Research opportunities in multi-channel services: a systematic review

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Abstract

The present study presents the results of a systematic review on multi-channel services, to synthesize the existing body of knowledge and propose avenues for further research. We present theories that are widely corroborated, as well as suggestions presented by scholars that represent research opportunities. Towards this aim, using a comprehensive review of 118 peer-reviewed articles, the results suggest that existing studies are mainly focused on the analysis of consumer interactions with multi-channel front-office services, whereas the management of back-office processes and control aspects remain largely undressed. These topics represent strategic challenges and opportunities for future research.

Keywords: Systematic review, Multi-channel services, Back-office processes

Introduction

Services are changing; contemporaneous service delivery is a complex process and, over the last years, the proliferation of technologies, strongly diffused by the wide use of Internet, has extraordinarily changed services. For instance, financial services have been pioneers and partial responsible for the adoption of new service delivery with the implementation of virtual services (Sousa and Amorim, 2009). The first self-service technologies in the financial sector emerged in the 1970s (Railton, 1985) when banks installed the first automated teller machines (ATMs) (Dabholkar, 1996), and remained changing during the past decade with the proliferation of mobile communications technologies (Hoehle *et al*., 2012). These new developments, complemented with the traditional way of competing, have increased the number of ways in which consumers are able to interact with service providers (Cortiñas *et al*., 2010; Chiou *et al*., 2012). Taking these facts in consideration, a systematic literature review can provide a solid contribution to scholars interested in modern service management literature, but also

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because it represents an interesting strategic challenge for future research.

Background

Services provided through complex and multiple channels delivery systems enable organizations to interact with consumers via face-to-face and/or face-screen interfaces (Froehle and Roth, 2004). The multi-channel service concept still did not reach a consensus regarding its definitions, however, there is a definition that has gathered some scholar approval; i.e. service composed of components (physic and/or virtual), delivered through two or more channels (Sousa and Voss, 2006). Moreover, channels (virtual or physical) are the interface that communicates with consumers, normally seen as the "eyes of the organization", providing services, capturing and transmitting consumers feedback to improve service performance (Reis and Melão, 2012).

Generally, multi-channel service delivery systems are known to be more convenient, efficient and fast (Stone *et al*., 2002; Neslin *et. al*., 2006). There are other reasons to implement a multi-channel strategy, in particular, they are difficult to reproduce by counterparts, require long-term commitments and significant investments (Rosenbloom, 2007). Apparently, the dominant view is that applications where pure Internet strategies (single-channel) can succeed are few and companies that succeed will be those that use the Internet and technology as a complement to their traditional way of competing (Gulati and Garino, 2000; Porter, 2001; Vishwanath and Mulvin, 2001; Sousa, 2002).

The implementation of a multi-channel strategy is hardly free of risks, though. The limited understanding of service specifications appears to cause difficulties in some service organizations and creates practical problems for operations managers in controlling service to assure a reasonable perceived quality (Kabadayi *et al*., 2007). Potential negative effects are increasing, as multi-channel services growth may intensify channel conflicts (Sharma and Mehrotra, 2006) or finish with a cannibalization of a channel towards another (Montoya-Weiss *et al*., 2003; Steinfield, 2004; Kollmann *et al*., 2012).

Methodology

According to Tranfield *et al.* (2003), a systematic review represents "rigorous scientific investigation of the literature". The literature review process tends to be complex, requires time and suffers from partial incompleteness or involuntary omissions (Mazzi, 2011). To reduce potential bias, we adopted a research methodology with two different approaches (see Table 1): first, a quantitative approach, based on a bibliometric analysis; second, a qualitative approach, centered on a content analysis of the literature (Coombes and Nicholson, 2013). Both techniques have advantages and disadvantages and, therefore, they must be seen as being "complementary" in gaining an overall understanding of a subject under investigation (Acedo and Casillas, 2005; Coombes and Nicholson, 2013). Adopting a systematic literature review is also important because multi-channel services is a relatively new area of study (Thorpe and Holt, 2008) and, as pointed out by Fink (2005), is an "explicit and reproducible method for identifying, evaluating and synthesizing the existent body of completed and recorded work produced by researchers". Overall, a systematic review will be a valuable tool to discover key theories, concepts, ideas and debates around multi-channel services (Hart, 1998).

