
Editorial

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Biographical notes: Jens Leker is a Professor of Business Administration at the Department of Chemistry and Pharmacy at the University of Münster. He obtained his PhD in Business Management from the University of Kiel. His institute's interdisciplinary approach combines business management research with natural sciences in order to get a deeper understanding of R&D processes. Besides, he is the Editor-in-Chief of the *Journal of Business Chemistry* and member of the advisory board of ISPIM.

Eelko K.R.E. Huizingh is an Associate Professor of Innovation Management at the Faculty of Economics and Business, University of Groningen, the Netherlands. He is the Director Scientific Affairs of ISPIM. His research focuses on the intersection of innovation, marketing and information technology. He has (co-)authored over 300 articles, which have appeared in a wide range of journals including *Marketing Science*, *International Journal of Research in Marketing*, *Technovation* and *Organizational Behavior and Human Decision Processes*. He has been Guest Editor of numerous journals. In addition, he runs Huizingh Academic Development which offers research and writing workshops aimed at academic researchers.

Steffen Conn is the Operations Director of ISPIM. He received his Doctor of Science (Technology) from Lappeenranta University of Technology, Finland (Distinction), and first class BA and MA degrees (Distinction) from Groupe ESC Rennes, France. He has previously held research positions at various organisations around Europe. He has edited more than 20 journal special issues and innovation books. He is also the author of numerous articles in the field of innovation management. He has been a Board Member of ISPIM since 2003.

It is widely accepted that innovations are a main driver of economic success and growth. Generating innovations requires going through many steps, such as idea generation, business/technical assessment, concept development, product development, prototype building and testing. As research and development (R&D) activities are getting more and more complex, these steps are seldom done by the same individual and often not even by the same organisation. Accordingly, collaboration is an important aspect of successful innovation. This kind of co-work is either inter-organisational or intra-organisational. However, in both cases, knowledge has to be transferred between the different actors in the innovation process. Knowledge thus forms the very basis for innovative products, services or processes, affecting all stages of the innovation process.

However, despite the increasing importance, integrated and comprehensive approaches examining the role of knowledge in innovation processes are still scarce. Concerning this highly complex and multi-faceted topic, the special issue at hand 'Closing the chain: from knowledge creation to innovation' sheds light on several aspects of this theme. The special issue is based on a selection of the best contributions to the 21st ISPIM Conference 2010 in Bilbao, Spain, and to the 2nd ISPIM Innovation Symposium 2009 in New York City, USA, dealing with knowledge-related aspects of innovation.

The first paper entitled 'Why and how do academics bridge the gap between invention and innovation?' focuses on the beginning of the knowledge chain. The authors, Réjean Landry and Nabil Amara, take a look at the early stages of innovation in the academic environment. They conduct a large Canadian survey to analyse the use of 'proof of principle' to bridge the gap between the invention and the transfer to industrial partners. The results of the study allow deriving important implications for all types of actors in the process: researchers, policy-makers and industry partners.

The second article 'Proactive versus reactive motivations for patenting and their impact on patent production at universities' by Caroline Hussler and Julien Pénin investigates the next step in the knowledge chain. Still in a university setting, this paper focuses on the patenting activities of academic researchers, often following the 'proof of principle' stage. The authors answer the question whether the scientists' motivation to patent affect the number of patents they invent. Using a dataset of French academic inventors, Hussler and Pénin derive implications, providing insights for building appropriate managerial tools to support the patenting work of scientists and technology transfer officers.

The third paper 'The knowledge value chain as an SME innovation policy instrument framework: an analytical exploration of SMEs public innovation support in OECD countries' leaves the university environment and moves to a framework perspective connecting the two worlds of academic and industrial R&D. Besides, it lays the basis for publicly funded innovation activities of SMEs. The authors, Norrin Halilem, Catherine Bertrand, Jean Samuel Cloutier, Réjean Landry and Nabil Amara, analyse 844 innovation policy instruments implemented in 27 OECD countries. On this basis, they validate a conceptual framework for policy instrument coordination. Additionally, the authors develop an innovation policy instrument framework to serve as a roadmap supporting the innovation activities of SMEs.

The fourth article entitled 'Knowledge management practices and innovation propensity: a firm-level analysis for Luxembourg' is the first paper taking a detailed look at the corporate level. Coming closer to the end of the knowledge chain, Giovanni Mangiarotti uses firm-level data from the community innovation survey for

Luxembourg to evaluate knowledge management activities in the service sector. The author analyses the relationship between knowledge management strategies and the probability of introducing product innovation.

The final paper in this special issue is entitled 'User knowledge in innovation in high technologies: an empirical analysis of semiconductors' and highlights the patenting behaviour of semiconductor firms and their customer companies. Pamela Adams, Roberto Fontana and Franco Malerba differentiate between producers of semiconductors and those firms that have their main business lines outside this industry but use semiconductors. The latter companies are characterised by application knowledge and an understanding of the solutions that components need to provide for systems or final products. The findings of the study show that major differences in patenting behaviour exist among various categories of user companies.

Finally, the guest editors of this special issue would like to thank all authors for their contributions. Additionally, our special thanks go to the reviewers whose fruitful comments helped to increase the quality of the published papers.