

CONFERENCE PROCEEDINGS

(Extended abstracts)

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CENTER FOR BUSINESS & INDUSTRIAL MARKETING

SUSTAINABLE BUSINESS MODELS: INTEGRATING EMPLOYEES, CUSTOMERS AND TECHNOLOGY

18-20 JUNE 2018 MADRID (SPAIN)

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Edited by Martín-Peña, María L & Ruiz-Alba, José L.

info@cbim2018.org

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The aim of the CBIM International Conference is to gather academics, professionals and doctoral students from around the world to promote a rigorous, candid and friendly discussion of current and potential future topics in B2B marketing and sales. Because of our long relationship with the IMP Group we also discuss relationships and networks in business.

Prof. Wesley J. Johnston, Prof. Spiros Gounaris, Prof. Eric Boyd, Prof. Thomas Brashear, Prof. Brian P. Brown and Prof. Michael Kleinaltenkamp has served as keynote speakers.

Papers submitted to this Conference were revised by two reviewers and those accepted were invited to present.

María Luz Martín-Peña and José L. Ruiz-Alba.
Co-Chairs CBIM2018 International Conference

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Bridging business models and customer orientation: new approach development and application

Denis Klimanov, Olga Tretjak.

Purpose – The purpose of this study is to develop a new approach to business model (BM) analysis and improvement that combines the results of marketing and BM research and enables orienting BM actors towards the interests of the final consumer. The approach is applied on the example of the international ophthalmology company on the Russian market where its features and benefits are demonstrated.

Theoretical background – While there is a large and steadily growing amount of BM publications, the questions related to building a unified theoretical basis for BM research are still under discussion (Teece, 2010; Zott, Amit, Massa, 2011; DaSilva, Trkman, 2014; Foss, Saebi, 2017). At the same time most of the researchers agree on the domination of a value component within BM definition. Many authors come to a conclusion that a BM spans the boundaries of a single firm and includes a whole complex of interaction participants – suppliers, distribution channels, final consumers. This is because cooperation of various market participants enables to significantly increase jointly created value for the customer (Nenonen, Storbacka, 2010; Zott, Amit, Massa, 2011).

Regardless the very broad spectrum of studied questions and value chain/network-based nature of the BM, the importance of value acknowledgement by the customer is in fact

neglected by BM researchers. At the same time in case the value is not acknowledged, the BM loses its commercial value for the other participants as it stops bringing them profits. Therefore there is a growing need in incorporating the final consumer into the value chain, understanding its interests. This is possible in case of using the results of marketing research (Gumesson, 1999; Juttner, Christopher, Baker, 2007). To close this gap, the current paper integrates the results of BM and relationship marketing research in order to develop a new approach to BM analysis that allows defining ways of BM improvement.

Design/methodology/approach – The theoretical part of the study is based on extensive literature review in the areas of business models, marketing, strategic management, sociology and organizational networks theory. The review is based on most cited and contemporary articles found in Scopus and Ebsco databases.

The empirical part of the study is based on the quantitative and qualitative data collected by the author from various sources of secondary (distributor secondary sales reports, specialized market research and analytics, industry periodicals etc.) and primary (expert opinions, phone interviews of ophthalmologists) information. The methods of observation, interviews, method of questionnaire-based survey, case study method, and various methods of statistical data analysis are applied. For the purpose of studying the Russian ophthalmology market and reproduction of companies' interaction mechanism we used 3rd party industrial research data (IMS Health, Synovate Comcon). We also conducted a series of expert interviews of five middle and top management representatives of the manufacturing company. To better understand the interaction mechanism between specific key BM actors (manufacturing company and doctors) 217 telephone interviews were conducted in five largest cities of Russia. The practical impact

of the new approach application on BM performance was evaluated using IMS Health market data as well as manufacturing company internal sales data.

Findings – the major findings of the study can be summarized as follows:

The literature review demonstrated that the process of joint value creation for the customer by various BM participants dominates in understanding of BM notion. A comparison of existing approaches to BM analysis and improvement was conducted within the study and demonstrated that existing approaches are not focused on the interests of the final consumer and also are not considering the specifics of interaction, multidirectional interests and the opportunities of BM participants' activities coordination. This, in turn, limits the opportunities of increasing the value for the final consumer and also the revenues of BM participants. At the same time, studying customer interests is one of the key objectives of relationship marketing. However, it was proven that marketing and BM studies interaction is very limited.

Based on the results of the literature review we offered a conceptual basis for BM analysis that is based on value chains and interfirm relationships and that provides an understanding of market interaction participants (BM participants), specifics and the results of this interaction. Following this conceptual basis three sequential levels of BM analysis are offered in the study: structure of the value chain/interfirm network, mechanism of BM participants' interaction, results of their interaction. Highlighting these levels enables structuring and streamlining the process of BM analysis.

A new marketing-based approach to BM analysis is offered in the study that allows understanding the directions for BM improvement. The approach is based on the conceptual basis described above. The approach application facilitates the increase of jointly created customer value within the BM as well as revenues of BM participants and

represents a sequence of eight steps that explain previously highlighted three levels of BM analysis. In contrast to the existing approaches, this new approach allows orienting BM participants towards the interests of a final consumer, acknowledges varying status of BM participants, and proposes analyzing the ways of BM participants' coordination by the dominating actor to improve the BM performance.

The new approach is tested using the example of the Russian ophthalmology market in order to highlight the inconsistencies between the BM participants and to propose the ways of overcoming them. This enabled demonstrating its practical applicability for improving the BM in order to increase customer value and also the revenues of BM participants.

Within the analysis of interaction between various BM actors we have highlighted the key role of doctors in influencing the patients' opinion about the value of drugs. It was proven that the absence of doctors' loyalty towards the company products leads to inconsistencies within the BM. Following this, we developed and tested the regression model of Russian ophthalmologists' loyalty factors towards the manufacturing company products. This enabled offering the ways of alignment for manufacturing company and doctors' activities, which corresponds to the interests of the final consumers (patients) and other BM participants.

Originality/value and the key contributions of the study are related to the development of a practically validated new marketing-based approach to BM analysis that allows evaluating the current state of a BM and offering the directions for its improvement. The approach consists of the conceptual model and step-by-step BM analysis procedure that allows coordinating the activities of value chain participants according to the interests of

a final consumer. This coordination allows increasing the customer value that is jointly created by BM participants as well as increasing the revenues of BM participants.

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Internet-Enabled Business Models: A Net Neutrality Perspective

Harald Brege, Fredrik Lindeberg.

Introduction

Business models (BMs) is an area that has been intensely researched for many years and they are considered a useful tool for understanding how firms do business (Massa, Tucci & Afua, 2017; Brege, Stehn & Nord, 2014). An interesting area of research in BMs is digitalization, which can be seen as a process of business transformation that reshapes the BMs of firms to enable increased value-creation and business performance by increased integration of ICT in business processes (Cöster et al., 2017). This results in BMs that are increasingly reliant on the Internet, what we call *Internet-enabled BMs*; these are BMs that depend on digital communication and information transfer over the Internet for the functioning of all core business processes (cf. Wheeler, 2002).