Table 1 – Research methodology

Phase	Approach	Description
Phase 1	Quantitative approach	Analysis in line with the research purpose and preliminary characterization of the selected publications.
Phase 2	Qualitative approach	Relevant findings for operations and value outcomes for multi-channel services are discussed in this phase.

A truly comprehensive approach to produce a systematic literature review generally requires the use of more than one database. However, given that our priority was transparency and easy reproduction of results (Buchanan and Bryman, 2009), a single database was used – Scopus, one of the largest abstracts and citation databases of peer-reviewed literature. At the beginning of March 2014, a search using the Scopus database found 22,763 documents, using the keyword "multi-channel" in the title, abstract and keywords. This keyword was chosen because it generated a higher number of hits when compared to other alternatives, such as "multichannel" or "multiple channels" or "channel mix"; however, interestingly, there were not wide variations in results from word to word. To improve the review process, filters were applied to exclude irrelevant papers, save time and ensure the viable results (table 2).

Table 2 – Methodological approach

Search for articles in Scopus database		
Criteria	*Filters*	*Documents*
Keyword	"Multi-channel"	22,763
Restriction	Title, abstract, keywords	
Selection of articles		
Language	English	20,315
Subject area	Management, business, finances and economics	317
Source type	Journals	204
Document type	Articles	176
Ranking	SJR Indicator	126
Topic	Relevant articles	118

To avoid wrong interpretations, the selected documents had to be written in English language. Centered with our main subject, we considered articles in the areas of management, business, finances and economics.

Furthermore, the SCImago Journal & Country Rank (scimagojr.com) revealed to be a helpful filter tool; according to SJR rank we considered Q1 and Q2 quartiles, excluding the Q3 and Q4 quartiles. To further restrict the selection process, we used, exclusively, journal articles; additionally, seven articles were rejected, since they were related with themes such as forest policy or geography, which are out of scope of our investigation. From 22,763 documents, we rejected 22,645, remaining, at the end, 118 articles that will provide us truthful research opportunities in the management services area.

Quantitative results and analysis

Services, delivered through multiple channels, have easily caused discussion over the past years and it has become a major force in the marketing and business

disciplines. Since around the year 2000, the scientific publications on multi-channel services grew and reached a peak in the years of 2007, 2009 and 2011 (figure 1).
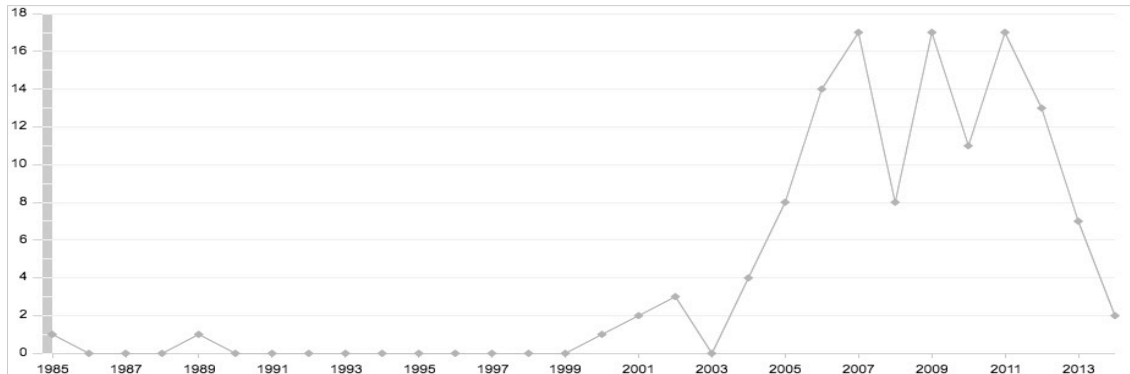

Figure 1 – Journal articles timeframe (Scopus.com)

