
Editorial

Valentina Lazzarotti and Raffaella Manzini

School of Industrial Engineering,
LIUC Università Cattaneo,
Castellanza, Italy
Email: vlazzarotti@liuc.it
Email: rmanzini@liuc.it

Luisa Pellegrini

Department of Energy, Systems, Territory
and Construction Engineering,
University of Pisa,
Pisa, Italy
Email: Luisa.Pellegrini@ing.unipi.it

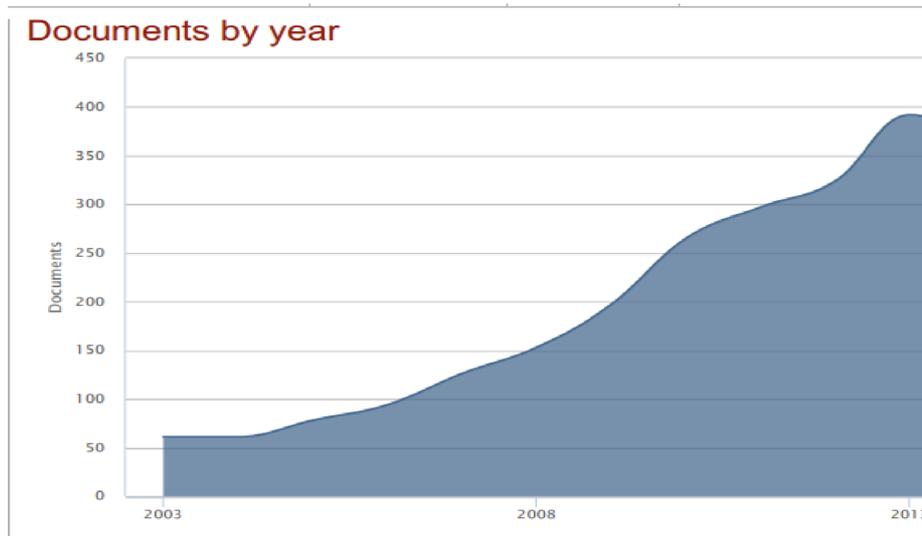
Biographical notes: Valentina Lazzarotti is an Associate Professor at the Institute of Technology of Università Carlo Cattaneo – LIUC, Italy. She teaches Business Economics and Organisation and Management Control Systems at LIUC. She obtained her Master in Business Administration from Bocconi University. Her research interests concern R&D performance measurement and accounting for innovative activities. She has published papers in international journals such as *International Journal of Innovation Management* and *Project Management Journal*.

Raffaella Manzini is a Full Professor at LIUC – Università Cattaneo (Italy). She teaches ‘Economics, Management and Organisation’ and ‘Innovation and New Product Development’ at LIUC. She is also a Lecturer of Innovation Management at ENI Corporate University. Her research interests are R&D and innovation management, technology strategy, management and organisation, innovation and intellectual property. In these fields of study, she has around 50 international publications. Since 2010, she is the Director of LIUC IP Centre, involved in research, training and services on the topic of Innovation and Intellectual Property. She obtained her Master’s Degree in Management Engineering from Politecnico di Milano in 1994.

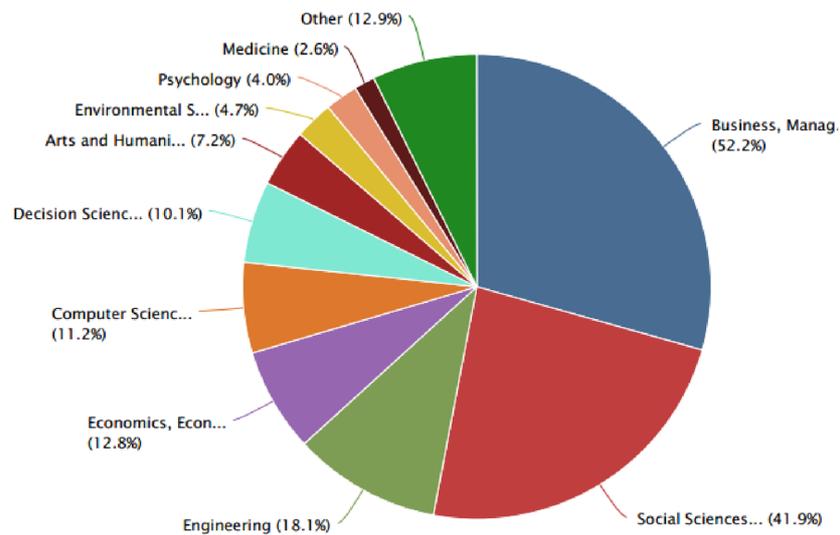
Luisa Pellegrini is an Associate Professor of Management Engineering at the Department of Energy, Systems, Territory and Construction Engineering, University of Pisa where she teaches Finance and Business Economics and Organisation. She is actively involved in national and international research projects on continuous and open innovation. She is a member of the Continuous Innovation Network (CINet) and author of numerous international publications on leading management journals such as *Technovation*, *International Journal of Management Reviews*, *Small Business Economics*, *International Journal of Technology Management* and *Production Planning and Control*.