Net neutrality (NN), the principle that Internet service providers (ISPs) cannot assign different priority to different users' traffic on the Internet (Wu, 2003), is thus a topic of great importance to Internet-enabled firms. Because their core business processes depend on full Internet connectivity, anything that can threaten that ability to connect systems pose a grave threat to the firms' ability to do business as intended. Since the recent ruling by the U.S. Federal Communications Commission to repeal previous federal NN rules, this potential threat has become reality. The result is that U.S. ISPs are no longer bound by regulation regarding how they prioritize users' Internet traffic, meaning U.S. Internet-enabled firms will likely face increased costs to continue using their current BMs. These additional costs will likely decrease the attractiveness of full digitalization for some firms, but, as e.g. Economidas and Hermalin (2012) show, depending on how the so-called two-sided market for Internet access develops, the overall results could be either positive or negative.

This paper seeks to investigate how NN influences digitalization of BMs, with particular focus on Internet-enabled firms, in order to explore what firm-level, strategic effects could be expected from a wider removal of NN rules. The main contributions will be an increased understanding of how NN and related Internet governance topics concretely affect modern digitalized firms, and support for policy decisions regarding NN. We will base our research on a synthezation of the literature on digitalization of BMs and NN, resulting in a meta-analysis of how firms would be affected by a wider repeal of NN.

Theoretical Framework

Business Models and Digitalization

The Linköping Business Model construct (Brege et al., 2014) describes a BM in terms of (1) a market position, which is used for measuring strategic, or external, effectiveness, (2) an operational platform, which is used for measuring operational, or internal, efficiency, and (3) the offering, which represents the connection between the internal and the external side of the BM. This simple, yet effective model enables analysis of a firm's

organization and strategy, without going too much into details (Brege et al., 2014). Digitalization represents supporting, or even basing, activities in one or more of these areas with ICT (Cöster et al., 2017). Depending on which parts are digitalized, and to what degree, a firm will be more or less dependent on Internet-access for the functioning of its business processes, creating potential vulnerabilities should that access be restricted.

Internet Governance and Net Neutrality

The Internet differs from other, superficially similar, digital networks in how it is governed and how the network infrastructure works. The Internet is governed through an explicit bottom-up process, where the *user* (i.e. those participating in the network, such as consumers, firms, states, or non-profits) can take part in setting standards and governance policies (Lindeberg, 2017). The other important aspect is the actual network, many other networks are controlled by one entity, who has the right to issue and control equipment on the network, e.g. local area networks at the offices of a firm, where the firm has control over all hardware. Governance of the Internet runs contrary to this concept; from its inception, the Internet explicitly promotes the users as being in control, rather than a central controlling agency or such (Lindeberg, 2017).

NN is a principle that influences how ISPs and other organizations that provide access to the Internet may prioritize different users' traffic through their networks. The main idea of NN is that the network infrastructure of the Internet should be user-agnostic, i.e. not give different access priority for different users (Wu, 2003). Thus, under NN, ISPs and others are not permitted to e.g. throttle certain users' bandwidth when they are using specific services, such as accessing Netflix or similar data-heavy consumer services.

Expected Results and Contributions

We expect increased costs and risks for heavily digitalized or *Internet-enabled* business models, which in turn would decrease innovation of digital services, and cause bigger problems for smaller actors without the resources necessary to negotiate the terms needed for their *Internet-enabled* BM to fulfill their strategic goals.

This research will contribute to the literature on digitalization and business models by extending on current knowledge about how the presence or lack of NN can affect heavily digitalized firms, and to the literature on NN by providing a firm-centric perspective on the benefits and drawbacks from NN.

Discussion

Most well-functioning Internet markets, i.e. markets with high competitiveness between ISPs, would prevent network operators from abusive behavior and, in essence, still have NN, only without the legal foundation. In situations where the total bandwidth available is relatively limited, such as cellular networks, operators would have greater ability to adapt pricing to gain a larger piece of the value created, for example on the traffic generated by wireless Internet-of-Things (IoT) systems. One example of this is Telsa, whose cars expect to send and receive very large amounts of data over the Internet, for diagnostic data upload as well as downloads of critical firmware, which means their products could be negatively affected by ISPs throttling Tesla Internet traffic.

For new firms and SMEs, the impact of NN is even larger; on an Internet market without NN it would likely be hard for a company like Netflix to start their business and compete with established players for streamed entertainment. Since several of these competitors are ISPs themselves and can thus access all their bandwidth at no extra cost, a new entrant would find it hard to be profitable at a comparable price point. Even if a startup had the financial resources available to enter into such agreements with large networks it would still need to have the capabilities to negotiate technically and legally relevant agreements with ISPs, which can further strain a small business. On a market with NN, the startup would not need to devote as much resources to these aspects, meaning they could treat the Internet more like a black box that serves as a market channel (cf. Wheeler 2002). In essence, without NN, ISPs would have a disproportionately large market shaping power over how firms can conduct business using the Internet, and thus exert large influence on heavily digitalized or Internet-enabled BMs.

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Balanced centricity and triads: strategies to reach ecosystem equilibrium in the arts sector

Maria José Quero, Montserrat Díaz-Méndez, Evert Gummesson.

Purpose – The purpose of this paper is to analyze whether triads structure can facilitate or inhibit the evolution into a service ecosystem. The triad structure and the institutions that dominate the triads will determine the evolution into ecosystem, remain as triad or die. “Balanced centricity” is considered a desirable institution that increases the possibility for transforming triads into ecosystems through marketing equilibrium.

Methodology– The authors apply a conceptual approach to develop and propose a framework for deepening understanding triads structures from the institution’s perspective (balanced centricity). Qualitative case study research was conducted using different methods of data generation including personal interviews and netnography analysis of the arts sector. Six case studies were developed, two for each triad structure: ATM and 2D (art galleries), Patreon and Vibuk (international artists platforms), Verkami and Lánzanos (crowdfunding platforms).

Findings –New business models start being a triad and it’s a strategic option to evolve into ecosystem. In this sense, authors argue for considering balanced centricity as an institution that enables the ecosystems to arise. From this perspective, balanced centricity can be considered a strategy that helps to balance and reach positive relationships among actors.

Research limitations/implications– The paper is a conceptual work that combines with an empirical approach. The empirical approach considers six success cases on the arts context. Other contexts, different crowd-funding and other countries would be useful to add new perspectives to the theory development.

Practical implications – Although sometimes an ecosystem arises in a natural way into markets, it's interesting to be able to design strategies that facilitate the process from the beginning of the business model design. In this sense, balanced centricity can help to configure institutions that result in positive relationships that facilitate the evolution into ecosystems.

Originality– The present paper re-defines the conceptualization of triad into “triad structure” and identifies categories depending on the way balanced centricity institution is adopted, facilitating or inhibiting the future evolution into ecosystem. Hitherto, previous papers have not put together these concepts that build on the triads and ecosystem theory to better understand and make easier the triads management and facilitating the evolution into ecosystems.

Key words (max 5): Triads, Balanced centricity, Service Dominant Logic, Value co-creation, ecosystems, systems of value co-creation.

