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Understanding innovation based on company optics: interpretation mistakes on the types of innovation developed

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Abstract

The objective of this research is to identify whether products, processes, organizational and marketing practices, introduced or implemented by companies, can be considered to be innovations. Closed-ended questions concerning the type of innovation introduced or implemented were contrasted with the descriptions of innovations developed among a sample of 1770 companies in the manufacturing, service and commerce sector, as well as the mining and quarrying sector. Companies were classified into five groups according to the type of innovation that was introduced or implemented: (i) companies that understand the concept of innovation; (ii) companies that understand the concept of product innovation; (iii) companies that understand the concept of process innovation; (iv) companies that understand the process of organizational innovation, and (v) companies that understand the concept of marketing innovation. The results show that eight out of 10 companies understand what it means to innovate with companies in the manufacturing sector being the ones that best understand this concept. Likewise, the type of innovation that is best understood throughout all sectors is marketing innovation. At the same time, companies present three errors at the time of identifying their innovations: companies that think they have innovated but have not done so, companies that think they have not innovated but actually have, and companies that think they innovated in a specific type of innovation, but instead innovated in another.

Keywords: Types of innovation; Perception types; Mistakes

Introduction

In recent decades, innovation has become an inevitable term in business strategy, government agendas and academic thinking. Product innovation, process innovation, organizational and marketing innovations (OCDE, 2005); technological and non-technological innovations (Nelson, 1993; OCDE, 2005); radical and incremental innovations (Henderson & Clark, 1990); disruptive innovation (Christensen & Raynor, 2003), open innovation (Chesbrough, 2006; Huizingh, 2011); and social innovation (Mulgan, 2006; Mulgan, Tucker, Ali, & Sanders, 2007) are types of innovations used to describe the commercial exploitation of ideas (Edwards, Delbridge, & Munday, 2005) that turn into reproducible scale goods which, when sold or implemented intelligently, solve problems and generate economic benefit.

Innovation, as a concept, is still under construction. Its nature and context have evolved, yet its analysis and measurement are still at an early stage. Each country or region has developed its own methodologies and surveys to measure this phenomenon, that is, they have come up with different ways of understanding what innovation is and have created a diversity of ways of measuring it. The first innovation surveys were applied between the 80s and 90s. The results of these surveys guided the need to propose a coherent set of concepts and tools that, in turn, led to the publication of the first edition of the Oslo Manual in

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1992. In 1997 the second edition was published and in 2005 the third (OCDE, 2005). Since its first version until today there have been changes to the manual. The first edition talks about technological innovation in product and process (IPP) in the manufacturing sector, the second is extended to the service sector and in the third edition non-technological organizational and marketing innovation is included.

Similarly, what is understood as innovating or innovation, differs according to the function of the sector as well as the type of company or type of organization (Arundel, O'Brien, & Torugsa, 2013). There is a difference in the usage of the term "innovation" among academia, business and government, which tend to confuse the term to mean something new, a novelty, an invention, technology or improvement, among others. Whenever innovation surveys are conducted, it is assumed that respondents understand the characteristics of each category of innovation – product, process, organizational and marketing – even though the interpretation that it is "new or significantly improved" to a company remains subjective (Arundel et al., 2013). The differences in how companies interpret the concept of innovation can substantially affect comparability across countries (Arundel et al., 2013). That is, countries where businesspeople do not understand what it means to innovate or the different innovation characteristics, they can overestimate or underestimate the level of innovation they have achieved. They can also think that their innovations are more technological – product and process, when they have actually achieved organizational or marketing forms of innovation.

In 2011 and 2012 the OECD and several countries participating in the CIS Task Force conducted a cognitive test to determine how company managers understand the basics of innovation. Preliminary results showed that managers often see innovation as a requirement of a substantially creative effort for the company or for a substantial increase in sales (Arundel et al., 2013). Arundel et al. (2013), contrasted the open-ended question related to the description of innovation in contrast with the closed-ended question related to introduced innovation, from the innovation survey conducted with 1591 Tasmanian and Australian companies. The results showed that 19.2% of companies that reported as being innovative were really not. In the same survey, 35.3% of the companies that reported as being non-innovative, described actual innovation, that is to say, they developed innovation but were not able to identify it as such.

Within national surveys on innovation, it is common to assume that businesspeople understand each of the definitions of innovation – product, process, organizational and marketing – in the same manner (Arundel, Colecchia, & Wyckoff, 2006; Arundel et al., 2013). Nevertheless, in some cases, managers believe that if they do not develop I + D activities they are not innovating, which rules out new organizational or marketing initiatives within their concept of innovational practices. As opposed to that thought, businesspeople can sometimes consider innovation to be the single purchase of new machinery, which does the same as the one previously used. The same thing happens with the concept of "novelty," which is understood to mean as something that is new to a company, but is not for another. According to Arundel et al. (2013), there is a lack of research on how businesspeople interpret the concept of innovation. For Edwards et al. (2005) there is a relatively poor understanding of innovation among companies.

Having established this concept, the objective of this research is to identify whether products, processes, organizational and marketing practices that are introduced or implemented by companies truly represent innovation. The article contains a literature review identifying what is and not considered to be innovation presented in section one. Methodological procedures are presented in the second section followed by analysis and discussion in the third section. Finally, conclusions and future predictions are developed and presented in the fourth section.

Literature review

Innovation: what it is and what it is not

In order to identify what innovation is and what it is not, it is important to first define it. An innovation is the introduction of something new or of a significantly improved product (good or service), of a process, a new marketing method or a new organizational method, in the internal practices of a company, the organization of the workplace and external relationships (OCDE, 2005). According to this definition, companies can introduce or implement four types of innovation – product, process, organizational and marketing. Nonetheless, there are other types of innovations used to describe the same phenomena. For example, Schumpeter (1934) explains that there are innovations relating to new products, new production methods, new supply sources, new forms of exploiting new markets and new ways of organizing businesses.

Other authors argue that innovation is the transformation of knowledge for commercial value, that is, the development of new applications with the purpose of bringing novelty to the economic area (Gunday, Ulusoy, Kilic, & Alpkan, 2011). The first confusion precisely originates when definitions are mixed or people do not know all of the existent perspectives. Table 1 shows the relationship between the different types of innovation classified by the OCDE and four innovation perspectives.

According to the first perspective, innovation is presented as technological and non-technological (Nelson, 1993; Nelson & Rosemberg, 1993; OCDE, 2005). Technological innovation is referred to as the introduction of new and significantly improved products and processes, but based on intensive I + D applications (Hölzl & Janger, 2014). Non-technological innovation includes new organizational or marketing practices applied in a company for the first time, but with minimal or no I + D activity. In some cases, technological innovations are easier to identify given that they come from varied and consistent episodes that are sequentially and continually organized. These include: invention, dissemination and implementation (Edwards et al., 2005). For non-technological innovations there is a barrier in translating ideas into concepts and concept models from the very beginning. This barrier is caused due to the difficulty of establishing sequential processes for development.

In the second perspective, innovation is thought of as radical or incremental (Henderson & Clark, 1990). New products