A tangible motive for this peak is associated with the emergence of studies in multi-channel retailing, Internet purchases and, especially, in consumer behavior when experimenting multi-channel services (figure 2 and figure 3).
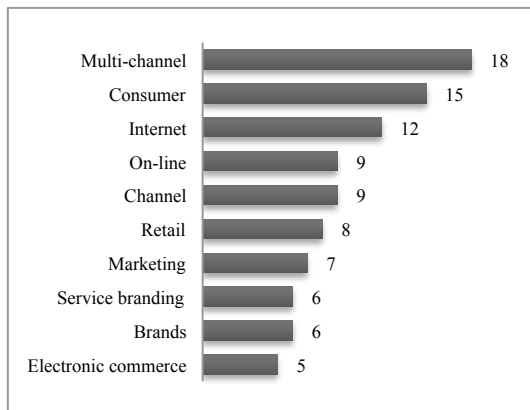

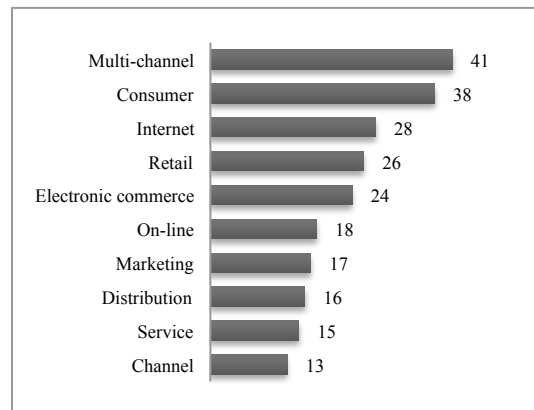*Figure 2 – Top 10 cited keywords (Years 2007, 2009 and 2011)*

Figure 3 – Top 10 cited keywords (118 articles)

Our analysis is consubstantiated in the previous figures: figure 2, represents the counting of the cited keywords from the abstracts, during the years of 2007, 2009 and 2011, marking the peaks in terms of published articles in the area; second, figure 3, represents a similar analysis but, in this case, concerning all the 118 articles, since the period 1989 until march 2014. Corroborating these statistics, some authors argued that, over the past decade, Internet has opened marketing opportunities (Rosenbloom, 2007; Yan, 2011) and that traditional channels are changing while multi-channel models have replaced the traditional channel structures (Koistinen e Jarvinen, 2009). Additionally, there have been changes in the way consumers interact with services (Berger, 2009) becoming, ultimately, multi-channel shoppers (Koistinen e Jarvinen, 2009). However, to our surprise, after 2012, the scientific studies have been losing strength, notwithstanding, we believe that it is still too early to give credible explanations for this cause.

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We observed, from the 118 articles, that 43 articles are dedicated to marketing, 18 are related to business and management and just 3 are about operations research (figure 3). The journals sub-categories were taken from SCImago Journal & Country Rank website.
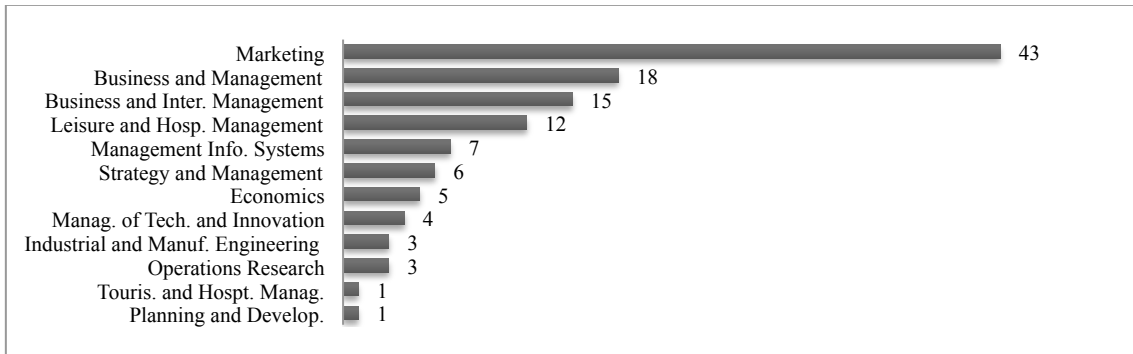

