


“Model for innovation management by companies based on corporate entrepreneurship”

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MODEL FOR INNOVATION MANAGEMENT BY COMPANIES BASED ON CORPORATE ENTREPRENEURSHIP

Abstract

This paper aims to propose a new model for the manner in which companies manage innovation. To that end, some of the most important research on the topic is analyzed and summarized through a review of its historical background in the indexed databases in WoS (Web of Science) and an analysis of frequently used terms over the past 15 years (2001–2016). The analysis is developed through bibliometric techniques using VOSviewer software, version 1.6.4, seeking to identify recurring and related concepts, such as corporate entrepreneurship, that can leverage company innovation management from the strategy, inherent factors related to human resources and the environment in which the organization operates. Henceforth, this paper focuses on a new model to manage innovation in companies through a conceptualization of innovation and corporate entrepreneurship, this model can be useful in countries with low levels of cooperation between stakeholders and scarce resources, countries on bias of development like Latin America, Africa and some Asian countries. It can be concluded that the company innovation should start with the definition of its strategy, taking into account factors like the human talent and the environment in which the organization is operating, through customized innovation processes that can be applied following some of the multiple models referred to in the literature, framed within the needs of different stakeholders, as indicators of organizational performance. Therefore, the actors which are part of the model are: employees, clients, state, suppliers, academics, community, shareholders and business.

Keywords

Innovation Management, Corporate entrepreneurship,
Bibliometric Techniques, Web of Science

JEL Classification

M13, M14, O14, O32, O35

INTRODUCTION

The current competitive environment, growing interest in innovation, and its presumed relationship with economic growth have fostered research on how companies manage innovation (Forrest, 1991), which is understood as a series of organizational activities aimed at obtaining a temporary or absolute competitive advantage (Rammer, 2006). Various authors have developed models for managing innovation, both at the corporate level and among entrepreneurs (Freeman & Engel, 2007) (see Table 1), but to date, no broad consensus on a comprehensive, generalizable model has been reached (Cooper, 1983; Godin, 2015; Hobday, 2005).

Accordingly, this paper undertakes a review of the historical background by analyzing the literature produced over the past 15 years of research on this topic, it then identifies recurring concepts such as corporate entrepreneurship that can leverage innovation management and notes theoretical and empirical needs, and, finally, it proposes a new model for managing innovation within companies.

Table 1. Models of innovation management

Source: the authors.

Authors	Proposal
Chin (1961)	Development, systemic, and change models
Clark (1968)	Organic growth, differentiation, diffusion, and combined process models
Schon (1967)	Rational and non-rational models
Havelock (1970)	Simple reflex and rational problem-solving models
Robertson (1971)	Innovation adoption, hierarchy of effects and AIDA models
J. Langrish, M. Gibbons, W. G. Evans, and F. R. Jevons (1972)	Discovery-push and demand-pull models
Saren (1984)	Departmental-stage, activities-stage, decision-stage, conversion process, and response models
Kline and Rosenberg (1986)	Linear and chain-linked models
Coombs, Saviotti, and Walsh (1987)	Linear, evolutionary, and epidemic models
Van de Ven (1989)	Group development, decision-making process, organizational planning, organizational change, and development and innovation processes models
Forrest (1991)	Stage-based, conversion, technology-push/market-pull, integrated, and decision-making models
Newby (1992)	Linear and interactive models
Rothwell (1992)	Technology-push, market-pull, linkages, integrated, strategic integration, and network models
C. Freeman (1996)	Linear and systematic models
Marinova and Phillimore (2003)	Black box, linear, interactive, systems, evolutionary, and innovative milieux models
Hargrave and Van de Ven (2006)	Institutional design, institutional adaptation, institutional dissemination, and collective action models
Caraza, Lundvall and Mendonza (2009)	Linear, chain-linked, multi-channel interactive learning models

