

**SERVICE INNOVATION IN FIVE TOP INNOVATION JOURNALS: A RECENT
SYSTEMATIC REVIEW**

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1 Introduction

The service industry has relevant impact in economy and on business management. Some of its characteristics are discussed by literature of several fields of knowledge, as a) it is responsible for 70% of the Gross Domestic Product (GDP) in developed countries (Chase & Apte, 2007); b) it is an industry that should be explored by countries to restore its competitiveness in global context (Porter, 1993); c) it has difficulties to achieve efficiency and productivity (Grönroos & Ojasalo, 2004), and d) it is in continue development with contribution of others fields of knowledge (Kowalkowski, Gebauer, & Oliva, 2017). However, it seems that the theme “innovation in services” is a subject that still not attracting the attention of researchers and therefore, has not the same content of works published in comparison with the body of research about product and manufacturing innovation.

Perhaps, this lack of studies occurs because of the requirement of several resources and knowledge to implement novel and valuable solutions, or innovations, which are usually socially and spatially distributed (Ibert & Müller, 2015). Analyzing the industrial sectors, innovation development has been studied with focus in two themes: the first is manufacturing, with emphasis on the technology intensity of sectors, and the second is service, with the focus on the knowledge intensity of sectors (Forsman, 2011). This division is important because there is a traditional distinction between the innovation process in products and services (Love, Roper, & Bryson, 2011).

Service Innovation is defined as a service that shows some incremental or radical change in its delivery process or result/solution (Gadrey, Gallouj, & Weinstein, 1995; Hertog, 2000). The service businesses are constituted of divers types, such as Information Technology (IT) support services, design, architecture and engineering consultancies, advertising, marketing and others (Mina, Bascavusoglu-Moreau & Hughes, 2014). One part of the research on service innovation focuses on questions as nature and types of service innovations, while other part of the literature pay attention on how services innovate, and not only on how innovative services are (Chen, Wen, & Yang, 2014).

The literature on innovation economics, in general ignores the service sector. The concepts of innovation usually found are based on the study of R&D and innovation in manufacturing branches (Trigo & Vence, 2012). Research in service innovation, specifically in management, roses in the late 90's and on beginning of 2000's. Analyzing the works published during this period, some papers are very known as those made by Gadrey, Gallouj and Weinstein (1995), Gallouj and Savona (2009), Gallouj and Windrum (2008), Hertog (2000), Hertog, Aa and Jong (2010), Miles (2008) and others. But, it is interesting that the majority of these works were published in journals without focus on innovation. Thus, would the journals with focus in innovation like Research Policy, Technovation and R & D Management continue not paying attention to researches about service innovation?

Therefore, this work discusses what has happen in the field of service innovation and which themes in service innovation has been object of study and published on the most important journals in the innovation area. Several journals can give space to texts about service innovation, such as for example, journals about economy, management, services, operations, marketing and for sure, innovation too. But, what is the discussion in recent years about service innovation, especially in high quality journals with focus in innovation?

Through of the systematic literature review, this work investigates which are the themes, concepts and methods discussed in the last ten years in top journals of innovation. The paper is organized as follows. First, it describes the methodology used to make the systematic literature

review. Second, it presents the results and discusses the main findings. Finally, it concludes with the limitations and directions for future research.

2 Method

2.1 Research Scope

In order to conduct an analysis on the body of the main studies published about innovation, we have chosen the Systematic Review methodology as proposed by Tranfield, Denyer and Smart (2003). According to these authors proposal, the systematic review can be conducted within the process of three stages as bellow:

- Stage I: planning the review
- Stage II: conducting the review
- Stage III: reporting and dissemination

To make a comprehensive, unbiased search, that according to Tranfield *et al.* (2003) it is one of the fundamental differences between a traditional narrative review and a systematic review, we understood that is important to include the most relevant journals in the field and for so, during the Stage I, we have consulted the Association of Business Schools (ABS) Academic Journal Guide (2015) in the Innovation table. So, we assumed that the top journals normally publish top quality papers. Beyond this, creating on Lee, Seo and Siemsen (2017) and Crossan and Apaydin (2010) we built the “Recent Systematic Review” (We understand that our choice criteria were based on highly cited journals instead of highly cited papers, it has the advantage of including recent articles that had not the time to accumulate citations), then we choose the time gap to search articles (2009-2018).