Figure 3 – Subject Category (number of articles)

These results are nonetheless impressive. The question is why multi-channel operations services have so few publications. Additionally, we made another exercise, by mixing citations with the timeframe (figure 4). We considered a citation as "the acknowledgement that one article receives from another" (Coombes and Nicholson, 2013:658) and, thus, it may be considered a useful tool for a quantitative analysis.
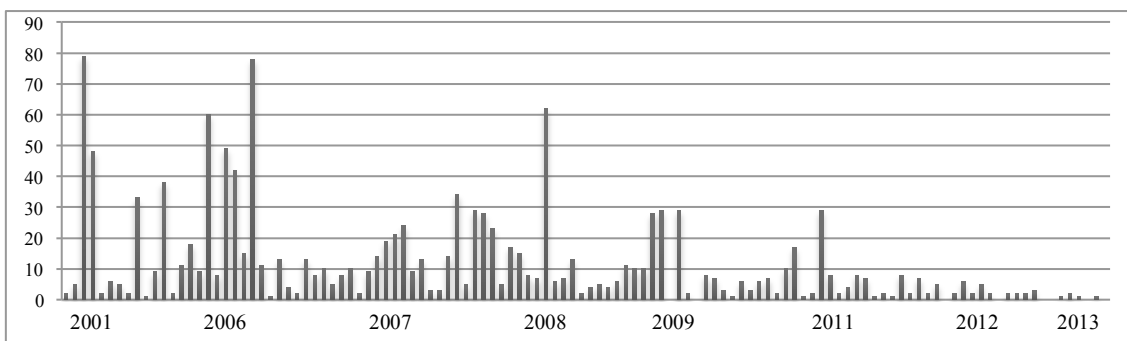

Figure 4 – Citations during time

Each bar of figure 4 represents the average number of citations per article, since the year 1989 until 2014. The results are interesting, since after 2006 the number of citations has decreased. But,

- is the quality of published articles decreasing over time or is the multi-channel services losing interest?

It is unlikely that the quality of published articles is decreasing; the appearance of articles with high quality, that started approximately since the mid-90´s, might be explained by the widespread of the Internet (Rosenbloom, 2004; Webb and Lambe, 2007) in association with other channels, which sparked the interest of researchers, not only because of the novelty of these new channels but because of the potential in terms of research. A logical explanation for the reduction of the number of citations is due to the fact that articles are becoming specialized in certain areas of knowledge, because of their complexity, which require in-depth knowledge in multidisciplinary fields. Additionally, it is normal that recent articles have not yet had time to be known and cited by other authors.

Concerning the most frequently used research approach, the articles published

during the period under analysis are empirical, with 75%, while 16% of the articles are theoretical and just 9% are case studies. The bars of figure 5 represent the percentages of the major research approaches used to study multi-channel services. The values were calculated on the basis of the 118 articles, the total represents 100%.
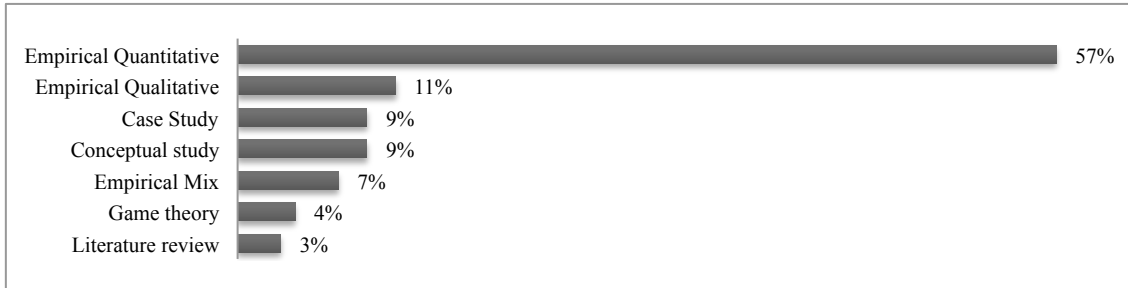

