

---

## **Editorial: The need for research on intangible assets in open innovation processes**

---

**Michele Grimaldi\***

Department of Civil and Mechanical Engineering,  
University of Cassino and the Southern Lazio,  
Via G. Di Biasio, 43, Cassino, Frosinone 03043, Italy  
Email: m.grimaldi@unicas.it

\*Corresponding author

**Vincenzo Corvello**

Department of Mechanical, Energy and Management Engineering,  
University of Calabria, Via P. Bucci 46C,  
Rende, Cosenza 87036, Italy  
Email: vincenzo.corvello@unical.it

---

### **1 Introduction**

Stating that intangible assets (IAs) are relevant to innovation processes is stating the obvious. What makes an innovation of a new product or process is in large part of an intangible nature: the knowledge needed to invent it; the relations activated to diffuse it; the image that the 'innovators' were able to communicate. Companies, large and small, need IAs in order to innovate and, in order to stay innovative, they need to continuously develop IAs or maintain access to external intangible resources (Chesbrough, 2003; West and Bogers, 2014; Fu, 2015). If it is true that in the present competitive environment, innovation is the key to firm survival, it is clear that understanding what IAs are necessary to an organisation as well as where and how to get them is crucial for any manager or entrepreneur.

Similarly, it is rather intuitive that innovation is intrinsically an open phenomenon: no true innovation can be created by an individual or an organisation in isolation. New products are a combination of elements developed by many diverse actors: private firms, research organisations and public entities. Even if inventing something new was possible for a single enterprise, the diffusion of the finding in the market requires interactions with a plethora of actors and artefacts. Indeed, an invention cannot be called an innovation until when it is adopted by a community (von Hippel, 2005). The diffusion and adoption process requires the involvement of organisations different from the one which first introduced the new finding in the environment. Producers of complementary goods, distributors, intellectual property consultants, early adopters, all contribute to the success of an innovation. The success of Chesbrough's 'open innovation' (OI) concept is certainly due in part to the fact that it describes in a concise and evocative way this inter-organisational nature of innovation.

From the point of view of management research, then, it is important to better understand the nature of IAs, their role in innovation processes and the mechanisms underlying their creation and transfer from an actor to another.

Research on IAs, however, has often focussed on a single organisation, in the attempt to define tools for measuring its stock of IAs (Sveiby, 1997), to single out causal relations between IAs and firm performance (Su and Wells, 2015) as well as efficient ways to acquire intangible resources (Denicolai, Ramirez and Tidd, 2014). More recently, some scholars have focussed on the flows of intangible resources between organisations, trying to grasp the dynamics of IAs rather than considering statically the effects of these stocks (Battagello, Grimaldi and Cricelli, 2015; Corvello and Migliarese, 2014; Denicolai, Ramirez and Tidd, 2016).

Studies on OI, on the other hand, have often analysed knowledge flows and relational resources as a key element. Indeed, studies analysing in conjunction (open) innovation processes and IAs are not rare. In a recent review of the literature, Corvello et al. (2015) have found 1013 documents, including academic and practitioner papers, which considered both topics at the same time. Research has focussed on the capability of companies of integrating and reconfiguring external and internal knowledge to create value, by means of proper knowledge management strategies and processes.

This abundance of material notwithstanding, the results seem to be still inconclusive and no clear picture of the topic emerges. For example, the idea that a balance of internal and external resources is needed is well supported in the literature (Denicolai, Ramirez and Tidd, 2016). A meaningful internal stock of intangible resources is needed in order to maintain a competitive edge. At the same time, external sourcing of IAs is important in order to keep the organisation efficient and flexible. However, which resources should be kept internally and which ones can be sourced from outside (and how) is not yet clear.

It seems that, even if the interest in this area of research is high, the complexity of both themes (that is, IAs and inter-organisational innovation processes) makes it necessary a further effort on the part of researchers.

Several research questions need to be addressed and empirical evidence needs to be collected.

For example, this phenomenon has often been studied from the point of view of large companies. Less well understood is the point of view of Small and Medium-sized Enterprises (SMEs), in particular when at the start-up stage. It is also important to investigate the phenomenon at several levels of aggregation: at the firm, network and ecosystem level. Besides, the subject is inherently multidisciplinary and requires to be approached from different points of view. Both qualitative and quantitative studies are needed in order to enrich our understanding on the one hand and consolidate it on the other.

This aim of this special issue was to give impulse to research on OI which focusses on the role of IAs, through the collection of original contributions about the management, implementation and assessment of IAs in the context of inter-organisational innovation processes. This special issue contains seven articles that dealt with the considered topic. Each of the seven papers addressed the theme as follows.

Silje Haus-Reve and Martin Gjelsvik wrote a paper titled 'Innovation in a globalizing world: within or beyond local clusters?' Authors analysed whether the geographic location of firms in local (regional) cluster and scope of collaboration are conducive to innovation. By surveying firms in Norwegian city regions, they found out that locating in regional clusters does not favour firms' innovation, oppositely to what would be

expected, being national and international clusters the actual strategic environments that foster innovation.

Anna D'Auria, Marco Tregua, Tiziana Russo-Spena and Francesco Bifulco submitted a paper titled 'Exploring innovation contexts: system, network and ecosystem innovation'. The paper illustrated a double-step and co-word bibliometric analysis of the three contexts, as they appear in the last five years' literature contributions. Authors observed that the obtained results showed that management and relevance features were relevant to understand knowledge innovation in open system contexts, while the role of strategy was considerably less notable in literature related to network and ecosystem literature.

