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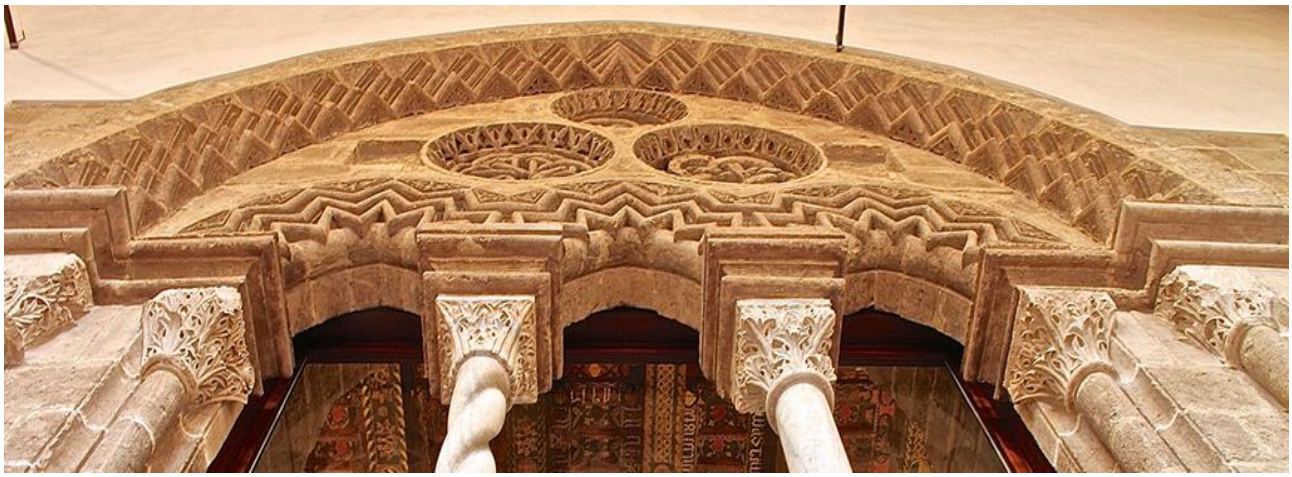

Source: University of Palermo

Leveraging intersections in management theory and practice

Extended Abstracts

University of Palermo

June 10-11, 2021

Electronic Conference Proceedings of Sinergie - Sima Management Conference
Leveraging intersections in management theory and practice, Palermo, June 10-11, 2021
University of Palermo

ISBN 97888943937-9-8

The Electronic Conference Proceedings are published online on
http://www.sijm.it

Via Interrato dell'Acqua Morta, 26
37129 Verona - Italy

Leveraging intersections in management theory and practice

10-11 June 2021

Electronic Conference Proceeding

Extended Abstracts

edited by

Sandro Castaldo - Arabella Mocciaro Li Destri - Lara Penco and Marta Ugolini

Exploring the linkage between open innovation and organizational learning: insights from exemplary alliance case studies

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Objectives. *The competitive landscape in which companies must compete today is increasingly turbulent and dynamic (Dagnino et al., 2020). Generating innovation has become crucial in many dynamic industries and is recognized as the only way through which firms may achieve a series of temporary competitive advantages and respond to market and technological uncertainty (Andrevski and Ferrier, 2019). In the last 20 years, innovation management literature has shown that firms can generate innovation through activities that are not exclusively related to "internal" processes (Chesbrough, 2003, Dell'Era et al., 2020). Open Innovation paradigm has emerged as a strategic orientation for firms aiming at capturing external knowledge to commercially exploit their profitable innovative potential (Cheng & Huizingh, 2014). In fact, firms may not be able to invest in innovation alone (Huizingh, 2011), and therefore seek external sources from which to draw new knowledge (Frenz and Ietto-Gillies, 2009; Laursen and Salter, 2006). Among the several strategic tools through which firms may access new knowledge, it is well recognized in the literature that strategic alliances are the most widespread ones (Ferrigno et al., 2021; Mamédio et al., 2019; Mowery et al., 1996).*

However, alongside the ability to identify external sources from which to draw knowledge, firms must also be able to learn from these sources (Winter and Szulanski, 2001). For this reason, Organizational Learning literature has investigated the processes which allow organizations to learn (Zollo and Winter, 2002). Within this vein, researchers have pointed to the importance of many ways through which organizations can learn (Barkema and Schijven, 2008). According to them, firms can learn from others (Haunschild and Miner, 1997); by experimentation (Pisano, 1994); by improvisation (Baker et al., 2003); and by doing (Argote, 1999).