Figure 5 – Major research approaches used to study the multi-channel services

The most commonly used data collection technique is the survey, which is employed in 73% of the articles (empirical quantitative, empirical mix and case studies), a prevalence that is still in use today; just 11% of the articles are purely qualitative.
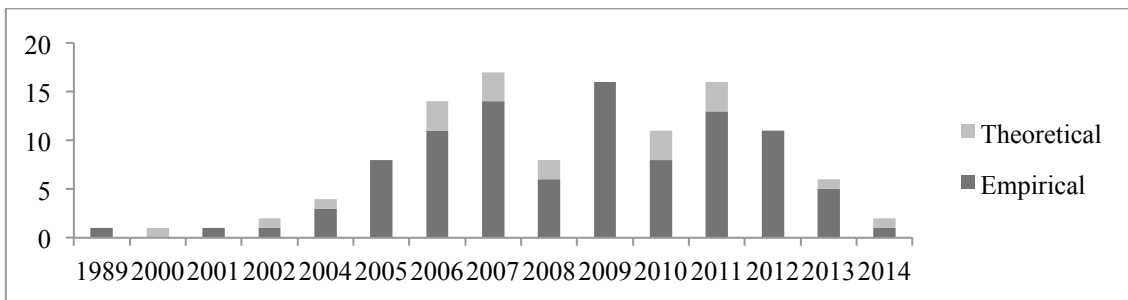

Figure 6 – Publication distribution (1989 – 2014)

Concomitantly, empirical studies have been predominant (figure 6), with an overwhelming majority of 84%, against 16% of articles that focus on theoretical studies.

Qualitative results and analysis

To improve our discussion, we present a table that summarizes the theoretical trend. Therefore, we examine different author perspectives by analysing the most relevant categories (figure 3), which are: Marketing with 43 articles, Business and International Management, with 18 articles and 15 articles, respectively. This categorization will allow us to define the most prominent points of view (table 3).

Table 3 – Qualitative analysis

Categories	Perspectives
Marketing (43 articles)	This category mainly focuses on consumers' behaviour actions (Noble *et al*. 2005) and gives emphasis to online channels (Pentina *et al*. 2009). The strategies used by investigators are aligned to understand multi-channel consumer preferences (Gensler *et al.*, 2007; Koistinen and Jarvinen, 2009) in order to improve consumer relationship with the service. Although the described perspective is the most common, some authors suggest more studies on channel structures and back-office processes (Coelho and Easingwood, 2008).
Business (18 articles)	Most of the studies contributed to website performance and are mainly dedicated to the multi-channel consumers evaluation and satisfaction

	across distribution channels in online contexts (Hsieh *et al.*, 2012). While this vision is predominant, Cassab and MacLaclan (2009) remarks that processes and design of multi-cannel strategies are being forgotten and virtually unexplored. This new perspective recommends that researches should be focused on organizational processes and systems (back-office), rather than the common front-office consumers' perspective (Metters and Walton, 2007).
International Management (15 articles)	Multi-channel services in the International Management category is associated to articles that are aligned with the website components (Jang and Burns, 2004) and the integration of new technologies, when associated to Internet (Funk, 2005).

As we can observe in table 3, the vast majority of articles are categorized in the marketing area. This occurs probably due to the ease of access to information by scholars; it is often easier to study front-office rather than back-office processes. Normally, this phenomenon takes place because organizations (e.g. banks, airline companies) protect their own know-how, in order to avoid reproductions by their rivals.

The qualitative approach reveals that scholars are mainly concerned with the prediction of online consumer behaviors (Noble *et al.* 2005) and enhancing the understanding of consumers' channel choices in order to improve online purchasing (Pentina *et al.* 2004; Carlson and Cass, 2011). The presented studies are commonly dedicated to consumer interactions with front-office service (web site interface), particularly on issues related with marketing activities. This means that there is abundance in the literature concerning the consumers' behavior in an online context (Hsieh *et al.*, 2012).

Thus, currently, there are few suggestions to guide further research, in particular, in the operations management area (table 4).