Introduction

Triads

Literature offers very heterogeneous approaches to triads. The sociological approach considers triads as the “smallest unit of a network” (Wasserman and Faust, 1994). In Marketing Gummesson (2008) refers to the “classic triad” referring to the relationships among three players: the customer, the customer's present supplier and competing supplier. For the author's perspective, a triad is a “system of three actors in which each actor interacts directly or indirectly with the other actors”. From the author's perspective, triads involve, at minimum, two dyadic ties among three actors (Chandler and Vargo, 2011; Vedel et al, 2016). More recently, Siltaloppi and Vargo (2017) identify three forms

of triadic relationships: Brokerage, mediation and coalition. We will go in depth with these triads structures.

Balanced centrality

Balanced centrality is a new concept developed by Gummesson (2008a, p. 17) as an intention to manage the complex reality recognizing that “all the stakeholders have the right to satisfy their needs and wants”. On latter publications, Gummesson (2008b, p. 328) continues the evolution of the concept adding that “It means that long-term relationships and well-functioning markets should build on the needs and wants of many stakeholders: customers, employees, suppliers, intermediaries, the media, governments and more”.

From the SD logic perspective, balanced centrality can be considered an institution and the basis for developing institutional arrangements.

Methodology

When a research topic is underexplored as is the case of triads and balanced centrality, a case study is a good choice (Gummesson, 2014, 2017; Skalen and Edvardsson, 2016). The table 1 describes the six cases analysed on the empirical research (two for each triad category).

Table 1. Organizations on the research.

Triad Tipology	Organizations participating
Brokerage	Base Elements Urban (https://www.baseelements.net/?lang=es) Singularart (https://www.baseelements.net/?lang=es)

Mediation	Patreon (https://www.patreon.com/) Vibuk (https://www.vibuk.com/)
Coalition	Verkami (https://www.verkami.com/) Indiegogo (https://www.indiegogo.com/)

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Organizational commitment in Key Account Management as a relevant resource for a sustainable marketing business model

Bjoner Ivens, Barbara Niersbach, Catherine Pardo.

Keywords: KAM, organizational design, sustainability, multi-level commitment

Key Account Management (KAM) is a challenging vertical marketing concept in line with the company's Key Accounts (KAs) that comprises personal, organizational, functional, strategic and managerial components. It has become an essential concept for managing customers in business-to-business markets (Baguhl 2004; Cheverton 2005; Georges and Eggert 2003; Guenzi, Pardo, and Georges 2007; Ojasalo 2001). According to Ivens and Pardo (2007, p. 472), KAM is "a concept through which companies introduce the principle of relationship marketing into their customer policy and become closer to the customer." It aims at the most important customers in a firm's customer portfolio and offers special treatment for KA in the fields of marketing, sales and services administration (Barrett 1986). By definition a KA is managed in a specific way; that is in an idiosyncratic form of management including dedicated actors, activities and resources (Homburg, Workman, and Jensen 2002). Thus KAM is a marketing business model that certain firms use in order to manage inter-organizational relationships with professional customers.

To date, the organizational implementation dimension of KAM and its impact on the sustainability of this marketing business model has received very limited attention in the academic literature. There are few studies dealing with the organizational implementation of KAM (Kempeners and van der Hart 1999). Academic research focusing on the issues of sustainability in KAM remains rare. However, a firm's organizational design both

enables KA managers to perform their job. It sets boundary conditions for their work. We argue that it can be relevant for the sustainability of a KAM business model.

KAM provides two major challenges for firms. First it requires the management of a firm-external network (relationships with customers). Second it requires the management of a firm-internal network (relationships with various departments within the company) (Pardo, Ivens, and Wilson 2013). This study aims to understand the management of internal KAM activities and relationships, the importance of organizational commitment within the internal relationship network, and its impact on the sustainability of ongoing relationships between a supplier and a KA firm. More precisely, it examines the nature of the KA manager's role in the internal network and identifies different level of organizational commitment to be associated with the effective and sustainable cooperation in the internal network: within the KA team as well as towards the interfaces of a KA team, the KA director or the organization as a whole. It is investigated how multi-level commitment strengthen a KA team internally and externally and, therefore, can lead to a sustainable competitive advantage.

Our research approach is a case study which includes 35 in-depth interviews conducted with three KA teams and interfaces of a globally operating industrial company. The results reveal differences in all three KA teams. They suggest that multi-level commitment within the firm (e.g. commitment to KA team, director, related departments, and company) affect the cooperation within KA teams, between KA teams and between KA teams and interfaces. The results confirm that the KA manager's performance requires cooperative behaviors and efficient management; and that multi-level commitment is a key characteristic for effective internal cooperation. Hence multi-level

commitment in KAM can be considered an important characteristic for the set-up and maintenance of a sustainable business model in KAM.

Our study is organized as follows: First, we discuss how an organizational design in KAM can have an impact on the sustainability of the marketing business model. Then we elucidate the foci that KA managers can feel committed to. Next, we present case material that illustrates how diverse KA manager commitment to organizational entities may be. Several academic scales (Meyer and Allen 1991) as well as the input of the interviewees are used to analyze commitment in internal KAM relationships. The study also discusses possibilities on how to strengthen the different levels of commitment, and thus consolidate internal KAM activities and relationships. Finally, based on our empirical material, we develop theoretical and managerial contributions as well as avenues for future research.

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How to recover B2B relationships after a failed online reverse auction?

Roberto Mora Cortez, Wesley J. Johnston.

It is common agreement that profitable business relationships are relevant for the success of an industrial company (e.g., Palmatier et al., 2006). During the lifetime of a business-to-business (B2B) relationship its strength can vary and face the risk of dissolution (Tahtinen and Vaaland, 2006). Extant literature on relationship marketing focus on how to manage and sustain current buyer-seller interactions through time (Homburg et al., 2007) and to some lesser extent some researchers have studied the reasons why a relationship can come to an end (Tahtinen and Vaaland, 2006). However, there is a theoretical gap in the understanding of how to regain or recover broken relationships. In addition, this gap is also relevant for practitioners because “some companies also systematically address lost customers and try to revive these relationships” (Homburg et al., 2007, p. 461).

Market conditions (e.g., market turbulence) and particular events within the B2B relationship (e.g., customer complexity, supplier failure to deal with compromises) can create a latent hazard for the sustainability of the relationship. Prior to dissolution, every business relationship faces a “relationship gap” (see Nordin and Ravald, 2016), where the interests of the supplier and buyer are incompatible. A specific situation, that commonly tear apart ongoing commercial relationships, is the decision of a customer to implement an online reverse auction (ORA) for the business cycle or contract. ORAs since their appearance in the mid-1990s, were increasingly being used in industrial sourcing activities (Jap, 2002). Even though ORAs have been found to significantly reduce procurement costs by 5-15 percent (Shambara et al., 2017), there is no substantial evidence that this procedure can effectively reduce the customer’s total cost of ownership.

