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Editorial

What's hot and what's not: A summary of topics and papers in technology innovation management that are getting attention

1. Introduction

On two separate occasions recently, I have heard editors suggest that in the short term one could really boost a journal's impact factors by over focusing a journal on open innovation as this topic is currently very hot. In both cases the statements were observations and not statements of intent. Encouraged by the issue of what is hot, a brief end of the year note is offered to look back and take stock of what seems to be hot and what is not. As researchers we should be trying to create "heat" with our work, not find "hot" subjects and stoke the fire with incremental work that makes smaller and smaller contributions over time.

This editorial by taking a brief accounting of where *Technovation* articles have produced a little "heat" hopes to offer some insight on how to move towards more hot articles, specifically brief consideration is given to impactful articles (based on downloads and citations) of the last two years, five years and longer.

2. The recent past

Unsurprisingly from what little has already been stated, open innovation has been the focus of both downloads and citations (Spithoven et al., 2010; Bianchi et al., 2011; Huizingh, 2011). I will restate my earlier concern (Groen and Linton, 2010) that as open innovation research is to a significant extent a subsector of product development in an integrated supply chain management environment, a failure to use common language with the supply chain management community and acknowledge this link keeps two large research communities working on the same topic separately.

Nanotechnology is another area that attracts a great deal of attention (Islam and Miyazaki, 2010; Nikulainen and Palmberg, 2010). While many of these papers have a descriptive feel to them or are case-based. The potential reach of this technology, and impact on products and processes suggest that there is substantial room for interesting contributions - especially, if this family of technologies turn out to be the basis of the next Kondratieff wave. (It is worth noting that as the editor is originally a materials engineer and as a consequence has a clear positive bias regarding the potential of nanotechnologies.) Energy and sustainability also can draw much attention in a case-based form (Lee et al., 2010; Raven and Geels, 2010). Otherwise, case-based work typically does not get too much attention. Besides cases, other areas that get less attention are studies that focus heavily on a specific location. In general, papers that focus on a location in the title are not heavily utilized, however, there are some exceptions (Guan and Chen, 2010; Kroll and Schiller, 2010; Rhee et al., 2010). Over attention to a specific location or technology can be problematic as it can correctly or incorrectly provide an impression of limited generalizability and relevance of the results. There are some topics that seem to get less attention than one might expect. While entrepreneurship is an area of great general interest, our papers in the area of technological entrepreneurship get less attention than one may expect (Scillitoe and Chakrabarti, 2010; Tolstoy and Agndal, 2010; Zeng et al., 2010). The reason appears to be that mainstream entrepreneurship researchers focus more on small or even family business than on technological entrepreneurship and technological entrepreneurship is the area that we are specifically interested in. As engineering and science faculties gradually orient themselves to encouraging and teaching topics related to technological entrepreneurship, this relative lack of interest should dissipate. The increasing interest in a variety of areas related to commercialization (Baldini, 2010; Bathelt et al., 2010; Pries and Guild, 2011; Gilsing et al., 2010) suggests that this evolution has already begun. Information technology does not draw tremendous attention in technology innovation management journals (Standing and Kiniti, 2011; Adebanjo and Michaelides, 2010; Lai and Ong, 2010; Mller-Seitz and Reger, 2010), it is possible that positioning articles in a technology innovation management journal, as opposed to a management information systems journal is a great disservice to the author – perhaps due to issues of fit and reader expectations. One final surprise is that the development of measurement instruments a very popular and important contribution in some areas of social science –does not seem to hold the same sort of traction in technology innovation management (Todorovic et al., 2011; Prodan and Drnovsek, 2010).

3. The medium term

If we take a longer-term view some of the same areas garner attention: nanotechnology and commercialization/technology transfer (Miyazaki and Islam, 2007). Articles on technology trends such as RFID (Wu et al., 2006; Chao et al., 2007; Dew and Read, 2007) can create a great deal of interest as their appeal crosses disciplinary fields and acts as a crash course on a particular subject. While, IT was mentioned earlier as not attracting attention in terms of downloads and impacts, articles on innovation and virtual environments have created a great deal of interest (Wu and Fang, 2010; Kohler et al., 2009; Füller and Matzler, 2007). In a similar vein, incubation and incubators (Ratinho and Henriques, 2010; Schwartz and Hornych, 2010, 2008; Bergek and Norrman, 2008; McAdam and McAdam,

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2008; Aerts et al., 2007) have been an area of entrepreneurship related research that has received noticeable attention. In process innovation the focus has been on total quality (Daghfous and Barkhi, 2009; Abrunhosa and Moura E Sá, 2008; Prajogo and Hong, 2008). The internationalization of innovation (Kafouros et al., 2008; Saarenketo et al., 2008) is an area of citable interest. The globalization of R&D and the recognition that different technologies are appropriate at different locations drives unique forms of innovation to be developed at every part of our globe. While much of management research focuses on the firm or relations between two firms, in technology innovation management the network is an important unit and level of analysis (Gilsing and Duysters, 2008; Takeda et al., 2008; Calia et al., 2007; Nieto and Santamaría, 2007). While on a more macro level innovation policy that strives to go beyond description of a specific policy at a specific location is valued by readers (Herrera and Nieto, 2008; Massa and Testa, 2008; Peneder, 2008; Huang et al., 2007).

4. The long term

The most downloaded categories of paper are those dealing with open innovation (Huizingh, 2011; Chiaroni et al., 2011; Van de Vrande et al., 2009; Mortara and Minshall, 2011), service innovation, (Cheng and Krumwiede, 2012; Hsieh et al., 2012; Edvardsson et al., 2012) and innovation in SMEs (Van de Vrande et al., 2009; Zeng et al., 2010; Hoffman et al., 1998). An important note to make regarding download volume is that it can favor younger papers. Alternatively, citations favor older papers. Papers that either provide insights on how to do something (Narula and Hagedoorn, 1999; Albino et al., 1998; Matzler and Hinterhuber, 1998; Archibugi and Pianta, 1996; Gilbert and Cordey-Hayes, 1996) or identify and attack specific challenges (Wu et al., 2006; Kwak and Anbari, 2006; Kumar et al., 2003), appear to cite well. Addressing the boundary between internal and external also is of great interest (Caloghirou et al., 2004; Rothwell, 1991). The related subject of knowledge transfer is also a focus point (Rasmussen et al., 2006; Nieto and Quevedo, 2005; Carayannis et al., 1998; Gilbert and Cordey-Hayes, 1996). This is worth noting as academic research often draws a distinction between internal and external. Such a distinction often overlooks interactions across this legal, financial and perceptual boundary.

Environment and sustainability are topics with significant traction, in part due to their interdisciplinary appeal (Pujari, 2006; Johnston et al., 2005; Del Brío and Junquera, 2003; Sarkis, 1995). Finally, a literature review that satisfies some needed gap (Chao et al., 2007; Becheikh et al., 2006; O'Neill and Sohal, 1999; Albino et al., 1998; Hoffman et al., 1998) are often cited and downloaded. While a very large number of literature reviews are written, very few are actually published. This is mentioned as it is often seen as an easy way to obtain high impact publications. Literature reviews are in fact one of the easier ways to get desk rejected–as it is difficult to make a novel contribution in a literature review. Please note that as every journal has a different focus and mission, this assessment is not generalizable it is based on an assessment of download and citation rates to give a better feeling for what seems to be hot and what is not in the community that *Technovation* serves.

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