The consult to the ABS Guide was undertaken in March 11, 2018 and we have selected the five journals with the best ratings in the Innovation table: Journal of Product Innovation Management, Research Policy, R and D Management, Technovation and Creativity and Innovation Management. Beside these search criteria, similar reviews were also our object of interest.

2.2 Operational procedures

As the proposal of this paper is to achieve a better understanding of what types of researches have been conducted on the Service Innovation area after the early stage of researches, between the 90’s and on beginning of the years 2000, we have defined as the time lapse of the study, the period of time from 2009 and 2018. The search was undertaken using the keywords “service(s)” and “innovation(s)” as key data source in the title of the article, directly in the journals within the defined time lapse.

After the first Stage (planning the review), we conducted the review (Stage II), searching on the journals according to the criteria defined. Then, results were revised through the analysis of the body of articles obtained with the objective of understand and categorize the papers found in terms of conceptual, empirics and managerial aspects. In the last part of the process, after reading and classifying the texts, a data analysis is conducted, and the results are synthesized and organized in order to contribute to the better understanding of the body of researches in the field of study (the flow chart resumes these procedures in Figure 1).

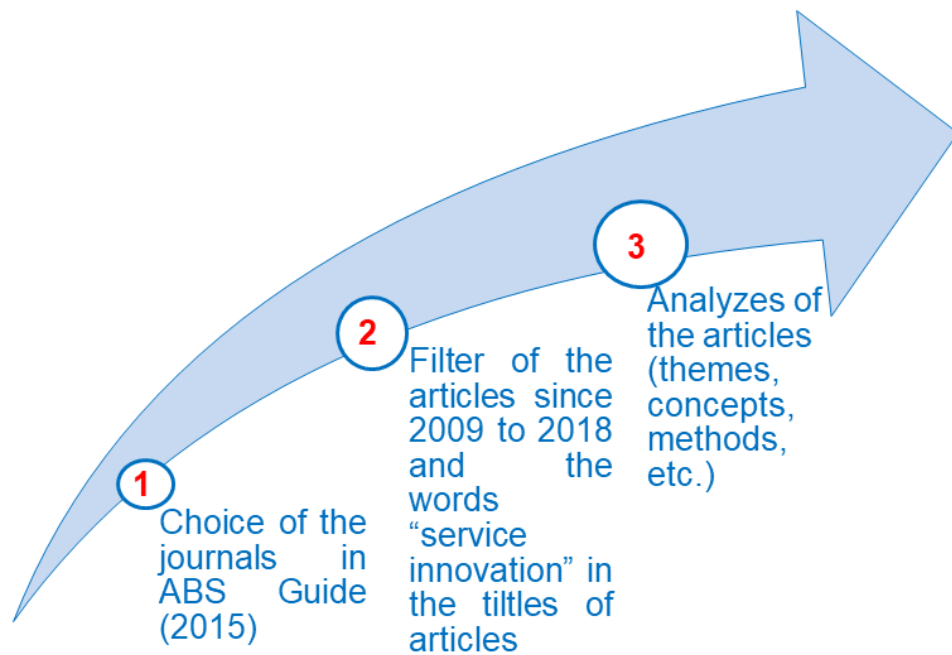


Figure 1 - Flow chart about procedures in systematic review of the literature

3 Results and discussion

After reading the full texts, the data obtained were organized into three different kind of analysis: (1) the scope of the chosen journals, (2) the methods utilized on researches, and (3) the themes and subthemes found on theoretical conceptualization and empirical studies.

3.1 Scope of the journals about service innovation

The articles identified in the search have totalized the number of 41 papers, distributed among the consulted journals as showed in Table 1.