Therefore, despite the initial cost reduction, the adoption of ORAs has been irregular. While some companies have used them successfully and expanded their use, others have either encountered resistance or have shunned them due to the long-term damage that ORAs can have on interfirm relationships (Shambara et al., 2017, p. 1114). In this sense, to the best of our knowledge, only Jap (2007) has studied the impact of ORAs on buyer-seller relationships. Particularly, this research examines how the buyer's auction design (i.e., the number of bidders, the economic stakes, and price visibility) and the price dynamics over the course of the auction affect its relationship with suppliers (Jap, 2007, p. 146). However, there is no clear understanding about the dissolution process from a failed reverse auction and if there are revival possibilities for a specific B2B relationship. In brief, the purpose of this study is to address this research gap and to contribute a framework that answers: (1) What customer's and supplier's activities help to reestablish a relationship after a failed reverse auction? (2) How these activities are integrated to establish a process for B2B relationship recovery from ORAs?

The research design of this study is guided by the purpose of theory construction in the setting of developing a framework to “fix” broken relationships from a failed ORA, and to do so, a qualitative case study design is chosen. A case study is particularly useful when the research area is only partially understood, when new perspectives are sought and when the contextual understanding of the phenomenon is important (Komulainen, 2014, p. 242). Case studies can be utilized in the exploratory phase of a research topic to discover the relevant features, factors or issues that might apply in other similar situations (Myers, 2013, p. 75). Furthermore, a case study provides a unique means of developing theory by generating in-depth insights of an empirical phenomenon (Komulainen, 2014), where the focus of interest is not studied divorced from its context (Yin, 2015). Therefore, a case

study is an endeavor that makes it possible to grasp the conceptual richness of the phenomenon (Komulainen, 2014). The theoretical underpinnings supporting our research comes from relationship marketing (e.g., Palmatier et al., 2006) and organizational buying behavior streams (e.g., Johnston and Bonoma, 1981).

Our particular research context is based on an U.S. grinding balls supplier for the mining industry operating around the world. This firm is experiencing the phenomenon the under analysis with 2 customers in a specific market. We used the term “failed” because the supplier under analysis was eliminated from the next procurement period, but the customers had problems with the assigned suppliers after the ORA and needed to open their supply alternatives, where the focal supplier was attentive to the situation. The researchers have no control over the ongoing activities, which allows to gain real-time understanding of the informants and their work-life experiences. Also, with the objective to confront the two perspectives of a B2B relationship, we have involved the 2 customers in the situation as part of our research inquiry. We follow a semi-structured interview guide for each scenario (i.e., customer, supplier), covering core topics of the research agenda while having flexibility to explore and complement the emerging themes (Myers, 2013). We conducted 7 interviews in a first round with the supplier, 5 interviews in a second round with the supplier, and 6 interviews with the 2 customers. The average time spent per interview is 42 minutes. Finally, in this moment the authors are integrating the contextual information, reviewing the interview transcripts, and condensing the theoretical literature in order to proceed with the data analysis and posteriorly provide answers to the propose research questions. Preliminarily, the authors have identified certain activities and attitudes from both parties in the interaction, which support the possibility of reestablishing a long-term relationship after a failed ORA.

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Identification of Factors Affecting Purchasing Performance in Engineering, Procurement and Construction Companies (EPCs) using Fuzzy Analytical Hierarchy Process – Quality Function Deployment (FAHP – QFD)

Ranjan Chaudhuri, Gitesh Chavan.

Keywords: Fuzzy Analytical Hierarchy Processing (FAHP), Quality function deployment (QFD), Purchasing Performance, Engineering Procurement & Construction Companies, Buying Decision Context (BDC)

Abstract

In industrial markets, one of the major overhead is the purchasing spend, which on an average account for 40–70% of a firm's sales volume (depending upon the degree of vertical integration of the industry). This offers large scope for the creation of sustainable competitive advantages in industrial firms. Purchasing in business to business markets has received great attention for over the years. The strategic role of purchasing function is inter – woven with the integrative buyer-supplier relationship and developed the notion of strategic purchasing.

A review of contemporary academic literature on the models developed for purchasing performance reveals that various contributors have defined Purchasing Performance (PP) in different ways; especially in the context of manufacturing firms. However, extant literature available till date clearly reflects the scarceness of research on Purchasing Performance measurement in EPCs.

In this article, we demonstrate a unique way of evaluating PP of different types of EPC buying such as New Task, Straight Rebuy and Modified Rebuy for various industry verticals of EPC such as Oil & Gas, (O&G), Metals & Mining (M&M) and Construction. Quality function deployment (QFD) methodology has been known for its application in new Product Development, however recent academicians and researchers have successfully used it for performance measurement as well. This article have utilized Fuzzy Analytical Hierarchy Processing (FAHP) – Quality Function Deployment (QFD) approach to capture the inherent vagueness of PP factors.

The findings will help in developing a purchasing performance Matrix for EPC's which can be implemented to evaluate buyers' purchasing performance at an individual level as well as departmental level.

In comparison to manufacturing companies, EPCs function otherwise as far as management of operations are concerned. End customers employ EPCs for an effective management of large-scale, capital-intensive engineering projects. EPCs cater to different industry verticals under one roof and take complete ownership of engineering projects from design phase to engineering phase. Purchasing in EPC is optimized by dividing engineering project into complete assets, main components, and basic components. As the design of every project is unique, and most of the purchasing is a new task, EPC purchasing becomes all the more challenging. The present study attempts to bridge this existing literature gap by investigating the determinants of Purchasing Performance of EPCs.

This research attempts to address the following research objectives (RO):

RO1: To identify and study the determinants of Purchasing Performance of EPC's

RO2: To understand the interaction of the above factors and develop a conceptual framework of Purchasing Performance of EPC's.

RO3: To propose a conceptual framework for Purchasing Performance in EPCs.

RO4: To understand the dynamic interaction among Purchasing Performance factors across various Industry verticals of EPCs concerning:

- New Task Buying
- Straight Rebuy
- Modified Rebuy

This study is important as it is the first empirical research which has established a relationship by linking Internal Customer Needs (ICNs) ("WHATs") which constitutes of Product Related Factors (PRF) with Engineering Requirements (ERs) ("HOWs") which constitute of Buyer Related Factors (BRF) and Organization Related Factors (ORF). This research also includes three different of buying types, i.e., New Task, Straight Rebuy and Modified Rebuy. To gain additional insight into the behaviors of various EPC industry verticals for different types of buying, the researchers have investigated by selecting industry verticals like Oil and Gas, Metals & Mining and Construction. This research is unique as PP models for EPC firms have not been published nor validated empirically, nationally or internationally. Thus, this exploratory study will add to the body of existing knowledge by not only identifying the emerging factors which constitute to the construct of PP of EPCs but also by filling the gap between theory and practice concerning the evaluation of PP of EPCs.

This research attempts to answer some critical issues, particularly, how the PP evaluation technique varied as per Buying Decision Context (BDC), i.e. whether it is a New Task Buying, a Straight Rebuy or a Modified Rebuy. This BDC was studied with respect to Industry Verticals such as Oil & Gas, Metals & Mining, and Construction. The results showed significant pattern across various Industry Verticals. Based on the underlying theory that these relationships exist; this research can propose its usefulness and managerial implication not confining it just for job evaluation but also for helping EPCs assign the right individual for the right buying task. Thus, this research can be used for rating of Purchasing professionals in industries, which reflect their proficiency in optimization of purchasing dollar. In extant literature, Cost, Quality, Delivery and Flexibility were some of the common factors which were proposed in PP models of Manufacturing firms. However from the industry experts opinion and the results obtained, new emerging factors related to the Buyer, such as Buyer Personality, Buyer Knowledge, and Internal Environment factors such as Decision Making Unit (DMU), Company Policies, Strategy, Technology Decisions emerged as factors which has critical impact on the PP of EPC evaluation.

