Editorial: Getting to grips with innovation in Knowledge Intensive Business Services (KIBS)

David Doloreux*

Telfer School of Management
University of Ottawa
55 Laurier East, Ottawa, Ontario
K1N 6N5, Canada
E-mail: Doloreux@telfer.uottawa.ca
*Corresponding author

Mark Freel

Telfer School of Management
University of Ottawa
55 Laurier East, Ottawa, Ontario
K1N 6N5, Canada
and
Hunter Centre for Entrepreneurship
University of Strathclyde, UK
E-mail: Freel@telfer.uottawa.ca

Emmanuel Muller

Fraunhofer Institute for Systems and Innovation Research
Karlsruhe, Germany
and
Université Louis Pasteur
Strasbourg I, France
and
University of Applied Sciences
Heidelberg, Germany
E-mail: Emmanuel.Muller@isi.fraunhofer.de

Biographical notes: David Doloreux is an Associate Professor at the Telfer School of Management at the University of Ottawa, Canada, Director of the Research Chair on innovation, entrepreneurship and regional development, and Research Fellow at the Fraunhofer Institute for Systems and Innovation Research (Fraunhofer ISI), Germany. His research programme focuses on two principal themes: the determinants of innovation in manufacturing firms and knowledge-intensive business services and the dynamics and functions of clusters and regional innovation systems across different sectors and regions.

Mark Freel is an Associate Professor at the Telfer School of Management at the University of Ottawa and visiting Senior Lecturer at the Hunter Centre for Entrepreneurship, University of Strathclyde, UK. His current research is

concerned with entrepreneurship and regional development, in general, and with innovation policy and practice in relation to small- and medium-sized firms, specifically.

Emmanuel Muller is a Senior Researcher at Fraunhofer ISI, a Guest Professor at the Université Louis Pasteur Strasbourg I and a Professor at the University of Applied Sciences Heidelberg, Germany. He is an economist specialised in innovation and knowledge economics, working in the fields of applied and contract research mainly on behalf of the European Commission on the issues of regional innovation systems, knowledge-based interactions and innovation policy. His current research activities encompass regional development and innovation strategies, innovation processes within SMEs and KIBS, and knowledge economics.

1 Introduction

Though casual perusal of the leading innovation studies journals suggests a growing interest in services innovation, few could seriously dispute its relative neglect. Much of the innovation studies literature continues to be dominated by accounts of the sources of new technologies (Salter and Tether, 2006). In this perspective, new technologies are typically embodied in physical artefacts and directed at 'improvements' in products and production processes. The standard metrics of innovation studies (and policy) address tightly defined *inputs*, such as R&D, or *outputs*, such as patents, and, at best, do little more than describe prevailing industrial structures. More worryingly, they may serve to buttress the apparently widespread view of innovation policy as an extension of science policy.

Alas, within advanced economies, such an approach serves to privilege a small proportion of innovation activities, performed by a small number of sectors. Failure to adopt a broader perspective, one which is faithful to the Schumpeterian ideals many researchers explicitly espouse (Drejer, 2004), leaves the bulk of innovation 'hidden' (NESTA, 2007). Crucially, services, comprising around 70% of total value added and 70% of total employment in most OECD economies (Wölfl, 2005), are typically observed to spend less on R&D and to patent less (*e.g.*, Hipp and Grupp, 2005). This allows those assuming a narrow Technological Product and Process (TPP) view of innovation to ascribe to services a marginal role in innovation: as mere adopters of technologies developed in other, more important, sectors of the economy (Tether *et al.*, 2001).

Such a position is concerning for at least three reasons: Firstly, is the idea that most innovation activity is 'hidden' from this narrow view. In the UK, for instance, one leading commentator (NESTA, 2006) has recently lamented the fact that traditional innovation metrics largely ignore innovation activities occurring in financial services, retail, consultancy and public administration: These sectors together account for around 94% of the UK economy. Secondly, evidence has long shown that most societal economic progress is driven by 'technologies in use', rather than by technology creation (Edgerton, 1999). Yet, studies of diffusion, whilst popular in other branches of the social sciences (*e.g.*, Rogers, 1995; Stoneman, 2002), are relatively uncommon in the principal media of innovation studies' debate. Finally, and of perhaps greatest immediate concern, is the blithe treatment of the term 'services'; as if it were able to denote homogeneity.

One of the most striking features of the service sector is its tremendous diversity (Tether *et al.*, 2001; Evangelista and Savona, 2003; Vermeulen *et al*., 2005). This diversity ought to encourage a more nuanced discussion of the role of services in innovation.