Source Title	Number of Papers
<i>Research Policy</i>	10
<i>Journal of Product Innovation Management</i>	10
<i>Technovation</i>	9
<i>R &D Management</i>	7
<i>Creativity and Innovation Management</i>	5
Total Number of Papers	41

Table 1 – Five Top Innovation Journals in the ABS Guide (2015)

It is important to notice that our review considered articles published only in journals listed in the Innovation field of ABS Guide and therefore we can conclude that in all cases their main subject of interest is innovation. However, service innovation *per se*, is not the focal theme of any of these journals, but as an emergent subject, it has been treated under several theoretical and managerial lenses.

With a focus on product manufacturing, for instance, scholars has paid attention on service as the intangible part in offering values to customers, a concept in accordance to the theory of marketing myopia suggested by Levitt (1960). Also, product features are relatively

rigid, where making changes to them are relatively difficult, but service has the flexibility of adding values by making the products more desirable, meeting customer needs (Chan et al., 2015).

Increasing emphasis on servitization - the notion of the shift from value-in-exchange towards value-in-use - and the trend towards service-dominant logic (Bititci, 2012) as well service experience as a complement to the value offering are other examples.

When analyzing the articles published by each of these five recognized journals we aim to find what are most important for the editors when the main subject is specifically service innovation.

According to our analysis, the journal *Creativity and Innovation Management* has focused in primary questions and processes of the service innovation, mainly in *how* the ideas are built - service idea - (Bellini *et al.*, 2017; D'Ippolito & Timpano, 2016; Pedrosa, 2012). Thus, some concepts as idea evaluation, design driven, co-creation and proactive customer integration are applied in these works. It is interesting that, although having this focus, where would be more probably expected the use of qualitative methods (Patton, 1990), some articles utilized experiments to exam their proposals (Schuhmacher & Kuester, 2012; Duverger, 2012).

The *Journal of Production and Innovation Management* (JPIM) clearly have discussed the innovation process (Rothwell, 1994; Tushman, 1977; Gassmann, 2006) and the approach and method most commonly applied on the works was quantitative - survey – (Kang & Kang, 2014; Ettlie & Rosenthal, 2011). In general, several concepts are discussed in innovation process, like new service development (NSD), success factors, service-dominant (S-D) logic, external information acquisition, joint development, exploration, exploitation, and ambidexterity.

R & D Management journal is probably the most complete publication, treating on several themes and methods. Also, about the themes, it is perceived a broader approach: innovation process (D'Alvano & Hidalgo, 2011), innovation strategy (Martin-Rios & Pasamar, 2018), servitization (Bustinza et al., 2017) & service idea (Geum et al., 2015). Beyond the concepts already mentioned before when we analyzed JPIM, *R & D Management* shows also open innovation, Knowledge-Intensive Business Service (KIBS) and dynamic service innovation capabilities (DSIC). Both the research methods - quantitative (survey) and qualitative (case study) - were found in the same number.

The fourth journal analyzed, *Technovation* explores mainly the determinants of innovation. Thus, we have found in our service research a series of articles that analyze the innovation process - the main theme presented - but also the innovation capacity (Thanasopon, Papadopoulos, & Vidgen, 2016; Jaw, Lo, & Lin, 2010) and strategy as in Candi (2016). Most of the articles found in service innovation use the survey as a research methodology, but a certain variety of methodologies was perceived, and one of the works uses a mixed technique (Jaw, Lo, & Lin, 2010).

The last journal, *Research Policy*, has a broader approach like *R & D Management*, but its focus is in public services (Torugsa & Arundel, 2017), innovation process (Forsman, 2011) and business model (Love, Roper, & Bryson, 2011). Therefore, the concepts utilized by the authors are different than other journals treated before. *Research Policy* discusses concepts as risk aversion, hybrid organizations, institutional logics, technological trajectory, innovation typologies and dynamic network analysis. As well as *R & D*, the methods quantitative (survey) and qualitative (case study) are presented approximately in the same quantity.

3.2 Methods utilized by researchers

Several research methods can be applied in management research. But some fields have methods that are applied with more frequency. For example, in marketing, the authors utilized

experiments (Perdue & Summers, 1986), in operations management, survey (Rungtusanatham, Choi, Hollingworth, & Forza, 2003), in strategy management, the case study (Eisenhardt & Graebner, 2007). In innovation management, several of these methods are usually applied, but in our study, we perceived that the most applied method was survey. We found the technic of survey in almost all of the journals, unless in the case of Creativity and Innovation.