The major finding of this study is divided into two parts: theoretical development and practical implications. From a theoretical development point of view, this exploratory

research offers a comprehensive methodology for identifying the factors which affect the PP of EPCs.

The practical implication underlies the fundamental that companies lack understanding of powerful methodologies and practical tools to gather and analyze data, which can improve their value chain by refining and optimize their products and services. Modelling industry perspective on PP of the firm using Fuzzy Set Theoretic – Quality Function Deployment (QFD) approach can lead to a matrix which can be used to evaluate the PP of EPCs.

A global perspective on the construct of purchasing performance is important to understand emerging themes and new concepts that constitute the construct of Purchasing Performance for EPCs.

Legitimacy needs, practices and the impact of reform policies in an institutionalized business environment

Brian Low.

Services such as transportation, health care services, utilities and higher education have historically been a public responsibility. Overstretched government funds and demands for these services have, however, led to increasing privatization. Few sectors have matched higher education in the scope and drama of privatization (Levy and Zumeta, 2011) with active private-sector participation. Private universities are now big businesses with extensive local and international networks. At the centre of this debate is how relationships between university, industry and government can be developed, the types of internal transformation that need to take place within each of these spheres, and the resulting recursive effect of the inter-institutional networks they represent (Etzkowitz and Leydesdorff, 2000). Relationships, transformation and inter-institutional networks are complex and dynamic social constructions of legitimacy created by organizations and their audiences, and organizations depend on such social constructions for physical, human, investment or reputational capital.

This paper examines the legitimation process, in an institutionalized business environment where the central government wields significant legislative power in conferring legitimacy upon private universities. Rules, regulations and norms perceived as essential to social and economic activity, more commonly termed coercive isomorphism (Meyer and Rowan, 1977; Oliver, 1991), mean that organizations must conform or risk being rendered illegitimate or illegal. In this way, organizational legitimacy influences business success and typically assumes a deterministic impact on the institutional environment, constraining management to conform (Chelariu *et al.*,

2014). Institutional actors become socialized to perceiving situations in a given way and acquiescing to certain assumptions (Vanharanta, *et al.*, 2014); actors then are less able to perceive situations differently, resulting in cognition-based institutional conformity (Scott, 2001).

In this regard, as far as the author is aware, no study has analysed an organization's legitimation process in the context of public to private sector role reversal. A focus on this role reversal, first, allows us "to vary the institutional contexts", since "it is difficult if not impossible to discern the effects of institutions on social structures and behaviours if all our cases are embedded in the same or very similar ones" (Scott, 1995, p. 146). Second, in an era of declining resources and greater accountability, it is also exceedingly important to understand the relationship between public policies and firms' strategic responses to those policies (Cashore and Veryinsky, 2000). Etzkowitz and Leydesdorff (2000, p.11) stressed the need to take into account the "recursive effect of the inter-institutional networks representing academia, industry and government, both on their originating spheres and the larger society" as an integral component of a university's transformation process.

Perhaps understandably, in the field of business marketing there is an urge to explore the interrelated arenas of institutional theory that bear on both legitimacy and efficiency (see, e.g., Persson, *et al.*, 2011). A common approach is to explore the performance implications of institutional environments from an interactive perspective. This perspective corresponds with the view that a theory of action is required, since the legitimacy literature offers few detailed strategic prescriptions for managers (Suchman, 1995). It also corresponds with limited research on the interface between businesses and government at a collective level, beyond a private sector focus on inter-firm legitimacy (Czinkota *et al.*, 2015; Persson *et al.*, 2011; Rampersad, *et al.*, 2010). Little is known

about legitimizing strategies available to firms enacting new practices in situations when the institutional environment changes over time (Chelariu *et al.*, 2014). We do know, however, that changes in government policies, through legislative acts, are bound to impact on these organizations' institutional space, their structures and their interaction with stakeholders.

This paper presents a new line of enquiry outlining how and why private universities' legitimacy aspirations change in response to reform policies that alter the institutional conditions. My core argument is that these aspirations do not start from scratch. Such changes are strongly rooted in universities' internal and external organizational transformation of "relational, collective associative capitalism" (Dunning, 1995, p. 467). Expressed more generally, changes in institutional conditions put pressure on private universities to identify their legitimacy needs and devise appropriate practices (LNP) that reflect their changing aspirations. This conceptualization fits more easily with visions of legitimacy that are only partially achieved – part incremental and part emergent (Harrison *et al.*, 2010) – endlessly repeating the sequence (of "building") as conditions and aspirations change, and as predictions become more accurate (Lindblom, 1959, 1979). Such a conceptualization also fits the reality of private universities' adoption of multidimensional, hybridized legitimacy practices, imbued with contradictory tensions of efficiency and responsiveness that capture the symbolism of its collective legitimacy. Figure 1 provides a model of the proposed interactions among reform policies, LNPs and organizational legitimacy. LNPs, however, must be considered in interaction; that is, any changes to reform policies will necessitate a reconfiguration and realignment of LNPs. This in turn determines what, if any, further changes are necessary in LNPs to ensure contextual conformity. In this way, I argue that LNPs are both the medium and outcome of an organization's legitimacy, due to the timing of reform policies.

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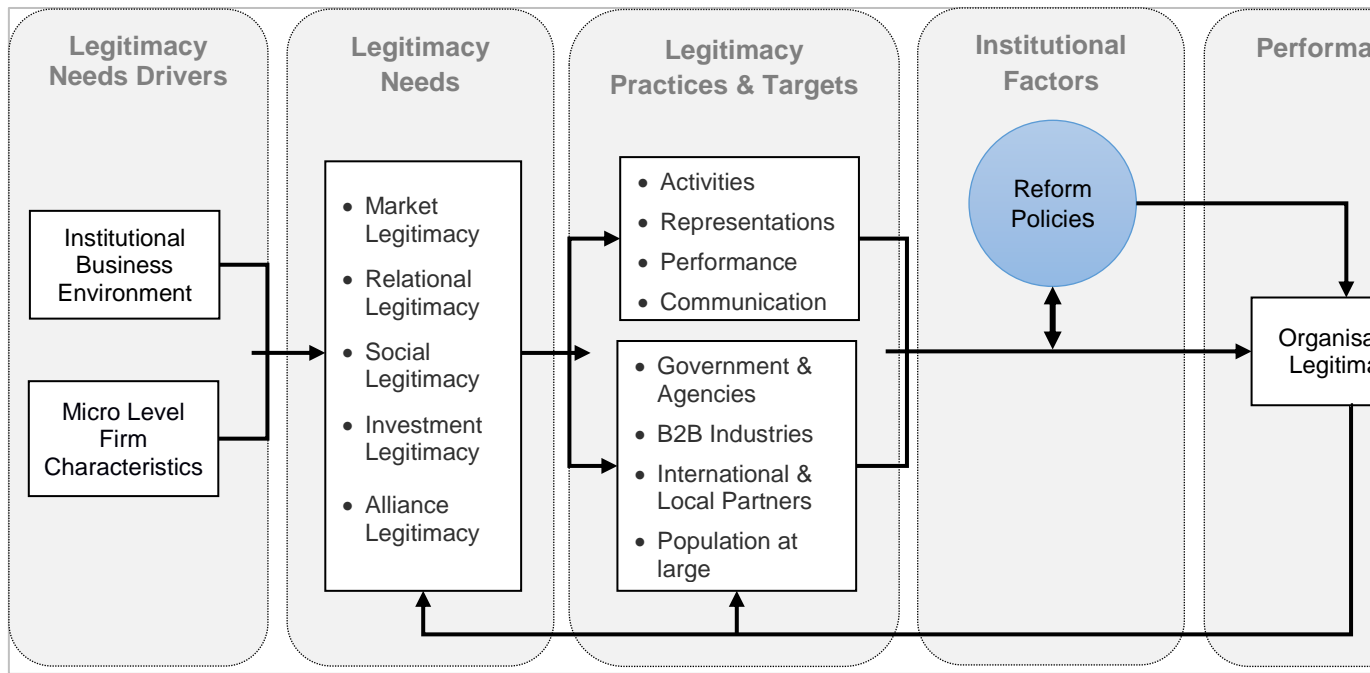


