

Preface

Japan's machine and information industries have been undergoing a dramatic transition during the prolonged recession. For one thing, the financial system is still caught in a quagmire. For another, direct investment in China (which kicked off in the late 1990s) has started to boom again. These factors are accelerating the relocation of manufacturers to East Asia, although manufacturing is Japan's forte.

The automobile and electronics/electric industries have served as the engines for Japan's machine and information industries. From the viewpoint of individual companies, however, globalization is emerging as a touchstone to discriminate "winners" from "losers" based on their capacity to adapt themselves to the violently changing environment. A realignment of financial systems is also breaking down the conventional framework of Japanese-style *keiretsu* (groupings of affiliated businesses).

At the Economic Research Institute, Japan Society for the Promotion of Machine Industry, we have focused on and conducted multidimensional research on measures and challenges for revitalizing Japan's machine and information industries as part of our research projects for FY2002. The findings are presented in our reports. This report, however, is designed to sum up the essence of the reports in question.

Chapter 1 focuses on technology, featuring an analysis of Japan's machine and information industries in terms of the new concept of "pivotal technology."

Chapter 2 reviews revitalization measures based on analyses of developments in 10 major regions. The keyword is "industrial integration and network building."

Chapter 3 is centered on globalization, i.e. manufacturing businesses across Asia. It includes an analysis based on data derived from fact-finding surveys (e.g. assessment of the technologies of small and medium-sized firms in Asia) while considering developments in industrial integration in China.

Chapter 4 presents a discussion from the viewpoint of hardware, software and service integration. More specifically, it presents the current situations and challenges of utilizing intellectual assets based on fact-finding surveys concerning commitments made by machine-related companies for software and service-related projects.

Chapter 5 is dedicated to the creation of new markets and new businesses. It pays particular attention to the health/welfare equipment, medical equipment and environment equipment sectors, which are expected to grow as new industries, to illustrate the potential and challenges of creating new businesses.

As mentioned above, this report presents a summary of the findings of research projects conducted in FY2002. We hope the information contained provides clues for revitalizing Japan's machine and information industries.

We would like to express our appreciation to all those who have provided us with support in this and other research projects.

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