In the last 5–10 years, several journals dedicated a special attention to open innovation (OI), by publishing papers and also by dedicating special issues to the topic (see Box 1). So, one question may arise: was another special issue on open innovation actually necessary? Is there any sub-topic in open innovation, which was not yet debated?

Box 1 Articles on open innovation (see online version for colours)



Documents by subject area



A quick search in the Scopus® database shows that around 2300 papers have been written on open innovation since 2003, in journals in the area of Social Sciences and Humanities. In Figures 1 and 2 (elaborated with the Scopus® database), the publication trend and the subject areas are shown.

In 2013, by reading the most recent contributions on the topic, it emerged clearly that while the theory on open innovation was reaching a very good level of systematisation and was still receiving a great deal of attention (in terms of models, organisational and managerial aspects), the practice of companies was not yet well known (Tidd, 2014). But the practice seemed to be the critical point, which might probably explain why OI in theory appears as an opportunity that companies must absolutely exploit, but in practice it is not yet demonstrated that OI has a positive impact on the companies' economic performance. Practice matters. And, some authors continued to stimulate researchers to investigate the practice of OI, to discover and discuss successful and unsuccessful practices (Tidd, 2014).

So, this was the starting point of this special issue and this was the way we thought this special issue could be considered by potential readers: investigating OI practice.

But further on, when we participated to the CINet conference in the year 2013 and we selected the contributions for this special issue, it emerged clearly that this was only one of the possible interpretations of the selected contributions.

Two other possible interpretations emerged:

- The contributions in this special issue improve state-of-the-art knowledge about the models of open innovation adopted by companies, i.e., about the partners whom companies innovate with, when these partners are actually involved (in which phase(s) of the innovation funnel) and how these partnerships are actually implemented;
- The contributions clearly show that probably OI can no more be considered a specific stream of study in innovation management, but rather a new lens or perspective with which current theories could be enriched, revised, revisited or refreshed.

A synopsis of these different interpretations of the contributions included in this special issue is given hereafter:

<i>Authors</i>	<i>Interpretation</i>	<i>Successful and unsuccessful practices in OI</i>	<i>OI models: with whom, when and how</i>	<i>OI as a different lens in studying innovation theories</i>
Morillo, Dell'Era, Verganti	Exploring the role of 'outsider' interpreters in the development of design-driven innovations	In the management of partners that are very distant from the current company's context	With external outsiders, in the design phase of innovation	Design driven innovation
Lidegaard, Boer, Møller	Organising purchasing and (strategic) sourcing – towards a typological theory	In exploiting suppliers as sources of innovation	With suppliers as sources of innovation	Purchasing organisation and strategy
Wolf, Holzer	Behind the stage: the making of innovation practice in private organisations	In managing internal and external people and objects	With external and internal actors and with material objects, in a sociomaterial interaction	Methodology and approaches in innovation management research

<i>Authors</i>	<i>Interpretation</i>	<i>Successful and unsuccessful practices in OI</i>	<i>OI models: with whom, when and how</i>	<i>OI as a different lens in studying innovation theories</i>
Neirotti, Paolucci	Innovation intermediaries as agents for SMEs' organisational learning: a case Study on the UCLA's global access program	In managing OI in SMEs	With intermediaries as enablers and facilitators of an international approach to (open) innovation	Internationalisation
Berendsen, Middel, Pieters, Angard, Hillerström	Social media within sustainable product development	In fostering sustainable NPD	With customers, by means of social media, in the early phases of the NPD process	Sustainable innovation
Chiaroni, Chiesa, Frattini, Terruzzi	Implementing open innovation: a case study in the renewable energy industry	In implementing OI (shifting from closed to open models of innovation)	In pilot projects, when companies start adopting an open approach to innovation	Change management

Hereafter, the papers of this special issue are briefly introduced, by adopting the above-mentioned three perspectives. We hope this will help researchers in considering this multifaceted interpretation of open innovation, capturing and also enriching in their future research the way open innovation is studied in technology and innovation management literature.