Figure 1. Relationships between legitimacy needs, practices and impact of reform policies on organization legitimacy. (Adapted from Low et al., 2007; Dacin et al., 2007).

A measurement model of trust in green markets: A proposal for electricity customers

Andrea Mezger, Klaus Rudiger, Pablo Lorenzo, Francesca Cabbiddu.

Keywords: Trust, green market, measurement model, electricity consumers, exploratory factor analysis

Aim of the study

The electricity generation and supply have been associated to environmental issues, since it can cause environmental pollution (CO₂ and greenhouse gases and may generate waste, e.g. nuclear). With the introduction of competition, customer choice regarding electricity supply has increased, reflecting about how electricity is generated besides how much electricity is consumed and at what price (Rowlands et al., 2002). People are becoming more involved in environmental protection, realizing that green electricity is an option to contribute (Christ & Bothe, 2007). Green energy industry and the resultant green energy products have thus emerged globally (Rowlands et al., 2002), especially in Germany.

What do green electricity means? There exist many different definitions of renewable or green electricity, considered synonymous in this research (Kotchen & Moore, 2007; Lipp, 2000; Rowlands et al., 2002; Salmela & Varho, 2006; Willstedt & Bürger, 2006). Based on these propositions, ‘green electricity’ is that electricity entirely generated from renewable energy sources with low (non-existent) impact on the environment.

Particularly, the paper analyses how trust can be conceptualised and operationalised in green electricity markets. It combines a theoretical approach, after a literature review on trust, with an operationalization of trust in green electricity markets through an empirical process, resulting in a multi-factorial measurement model.

Theoretical background

A systematic literature review was conducted to gain a comprehensive and systematic overview on the current state of research on measurement models of trust in both business relationships and end-customers contexts. The focus was on recent academic literature from the period from 2009 to 2015 to ensure the latest academic discussions and to mitigate the influence of the most cited but older articles on the subject. This revision

process followed the David and Han's (2004) approach to collect large but manageable number of articles that measure trust in relevant research disciplines.

Existing research showed heterogeneous methodological approaches to measure trust. The specificity of trust depends on the involved parties, the business context and other factors. Therefore, different models are necessary to measure trust in different types of companies such as banks or textile suppliers (Kenning & Blut, 2006). A comparison of the presented studies allows a first determination of possible factors or dimensions to measure consumer trust. Some authors have assessed trust based on perceived expertise. The factors of competence (Hwang & Lee, 2012), ability (Casaló et al., 2010), dependability (Delgado-Ballester et al., 2003) and confidence in quality and reliability (Kaur & Soch, 2012) were extracted. Trust is often operationalised by the factors of credibility (Albert & Merunka, 2013) and honesty (Casaló et al., 2011). Furthermore, some studies include an affective dimension conceptualised by factors such as sympathy (Hawes et al., 1989) and benevolence (Casaló et al., 2010; Hwang & Lee, 2012). Additionally, some studies use the factors responsibility (Chiou & Pan, 2009), altruism, customer orientation (Chen, 2012) and integrity (Albert & Merunka, 2013) to measure trust.

There is no a comprehensive approach to capture the entire scope of the phenomenon of trust and no existing approach to measure trust, specifically in green electricity suppliers. Consumers may be unsure about the credibility product characteristics and suppliers. For this reason, it is necessary to create a new model to measure trust in (green) electricity suppliers.

Methodology

The research follows an exploratory approach, aligned to the guidelines developed by Homburg and Giering (1996) and Churchill Jr. (1979), applied in previous studies on trust, see e.g., (Bhattacharjee, 2002). The referred literature review let understand the concept of trust and develop a list of items. A list of 150 items was generated from the evaluation of existing research, extended with synonyms and through an exploration of additional items from qualitative interviews with electricity consumers.

The second step was an initial survey to reduce the number of items connected with limitations concerning understandability and the relevance of the considered construct (Homburg & Giering, 1996). After sixteen interviews with electricity consumers, items

containing vague wording or a lack of connection to the construct were eliminated. Only remain items used within everyday language and that characterises trust in electricity supplying, 58 items remain from the initial 150, formed the basis for empirical data collection and analysis to generate a measurement model of trust.

The third step let identify the underlying dimensions and factors of trust after an on-line survey of 304 consumers. The initial analysis evaluated data for EFA (e.g. missing values, KMO), examined the dimensions (exploratory factor analysis) and the factors (coefficient alpha, item to total correlation, exploratory factor analysis). Finally, the quantitative analysis developed to evaluate measurement model reduced the number of items to 15.

Main findings and the key contributions.

Based on the results of the empirical analysis, the final measurement model consists of the four factors of ‘competence’, ‘responsibility’, ‘openness’, and ‘authenticity’. The factor ‘competence’ is represented by three items ‘expert’, ‘experience’ and ‘knowledgeable’, which describe the consumers’ perception of a supplier ability to deliver the desired performance. The factor ‘responsibility’ consists of the four items ‘green’, ‘ecological worthwhile’, ‘environmentally responsible’ and ‘sustainable’, which indicate whether the supplier intends to deliver an environmentally-beneficial product of the declared quality and intends to keep its environmental promises. The third factor ‘openness’ consists of ‘service oriented’, ‘approachable’, ‘accessible’ and ‘customer oriented’, which describe consumers’ evaluation of whether the electricity supplier provides an open information exchange. The factor ‘authenticity’ includes the items ‘trustworthy’, ‘honest’, ‘reliable’ and ‘sincere’, which reflect the way a supplier keeps its promises and delivers on its offers.

