

## **Industrial Performance Center**

The Industrial Performance Center (IPC) is an interdisciplinary community of researchers dedicated to the study of productivity, innovation, and industrial development in the United States and around the world. IPC carries out field-based, often large-scale research projects bringing together scientists and engineers with scholars from the social sciences and management disciplines. Our research teams observe strategic, technological, and organizational developments in industry and analyze the implications for firms, their employees, and the societies in which they operate. Through this research we seek to help leaders in business, government, and education better understand global industrial developments and develop practical new approaches for strengthening public policies, business strategies, technical practices, and educational programs. IPC serves as a focus at MIT for interdisciplinary research on the rapidly changing global economy, monitoring and analyzing patterns of organizational and technological practice in different countries, interpreting them for our partners and sponsors, and feeding our observations and insights back into the core disciplines and educational curricula of the Institute.

### **Research Highlights**

The center's research is organized around five major themes: Innovation in the Energy Industries; New Concepts and Frameworks for Managing Innovation; Local Innovation Systems and the University Role; Globalization and Global Value Chains; and Technology, Offshoring and the Future of Work.

This year the Industrial Performance Center was awarded a major grant from the Doris Duke Charitable Foundation to review US energy technology innovation. Researchers at the MIT Industrial Performance Center will conduct a comprehensive assessment of the strengths and weaknesses of energy technology innovation system in the United States, and will consider the entire complex of incentives, regulations, markets, and public and private institutions within which the development, demonstration, adoption and diffusion of new energy technologies takes place. Their work will eventually lead to recommendations for improvements to federal and state research, development and demonstration policies, as well as mechanisms for early adoption and large-scale deployment of supply- and demand-side innovations.

IPC also entered into a partnership with John Adams Innovation Institute to study the competitiveness of Massachusetts Industries and to develop practical insights into what can be done to improve the long-run economic outlook for the state. The research has focused on the future of biomanufacturing in Massachusetts and the competitiveness of the state's solar photovoltaic cluster.

In a related project funded by the MIT/Masdar Institute of Science and Technology Cooperative Program, research is underway on the roles of public research institutions in development of innovative industries and broader consequences for economic development, especially in communities within which research institutions are located. This project is focusing on development of the solar photovoltaic industry in different

locations in the US and Germany and builds on ongoing IPC research to specify conditions associated with development of successful local innovation systems.

Work continues on IPC's China Energy Program, which analyzes technological and institutional innovations in China's energy sector. This year, professors Steinfeld and Lester and doctoral student Edward Cunningham completed the first-of-its-kind national survey of the investment, operational, and environmental strategies of Chinese power plant owners and operators.

Drawing on the center's ongoing program of research on globalization, IPC and IBM jointly convened a group of MIT researchers and corporate executives from nine multinational firms for a seminar on the globally integrated enterprise. Participants discussed corporate strategies in a globalizing marketplace, and their successes and challenges. The two-day seminar was organized around four main sessions: (1) individual companies' experiences with globalization; (2) the strategic rationale around globalization; (3) managing global organizations and relationships; and (4) innovation and globalization.

IPC continues to play an active role in the Sloan Foundation-sponsored Industry Studies network, and organized and hosted the Sloan Industry Studies Annual Conference, held in Boston in May 2008.

## People

IPC research affiliate and former doctoral fellow Dan Breznitz received the American Political Science Association's 2008 Don Price Award for the best book on science and technology for his book *Innovation and the State*.

Visitors to the center this year included: Nolan Browne, director of business development, Sustainable Energy, Fraunhofer USA; Juha Nummi, researcher in human capital and leadership at the Helsinki University of Technology; Georgeta Vidican, assistant professor, Masdar Institute of Science and Technology, and visiting professor; and David Weil, professor of economics, Everett W. Lord distinguished faculty scholar at Boston University School of Management, and codirector of the Transparency Policy Project at the Kennedy School of Government at Harvard University.

**Richard K. Lester**

**Director**

**Professor of Nuclear Science and Engineering**