In particular, recent statistics have shown sharply increasing innovation expenditures within a number of service sectors, even where one employs traditional manufacturing derived measures (Howells, 2000). Principal amongst these, Knowledge-Intensive Business Services (KIBS) are increasingly recognised as occupying a dynamic and central position in 'new' knowledge-based economies, as creative innovators in their own right, rather than as mere adopters and users of new technologies. Indeed, in studies based on Community Innovation Survey (CIS) data, technology-based KIBS and financial services emerge as remarkably innovative, with a tendency to combine both product and process innovation (Miles, 2008). In terms of innovation, these sectors appear to resemble manufacturing more than they do other services (or other primary and secondary subsectors) (Freel, 2006). Unfortunately, though the picture is greatly improving, much of what we 'know' about innovation in KIBS (Muller and Doloreux, 2008) continues to be reduceable to a series of stylised facts derived from case study work or descriptive statistics generated by omnibus surveys (such as the CIS). This work amounts to a skeleton, or framework, for the way ahead. Our hope in the current issue is to showcase the work of some of the leading scholars engaged in putting the meat on the bones of this skeleton.

2 Papers in the special issue

The different papers constituting this special issue reveal a great diversity of research works and correspond to different approaches of one and same research object. In this respect, investigations on KIBS illustrate perfectly how fruitful (and necessary) multidisciplinary analyses can be. Broadly spoken, the papers collected here can be divided within three main groups.

The first one resolutely addresses conceptual issues in aiming at deepening and renewing the state of the art related to KIBS providing alternative ways to classify KIBS. Strambach claims that, even when dealing with innovation, analyses of KIBS did not so far explicitly focus on knowledge processes. In adopting an evolutionary and organisational based knowledge approach, her contribution intends to show that the specific characteristics of KIBS composite knowledge products as well as the way these are produced are considered to be responsible for the unique way KIBS foster knowledge dynamics at firm, sector, regional and national levels. In parallel, Toivonen *et al.* consider the broadening of the content of expertise in KIBS as the result of a two-ways process. This process results from the ways in which KIBS tackle the challenges they are confronted with. This corresponds to an increase of knowledge base related to about the clients' business and mastery of the cooperation process with the clients become increasingly important as well as to an expertise becoming more multidisciplinary. According to Horgos and Koch, common, basically output-oriented industry classifications are difficult to apply to KIBS (even if conventional taxonomies, like the NACE or the ISIC, are recognised as indispensable in many respects). For this reason, a new taxonomy of KIBS distinguishing seven groups by using firm-internal attributes rather than the services is proposed as a viable alternative to conventional industry classifications.

The second group of papers is related to the evolution of the KIBS industry and to the meaning of KIBS in the process of internationalisation of the economic world. Focusing on Technical and Scientific Services (TSS) and adopting a firm-level perspective Chiesa *et al.* intend to analyse the key organisational and managerial challenges these firms are confronted with. In this respect, the authors notably provide a map of the organisational and managerial decisions seen as critical for TSS' competitiveness. Adopting an international perspective, Kautonen and Tuhkunen depict KIBS as pipelines allowing an access for their clients to global business intelligence. The contribution discusses in particular the role that KIBS play in their clients' innovation activities in *channelling* knowledge from international to national and regional levels. Going one step further, Rodríguez and Camacho, considering the increasing internationalisation process that has been taking place in KIBS in recent years and using an input-output model that estimates the domestic and the imported product-embodied R&D diffused by intermediate consumptions of high-tech services in different countries, identifies the a potential 'compensatory' role of those services in certain countries.

The third group of papers examines specific issues tackling the development and success of KIBS activities and thus allows gaining a better understanding of this industry. In exploring the main drivers of outsourcing of KIBS by Italian manufacturing firms, Antonietti and Cainelli stresses spatial agglomeration and technology as being factors more important than labour cost-savings effects. The paper by Tödtling *et al.* devoted to KIBS start-up investigates to what extent start-up companies in the Vienna ICT sector differ from more established firms in their innovation activities and types of knowledge interactions whereas the work done by Tseng and Paig focus on Taiwan's IC design industry factors contributing to the performance of this KIBS sub-category, stressing in particular the role of internal R&D.

Finally, the special issue contains three key research notes. These notes correspond mostly to ongoing research projects and explore new dimensions in the investigation of KIBS. Considering the below-average KIBS start-up and closure rates in the Stuttgart region, Stahlecker and Muller show that this area depicts structural characteristics of a standard technological regime, context to which survivors and growing KIBS start-ups adapt presumably in a quite successful way. Zenker and Doloreux analyse how different KIBS in different regions view their respective environments. The analysis relies on three 'perception variables', research and technology, the workforce, and the regional innovation climate. Finally, Muller introduces a new concept, *i.e.*, the so-called 'knowledge angels', presenting them as the specific individuals potentially playing a critical role for the innovation capacity of KIBS.

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