This multi-dimensional measurement model reflects the broad nature of the trust construct, specifically in the context of green electricity. It addresses the shortcomings of previous academic discussions. Thus, trust in green electricity providers represents the attitude of an electricity consumer towards a green electricity provider, namely that this provider acts in an environmentally responsible manner by competently and sustainably supplying electricity that (based on its origin) can be considered ‘green’ (i.e., ecologically worthwhile and responsible) while engaging with consumers openly and authentically through its marketing activities.

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Identifying omnichannel customer segments regarding the perceived usefulness, shopping enjoyment, and social influence

Ana Mosquera, Emma Juaneda Ayensa, Yolanda Sierra Murillo, Cristina Olarte Pascual.

Keywords: omnichannel; segmentation; omnishopper; technology; shopping behavior

Nowadays, the customer journey is more complex due to the myriad of touchpoints and channels that are presented in an omnichannel environment. The new phenomenon of omnichannel shopping allows customers to use different channels simultaneously, linking the online and physical worlds to create a superior and seamless shopping experience (Piotrowicz & Cuthbertson, 2014). Due to this great number of possibilities that customers have in their shopping journey, a new type of consumer has emerged: the “omnishopper”. Within this context, retailers need to understand what drives the behavior of the omnichannel customer, not only to keep them, but also to offer them the appropriate experience, as they are not a homogenous group (Frasquet, Mollá, & Ruiz, 2015). More than a decade ago, Neslin et al. (2006) identified multichannel customer segmentation as a key challenge to design effective multichannel strategies. More recently, with the emergence of omnichannel retailing, authors such as Juaneda-Ayensa, Mosquera, and Sierra Murillo (2016) or Verhoef, Kannan, and Inman (2015) have called for additional research on the new omnichannel shoppers and their characteristics and shopping behavior across channels. Some studies have looked at the two most popular omnichannel behaviors, showrooming and webrooming (e.g., Arora & Sahney, 2016; Arora, Singha, & Sahney, 2017; Gensler, Neslin, & Verhoef, 2016; Gu & Tayi, 2017; Nesar & Sabir, 2016), but there is little literature on the motivations for using different channels or

technology during the customer journey (Mosquera, Olarte-Pascual, & Juaneda-Ayensa, 2017). In light of this lack of research on omnishopper segmentation, the aim of the present paper is twofold: first, to identify possible groups of customers based on the perceived usefulness of using different channels during the customer journey, shopping enjoyment, and social influence; and, second, to characterize the omnishopper clusters, identifying which channels they use during the customer journey (search, purchase, and post-purchase stages), as well as socio-demographic variables like age, gender, income, education and the devices they use during the information-search and purchasing stages. Specifically, this study seeks to answer the following research questions:

RQ 1: Can omnishoppers be classified and profiled according to their extrinsic and intrinsic motivations? RQ 2: Are there differences among the groups in terms of their omnichannel shopping behavior?, RQ 3: Are there differences among the groups in terms of the use of channels and devices during the customer journey?, RQ 4: Are there sociodemographic differences among the groups?

To this end, a sample of 628 customers of a well-known omnichannel clothing store was selected. Data were gathered and analyzed by cluster analysis. The results reveal: (1) three different omnichannel customer segments: reluctant omnishoppers, omnichannel enthusiasts, and indifferent omnishoppers; and (2) significant differences in gender, age, income level, and omnichannel behavior among these segments. However, no differences were found in the use of channels and devices during the customer journey. Thus, our findings contribute to advances in the knowledge of the different types of today's consumers. The first group, consisting of *reluctant omnichannel shoppers*, consists of people who neither value the integration of channels during the shopping process nor enjoy the shopping task and whose shopping behavior is not influenced by other people.

The second group consists of *omnichannel enthusiasts*, who love to shop, perceive the benefits of omnichannel retailing, and are influenced by the opinions of others, such as family or friends. The third group is the *indifferent group*. This group includes people who neither feel that using multiple channels during their customer journey is particularly useful nor particularly enjoy shopping, as reflected in their indifference. Likewise, they did not feel influenced by other people in their shopping behavior.

The theoretical and empirical implications of the results are discussed within this study. However, this paper does have some limitations. Specifically, our study was based on the specific case of an omnichannel clothing company and the sample is limited to Spain. It would be interesting to replicate the study in other industries, geographical and cultural spaces in order to generalize these results.

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Tension management in coopetition between small- and medium-sized manufacturing firm

Henrik Virtanen.

Keywords: Coopetition, cooperation between competitors, tension, management of tension, SMEs

Abstract

Tension between cooperation and competition is pertinent in coopetition. Scholars describe coopetition as a paradoxical phenomenon, triggering tension between value creation (cooperation) and value appropriation (competition) (Park *et al.*, 2014). Managing tension is therefore critical to avoid once friendly colleagues reverting to hostile enemies if the balancing act fails. The main problem is how.

A separation and an integration principle are in previous research proposed as general options for managing tension in coopetition (Fernandez *et al.*, 2014). Individuals experience tension, and entrepreneurs of small- and medium-sized firms (SMEs) have difficulties to embrace the contradictory logic of interaction (Bengtsson *et al.*, 2016). In other words, it is difficult for individuals to play the roles as partner and competitor at the same time. An integration principle is therefore challenging, which is also the case with a separation principle. In larger firms, it is possible to separate cooperation and competition between different subsidiaries, divisions, business units, projects and key responsible individuals. This is hardly possible in SMEs. To conclude, both an integration and a separation principle seem problematic when focusing on coopetition between SMEs.

There is a quest for further empirical research on coopetition in SMEs and on management of tension in coopetition. The purpose of the paper is accordingly to elaborate on the management of, and the nature, sources and dynamics of inherent tension in coopetition between SMEs. With notice of the purpose, an embedded single-case design is chosen for the study. Two manufacturing SMEs in the machinery- and metal business are studied. The units of analysis are their past dyadic coopetition with other competitors, their present coopetition with each other and their view of possible dyadic coopetition with other partners in the future. The case can be interpreted as a representative case.

In the paper, inherent tension refers to tension that is always present, because the partners are competitors. The explanatory variables to inherent tension in are product and market overlaps, proximity to the customers, strategic importance, goal congruence and prospect of return. In a relationship, all tension-causing factors are not inherently built in. For example, asymmetrical dependence, power and control issues, relative scale, incompatible personal chemistry and corporate cultures, risk of unintended knowledge leakage etc. may cause tension. However, these may or may not realize due to the structure and development of the relationship, and are not in focus in the paper.

Paradoxes can be solved by a functional (Bengtsson & Kock, 2000) or a product – market related separation principle (Galvagno & Garaffo, 2010). Due to the challenge individuals face when trying to embrace the cooperative paradox in SMEs, a separation principle is important to manage tension. On the other hand, integration of cooperation and competition demands coopetition capability (Bengtsson *et al.*, 2016). Integration may be relevant in situations when separation is not possible or sufficient. Coopetition capability embraces both awareness, perception, understanding and assessment of tension, and

development, implementation and utilization of routines to respond to it. Avoidance may be another response to tension, especially if it is perceived as high. Avoidance means that coopetition is either not seen as an option, or the coopetitive set-up has to be altered to lower the tension to a tolerable level.

