

## **Industrial Performance Center**

The [Industrial Performance Center](#) (IPC) is dedicated to the study of innovation, productivity, and competitiveness in the US and around the world. The center specializes in bringing together multidisciplinary teams of researchers in engineering, science, management, and the social sciences to carry out innovative applied research on industrial growth and transformation, national and regional economic growth and competitiveness, and innovation performance. The IPC seeks to help leaders in business, government, education, and other sectors better understand global industrial developments and create practical new approaches for strengthening public policies, business strategies, technical practices, and educational programs. The center's interdisciplinary teams observe, analyze, debate, and report on strategic, technological, and organizational developments in a broad range of industries and examine the implications for society and the global economy. The IPC often convenes key actors from the public, private, and nonprofit sectors to discuss the challenges and opportunities facing firms, industries, regions, and countries in an increasingly dynamic, competitive, and global economy.

### **Research Highlights**

The center's research is organized around four major themes: systems of innovation, energy innovation, production in the innovation economy, and globalization. The following provides research highlights from July 1, 2014, to June 30, 2015.

#### **Systems of Innovation**

##### ***Accelerating Innovation in Brazil***

The IPC launched the first year of its research project, [Accelerating Innovation in Brazil](#), which is focused on building innovation capacity in Brazil as it is related to the new network of SENAI Institutes for Innovation. (SENAI is Brazil's National Service for Industrial Training.) The research team, which includes IPC Executive Director Dr. Elisabeth Reynolds and Professors Richard Lester, Michael Piore, and Ben Ross Schneider, was expanded to include two PhD students, Christopher Smith and Susana Cordeiro, as well as Research Affiliate Ezequiel Zylberberg from the Oxford Saïd School of Business. Summer research associates were also engaged on the project. Initial research focused on building foundational knowledge of the economic, political, and institutional context in which innovation does and does not occur in Brazil.

##### ***Growing Innovative Companies to Scale***

The IPC continued its research on the Growing Innovative Companies to Scale project, with Professor Lester, Dr. Reynolds, and Professor Charles Sodini and graduate student Max Luke, along with the advice of the project's Advisory Board. This project builds on earlier research conducted as part of the Production in the Innovation Economy project. It focuses on the scale-up of Massachusetts companies across a broad range of industries compared with similar companies and industries in the California Bay Area and in New York City.

## **Production in the Innovation Economy**

In the spring of 2015, as a follow-on to the [Production in the Innovation Economy](#) project, the IPC released its report, *Strengthening the Innovation Ecosystem for Advanced Manufacturing: Pathways and Opportunities for Massachusetts*. This research, sponsored by the Massachusetts Development Corporation, focused on how to increase innovation capabilities among the state's small and medium-sized advanced manufacturing companies and how to strengthen the industrial innovation ecosystem overall. The report was covered in local press outlets and in presentations made to various public- and private-sector audiences across the region.

## **Globalization**

Senior Research Affiliate Tim Sturgeon continued his work on global value chains, and, in particular, on measurement challenges in capturing value added in national and international statistics. He published various reports and articles on the subject, including work with the W.E. Upjohn Institute on "Measuring Manufacturing: How the Computer and Semiconductor Industries Affect the Numbers and Perceptions," published as Chapter 5 in *Measuring Globalization: Better Trade Statistics for Better Policy*. He also published work on VoxEU.org on trade in value-added indicators.

## **Visiting Researchers, Affiliates, and Post-Doctoral Associates**

The IPC hosted the following two visiting researchers during the 2014–2015 academic year:

- Professor Celson Pantoja Lima is visiting the IPC from the Federal University of Western Pará in Brazil, where he headed the Institute of Engineering and Geosciences. Professor Lima works on the Accelerating Innovation in Brazil project and has conducted extensive research on the work of the network of SENAI Innovation Institutes.
- Dr. Yilmaz Uygun is in his second year as a post-doctoral associate visiting the IPC from the Dortmund University of Technology and the Fraunhofer Institute for Material Flow and Logistics in Germany. His research at IPC is focused on building innovation capacity among small and medium-sized manufacturers and developing agent-based models to understand innovation ecosystems for advanced manufacturing companies.

In addition, Ezequiel Zylberberg became a research affiliate of the IPC in the fall of 2014. Zeke is a PhD candidate at the Said Business School at Oxford University, where he is researching the global information and communication technologies (ICT) industry and, specifically, how Brazil fits into global ICT research and development networks and strategies.

**Elisabeth Reynolds**  
Executive Director