

*The Management of
Productivity and
Technology in
Manufacturing*

The Management of Productivity and Technology in Manufacturing

Edited by

Paul R. Kleindorfer

*Center for the Study of Organizational Innovation
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CONTRIBUTORS

Thomas Allen • Sloan School of Management, Massachusetts Institute of Technology, Cambridge, Massachusetts

Rajiv D. Banker • School of Urban and Public Affairs, Carnegie-Mellon University, Pittsburgh, Pennsylvania

Jay B. Barney • Graduate School of Management, University of California, Los Angeles, California

Morris A. Cohen • The Wharton School, University of Pennsylvania, Philadelphia, Pennsylvania

Christopher Fuselier • General Electric Company, Industrial Automation Systems Department, Albany, New York

Ralph Katz • Graduate School of Business, Northeastern University, Boston, Massachusetts

Linsu Kim • Korea University, Seoul, Republic of Korea

Hau L. Lee • Department of Industrial Engineering and Engineering Management, Stanford University, Stanford, California

Steven Miller • Graduate School of Industrial Administration, Carnegie-Mellon University, Pittsburgh, Pennsylvania

Jack Romanosky • Arthur Andersen & Company, Philadelphia, Pennsylvania

Charles S. Skinner • Strategic Technology Inc., Cleveland, Ohio

John F. Tomer • Department of Economics and Finance, Manhattan College, Riverdale, New York

James M. Utterback • Massachusetts Institute of Technology, Cambridge, Massachusetts

Steven A. Weiner • Ford Motor Company, Detroit, Michigan

PREFACE

This volume is concerned with the nature of new manufacturing technologies, such as CAD/CAM and robotics, as well as appropriate methodologies for evaluating whether such technologies are financially and organizationally viable in particular contexts. The chapters included here were commissioned as papers for presentation at The Wharton Conference on Productivity, Technology, and Organizational Innovation, which took place in Philadelphia on December 8 and 9 of 1983. The conference was sponsored by The University of Pennsylvania's Center for the Study of Organizational Innovation.

There has been a surge of interest in the area of manufacturing over the past ten years as managers have come to realize that the operations function is critical to remaining competitive. New status has been given to factory and operations managers. New programs revitalizing manufacturing and distribution have been introduced in organizations. Corporate strategy is now explicitly considering operations and manufacturing functions. And the curricula of leading business schools are reflecting the rapidly advancing research on technology management and manufacturing operations.

In spite of these important signs of progress, we are clearly just at the beginning of understanding the issues involved here. The present volume provides a state-of-the-art review of the realities of technology management and manufacturing strategy. As described in the Editor's Introduction, we address four topics: The Nature of New Manufacturing Technology, Innovation and Manufacturing Strategy, Productivity Management, and Technology Management and Organization. These issues are clearly very important themes for U.S. industry and its policymakers, given the tremendous cost of new information-intensive technologies and the implications of these for any firm's work force and support staff.

I am pleased to acknowledge the contributions of industry representatives of The Wharton Partnership. I am also delighted to

acknowledge the financial support of the Continental Group, Texaco Corporation, and the Gulf Oil Foundation. Finally, a special note of thanks is due to the participants of the conference, whose constructive comments on early versions of the chapters presented herein contributed significantly to a lively conference and a much improved final product.

PAUL R. KLEINDORFER

*Director, Center for the Study
of Organizational Innovation
Philadelphia*

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