

Organizational innovation: A literature review

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ABSTRACT: This article carries out an in-depth review of the literature on organizational innovation, focusing on the main approaches, definitions, its typologies, characteristics and some theories of organizational innovation. The main objective of this work is to improve understanding of organizational innovation and to develop effective strategies for stimulating such innovation and improving organizational performance. The results of this article provide an in-depth understanding of the definition, types, characteristics and theory of organizational innovation. However, as with any study, this literature review provides researchers with significant contributions, but may also present certain limitations. The sources selected may not include all relevant publications. To this end, this work encourages future researchers to fill the gaps identified and maintain understanding of this type of organizational innovation.

KEYWORDS: organizational innovation, innovation typologies, innovation characteristics, innovation theories.

1 INTRODUCTION

With globalization, rapid changes in economic reality, technological evolution and changing tastes and market supply and demand. Companies have to look quickly for new options to develop and diversify in relation to their competitors. And to succeed, innovation has become the key to economic growth and commercial success for any company.

Today, innovation appears to be a major challenge for companies. This type of organizational innovation is not just about technology, the approach to developing new products to bring ideas to market, the creation of new markets or customer needs. Rather, it encompasses improvements to a company's organization, its competitiveness and profitability.

In fact, for the company, it is all about discovering something new, seeking to differentiate itself while implementing well-documented projects to develop, grow and escape price pressure by offering consumers surprising experiences. Innovation is therefore a catalyst for organizational development. It is one of the main sources of competitive advantage.

In this article, we are interested in showing the place of organizational innovation in companies, hence the originality of the theme. We begin by presenting the theoretical approaches to the concept of "organizational innovation" and its various definitions. We will then look at the types of organizational innovation, namely product innovation and process innovation, and move on to two other types: technological innovation and administrative innovation. We will then discuss the characteristics of organizational innovation. Finally, we present some theories of organizational innovation.

2 THEORETICAL FRAMEWORK FOR ORGANIZATIONAL INNOVATION

2.1 MAIN APPROACHES TO ORGANIZATIONAL INNOVATION

Two main approaches to organizational innovation are highlighted in the work of Wolfe (1994) and subsequently Lam (2006).

The first approach uses the term "organizational innovation" to refer to the adoption by the organization of all types of innovation (technical and non-technical, products, services, processes). In its broadest sense, then, innovation is defined as "the generation and adoption of new ideas or behaviors related to the equipment, systems, processes, strategies, procedures, products or services of the adopting organization" (Aiken and Hage, 1971; Damanpour & al., 1989; Pierce and Delbecq, 1977; Zaltman & al. 1973). In the same approach, the unit of analysis is the firm (the organization), its characteristics more specifically structural characteristics such as: (size, age, type of structure...) which are checked to determine their impact on the firm's ability to innovate. Wolfe (1994) calls this point of view "organizational capacity for innovation".

Although this approach is a rich source of literature, it is also the subject of much criticism. Researchers criticize it as an ambiguous and even contradictory result, not least because the variable explained lacks precision, which may or may not contain different types of innovation (Downs and Mohr, 1976). In addition, this approach frequently uses the term "organizational innovation" (Damanpour, 1991) instead of "organizational innovation capacity". This approach is used as a specific object of inquiry, which confuses researchers about the concept of organizational innovation. This has led some authors to rename it "innovation management" (Birkinshaw & al. 2008) or "managerial innovation" (Damanpour and Aravind, 2012), while using different terms interchangeably depending on their research articles.

For the second approach, authors use the term "organizational innovation" in a more confined way to designate a specific type of innovation, which already exists in the classic type of innovation, and then becomes the "organizational innovation stricto sensu" unit of analysis. Whether based on Schumpeter's research (1934), it represents the basic framework of innovative thinking and distinguishes five types of innovation, including organizational innovation, or the most recently and widely used type (Edquist & al. 2001); Evan, 1966). To clarify and understand the concept of organizational innovation, we will discuss the various definitions in the following sections.

2.2 DEFINITIONS OF ORGANIZATIONAL INNOVATION

The terms used to define organizational innovation are interchangeable, due to the different criteria used by all the authors and writers in the literature. Indeed, several authors have presented their own ways of understanding this concept, generally inspired by their study interests and fields of origin.

Thus, the concept of non-technological process or organizational innovation has taken on many terms, including administrative innovation (Armbruster et al. 2008; Ayerbe, 2006; Ganter and Hecker, 2013), managerial innovation (Damanpour and Aravind, 2012) and innovation management (Birkinshaw et al. 2008). This polyvalence of terms results in a set of varied definitions, which can be disconcerting for researchers investing in this field.

