

Franco Malerba · Uwe Cantner

# **Innovation, industrial dynamics and structural transformation: Schumpeterian legacies**

Published online: 11 January 2006  
© Springer-Verlag 2006

The general theme of the 10th International Joseph A. Schumpeter Society Conference, held during June 9th–12th, 2004 at Università Luigi Bocconi, Milan, was the exploration of the dynamics of industries driven by the highly interrelated processes of innovation and structural transformation. The phenomena addressed are at the core of Schumpeter's work and the discussion of these endogenous modes of change constitutes one of the major Schumpeterian legacies of today. Indeed the influence of the Schumpeterian approach to economic dynamics is far reaching and covers evolutionary as well as neoclassical theories.

This Special Issue provides an account of work in the Schumpeterian and evolutionary tradition of industrial dynamics. Here the main analytical concern is that over time industries evolve and change their structure, and that in this dynamic process knowledge and technologies, the capabilities and incentives of actors, new products and processes (as well as variants of existing ones) and institutions affect and constraint change, sometimes more smoothly and sometimes in a rather radical way. Thus, what is meant here with the terms structure and structural change is not the traditional market structure view (as reflected for example in the classical discussion on the Schumpeterian Hypotheses), but all those elements and relations among actors, knowledge and technologies which drive innovative activities and greatly affect economic performance in an industry. Investigations into these complex phenomena show a deep interdependence between empirical work

---

F. Malerba  
CESPRI, Bocconi University, Via Sarfatti 25, 20136 Milan, Italy  
E-mail: franco.malerba@unibocconi.it

U. Cantner  
Jena University, Carl-Zeiss-Str. 3, 07743 Jena, Germany  
E-mail: uwe.cantner@wiwi.uni-jena.de

delivering a rich account of regularities and stylized facts in the structure of industries and their change, and theoretical analyses ranging from appreciative theorizing to more formal modeling.

The various contributions to this Special Issue reflect upon this general theme in a number of ways. Franco Malerba's Presidential Address broadly examines innovation and the evolution of industries. After discussing the state of the art in the field of industrial dynamics and its roots in the Schumpeterian work and tradition, Malerba identifies four issues on top of tomorrow research agenda: demand, knowledge, networks and coevolution. The remaining papers of this Special Issue contribute to this address by stressing several interrelated issues. At the very core of industrial dynamics lie the creative as well as destructive effects of new combinations (Stefano Brusoni/Giorgia Sgalari) as well as the entry of new firms and their challenge to incumbents (Roberto Fontana/Lionel Nesta). Demand and knowledge play a major role in industrial dynamics. The Special Issue examines them by focusing on network externalities (Daniel Birke/Peter Swan), incentives for knowledge disclosure (Paul Muller/Julien Pénin), strategic aspects of knowledge protection (Carine Peeters/Bruno van Pottelsberghe de la Potterie) and conditions for the absorption of knowledge spillovers (Aykut Lenger/Erol Taymaz). Networks are also equally important, and the Special Issue presents a simulation analysis of the formation and development of innovation networks and the role of knowledge transfer (Robin Cowan/Nicolas Jonard/Jean-Benoit Zimmermann). Finally, public policy in dynamic environment has to be fully assessed. Here we present an investigation of competition policy and its ability to foster innovative activities (Jean-Luc Gaffard/ Michel Quéré ) and an analysis of the effectiveness of the patent system (Thomas Vallée/Murat Yildizoglu).

*Milano and Jena, December 2005*