Successful and unsuccessful practices in open innovation

The success rate of technology alliances, innovation networks and partnerships is low on average and dramatically low in some circumstances (Gulati and Singh, 1998; Laursen and Salter, 2006; Pertuzè et al., 2010; Hung and Chou, 2013). The literature brings into evidence that the underlined reasons can be probably found in the 'conditions' in which open innovation is actually implemented within companies (Foss et al., 2011; Petroni et al., 2012; Sisodiya et al., 2013; Brunswicker and Vanhaverbeke, 2013). To profit from open innovation, the type of organisation, the managerial style and tools, the cultural mindset and the relational capital that companies have – or are able to build – make the difference.

In this special issue, we have collected contributions that describe successful and unsuccessful conditions created by companies in opening (part of) their innovation funnel. These can be useful for managers that may find interesting suggestions – and also important warnings – about how to actually implement an open approach to innovation.

Chiaroni, Chiesa, Frattini and Terruzzi illustrate good practices for companies to change from a closed to an open innovation approach, drawn from the renewable energy industry. They emphasise the fundamental role of pilot projects for institutionalising the change, and the relevance of individuals and of informal interactions in supporting the knowledge transfer, which is implied in such a change. Morillo, Dell'Era and Verganti describe different ways to manage partners that are very 'distant' from the company,

in terms of competences and cultural mindset, and show that a decentralised organisational model is more suitable to be successful with respect to a more centralised and controlled approach. Lidegaard, Boer and Møller observe that current solutions for organising and managing the purchasing process prevent companies from profiting from suppliers as sources of innovation; as a consequence, firms have to “rethink the organisation of that process”. They propose an activity-based typological theory of purchasing and strategic sourcing process, and give a detailed description of the most suitable organisational solutions associated to different context conditions in terms of uncertainty, complexity, interdependence and variety. Berendsen, Middel, Pieters, Angard and Hillerström discuss the practices related to the exploitation of social media for sustainable new product development (NPD) and underline that they are almost non-existent. Hence, they give managers a strong warning: at the moment, ‘social media is not being used as a tool to interact with customers’ in the sustainable NPD process.

Neirotti and Paolucci provide an extensive study on SMEs, a context in which the feasibility and effectiveness of an open innovation approach is still debated. They show in detail which is the short-term and the long-term impact of the use of intermediaries as a source of knowledge on foreign markets, in terms of knowledge acquired and also of routines and processes improved or even introduced *ex-novo*. Last, Wolf and Holzer investigate the innovation process of private organisations adopting a sociomaterial approach, according to which innovation is studied as “interplay between the social and the material”, between human and non-human actors, internal and external actors. They show that open innovation practices are successful if companies are also able to manage the non-human parts involved in the innovation network.

Open innovation models: with whom, when and how

The literature on open innovation proposes many different models of open innovation. Just to quote (some of) the most cited, models (or approaches) to OI are distinguished with respect to: the partners’ breadth and depth (Laursen and Salter, 2006); the openness direction – integration and exploitation (Gassman and Enkel, 2004); the type of governance and partners’ participation (Pisano and Verganti, 2008); the type of partners and the phases of the innovation funnel involved (Lazzarotti and Manzini, 2009). Hence, designing an open innovation firm means defining a set of variables: with whom (partners), when (innovation phase(s)) and how (openness direction, governance and participation). This special issue goes more deeply into these variables, providing cases of different open innovation models actually adopted in practice, where different design choices have been made by companies in terms of partners, open innovation phases, openness direction, governance and participation. This allows researchers to move from a theoretical to an empirical perspective in discussing the characteristics of open innovation models, their pros and cons, their consequences on the organisation and management of the innovation process. In terms of partners, the contributions collected in this issue deepen the study of the role, action and interaction of ‘outsider interpreters’ (Morillo et al.), of suppliers (Lidegaard et al.), of customers (Berendsen et al.), of innovation intermediaries (Neirotti and Paolucci) and of human and non-human actors (Wolf and Holzer). In terms of open innovation phase(s), in this special issue a deep investigation is provided concerning the early stages of the NPD process (i.e., concept generation) (Morillo et al.; Berendsen et al.), the strategic sourcing of manufacturing inputs

(Lidegaard et al.) and the searching process of new market knowledge (Neirotti and Paolucci). On the contrary, two contributions provide practices involving the opening of the whole innovation funnel (Wolf and Holzer; Chiaroni et al.).