1. NEW MODEL FOR INNOVATION MANAGEMENT BY COMPANIES

A review of the WOS (Web of Science) database found 10,827 indexed works over the past 15 years (2001–2016) on the topic of innovation management by firms, companies, organizations, and businesses. VOSviewer software version 1.6.4 was used to conduct a bibliometric analysis of this literature by author, title, source, and abstract, with mathematical and statistical methods being applied to books, articles, and other forms of communication to measure their quantity, circulation, and even some structural indicators measuring connections among authors, publications, and fields of study (Durieux & Gevenois, 2010; Romo Jiménez, Valencia-De-Lara, & Escobar-Sierra, 2017). This analysis produced the network shown in Figure 1 and

the compendium of frequently occurring terms shown in Table 2, including entrepreneurship, entrepreneurs, small and medium-sized enterprises (SMEs), environment, and performance. These findings suggest the need to integrate the study of innovation management by businesses with other concepts such as corporate entrepreneurship (CE) (Corbett, Covin, O'Connor, & Tucci, 2013; Hashimoto & Nassif, 2014).

To verify this relationship between studies of innovation management by companies and what we refer to as CE (J. Freeman & Engel, 2007; Guth & Ginsberg, 1990; Morris, Kuratko, & Covin, 2010), it is worth noting the pioneering role of authors such as Peterson and Berger (1971) and who introduced entrepreneurship into the business environment and sparked a discussion that initially focused on how to develop the concept within companies but was subsequently hailed as renewing (Burgelman, 1983, 1984; Kanter, 1985; Sathe, 1985) companies' innovative capabilities (Borch,

Source: the authors.

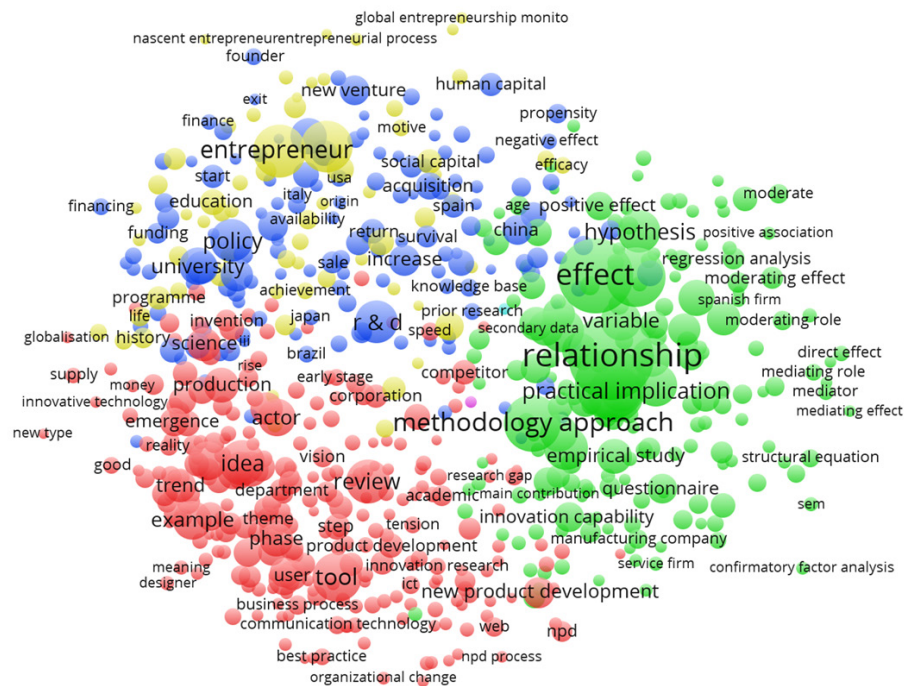


Figure 1. Knowledge map for the innovation management by companies

Huse, & Senneseth, 1999; Merrifield, 1993) and is currently widely considered a source of competitive advantages that are sustainable and profitable over the long term (Hornsby, Kuratko, Shepherd, & Bott, 2009; Kuratko, Hornsby, & Bishop, 2005).

Table 2. List of 10 most frequently occurring terms in studies of innovation management in business

Source: the authors.

