

New combination of ICT and manufacturing industry

Japanese industrial giants use ICT to regain lost ground

Noboru Maeda

Japan's manufacturing industry has been losing ground to China, which has a competitive advantage in labour costs. For Japan, technology management, combined with the development of a new business model, is key to recovery. Leading Japanese manufacturers are using Information and Communications Technology (ICT) to move into new business domains, where high-tech start-ups are emerging. This new development is likely to regenerate the entire Japanese manufacturing industry by 2010. Japanese giants Sony and Toyota are leading the way.



Dr. Noboru Maeda

*Professor, Graduate School of
Entrepreneur Engineering
Kochi University of Technology
Affiliated Fellow, National Institute of
Science & Technology Policy (NISTEP)
MEXT, Ministry of Education, Culture,
Sports, Science and Technology of Japan
185, Miyanokuchi, Tosayamada-chou
Kami-gun, Kochi-ken, 782-8502, Japan
Tel: (+81-887) 57-2104, Fax: 57-2124
E-mail: maeda@nistep.go.jp
maeda.noboru@kochi-tech.ac.jp*

Introduction

Over the last three decades, world business has been experiencing three different major tides. These are: globalization, deregulation and the ICT revolution. The USA began to experience globalization about 30 years ago, and deregulation about 20 years ago. In Europe, globalization came about 20 years ago, and deregulation about 10 years ago.

In Japan, the internationalization of its manufacturing industry happened about 20 years ago, but globalization has only just started. Nissan Motor, with its non-Japanese President and CEO, is a good example of globalization. As for deregulation, a limited form took place some years ago in the finance industry. Almost simultaneously, however, an ICT wave hit the world.

For the Japanese industry, the three major tides are marching in simultaneously. In contrast, the USA and Europe are already used to globalization and deregulation.

On top of these enormous challenges, Japanese business finds that its successful "Catch-up Model," of earlier times is no longer effective in today's IT age. No one seems to be clear about what the new direction for Japanese business recovery should be.

Meanwhile, companies in the USA are taking advantage of e-business, with the successful Silicon Valley business model of the 1990s. Big companies are enjoying high profit ratios, due in large part to corporate restructuring, concentration of business domains, significant layoffs, and mergers and