## **Preface**

The Japanese machinery and information industry is now emerging at last from a prolonged economic slump. Factors contributing to this include the fact that, with China now thriving as a manufacturing hub, markets – particularly those in intermediate goods – are being revitalized, exports from Japan to China – especially those of machinery components – are increasing, domestic demand for digital electrical appliances grew sharply in the latter half of 2003, hopes for China as a new market are growing and the effects of corporate restructuring are beginning to be seen.

However, if we look at the medium- to long-term prospects for the machinery and information industry, it is clear that, in addition to existing leading industries, the creation of new industries is essential. Accordingly, as part of its research projects in fiscal 2003, the Economic Research Institute, Japan Society for the Promotion of Machine Industry set up six research projects and carried out studies focusing on the revitalization of Japan's machinery and information industry and the creation of new industries. This report summarizes the key points of each project.

Chapter 1 focuses on the overall theme of the revitalization of Japan's machinery and information industry and the creation of new industries, reporting on promising new markets and new technologies, and the challenges involved in their commercialization, based on data from fact-finding surveys.

Chapter 2 is devoted to a comparative analysis of Germany's machine tool industry, as a way of viewing Japan's machinery and information industry in relative terms, and looks at the Japanese industry from the perspective of inter-organizational relationships and the creation of innovation.

Chapter 3 turns its attention to the current state of research and development in Japan's machinery and information industry, considering the possibilities for building a business model based on finance for research and development.

Chapter 4 focuses on environment-related business, which is the subject of attention in the machinery and information industry as a new market for small and medium-sized manufacturing companies, and reports on the current situation and issues based on data from fact-finding surveys.

Chapter 5 looks at the shift towards service provision, as one direction in which the machinery and information industry should progress, analyzing initiatives aimed at service-related business being conducted by machinery companies, based on data from fact-finding surveys.

Finally, Chapter 6 outlines the potential for and issues relating to success in new business ventures, as seen from the perspective of tapping demand in the machinery and information industry, reporting on trends in the health and welfare, medical and environment sectors.

This report outlines the results of multifaceted analyses of the future prospects of the machinery and information industry. We hope that the information it contains will be of use to those involved in conducting research, as well as those charged with formulating policy concerning the machinery and information industry

May 2004