In the following, we summarize the different definitions of organizational innovation based on changes in terminology in the literature:

Table 1. Definitions of organizational innovation based on change in terminology in the literature

Authors	Terms	Definitions
Schumpeter (1934)	Organisationnel innovation	« Innovation is creative destruction. It consists in abandoning and surpassing a traditional model and creates something new that is generally positive ».
Evan (1966)	Administrative innovation	« Implementation of a new idea relating to staff recruitment, resource allocation, task structure, authority or rewards ».
Knight (1967)	Organisationnel innovation	« Adopting a change that is new to an organization and its environment »
Williamson (1975)	Organisationnel innovation	« Refers to changes in organizational structures and procedures »
Kimberly (1981)	Managerial innovation	« Indicates any technique, product or program that deviates significantly from the state of the art in management and affects the nature, location, quality or quantity of information that can be used to make decisions »
Damanpour & Evan (1984)	Administrative innovation	« New administrative ideas stem from the organization's social system, understood as the relationships between people who interact to accomplish a specific task or objective »
Gosselin (1997)	Administrative innovation	« Defined as new procedures, administrative policies and organizational structures »

Edquist & al. (2001)	Organisationnel innovation	« A new way of organizing activities, such as production or R&D, which is linked to the coordination of human resources and aims to improve the organization's effectiveness and efficiency »
OCDE (2005)	Organisationnel innovation	« Implementation of a new organizational method in business practices, work organization and external relations »
Hamel (2006)	Innovation management	« Defined as a marked departure from traditional management principles, processes and practices, or a departure from customary organizational forms that significantly alters the way management work is performed »
Armbruster & al. (2008)	Organisationnel innovation	« Use of new organizational and management practices and concepts »
Birkinshaw & al. (2008)	Innovation management	« The creation and implementation of a management practice, process, structure or technique that is new in relation to the state of the art and that is intended to further the organization's objectives » this definition is also retained by Vaccaro and al. in (2012)
Damanpour & Aravind (2012)	Managerial innovation	« New knowledge approaches to doing management work and new processes that produce changes in the organization's strategy, structure, administrative procedures and systems »
Volberda & al. (2013)	Innovation management	« New management practices, processes, structures and techniques involve changes respectively in the daily activities of managers as part of their work in the organization in order to improve the effectiveness and efficiency of internal organizational processes »

Source: Developed by us, based on research by Damanpour and Aravind (2012)

2.3 TYPOLOGIES AND CHARACTERISTICS OF ORGANIZATIONAL INNOVATION

2.3.1 TYPOLOGIES OF ORGANIZATIONAL INNOVATION

There are several types of innovation but the best known are those which distinguish product innovation from process innovation on the one hand (Abernathy and Utterback, 1978), and on the other hand which distinguish technological innovation from administrative innovation. We start with product innovation and process innovation:

Product innovation includes new products and services introduced throughout the organization. This innovation has external concerns and is driven by the market. It was introduced to meet demand expectations.

For process innovation is defined as a new element introduced into production operations. It has an internal objective and aims to improve the effectiveness and efficiency of organizational processes (Abernathy and Utterback, 1978; Utterback, 1994). For process innovation, the focus is on "how" – "how is work performed in the organization?" -, while for product innovation the focus is on "what" – "which outcome meets which needs?". Organizational innovation belongs to the category of process innovation.

We move on to the definition of technological innovation and administrative innovation which comes from the research of Meeus and Edquist (2006):

On the one hand, technological innovation occurs in the technological or technical system of the organization and is directly linked to technology. This can be linked to products, services and processes. On the other hand, administrative innovation occurs in the social system of the organization. They involve recruitment, authority, rewards, and task structure or resource allocation. Therefore, organizational innovation will fall into the category of administrative or non-technological innovations.

So, we summarize, according to these typologies, that organizational innovation is part of administrative process innovation or non-technological process innovation. For this reason, the perspective defended in our study is to define organizational innovation as *"a non-technological innovation of processes which consists of an improvement in ways or ways of achieving, the development of new practices, organizational methods, tools, techniques, and relationships external aspects, new organizational and managerial structures for the company which aim to improve the company's performance"*.

We move on, in what follows, to our second objective that serves to clarify the particular characteristics of organizational innovation in relation to technological innovation. And also, to differentiate organizational innovation from related concepts of organizational change.

2.3.2 THE MAIN CHARACTERISTICS OF ORGANIZATIONAL INNOVATION

The importance of studying the main characteristics of organizational innovation in relation to technological innovation is twofold. Firstly, it enables us to discuss the relevance of transforming the approaches and models produced by research into technological innovation into organizational innovation. Secondly, it provides an opportunity to consider the possible consequences of these characteristics in the process of adopting this innovation at company level.