Notwithstanding it is quite known that, given market and technological uncertainty, organizations need access to new knowledge and that Open Innovation strategies allow them to seek that knowledge, existing literature investigating the link between Open Innovation and Organizational Learning is surprisingly scarce. Exploring such a link is fundamental as many firms adopt Open Innovation strategies such as strategic alliances to successfully learn from others (Faems et al., 2005). Nowadays, in fact, big companies such as P&G, Xerox, Huawei, and IBM are increasingly making use of strategic alliances that allow them to gain new knowledge from partners.

To address this research gap, we conduct an in-depth analysis of the literature on Organizational Learning and Open Innovation and we identify, per each literature, two key dimensions that indicate the way through which organizations learn and acquire knowledge from collaborating with external partners. By combining Open Innovation (Chesbrough, 2003) and Organizational Learning literature (Levinthal and March, 1993) in relation to strategic alliances, we elaborate a matrix (see Figure 1) in which we argue that two main open innovation strategies - i.e. inbound and outbound open innovation strategies - may drive firms' strategic orientation to access new knowledge (Dahalander and Gann, 2010). Moreover, we argue that the implementation of these open innovation strategies in the context of strategic alliances may lead firms to either (mainly) experiential or (mainly) experimental learning (Zollo and Winter, 2002). In the following section, we validate this matrix through a sample of representative qualitative case studies.

Fig. 1: Open Innovation strategies and Organizational Learning modes

	Organizational Learning modes		
Open Innovation Strategies		*Experiential*	*Experimental*
	Inbound	*Type I*	*Type II*
	Outbound	*Type III*	*Type IV*

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Methodology. *On the basic principles of theoretical sampling (Eisenhardt, 1989), we searched for the units for research, based on characteristics or attributes that are important to the evaluation (Yin, 2018): 1) known alliances between large companies recognized on the international market; 2) companies that have adopted an open innovation inbound or outbound strategy; and 3) companies that have used an experiential or experimental learning approach. In particular, we verified that the two partners of each alliance reported in their website the adoption of inbound or outbound open innovation strategy. Based on these criteria, we have selected four representative alliance case studies formed by the following partner: 1) P&G and Xerox, 2) L'Oréal and Founders Factory; 3) Huawei and Leica; and 4) BMW and IBM. Per each alliance case study, we collected several data from different sources (Creswell 1998; Jick 1979): videos, data available from websites, press releases, newspaper articles and, when possible, financial data from AIDA-Bureau van Database Dijck. As regards data analysis, we validated our matrix and their relations through an inductive and confirmatory approach in our empirical analysis (Lee et al., 1999). Confirmatory approaches tend to confirm a researcher's preconceived notions and they are well recognized in the literature (Ruddin, 2006; Yin, 2018). In this paper, we used an approach similar to previous literature (Casprini et al., 2014; Ferrigno and Cucino, 2021). More specifically, we first conducted a within case analysis of each strategic alliance and after a cross-case analysis to dissect a trend that characterises each quadrant of the matrix.*

Findings. *The analysis of the four cases of strategic alliances allow us to fill the matrix reported in Figure 2.*

Fig. 2: Open Innovation strategies and Organizational Learning methods in strategic alliances

	Experiential	*Experimental*
Inbound	*Type I* *Alliance partners* *P&G and Xerox* *Key Features* *Complementary sectors* *Strong experience* *Improve each other*	*Type II* *Alliance partners* *L'Oréal and Founders Factory* *Key Features* *Distant sector* *Deepen sector or new sector* *Trial and error*
Outbound	*Type III* *Alliance partners* *Huawei and Leica* *Key Features* *Complementary sectors* *Strong experience* *A new sector*	*Type IV* *Alliance partners* *BMW and IBM* *Key Features* *Distant sector* *A new sector* *Technology transfer*

Each alliance case is representative of the combination of one Open Innovation strategy (inbound or outbound) with one Organizational Learning method (experiential or experimental learning). In the following section, we discuss four types of links between Open Innovation strategies and Organizational Learning Methods in the four cases of strategic alliances.

Type I: Inbound Open Innovation and Experiential learning

Caroline Basyn, director of global business services at P&G, proposed outsourcing printing across all two hundred P&G sites to an MPS provider. At that time she said: "I want to manage the whole fleet as if it were a printer". The goal was to have a printing strategy that offered innovative ways for P&G employees to be more productive and more mobile. Then, in September 2008, they began working with Xerox, which helped them set goals for an MPS implementation.