Besides, the journal Creativity and Innovation have a novelty in terms of methodology: it is the only journal analyzed that used experiment as a research method. On the other side, case study is present in all journals, with high frequency in Research Policy.

Among the articles selected on our search, in general, we could find qualitative and quantitative researches in almost the same quantity. These findings can be observed in Table 2. Specifically, in qualitative research the papers analyzed are predominantly case studies. This is understandable as the service innovation process, besides being an emergent field, is partially subjective and researchers require a profound analysis in order to understand its mechanisms, its complexity and how the organization implements it.

Although there is a strong use of survey when considering quantitative research, the use of experiments and secondary data search were also perceived. We have also found an interesting work in Technovation (Jaw, Lo, & Lin, 2010) using a mixed approach, combining techniques such as interviews, survey and content analysis.

Research Type	Number of Papers
<i>Qualitative</i>	14
Content Analysis	1
Case Study	11
Interviews	1
Depth Interviews, Direct Observations, Internal Document and Data Analysis	1
<i>Quantitative</i>	24
Survey	18
Experiment	2
Panel Date	2
Survey and Panel Date	1
Meta-Analysis	1
<i>Mixed</i>	2
Survey, Interviews and Content Analysis	1
In-Depth Interviews and Survey	1
<i>Others</i>	1
Editorial	1

Table 2 - Methods and research techniques

Finally, as mentioned before we also searched for similar reviews, and we have found only a book chapter - Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations (Greenhalgh, Macfarlane & Kyriakidou, 2004) - but none article published as a literature review.

3.3 Themes and subthemes researched

During the process of our systematic review we analyzed each paper according to its theme and the results of this categorization can be seen in Table 3. Innovation in services is not an easy matter. When analyzing the advances in the field, it seems that we are always dealing with simple questions or incremental improvements. Thus, to achieve a more advanced innovation in service, researchers understand that it is important to study the factors and mechanisms to the idea creation and development process. Beside this relevant theme, the innovation as capability has been explored in researches and also how it contributes to service design and the raise of competitiveness of the firm in the market.

Public organizations and public agencies can also take advantage of these studies, as they are services suppliers. As seen in Table 3, recently, among the most discussed themes, the topics that appear with more frequency are innovation processes, innovation capacity and innovation strategy. The study of business models is a topic that follows the tendency of recent works developed by Chesbrough (2011). Considering the nature of complexity of the innovation concept and overall its implementation, recent researches aim to understand its process.

General Theme	Specific Concept	Authors	Number of Papers
Service Innovation Process	Open Innovation and Cooperation	<i>Mina, Bascavusoglu-Moreau and Hughes (2014); Sala, Landoni and Verganti (2016); Trigo and Vence (2012); Mention (2014)</i>	22
	Innovation in Value Chain	<i>Love, Roper and Bryson (2011)</i>	
	Innovation Clusters	<i>Chang and Chen (2016)</i>	
	Servitization and Servicisation	<i>Santamaria, Nieto and Miles (2012)</i>	
	Data-Rich Environments	<i>Troilo, De Luca and Guenzi (2017)</i>	
	Dynamic Network Analysis	<i>Ibert and Müller (2015)</i>	
	External Knowledge Sourcing Modes	<i>Kang and Kang (2014)</i>	
	Co-creation	<i>Perks, Gruber, and Edvardsson (2012)</i>	
	Technology Acceptance Model (TAM)	<i>Evanschitzky, Iyer, Pillai, Kenning, and Schütte (2015)</i>	
	Locus of Innovation	<i>Blindenbach-Driessen and van den Ende (2014)</i>	
	Innovation Management Tools (IMT)	<i>D'Alvano and Hidalgo (2011)</i>	
	Diferences between Products and Services	<i>Ettlie and Rosenthal (2011)</i>	
	Technology Management	<i>Chang and Yen (2012)</i>	
	Intellectual Property	<i>Berg and Einspruch (2009)</i>	
	Service Innovation Ideas	<i>Schuhmacher and Kuester (2012); Duverger (2012); Pedrosa (2012); Geum, Noh</i>	

and Park (2015); Sorensen, Sundbo and Mattsson (2013)