2.3.2.1 ORGANIZATIONAL AND TECHNOLOGICAL INNOVATION

According to the literature, we will present the attributes of innovation identified by Rogers (1995) and widely accepted in research, to build a discourse on the difference between organizational and technological innovation. We begin with the first attribute, which relates to the relative advantage of innovation. It is defined as the understanding of the benefits, economic and social significance of a new idea or practice, compared with the new idea or practice that can be replaced.

The second attribute concerns the impact of innovations on business performance. On the one hand, the impact of technological innovation on performance is more clearly measured, and is also seen as superior. On the one hand, the impact of technological innovation is more clearly measurable, and on the other, it is perceived as superior. This explains why revenues generated by new products can be measured and become a source of competitive advantage, whereas it is difficult to measure the effectiveness and efficiency of internal processes. Unlike technological innovation, organizational innovation is difficult to protect.

With regard to the third attribute "ease", which concerns the ease of testing or implementing the innovation process, process innovations, including organizational innovation, are seen as more systematic: their execution can only be achieved in combination with other elements of the organization, linked to other knowledge domains (Gopalakrishnan & al. 1998). They will involve more tools, machines and people. As a result, they will be more difficult to implement than product innovations, which are generally more autonomous (Damanpour and Aravind, 2012). The difficulty of implementing organizational innovation is also linked to the lack of expertise in this field. Indeed, companies rarely have mature and professional organization and managerial expertise, but do have engineers and/or scientists dedicated to the development of technological innovation (Birkinshaw & al. 2008).

According to Rogers (1995), the fourth attribute relates to the observability of innovation, defined as the degree of visibility of its achievements and results. Technological innovations (especially product innovations) are more observable than organizational innovations. This is because organizational innovations are linked to the way in which results are produced and delivered, and not to the results themselves, which are observable in the marketplace (Damanpour and Gopalakrishnan, 1998). And finally, the fifth attribute, presented by Rogers (1995), relates to the complexity of the innovation, and is defined as the degree of difficulty in understanding and using the innovation.

2.3.2.2 ORGANIZATIONAL INNOVATION AND ORGANIZATIONAL CHANGE

The concept of organizational innovation is closely related to the concept of organizational change, and at the same time presents typical characteristics. Although they are very close, it is paradoxical that research in these two areas tends to develop independently of each other without mutual reference (Poole and Van de Ven, 2004). The same authors define the concept of organizational change as "a difference in form, quality or state over time, in an organizational entity". The latter is determined by measuring the same entity at two or more points in time on a set of dimensions and then comparing the differences in those dimensions. Changes can take different forms: planned or unplanned, incremental or radical, recurring or unprecedented.

Based on what we have already seen in the four main characteristics of organizational innovation, the latter differs from organizational change on three characteristics which are:

The character of novelty which is considered as one of the main characteristics typical of organizational innovation in relation to organizational change, and which is based more on the differences observed between the two states (Van de Ven and Poole, 2004). Second character that differs from organizational change, relates to the intentional aspect of organizational innovation. This is a feature that the concept of organizational change does not necessarily share and may or may not be intentional. Finally, a central feature of organizational innovation that distinguishes it from technological innovation is the fact that it does not contain such technical elements. This is not the case for organizational change, as organizational change may incorporate technical aspects, such as information and communication technologies (Whittington & al. 1999).

We can conclude that organizational change is not necessarily caused by human choice. Organizations can make changes to a set of dimensions in the sense of whether they are necessary, whether they need to decide and whether they need to be

controlled. For example, external factors can be powerful triggers for organizational change that deny the role of participants and deliberate human intentions (Hage, 1999; Poole, 2004).

3 THEORIES OF ORGANIZATIONAL INNOVATION

The increase in research and theories on the concept of innovation in multiple disciplines was caused by the fueled enthusiasm for this phenomenon. This increase is characterized by the idea of novelty as a fundamental point at the center of their appreciation, but under different concepts and perspectives, concerning their impact on the industry, performance, growth and survival of the company (Gopalakrishnan and Damanpour, 1998).

In this article, we will mobilize two major theories that we consider complementary and interrelated to explain the phenomenon of organizational innovation; resource and skills theory and organizational learning theory.

3.1 THEORIES OF RESOURCES AND SKILLS

An approach based on resources and competencies focuses on the internal dimensions of a company to show how certain companies have managed to outperform their competitors (Dhanaraj and Beamish, 2003). Starting from the fact that companies in the same sector are heterogeneous in terms of resources, and that these cannot be fully transferred from one company to another (Knight, 2001), the approach argues that resource heterogeneity between companies tends to be self-sustaining, and sees the organization as a combination of tangible and intangible resources whose unique nature, acquisition and exploitation lead to its competitiveness and performance (Ramangalahy, 2001; Dhanaraj and Beamish, 2003). However, the resources that contribute to a company's competitive advantage are those that are strategic, rare, difficult to imitate and replace, and offer superior value during development (Knight, 2001; Barney, 1991).