Terms	Occurrences
Performance	16.057
Originality value	12.573
Entrepreneur	9.000
Entrepreneurship	8.424
SMEs	6.952
Idea	5.751
Innovativeness	4.790
Innovation performance	4.351
Medium-sized enterprise	4.088
Government	3.851

As a field of research, CE is the product of several constructs (Fang, 2013; Kuratko, 2010) that have been studied from different perspectives and

then synthesized by several authors such as Fang (2013) through a system composed of preconditions, processes and outcomes. The preconditions involve the environment, strategy, and organizational factors (Amaeshi, Nnodim, & Osuji, 2013; Kuratko, 2010; Postaliuk & Akhmetshina, 2014; Zahra, 1986); the processes are associated with an entrepreneurial outlook characterized as innovative, proactive, and risk-taking (Covin & Slevin, 1991; Morris, Kuratko, & Covin, 2010); and the outcomes are related to performance, taken as a measure of growth in sales, market share, profitability, performance, and customer satisfaction (Cao, Simsek, & Jansen, 2015; Escobar-Sierra & Vera-Acevedo, 2016; Postaliuk & Kwon, 2014).

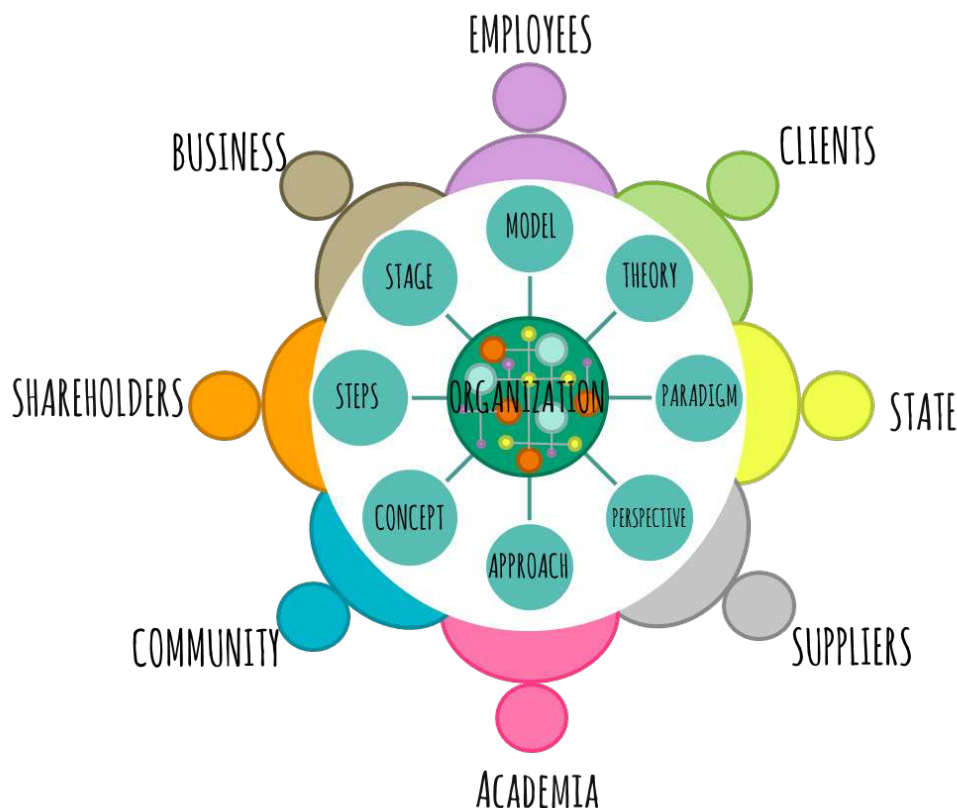
In this sense, this study aims to approach innovation management in companies from the perspective of CE, adopting elements that are unique to this system, as shown by the model presented below in Figure 2. In this proposal, the starting point for innovation management is the company itself, as shaped by its strategy (set of actions and commitments around organizational behavior and innovation to gain, at present or in the future, competitive advantages (Ireland, Kuratko, & Covin, 2003)), the characteristics of its human resources and the environment in which it operates (leadership

