

**E-BUSINESS TRANSFORMATION AND
STAKEHOLDER FLEXIBILITY: A STUDY OF
MANUFACTURING INDUSTRY IN INDIA**

by

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Submitted

In fulfillment of the requirements of the degree of

Doctor of Philosophy

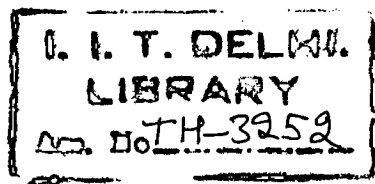
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CERTIFICATE

This is to certify that the thesis entitled '**E-Business Transformation and Stakeholder Flexibility: A Study of Manufacturing Industry in India**' being submitted by Mr. Rajeev Dwivedi to the Indian Institute of Technology Delhi for the award of the degree of **Doctor of Philosophy (Ph.D.)**, is a record of bonafide research work carried out by him. He has worked under our guidance and supervision and has fulfilled the requirements for the submission of the thesis, which has attained the standard required for a Ph.D. degree of the Institute. The results presented in this thesis have not been submitted elsewhere for the award of any degree or diploma.



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Abstract

The research aims at studying e-business transformation in the manufacturing industry in India. It also aims to identify e-business transformation process and stakeholder flexibility in the industry. It addresses the queries like 'why', 'what' and 'how' about the e-business transformation with emphasis on flexibility related to stakeholders. The study has been carried out in automobile and home appliances/electronics sectors of the manufacturing industry.

The review of the literature has been classified in eight of e-business transformation. The areas are: (i) E-Business Transformation, (ii) Alignment of Technology with Business Strategy (iii) Knowledge Management and E-Business, (iv) Business Processes Automation, (v) Stakeholders Theory and E-Business, (vi) E-Business and Flexibility (vii) E-Business for Manufacturing Industry and (viii) E-Business in India. Based on the literature review various macro and micro variables have been identified and defined. Further, a conceptual framework for e-business transformation and implementation with stakeholder flexibility has been evolved. Research hypotheses have been framed on the basis of the conceptual framework.

The study is divided into three phases, namely the pilot study, questionnaire based survey study for evolution of e-business transformation model with stakeholder flexibility, and detailed case studies of select organizations in India to verify and further refine the model.

Pilot study aims to bring out the issues of e-business transformation and stakeholder flexibility. The pilot study was carried out to enrich the conceptual framework with four world class manufacturing organizations from learning perspective. The selection of the organizations was based on their innovativeness and performance through e-business. The concepts that emerged from pilot study were examined by their relevance in Indian environment. The methods of systematic observation and analysis were used in preparing the case studies. The cases are analyzed using Situation-Actors-Process (SAP) framework and learning issues were identified.

The empirical study was carried out for validating the hypotheses with various methods of analysis, such as univariate, bivariate and multivariate analyses. Ten sets of questionnaires were developed for conducting survey

on e-business transformation and stakeholder flexibility in Indian manufacturing industry and related stakeholders. Questionnaires were validated through various tests of validation such as content validity, face validity, criterion related validity and construct validity. Five point Likert scale was used to take the response. However, some of the questions were yes/no type. The quantitative data gathered through structured questionnaire survey, were analyzed using various statistical techniques, such as correlation, regression, and factor analysis.

The statistical analyses was used to test the hypotheses at macro and micro variables levels and the validated model was obtained. The case studies in the Indian context have been done in four organizations using Dynamic SAP-LAP framework (Situation, Actors, Process, Learning, Action and Performance) to compare two situations (without e-business and with e-business) over a time period to see better picture of e-business transformation and stakeholder flexibility in the industry. The SAP matrix is made on the basis of Dynamic SAP analysis.

The learning from questionnaire survey and case studies have been synthesized using interpretive matrix and validated model for e-business transformation and implementation with stakeholder flexibility has been presented. IT/Strategy alignment has direct impact on knowledge management and business process automation, which lead to e-business transformation and subsequently stakeholder flexibility and business performance but there is no relationship between stakeholder flexibility and business performance at macro level empirical research. The major findings of the study are summarized as per research objectives and these are reflected upon to generate major recommendations for the industry for implementing e-business. The limitations of the study are outlined and specific suggestions have been made regarding future extension of research work reported in the thesis. It is hoped that this research may help the organizations in India for transforming into e-business with stakeholder flexibility. The study has been presented in ten chapters.

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