This theory is not only interested in the mastery of resources in a unique way by the company to explain its competitive advantage, but is mainly interested in its use of these resources, which alone cannot explain the internal potential of the company's activity (Pantin, 2006). As such, this approach by skills and dynamic capabilities approach pays full attention to the ability of companies to organize their resources and skills in an original way allowing them to generate an advantage over their competitors. Therefore, this approach assumes that the relationship between resources and performance is not direct, but determined by the mediating role of competitiveness, itself resulting from a company's unique ability to integrate resources (Ramangalahy, 2001). What shapes organizational innovation and enables companies to maintain their competitive advantage (Atamer & al. 2005) is this ability to deploy, combine and reallocate resources in new ways (Henneke, 2007). Thus, organizational innovation is considered in the resource and skill-based approach as the creative use of company resources by combining them to obtain new resources (Atamer & al. 2005).

It relies mainly on the company's experience and the structure of its existing resources, its ability to learn (incorporation of new knowledge in the resource directory), its learning capacity, its structure, and the qualities of the participants (managerial skills) who assemble it. Therefore, innovation depends primarily on how it combines and uses resources, not just the resources available to them (Penrose, 1959). Also, if companies can have multiple possibilities to combine their productive resources, it is at the basis of how they put these resources in place the organizational innovations they will achieve and which will allow them to institute sustainable practices and processes in their environment.

3.2 THEORIES OF ORGANIZATIONAL LEARNING

Organizational learning is a complex process that develops new knowledge that can influence and change a company's behaviour (Slater & Narver, 1995; cited by Škerlavaj & al. 2010). This process is defined as «a collective phenomenon of acquisition and development of knowledge which, more or less deeply, more or less durably, modifies the management of situations and the situations themselves» (Koenig, 2006).

Organizational learning promotes the emergence of new methods and procedures for learning and change (Yu Yuan Hung & al. 2011), encourages creativity, encourages new knowledge and ideas, and also improves a company's ability to absorb and apply them. This is why, currently in the knowledge economy, an organization's capacity for innovation is largely linked to the nature of its production process and the internal circulation of knowledge (Cohendet & al. 2003). Many authors have highlighted the positive link between organisational learning and the innovation process, where business behaviours and innovation pathways are seen as the processes by which new knowledge is generated, developed and implemented to solve problems.

Moreover, in organizational learning theory, organizational innovation is defined as the transformation of new knowledge or the reorganization of existing knowledge to form new or significantly improved practices (Chen, 2006).

In summary, the analysis of these two major theories highlights two vectors of organizational innovation, the resources available to companies and the ways in which they can be combined to generate new practices. The process of organizational innovation is considered endogenous and voluntary, based on the accumulation of resources, knowledge and experiences, combining or recombinant them into new knowledge and practices through learning. Thus, this dynamic character of these practices and knowledge characterizes a continuous process of organizational innovation that can be incremental or radical, depending on the depth of the changes made to pre-existing practices and knowledge. So, the organization is seen as an intelligent and open system that performs endogenous and voluntary adaptation through organizational innovation based on its repertoire of resources (resources, skills, knowledge and accumulated abilities) and the learning abilities she has acquired.

4 CONCLUSION

In conclusion, there are many explanations for organizational innovation, but two main approaches can be distinguished. On the one hand, organizational innovation is seen as an organizational means of supporting a company's innovative activities, mainly technological (products and processes). The organization here represents the unit of analysis and its characteristics (size, age, structure, etc.) for assessing its impact on innovation. Organizational innovation is defined as the adoption of new management practices, work procedures, techniques, forms or structures. In this definition, the unit of analysis is organizational innovation itself. The broadest types of innovation are divided into product and process innovation, and technological and administrative innovation.

Product innovation is defined as new products that meet the needs of the market. Therefore, this type of innovation has an external orientation. Process innovation is defined as new forms of organization and new methods of production. It has an internal orientation motivated by the search for efficiencies and effectiveness of organizational processes. Regarding the difference between technological innovation and administrative innovation, the first occurs within the technological systems of an organization. So, it is usually associated with technology. The second occurs within the social system of an organization and concerns recruitment, authority, rewards and work structures.

In summary, organizational innovation as "a non-technological process innovation which consists of an improvement in the ways or means of realization, the development of new practices, organizational methods, tools, techniques, external relations, new organizational and managerial structures for the company that aim to improve the company's performance."

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