Innovation Capacity	Determinants and Success Factors for Service Innovation	<i>Storey, Cankurtaran, Papastathopoulou, and Hultink (2016); Jaw, Lo and Lin (2010)</i>	6
	Dynamic Service Innovation Capabilities (DSICs)	<i>Janssen, Castaldi and Alexiev (2015)</i>	
	Innovation Development in Small Enterprises	<i>Forsman (2011)</i>	
	Openness Competence	<i>Thanasopon, Papadopoulos and Vidgen (2016)</i>	
	Innovation and Path Dependence	<i>Thrane, Blaabjerg and Moller (2010)</i>	
Innovation Strategy	Design-Driven Innovation (DDI)	<i>Bellini, Dell'Era, Frattini and Verganti (2017); Candi (2016)</i>	5
	Innovation Orientation	<i>Prajogo, McDermott and McDermott (2013)</i>	
	Strategic Adaptation to Economic Crisis	<i>Martin-Rios and Pasamar (2018)</i>	
	Non-technological Innovations	<i>D'Ippolito and Francesco Timpano (2016)</i>	
Service Business Model	Value Creation and Delivery	<i>Wooder and Baker (2012); Berger and Nakata (2013); Chen, Wen and Yang (2014)</i>	5
	Servitization	<i>Visnjic, Wiengarten and Neely (2016); Bustinza, Gomes, Vendrell-Herrero and Baines (2017)</i>	
Innovation in Public Services	Organizational Risk Aversion	<i>Torugsa and Arundel (2017)</i>	2
	Institutional Logic	<i>Vickers, Lyon, Sepulveda and McMullin (2017)</i>	
New Service Performance	Market Orientation	<i>Cheng and Krumwiede (2012)</i>	1

Table 3 - Articles by themes

On the multi-dimensional framework of organizational innovation, the conceptual consolidation proposed by Crossan & Apaydin (2010), the determinants of innovation are divided into three distinct meta-theoretical constructs: innovation leadership, managerial levers, and business processes, and into ten dimensions of innovation. These dimensions were identified and classified by the authors among “innovation as a process” and “innovation as an outcome” as can be seen in Figure 2.

