfect competition in the product market are not fulfilled. In such cases estimated TFP needs to be adjusted for scale economies, capacity utilisation and mark-up over marginal costs so as to obtain a measure of technological change in the industry.

Using annual aggregate data of the Indian paper industry for the period 1973-74 to 1997-98, the present study estimates a translog variable cost function with three variable inputs, viz., labour, energy and raw material and one quasi-fixed input, that is, capital.

An important outcome of the study is the finding that traditional TFP and TFP adjusted for scale economies, capacity utilisation and mark-up have moved in opposite directions during the period of study. While traditional TFP registered a decreasing trend over the study period, technological change is found to have recorded a positive growth.

The negative growth rate in TFP of the Indian paper industry is coupled with presence of economies of scale and under-utilisation of capacity and substantial mark-up over marginal cost. These features make TFP a poor representative of technological change and bring in a downward bias into it. After purging the effects of scale economies, capacity utilisation and mark-up from TFP growth, a positive trend in the residual is obtained.

The study covered both liberalized and controlled policy regimes. However, no structural break was observed in the course of TFP growth in the Indian paper industry.

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