This type of Open Innovation is "inbound" because P&G uses available external knowledge as a source of internal innovation. Within a year of forming the partnership, Xerox announced the first innovative solution it had co-created with P&G: the mobile printing solution. The solution allowed P&G employees to use a smartphone to easily transmit documents to a secure server or cloud. Thus, both firms had managed to achieve different objectives while not operating in the same market. The mobile printing solution was the first contribution to support P&G's "500 Million Minutes Return" program, reducing the time employees spend on printing and output problems. For the success of the partnership, P&G has made it a priority to assign adequate human resources. In fact, it was necessary to bring together people with specific experience and who knew the company, its activities, and its criticalities well.

Type II: Inbound Open Innovation and Experimental learning

In 2016 L'Oréal, a well-known brand in the beauty & cosmetics sector, decided to explore new sectors; to achieve its goal, L'Oréal knew it needed a partner completely different from its current business. Thus, bearing in mind "Makeup Genius" success, on May 12th 2016 L'Oréal announced a strategic partnership with the Founders Factory, a leading global multi-sector digital accelerator and incubator based in London. As such, L'Oréal became the Founders Factory's exclusive partner for investments in beauty tech startups worldwide. This allowed L'Oréal to deeply connect itself to a global ecosystem of world-class startups and entrepreneurs operating in the field of beauty, in line with L'Oréal's CEO Jean-Paul Agon vision of the transformative power of digital for beauty.

By supporting startups through the Founders Factory digital accelerator and incubator, the French giant applying an inbound - Open Innovation . Although almost everyone can completely agree that L'Oréal is "importing" knowledge, someone can argue that a coupled Open Innovation can be taking place in this partnership.

This alliance L'Oréal is not just sourcing and acquiring expertise from outside the organization. The corporation is providing a significant contribution to its partners: a history of scientific knowledge in the beauty industry. In the words of Brent Hoberman, Co-Founder and Executive Chairman of the Founders Factory: "Marrying our expertise in digital with L'Oréal's brands, scientific research, and audience reach offers a compelling opportunity to build and scale the next generation of beauty startups".

Through this strategic alliance, both L'Oréal and the Founders Factory will provide and receive a significant contribution to the development of incubated companies, achieving benefits in many different ways. One of the main benefits the Founders Factory has received from L'Oréal through this partnership is strategic support. This means that the digital accelerator and incubator receive help to scale their products through L'Oréal's distribution channel, enjoy a low-risk testing partner and have access to deep expertise and market insights concerning the beauty industry. Concerning this aspect, Lubomira Rochet states that "In this 'test&learn' approach, we are supporting the development and growth of promising young entrepreneurs by sharing our expertise and network, and in the meantime we invite them to bring new ideas to the digital projects of our brands. Open Innovation is a win-win strategy that fosters disruptive thinking and pushes forward our digital leadership in beauty" (Galang, 2017).

Type III: Outbound Open Innovation and Experiential learning

In 2014, Huawei was looking for ways to improve its smartphone cameras, and Leica had been looking to branch out into the mobile space. Through a series of talks, Huawei and Leica decided there was a match and began working on. Thus, in February 2016, as communicated in the website of Leica, "Huawei Consumer Business Group (BG) and Leica Camera AG are delighted to announce the start of a strategic partnership, a co-operation with shared premium ambitions and spirit, which will see both technology and photography brands combining their shared ethos in a long-term commitment to the art of craftsmanship, meticulous engineering and the spirit of winning collaboration, to create a powerhouse in the reinvention of smartphone photography". In this announcement are synthesized all topics of the new strategic alliance: combining innovation and design, uncompromising quality for customers, and unlocking the growth potential of both brands.

It is a perfect example of outbound Open Innovation : LEICA technology allowed Huawei to leap forward in the smartphone sector, especially in the top of the range. Leica & Huawei opened a joined R&D center, where they have more teams working in the areas of R&D and innovation than before, according to both companies' representatives. For the collaboration Leica and Huawei have opened a joint research and development center, where they have combined the different skills of their respective areas of research and development and innovation. In this way, one partner learns from the other partner about a completely new but at the same time complementary sector. In fact, although they are different sectors, one firm could support the other to strengthen their business. More concretely, while LEICA made available its teams of experts in the field of optical cameras and zoom, Huawei shared its experiences in the field of mobile telephony. Thus, the advantages were twofold. In particular, LEICA pushed an "old brand" to the new generations. With the partnership, the Leica brand, already known to older people, can be brought closer to the smarter and younger generations. On the other hand, Huawei improves its technology. Indeed, the implementation of the new technology works with the new artificial intelligence (AI) which is now playing a more important role: the images are looked at by a "mathematical equation", which helps the phone understand what that image actually is. With more people using smartphones as their primary camera, the improvements to the processor will make the smartphone camera smarter.