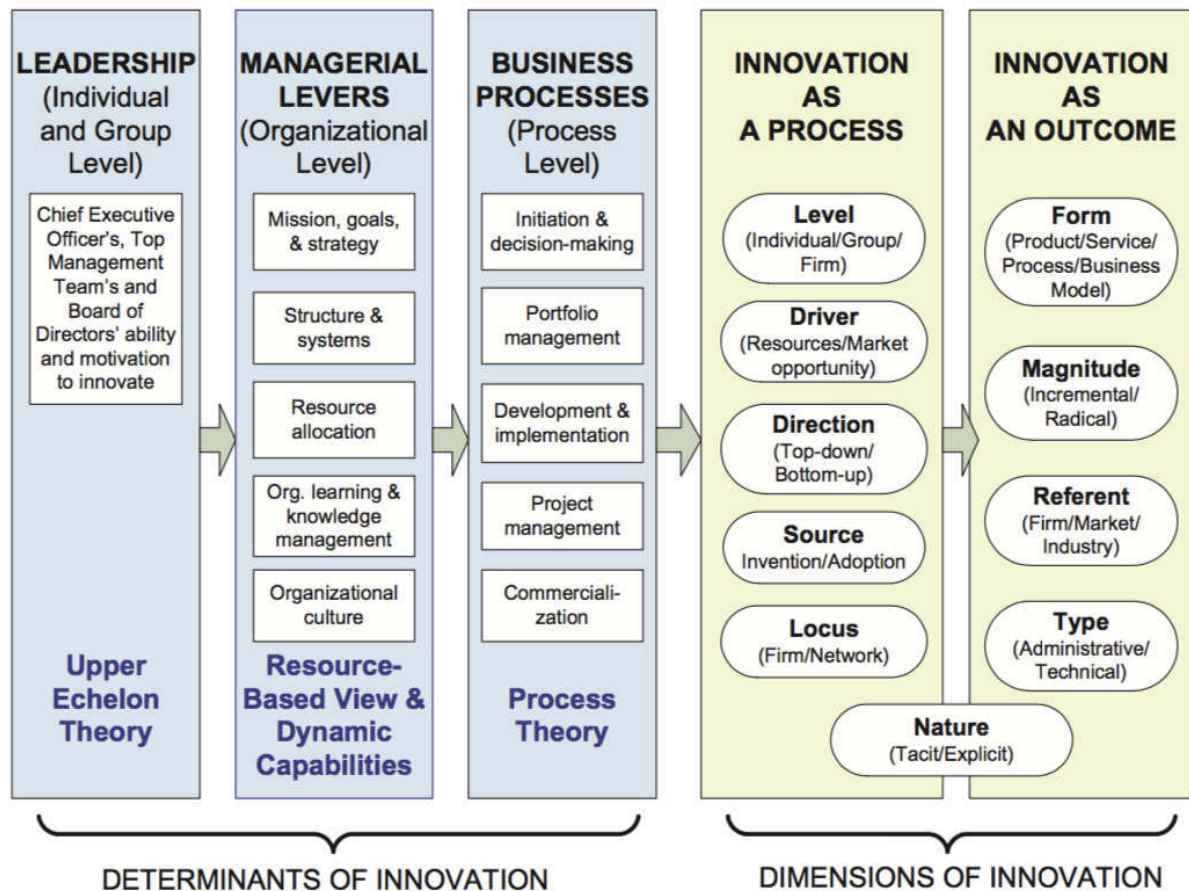


Figure 2 - Multi-dimensional framework of organizational innovation (Crossan and Apaydin, 2010)

Based on this work, the data obtained in our review were organized as can be seen on Table 3 and we could identify on the texts the following concepts as general themes: (1) Service Innovation Process, (2) Innovation Capacity, (3) Innovation Strategy, (4) Service Business Model, (5) Innovation in Public Services, and (6) New Service Performance.

3.3.1 Service Innovation Process

The idea of the service innovation process utilized here is a general theme that covers several specific concepts considered as determinants of innovation. The process level, as described by Crossan and Apaydin (2010) is composed by all the steps and procedures required to initiate, develop and commercialize an innovation. It's not the process as an outcome of innovation.

The sequence of the innovation process development is defined between activities that are in part represented on the present research, such as learning process through studies on external knowledge sourcing modes (Kang and Kang, 2014), idea creation or also known as ideation process (Schuhmacher and Kuester, 2012; Duverger, 2012; Pedrosa, 2012; Geum, Noh and Park, 2015; Sorensen, Sundbo and Mattsson, 2013), intellectual property (Berg and Einspruch, 2009), co-creation process (Perks, Gruber, and Edvardsson, 2012), open innovation and cooperation (Mina, Bascavusoglu-Moreau and Hughes, 2014; Sala, Landoni and Verganti, 2016; Trigo and Vence, 2012; Mention, 2014), among others.

3.3.2 Innovation Capacity

Appearing as the second level of importance for researchers, there are some papers that examine the service firm's capacity to innovate and that explore the *how* it occurs analyzing several aspects and conditions like openness competence in relation to innovation (Thanasopon, Papadopoulos, & Vidgen, 2016), innovation and path dependence (Thrane, Blaabjerg, & Moller, 2010), and Dynamic Service Innovation Capabilities (DSICs) (Janssen, Castaldi, & Alexiev, 2015). In addition, we have found two researches specifically on the determinants and success factors for service innovation (Storey, Cankurtaran, Papastathopoulou, & Hultink, 2016; Jaw, Lo, & Lin, 2010). We consider the innovation capacity as one of the determinants of innovation and a concept that is spread over the three constructs defined by Crossan & Apaydin (2010): innovation leadership, managerial levers, and business processes.