Emilia Lamberti, Mauro Caputo, Antonello Cammarano and Francesca Michelino proposed a paper entitled 'Investigating the relationship between open business models and intangible assets'. The paper aimed at two targets: outlining features of open business models of worldwide companies and characterizing them mainly on the basis of the composition of portfolio intangibles, such as R&D and goodwill. Data information were drawn from audited consolidated annual reports of 234 worldwide companies for the period 2010–2012. The analysis of OI inbound and outbound features from a financial point of view issued five models: collaboration, outsourcing, licensing, trading and incorporation, or a combination of them, each showing an openness level of innovation strategy. The framework provides course of action for managers to leverage IAs of their companies and generate value from OI activities.

Niloofar Kazemargi, Corrado Cerruti and Andrea Appolloni authored a work titled 'Adopting open innovation in supply networks'. The paper focussed on OI practices in social networks' relationships in order to improve upon knowledge flows. Building on extensive OI literature and social network theory, a model was devised by envisaging how tie strength and trust facilitate knowledge flows in four different types of OI, such as inward IP licencing, outsourcing of R&D, external networking and external participation. The proposed theoretical framework is intended to help managers to analyse OI practices and conditions of supply networks in order to adopt the most favourable conditions.

Ana Isabel Almeida Costa, Marco Greco, Michele Grimaldi, Livio Cricelli and Vincenzo Corvello advanced a paper titled 'Inter-organizational innovation processes in the European Food & Drink industry'. The paper analysed the innovation activities of the largest Food and Drink (F&D) industry in Europe, a 'supplier dominated' industry, according to Pavitt's taxonomy. Internal and external innovation activities of the industry were checked through Wilcoxon and Mann-Whitney tests on data drawn from a sample of 54,088 manufacturing firms (7,301 of which operating in the F&D industry) in 14 European countries, participating in Eurostat's 2008 Community Innovation Survey. Results showed that not only other manufacturing firms invest comparatively more in internal R&D than F&D ones, but that most of them rely on external sources more than F&D firms do. Also, the outcome of the study confirmed suggestions emphasised by the OI paradigm, which encourages firms to integrate their internal R&D activities with innovation outputs coming from external sources.

Antonio Lerro, Gianluca Elia, Giovanni Schiuma and Giuseppina Passiante presented the paper titled 'Dimensions and practices of the collaborative relationships between cultural and creative organizations and business'. The paper is on the capability of traditional businesses to promote cross-sector innovation through relationships and collaborations with Cultural and Creative Industries. The paper examined, by means of qualitative research methods, the relational and collaborative interactions of a sample of

Italian manufacturing and services companies, which supplied experienced products and services, with Cultural and Creative Industries. Results showed that most relationships and collaborations were aimed to enhance company image and reputation, communication strategies, corporate social responsibility policies, brand recognition and to incorporate intangible values.

Xi Wang and Liliana Mitkova wrote a paper titled 'Research on China's knowledge sharing system: under open innovation framework'. The paper investigates the practice and development of China's knowledge sharing system from both institutional and organisational perspectives. As for the first perspective, the paper illustrates the government regulation to build a specific Chinese knowledge sharing system among firms, universities, research institutions and market. From the organisational aspect, the paper examines the industrial knowledge sharing system of Huawei, a typical high-tech enterprise in China. In summary, the paper helps to identify the key barriers for the development of large knowledge sharing process between main actors.

## References

- Battagello, F.M., Grimaldi, M. and Cricelli, L. (2015) 'A rational approach to identify and cluster intangible assets: a relational perspective of the strategic capital', *Journal of Intellectual Capital*, Vol. 16, No. 4, 809–834.
- Corvello, V., De Mauro, A., Grimaldi, M. and Scarmozzino, E. (2015) 'The role of intangible assets in open innovation processes: a literature review'. *Proc. Int. Forum on Knowledge Assets Dynamics*, 10–12 June, Bari.
- Corvello, V. and Migliarese, P. (2014) 'The dynamics of intellectual capital stocks and flows in the context of innovation processes of small and medium-sized enterprises', *International journal of intelligent enterprise*, Vol. 2, Nos. 2/3, pp.104–117.
- Denicolai, S., Ramirez, M. and Tidd, J. (2014) 'Creating and capturing value from external knowledge: the moderating role of knowledge intensity', *R&D Management*, Vol. 44, pp.248–264.
- Denicolai, S., Ramirez, M. and Tidd, J. (2016) 'Overcoming the false dichotomy between internal R&D and external knowledge acquisition: absorptive capacity dynamics over time', *Technological Forecasting and Social Change*, Vol. 104, pp.57–65.
- Fu, N. (2015) 'The role of relational resources in the knowledge management capability and innovation of professional service firms', *Human Relations*, Vol. 68, No. 5, pp.731–764.
- Su, W. H. and Wells, P. (2015) 'The association of identifiable intangible assets acquired and recognised in business acquisitions with post acquisition firm performance', *Accounting & Finance*, Vol. 55, pp.1171–1199.
- Sveiby, K.E. (1997) *The New Organizational Wealth: Managing and Measuring Knowledge Based Assets*, Berrett Koehler, San Francisco, CA.
- von Hippel, E. (2005) *Democratizing Innovation*, MIT Press, Cambridge, MA.
- West, J. and Bogers, M. (2014) 'Leveraging external sources of innovation: a review of research on open innovation', *Journal of Product Innovation Management*, Vol. 31, pp.814–831.