Type IV: Outbound Open Innovation and Experimental Learning

BMW and IBM announced (2017) that both companies are jointly developing a cloud computing project that could help up to 8.5 million drivers diagnose and repair problems, save on auto insurance, and benefit from other third-party services. The BMW CarData network will integrate with IBM Bluemix platform, where it will have access to Watson Internet of Things capacity. Drivers using the BMW ConnectedDrive app will be able to access services as data is collected. The partnership was very stimulating but high-risk at the same time because neither of the two giants had entered that business. This outbound Open Innovation alliance demonstrates that IBM faces new challenges and reacts

with a flexible experiment-based strategy. Indeed, in addition to its strong focus on integrating the knowledge and ideas of customers, suppliers and partners early in its innovation process, IBM has created an excellent patent strategy.

Analyzing the IBM case it becomes clear that IBM has decoupled the locus of innovation file (in terms of applying the idea and transforming it into innovation) with the locus of knowledge creation (invention or research) and the locus of commercialization (product development or exploitation of innovation). In this alliance, the experiential process is very important because the planning process was sophisticated. Indeed, this strategy allows commercialization through active know-how to transfer projects and license those patents that cannot be efficiently implemented internally or that do not fit the innovation strategy (exploitation of knowledge).

Research limits. *Several limitations are taken into our study. First, the generalizability of our findings can be enriched by conducting an in-depth analysis of some of the four alliance cases we analyzed. Second, we focused on inbound and outbound Open Innovation . We are aware that sometimes coupled innovation could take place in alliances. Thus, we invite scholars to examine whether experiential and experimental learning differ when both inbound and outbound Open Innovation characterize the alliance. Lastly, future studies might unveil the impact of experiential and experimental learning on product innovation performance.*

Practical implications. *This study also offers interesting implications for companies' managers. First, the findings of this study suggest that two learning approaches - i.e. experiential and experimental learning - may drive companies to learn from alliance partners. Second, we found that these learning approaches may be reflected in different Open Innovation practices - i.e. firms open up their innovation processes by exploring and integrating external knowledge for technology development and technology exploitation (inbound Open Innovation) or by utilizing not only internal but also external paths of commercialization (outbound Open Innovation). Third, the results of this study propose best practices for companies that are willing to open up their innovation processes with alliance partners by bearing in mind the learning outcomes that may be exploited through the alliance.*

Originality of the study. *This study provides three theoretical contributions. First, academic literature investigating the link between Open Innovation and Organizational Learning is surprisingly scarce. Understanding such a link is crucial because many firms adopt Open Innovation strategies such as strategic alliances to successfully learn from others (Faems et al., 2005). In this paper, we propose a framework that links two types of Organizational Learning , namely experiential and experimental learning, and two well-known Open Innovation strategies (inbound and outbound). This, in turn, allows us to propose four different typologies of learning opportunities that could be pursued by alliance partners.*

Second, this paper contributes to Organizational Learning literature (Shahriari and Allameh, 2020) by highlighting that the two different learning methods (e.g. experiential and experimental) may be combined with two different Open Innovation approaches, facilitating the effectiveness of such methods. Third, this study contributes to the Open Innovation literature by showing how the different learning methods are chosen by the company according to the sector of origin of the company. In particular, in the case of distant sectors, companies prefer to approach the partnership in an experimental way; otherwise, in the case of complementary sectors, companies learn mainly by leveraging their own experience.

Key words*: open innovation; alliances; organizational learning*

References

ANDREVSKI G., FERRIER W.J. (2019), "Does it pay to compete aggressively? Contingent roles of internal and external resources", *Journal of Management*, vol. 45, n. 2, pp. 620-644.

ARGOTE L. (1999), "Organizational learning: creating, retaining, and transferring knowledge", Boston: Kluwer Academic.

BAKER T., MINER A.S., EESLEY D.T. (2003), "Improvising firms: bricolage, account giving and improvisational competencies in the founding process", *Research Policy*, vol. 32, n. 2, pp. 255-276.

BARKEMA H.G., SCHIJVEN M. (2008), "How do firms learn to make acquisitions? A review of past research and an agenda for the future", *Journal of Management*, vol. 34, n. 3, pp. 594-634.

CASPRINI E., PUCCI T., ZANNI L. (2014), "Business model shifts: a case study on firms that apply high technology to cultural goods", *Technology analysis & strategic management*, vol. 26, n. 2, pp.171-187.

CHENG C.C., HUIZINGH E.K. (2014), "When is open innovation beneficial? The role of strategic orientation", *Journal of product innovation management*, vol. 31, n. 6, pp. 1235-1253.

CHESBROUGH H.W. (2003), "*Open Innovation: the New Imperative for Creating and Profiting From Technology*", Harvard Business Review Press, Cambridge, MA.

