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## **Preface: strategic management of technology in Japanese firms**

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Sam Kurokawa, Karol I. Pelc and  
Kenzo Fujisue

For the last decade or two, Japanese companies have significantly contributed to technology management practices and theories. Such practices and theories include quality management, inventory control, operation management, *etc.* However, strategic aspects of technology management practices in Japanese firms have not been fully investigated or reported. These strategic aspects of technology management practices include knowledge management, global R&D management, new product development, innovation (or creativity) management, *de facto* technical standards, alliance management, management of suppliers (or supply chain management).

This special issue examines the strategic aspects of technology in Japanese firms. It offers a rich analytical discussion valuable for the academic, policy maker and business practitioner in navigating the current technology-based society.

The seven articles reporting recent research results are preceded by a review of literature on the main topics of strategic management of technology in Japanese firms. This review is intended as an introduction to the issue.

In the first article, 'Strategic knowledge creation,' Nonaka and his co-authors investigate Hamamatsu Photonics, a Japanese opt-electronics company that has recently received attention for its production of the large photoelectron cell. The authors analysed this company's experience in depth from a knowledge management perspective. In the second article, 'Does cross-functional integration lead to adaptive capabilities?' Yasumoto and Fujimoto examine data from 188 product development projects in Japanese technology-based companies. Results of their study cast doubt on the effectiveness of cross-functional integration.

The third article, 'How to profit from *de facto* standard-based competition,' by Yamada and Kurokawa, discusses strategic issues related to technological *de facto* standards. The article is based on historical and empirical analyses of 13 cases observed in the Japanese audio-visual and IT-related firms. In the following article, 'Technology strategy revealed,' Collinson and his co-authors describe patent licensing behaviours in the Japanese pharmaceuticals and electronics firms.

In the fifth article, 'Innovation management of Japanese pharmaceutical companies,' Hara investigates an antibiotic developed by Takeda, the largest Japanese pharmaceutical firm which is seeking more radical types of innovation. In the following article, 'New product development and creativity management in the Japanese video game software firms,' Kohashi and Kurokawa examine the Japanese video-gaming software firms, and report mechanisms by which the creativity management practices have been made to respond to the needs of their market and their development process.

In the final article 'A comparative analysis of EDI integration in the US and Japanese automobile suppliers' Manabe and his co-authors report the result of their study on Business-to-Business (BtoB) electronic commerce used in US and Japanese automobile suppliers. The research concludes that the use of these communication technologies differs significantly in the two countries.

It is hoped that studies like these will continue and that this special edition will act as a catalyst for greater discussion in this important realm.