Table 4 –New approach to multi-channel services

Marketing, Business and Management	Operations Management
Focus on consumer behavior	Study of processes and systems
Studies are engaged to channel choices and online purchasing	Understanding channel structures
Improvement of front-office interfaces	Improvement of back-office processes

Cassab (2009) suggests that the deployment of technology in modern service channels implies that consumer contact with firms is likely to be wider than the online purchase. Although the scientific articles are still very attached to consumers' interactions (e.g. front-office interfaces), scholars do not exclude the possibility to investigate other directions, since there are areas poorly studied in the multi-channel literature. For instance, Coelho and Easingwood (2008:32) state that "it is needed more studies on channel structures" and "the design of multi-channel strategies has been virtually unexplored". Cassab and MacLachlan (2009:25) go further, stating that "research should be focused on organizational processes and systems, besides consumer perspectives", an argument also corroborated by Metters and Walton (2007): "focus on back-office processes, rather than the typical service typologies that focus on the front-office are needed". Such perceptions pave ways for new studies in multi-channel services. Overall, the results are consistent and show that existing studies are mainly focused on the analysis of consumer interactions with multi-channel front-office services, whereas the management of back-office processes and control aspects remain largely undressed. Table 5 resumes the previous paragraph.

Table 5 –Research opportunities

Current research	*New research opportunities*
Generically, current investigations target: • online shopping, according to consumers preferences and behavior; • the improvement of front-office interfaces.	The opportunities for future research lie on: • understanding the design of multi-channel services; • the improvement of multi-channel back-office; • understanding the control processes of multi-channel services.

Ultimately, it is still important to understand the multi-channel characteristics and consumer choices. However, we reached a maturity level that makes us confortable to argue that is time for a turning point as the understanding of the extent where multi-channel services can be optimized at a process level.

Conclusions

Two main findings emerge from this study. The first is that the operations management discipline has a limited engagement with the literature on multi-channel services, and, second, the focus of this literature is on the marketing area, with a considerable number of papers dedicated to the analysis of consumer interactions with front-office services. One possible conclusion is that back-office processes and control aspects remain largely unaddressed and this clearly represents a research opportunity. Despite the popularity of multi-channel services, the process and corresponding control has been surprisingly unexplored. Thus, investigating this research opportunity may provide useful knowledge for practitioners and would deepen the academic understanding.

Limitations

This paper is not free of limitations; the Scopus database is constantly being updated as new articles are being added. The choice of the search term "multi-channel" also dictated which publications were included, as different keywords may change the results; nevertheless, we believe that the analyzed articles provide a comprehensive overview of the theme. Documents such as conference papers were excluded, which could provide credible evidence; instead, we consider that the sample (scientific articles) is an adequate coverage of the field. Due to space limitations, this article does not list all references; they can be provided on request by the first author.

Future directions

In line with the main results we suggest for future research an empirical work in the background of multi-channel services delivery systems. For instance, it would be interesting to perform an investigation in the financial services. The financial services may have specific, unique characteristics and, consequently, the observed results may not transfer to other contexts, as some authors suggest (Coelho and Easingwood, 2008). However, as previously mentioned, financial services have been pioneers in the adoption of multi-channel services because they have a long history in this area, and, therefore, may become a fertile ground for investigators (Easingwood and Storeym 1996; Pikkarainen *et al.*, 2004; Cortiñas *et al.* 2010).

Narrowing the research field, we suggest for further research the study of back-office processes and their control or, in the same extent, the design of multi-channel services. These themes have been virtually unexplored (Coelho and Easingwood, 2008),

while the front-office has been widely investigated (Metters and Walton, 2007), mainly because of the ease of access to information or to data collection; concomitantly, there is a scope for other research fields (e.g. operations management). However, scholars who decide to follow these suggestions should be prepared to overcome some barriers, as the difficult access to information or restrictions to data collection might occur. This happens for obvious reasons as, for example, the protection of the know-how by organizations. With this timely contribution, we expect to instigate other investigators to provide contributions to operations management and to develop knowledge in the multi-channel service area.

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