CRESWELL JOHN W. (1998), "*Research design: Qualitative, quantitative, and mixed methods approaches*", London: SAGE

DAGNINO G.B., PICONE P.M., FERRIGNO G. (2020), "Temporary Competitive Advantage: A State-of-the-Art Literature Review and Research Directions", *International Journal of Management Reviews*. https://doi.org/10.1111/ijmr.12242

DELL'ERA C., DI MININ A., FERRIGNO G., FRATTINI F., LANDONI P., VERGANTI R. (2020), "Value capture in open innovation processes with radical circles: A qualitative analysis of firms' collaborations with Slow Food, Memphis, and Free Software Foundation", *Technological Forecasting and Social Change*, vol. 158, pp. 120128.

EDMONDSON A.C. (2003), "Speaking up in the operating room: How team leaders promote learning in interdisciplinary action teams", *Journal of Management Studies*, vol. 40, n. 6, pp. 1419-1452.

EISENHARDT K.M. (1989), "Building Theories from Case Study Research", *Academy of Management Review*, vol. 14, n. 4, pp. 532-550.

FAEMS D., VAN LOOY B., DEBACKERE K. (2005), "Interorganizational collaboration and innovation: Toward a portfolio approach", *Journal of product innovation management*, vol. 22, n. 3, pp. 238-250.

FERRIGNO G., CUCINO V. (2021), "Innovating and transforming during covid-19. Insights from italian firms", *R&D Management*.

FERRIGNO G., DAGNINO G.B., DI PAOLA N. (2021), "R&D alliance partner attributes and innovation performance: a fuzzy set qualitative comparative analysis", *Journal of Business & Industrial Marketing*. vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/JBIM-07-2020-0314.

FRENZ M., IETTO-GILLIES G. (2009), "The impact on innovation performance of different sources of knowledge: Evidence from the UK Community Innovation Survey", *Research Policy*, vol. 38, n. 7, pp. 1125-1135.

HAUNSCHILD P.R., MINER A.S. (1997), "Modes of interorganizational imitation: The effects of outcome salience and uncertainty", *Administrative Science Quarterly*, vol. 42, n. 3, pp. 472-500.

HUIZINGH E.K. (2011), "Open innovation: State of the art and future perspectives", *Technovation*, vol. 31, n. 1, pp.2-9.

JICK T.D. (1979), "Mixing qualitative and quantitative methods: Triangulation in action", *Administrative Science Quarterly*, vol. 24, pp. 602-11

LAURSEN K., SALTER A. (2006), "Open for innovation: the role of openness in explaining innovation performance among UK manufacturing firms", *Strategic management journal*, vol. 27, n. 2, pp. 131-150.

LEE T.W., MITCHELL T.R., SABLYNSKI C.J. (1999), "Qualitative Research in Organizational and Vocational Psychology, 1979-1999", *Journal of Vocational Behavior*, vol. 55, n. 2, pp. 161-187.

LEVINTHAL D.A., MARCH J.G. (1993), "The myopia of learning", *Strategic management journal*, vol. 14, n. S2, pp. 95-112.

MAMÉDIO D., ROCHA C., SZCZEPANIK D., KATO H. (2019), "Strategic alliances and dynamic capabilities: A systematic review", *Journal of Strategy and Management*, vol. 12, n. 1, pp. 83-102.

MOWERY D.C., OXLEY J.E., SILVERMAN B.S. (1996), "Strategic alliances and interfirm knowledge transfer", *Strategic management journal*, vol. 17, n. S2, pp. 77-91.

PISANO G.P. (1994), "Knowledge, integration, and the locus of learning: An empirical analysis of process development", *Strategic Management Journal*, vol. 15, pp. 85-100.

RUDDIN L.P. (2006), "You can generalize stupid! Social scientists, Bent Flyvbjerg, and case study methodology", *Qualitative inquiry*, vol. 12, n. 4, pp. 797-812.

SHAHRIARI M., ALLAMEH S.M. (2020), "Organizational culture and organizational learning: does high performance work systems mediate? ", *Journal of Workplace Learning*, vol. 32, n. 8, pp. 583-597.

WINTER S.G., SZULANSKI G. (2001), "Replication as strategy", *Organization Science*, vol. 12, n. 6, pp. 730-743.

YIN R.K. (2018), "*Case study research and applications*", 6th edition. Los Angeles: SAGE Publications Inc.

ZOLLO M., WINTER S.G. (2002), "Deliberate learning and the evolution of dynamic capabilities", *Organization Science*, vol. 13, n. 3, pp. 339-351.