Open innovation as a different lens in studying innovation

The authors who contributed to this special issue have already started studying open innovation not as a discipline 'per se', i.e., not as an autonomous field of study. On the contrary, they are investigating whether and how open innovation is actually influencing – or should actually influence – other theoretical fields, and they are achieving that by analysing the practice of companies. We believe that this third interpretation of this special issue is particularly relevant for researchers, as it may influence how to do research on the topic in the future. It is true that it is still necessary to study the empirical side of open innovation, deepening the understanding of the practical difficulties faced by companies in opening their innovation process and identifying practices to be used by managers for designing their own open innovation model. And, this contribution makes a little step further in this direction. Moreover, it would also be interesting and useful to understand whether open innovation has an impact on other aspects of innovation management, both from a theoretical and an empirical perspective. If we look at this special issue from this point of view, we can already bring into evidence that several fields of study are affected by open innovation (or have significant interaction with open innovation) and that many practical aspects of innovation management and organisation within companies are actually affected by an open approach to innovation. Wolf and Holzer, in their investigation on the interactions among actors in open innovation processes, propose to adopt a new approach to research in innovation, according to which not only human actors are considered explicitly, but also non-human ones, both internal and external to the company. Such a sociomaterial approach (Latour, 2007; Orlikowski, 2007; Suchman, 2007) may greatly enrich the way innovation – and open innovation as well – is understood and investigated. Chiaroni et al., by investigating how companies actually move from a closed to an open approach to innovation, draw conclusions that are of high relevance for the theory on change management. In particular, they give a contribution related to the role of pilot projects in change management (Turner and Muller, 2005), to the problem of overcoming the inertia of people (Thompson et al., 2006) and to the institutionalisation of new procedures and approaches within companies (Nonaka and Ryoko, 2003; Grabher, 2004). Neirotti and Paolucci contribute to the literature on the internationalisation of SMEs. They point out that an open approach, in which external intermediaries are exploited as facilitators and supporters, may help SMEs to overcome their weaknesses in terms of available resources (individual and social capital), market knowledge and dedicated internal procedures (Leonidou, 2004; Hollestein, 2005). Lidegaard et al. propose a new framework in the organisational theories on purchasing processes. They start from the observation that purchasing is not only a source of manufacturing inputs, but is becoming itself a source of innovation inputs. This changing role of purchasing processes asks companies to change the way they organise such processes and by studying this change the authors propose an activity-based typological theory of strategic purchasing processes, which could be further studied in the future. Morillo et al. ground their contribution in the recently born stream of literature on Design-Driven innovation (Verganti, 2009), and exploit the literature on collaboration strategies to study a specific aspect of design-driven innovation: the

management of new partnerships with outsider ‘interpreters’, as sources of design-driven innovations. Last, Berendsen et al. focus on the theory on sustainable new product development, to understand whether and how social media can be a suitable source of new product concepts.

Acknowledgements

This special issue represents a (small) contribution on the open innovation literature. We hope that different researchers may read it with different perspectives and interpretations, stimulating the development of theory not only in open innovation, but more generally on the topic of innovation and technology management. At the same time, we hope that the cases may be helpful to managers for optimising their approach to open innovation.

We are grateful to the board of the Continuous Innovation Network, CINet, as this project was born during the *14th CINet Conference*, held in Nijmegen, The Netherlands, in September 2013, and in particular to Mats Magnusson, who is the President of the Network, and to Jeannette Visser Groeneveld, who gave us support during and after the conference. We are also grateful to the Editor for trusting this project and for supporting us during the long review process, and to all the reviewers, for their commitment and their helpful insights, as their work resulted in significantly improved papers.