3.3.3 Innovation Strategy

Strategy is also one of the determinants of innovation, according to Crossan and Apaydin (2010), but its position of importance is specifically on the organizational level and is considered as a managerial lever for innovation. On this subject we have found a fruitful discussion about innovation orientation (Prajogo, McDermott, & McDermott, 2013), non-technological innovations (D'Ippolito & Timpano, 2016), Design-Driven Innovation (DDI) (Bellini, Dell'Era, Frattini, & Verganti, 2017; Candi, 2016) and strategic adaptation to economic crisis (Martin-Rios & Pasamar, 2018).

3.3.4 Service Business Model

Service business model is the framework that the organizations use to create their ways to achieve commercial goals, especially in business services, like healthcare, banks, air companies and hotels (Chen, Wen, & Yang, 2014). Some organizations, that traditionally performing in manufacturing, and are now changing their business models to services, are being subjected to a phenomenon named servitization (Visnjic, Wiengarten, & Neely, 2016). Another path, it is through systemic service innovation, that is a form to innovate in service involving and analyzing several actors and conditions, like networks, market orientation, regulations, and others. (Chen, Wen, & Yang, 2014). Accordingly, Chesbrough and Teece (1996, p. 67) "lean manufacturing is a systemic innovation because it requires interrelated changes in product design, supplier management, information technology, and so on".

3.3.5 Innovation in Public Services

Today, it is clear that innovation can help the public organizations to achieve better delivery services, quality and productivity (Torugsa & Arundel, 2017). Second the same authors, this specific innovation can be highly novel or small-scale changes. But to Vickers, Lyon, Sepulveda & McMullin (2017, p. 1755), the innovation in public services is "poorly understood, particularly where innovators must navigate between the norms, practices and logics of public, private and civil society sectors". Interesting, that second Battilana and Lee (2014), a way to win these challenges is to learn with hybrid organizations, that to them, they are activities, structures, processes and meanings by which organizations make sense of and combine multiple organizational forms.

3.3.6 New Service Performance

New service performance (NSP) is a multidimensional construct that reflects both operational effectiveness and marketplace competitiveness (Menor, Tatikonda, & Sampson, 2002). Carbonell, Rodríguez-Escudero and Pujari (2009), for example, investigated the effects of customer involvement on operational dimensions (i.e., innovation speed and technical quality) and market dimensions (i.e., competitive superiority and sales performance) of new service performance.

4 Conclusions

The goal of this work was building a recent systematic review of literature about service innovation in the main journals about innovation. According to the ABS Guide (2015), we chose 5 top journals and filter through words “service innovation” in the titles of articles 41 articles. After, we analyzed these articles and discussed the themes, concepts and methods that are examined and utilized currently.

We discovered that today, besides the concern in trying to differentiate innovation in services from product innovation, the themes with broader interest for innovation journals about service innovation are Service Innovation Process, Innovation Capacity, Innovation Strategy, Service Business Model, Innovation in Public Services and New Service Performance and the methods more applied are case study and survey.

The results revealed that the study of service innovation, an emergent area, is being structured as a field apart from being a complement of product innovation and that the definitions of characteristics, drivers and processes in services are still undergoing. That is, the determinants of innovation are the most studied by the authors, representing 80% of the total of themes in numbers of articles found in our research. We conclude that besides continuing the deep understanding of the Determinants of Innovation in service, there is a considerable opportunity for developing research focused on the Dimensions of Innovation with a result-oriented view. Beyond that, we present below some contributions and limitations of our study.

4.1 Contributions

Undertaking a review of the literature is an important part of any research project and how these findings and advances can benefit future researchers on this field. As a main contribution of this paper, after reading and classifying the texts, we provided a data analysis and concluded with our understanding of what are the themes that are being more relevant on Service Innovation along the last 10 years, how the field has been rising in terms of theoretical concepts and what are the contributions of research to the managerial level.

4.2 Limitations

We acknowledge the limitations of our literature review in the criteria of search. Though we have analyzed the top five journals in Innovation, according to the ABS Guide, we could also have searched on other adjacent fields, as services *per se*, marketing or operations. Another way of improving the accuracy of our research would be expanding the search for the *topic*, i. e., using the same keywords (“service(s)” and “innovation(s)”) as key data source in the title, keywords or abstract of the article.

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