characteristics (Ling, Simsek, Lubatkin, & Veiga, 2008)), culture (Burgelman, 1984), capabilities and resources (Kuratko, Montagno, & Hornsby, 1990), human resources management practices (Hornsby et al., 2009), structure (Dess et al., 1999), technological capabilities (Martín-Rojas, Fernández-Pérez, & García-Sánchez, 2016) and company determinants (Álvarez-Herranz, Valencia-De-Lara, & Martínez-Ruiz, 2011), making it a fertile ground in which innovative processes are developed to their fullest extent, following one of the models for innovation management, which may also be termed theories, patterns, approaches, designs, paradigms, frameworks, representations, perspectives, concepts, hypotheses, figures, and diagrams referenced in the literature (Godin, 2015). Finally, it is important to note that both the organization and the model selected for innovation management must be framed within the needs of different stakeholders (Cao et al., 2015; Escobar-Sierra, 2015; J. Freeman & Engel, 2007) as indicators of organizational performance (Fang, 2013). Besides, as indicated by Hernández Perlines (2015), corporate social responsibility has a mediating effect between organizational perfor-

mance and entrepreneurial orientation, to where the proposed model in this study points.

In this sense, the company innovation corresponds to a customized processes that can be applied following some of the multiple innovation models referenced in the literature. This process should start with the definition of the organizational strategy and taking into account factors related with the human talent, the environment in which the enterprise is operating. This structure must be framed within the needs of different stakeholders as indicators of organizational performance. So, the actors which are part of the model are: Employees, clients, State, suppliers, academics, community, shareholders and business.

The proposed model addresses the theoretical and empirical suggestions of authors such as Luengo, Areitio, y Obeso (2013) who recognize the role that academics can play on innovation and organizational strategy to gain competitive advantage. Furthermore, Ballesteros-Sola (2014) proposes the inclusion of external clients as part



Source: the authors.

Figure 2. Model proposed for managing innovation by companies based on CE

of the business innovation strategy. Bilton (2014) links up the political and cultural agents as mediators leaders between both motivation and generation of ideas for innovation. Hoffmann, Bandeira-de-Mello, & Molina-Morales (2011) indicate the link between clusters and innovation as a scarcely explored field of study to be complemented in the empirical context and also to be adapted to the particular characteristics of contexts such as Colombia, as verified in domestic companies (Escobar-Sierra, 2015; Escobar-Sierra, Vera-Acevedo, & Correa-Espinal, 2013).

Finally, the model recognizes the importance of connecting innovation management by com-

panies and CE to other theoretical paradigms of organizational studies (Miller, 2011; Phan, Wright, Ucbasaran, & Tan, 2009; Wales, 2015); specifically, it aims to ground itself in little-explored theoretical frameworks such as institutional logic (Biniari, Simmons, Monsen, & Pizarro Moreno, 2015), network theory (Glaser, Fourne, & Elfring, 2015), the population ecology of organizations (Aldrich & Martinez, 2007), the dominant logic of businesses, and the subjectivist theory of entrepreneurship (Covin & Lumpkin, 2011), to consolidate the research field that has been developing in the last years on organizational innovation and corporate entrepreneurship.

DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

The starting point for the new model of innovation management by companies based on CE is the organization itself, its strategy, the characteristics of its human resources, and the environment in which it operates. In this context, the company develops innovative processes to the full extent that they may be implemented using one of the many models referenced in the literature, thus ensuring that they are framed within the needs of different stakeholders as indicators of organizational performance. To propose this new model, it was necessary to review its historical background (marked by myriad non-generalizable models) and to employ a bibliometric analytical technique to identify current concepts and related proposals that provide theoretical and empirical underpinnings for the development of the new model and to suggest further research that explores little-used theoretical paradigms such as institutional logic, network theory, the dominant logic of businesses, the subjectivist theory of entrepreneurship, and the population ecology of organizations.

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