References

- Brunswick, S. and Vanhaverbeke, W. (2013) *Open Innovation in Small and Medium-Sized Enterprises (SMEs): External Knowledge Sourcing Strategies and Internal Organizational Facilitators*, Available at SSRN 2351047.
- Foss, N.J., Laursen, K. and Pedersen, T. (2011) ‘Linking customer interaction and innovation: the mediating role of new organizational practices’, *Organization Science*, Vol. 22, No. 4, pp.980–999.
- Gassmann, O. and Enkel, E. (2004) *Towards a Theory of Open Innovation: Three Core Process Archetypes*, Working Paper, R&D Management Conference (RADMA), Lisbon, Portugal.
- Grabher, G. (2004) ‘Learning in projects, remembering in networks? Communitarity, sociality, and connectivity in project ecologies’, *European Urban and Regional Studies*, Vol. 11, No. 2, pp.103–123.
- Gulati, R., and Singh, H. (1998) ‘The architecture of cooperation: managing coordination costs and appropriation concerns in strategic alliances’, *Administrative Science Quarterly*, pp.781–814.
- Hollestein, H. (2005) ‘Determinants of international activities: Are SMEs different?’, *Small Business Economics*, Vol. 24, No. 5, pp.431–450.
- Hung, K. and Chou, C. (2013) ‘The impact of open innovation on firm performance: the moderating effects of internal R&D and environmental turbulence’, *Technovation*, Vol. 33, Nos. 10–11, pp.368–380.
- Latour, B. (2007) *Eine neue Soziologie für eine neue Gesellschaft. Einführung in die Akteur-Netzwerk-Theorie*, Suhrkamp Verlag, Frankfurt am Main.
- Laursen, K. and Salter, A. (2006) ‘Open for innovation: the role of openness in explaining innovation performance among U.K. manufacturing firms’, *Strategic Management Journal*, Vol. 27, No. 2, pp.131–150.

- Lazzarotti, V. and Manzini, R. (2009) 'Different modes of open innovation: a theoretical framework and an empirical study', *Journal of Innovation Management*, Vol. 13, No. 4, pp.1–22.
- Leonidou, L.C. (2004) 'An analysis of the barriers hindering small business export development', *Journal of Small Business Management*, Vol. 42, No. 3, pp.279–302.
- Nonaka, I. and Ryoko, T. (2003) 'The knowledge-creating theory revisited: knowledge creation as a synthesizing process', *Knowledge Management Research & Practice*, Vol. 1, No. 1, pp.2–10.
- Orlikowski, W.J. (2007) 'Sociomaterial practices: exploring technology at work', *Organizations Studies*, Vol. 28, No. 09, pp.1435–1448.
- Pertuzè, J.A., Calder, E.S., Greitzer, E.M. and Lucas, W.A. (2010) 'Best practices for industry university collaboration', *MITSloan Management Review*, Vol. 51, No. 4, pp.83–90.
- Petroni, G., Venturini, K. and Verbano, C. (2012) 'Open innovation and new issues in R&D organization and personnel management', *The International Journal of Human Resource Management*, Vol. 23, No. 1, pp.147–173.
- Pisano, G.P. and Verganti, R. (2008) 'Which kind of collaboration is right for you?', *Harvard Business Review*, December, pp.1–9.
- Sisodiya, S.R., Johnson, J.L. and Grégoi, Y. (2013) 'Inbound open innovation for enhanced performance: enablers and opportunities', *Industrial Marketing Management*, Vol. 42, pp.836–849.
- Suchman, L. (2007) *Human-Machine Reconfigurations. Plans and Situated Actions*, 2nd ed., Cambridge University Press, Cambridge.
- Thompson, G.N., Estabrooks, C.A. and Degner, L.F. (2006) 'Clarifying the concepts in knowledge transfer: a literature review', *Journal of Advanced Nursing*, Vol. 53, No. 6, pp.691–701.
- Tidd, J. (2014) *Introduction*, Series on Technology Management, Volume 23: 'Open Innovation Research, Management and Practice', Imperial College Press, London.
- Turner, J.R. and Müller, R. (2003) 'On the nature of the project as a temporary organization', *International Journal of Project Management*, Vol. 21, No. 1, pp.1–8.
- Verganti, R. (2009) *Design-Driven Innovation. Changing the Rules of Competition by Radically Innovating What Things Mean*, Harvard Business Publishing Corporation, USA.