The results of the study show that a high degree of product and market overlap causes high tension. A moderate separation of cooperation and competition may accordingly be relevant. The partners can phase out head-on competition through for instance specialization on different customers and niches and focus on different products. It is possible to delimit cooperation to specific products, for instance complementary products that together contribute to an interesting offering to the customers.

Taking into account the problems for entrepreneurs of SMEs to both be a partner and a competitor at the same time, it seems unlikely that SMEs can cooperate in for instance output-functions such as sales when offering the same products to the same customers. The competitive dimension of the relationship becomes overwhelming, and avoidance is a likely response. However, it is possible for SMEs to cooperate with head-on competitors in input-functions, such as cooperation in product development, especially if the partners are able to implement routines to guarantee shared value.

Incongruent goals in coopetition rises tension. Congruence is not a question about similarity. The partners may or may not have similar goals, but they rather have to be compatible so that both partners are able to achieve their individual goals. The “dangerous zone” is when the partners’ goals are incongruent or conflicting and the prospects of return are low. Incongruent goals may be acceptable, if there is a high prospect of return. Likewise, lower prospect of return may be tolerable in situations where there is a strong fit between the partners.

The paper contributes to coopetition research by increasing our knowledge of management of inherent tension and identifying new perspectives on tension dynamics and level of strengths. The novelty of the paper is that it introduces a framework to identify and map the sources of inherent tension, enhancing SMEs to monitor their coopetitive relationships. The discussion started with the statement that both separation and integration of cooperation and competition are relevant for managing tension. In reality, a separation principle or avoidance will be more probable in certain situations and an integration principle will be more possible in other. Actually, it is not a question about either separation or integration of cooperation and competition. Instead it is a question where emphasis should be put (see also Le Roy & Czakon, 2016). For example, an integration principle may be enhanced by a moderate separation of the cooperative and competitive activities in coopetition. Successful management of coopetition combines separation with integration.

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Changing roles in networks – Some management questions of smart grids

Noémi Piricz.

Keywords: smart grid, electric supply chain management

In the 20th century roles and functions were usually clearly distinguished both in B2B and B2C contexts. There are however more global tendencies and new situations – e.g. sharing economy or smart grid – where the traditional functions change or should modify so as to achieve proper operation. The aim of this study is to show some challenges in a traditionally B2B network (till the last level), more concretely the supply chain of electric energy. This paper raises a few research questions and objectives, which should be investigated in near future.

Amin and Giacomoni (2015) define smart grids as special networks which are self-healing, empower and incorporate the consumers, tolerant of attack, provide power quality needed by 21st-century users, accommodate a wide variety of supply and demand, and are fully enabled and supported by competitive markets. This means that smart grid concepts also can be applied to a range of commodity infrastructures, including water, gas, electricity or hydrogen. Here we focus on national electric supply chains and the future challenge which the spread of Electric vehicles (EVs) may cause.

During our theoretical investigation of electric grids we use the methodology of TRIZ. The Russian mosaic word means literally "theory of the resolution of invention-related

tasks" (TIPS). It was created by Genrich Altshuller and his colleagues in the Soviet Union in the 1940s. Based on 40,000 reviewed patent abstracts he developed the concept of technical contradictions, the concept of ideality of a system, contradiction matrix, and 40 principles of invention. According to Mishra (2013) in TIPS the ideal state of the system is where all its functions are achieved without causing any problem.

According to conventional logistics, the electricity supply is a typical pull system, without significant storage possibilities at the final product level. More concretely power plants and other generators produce the required electrical energy from moment to moment, otherwise the system loses its balance, and the service breaks off – generating high balancing costs and enormous costs of restarting (Bajor, 2007). But as we see in Figure 1 modern electric grids require more actors and more connections. In the future networks those individual consumers who have EV, will appear as active participants while a smart grid technology can enable EV-charging (grid-to-vehicle, or G2V) load to be shifted to off-peak periods, thereby flattening the daily load curve and significantly reducing both generation and network investment needs. Additionally smart-grid technology may enable EVs to be used as distributed storage devices, feeding electricity stored in their batteries back into the system when needed (vehicle-to-grid, or V2G, supply) (Morgan, 2012).

The topic of smart grid seems to be popular in engineering journals but more rarely discussed its management and other economic aspects. Some experts think a proper

motivating pricing system (and smart meters) will make the whole electric grid successfully operate (e.g. Bai, 2016; and Mark et al., 2011) however – despite the pilot projects and smaller scale tests in different countries (e.g. Planko et al., 2017; or Morgan, 2012) – we see the following problems which need more discussion and investigation:

- When traditional roles in electric networks change, the smart grids require professional attitude and behaviour towards individual consumers as well.
- If the dynamic pricing system – which should handle G2V and V2G processes – may not fulfil the encouraging and balancing function, it can result security problems in national or regional electric supply chains especially during peak-times.
- On the other hand it is a great challenge to identify a good pricing system in a network where ownership of actors (e.g. producers and traders) can be both public and private and the price setting of electricity is a state monopoly in many countries. Currently national energy supply systems show large variations but both efficiency and security of future smart grids can be increased by applying some tested and suggested relevant business models. Furthermore this small number of models may support standardisation and development of continental or global networks.
- In the BLUE Map Scenario global carbon-dioxide emissions are reduced by 50% by 2050 compared with 2005 levels, EVs account for 11% of overall

electricity consumption by then because of a significant increase in EVs (IEA, 2010). In spite of that the electricity consumed in charging EV batteries will probably remain small relative to overall electricity demand for the foreseeable future, EVs could add significantly to peak load if vehicle charging is not managed intelligently. But in this possible situation pure dependency on a good dynamic pricing system could effect a fragile operation. More communication, education and trust management may be needed to develop a professional attitude from each actor.

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Making marketing decisions in turbulent business contexts

Fredrik Nordin, Annika Raval, Paul Viio.

Introduction

Most, if not all, business contexts today are characterised by rapid change due to emerging technologies and macro-level disruptions. This makes decision making inherently challenging as increasingly complex issues need to be addressed and made sense of, often based on insufficient information and under time constraints. Although there is notable research on decision making in fast-moving markets (e.g., Eisenhardt, 1989), research with empirical grounds providing a real-world understanding (Basel & Brühl 2013) is scarce. We propose that there is a need for further research on how decision-making procedures and procedures align with different decision contexts. This knowledge gap is also addressed by Wierenga (2011), proposing more research on the determinants, outcomes, and conditions of decision-making processes in marketing. The purpose of this paper is to address this in gap in marketing theory, both in terms of better understanding how managers make sense of marketing problems in turbulent business contexts and what strategies they apply when making marketing decisions. We develop a conceptual model and provide empirically based propositions for how and why certain types decision processes (characterised by, e.g., their pace and nature) are adopted in specific decision contexts (with different problem structures, problem complexity, and problem context). Our specific focus is on marketing decisions in turbulent contexts where new business fields are emerging or where present business fields are disrupted. Such contexts are characterised by a lack of clear market structures and by high uncertainty concerning both the technological solutions and the potential key actors, their resources, and contributions (Nordin et al, 2017). Few research efforts have examined managerial marketing decisions in such contexts. A notable exception is provided by Yang and Gabrielsson (2017),

focusing on decision-making by entrepreneurs. Whereas they use effectuation theory (Sarasvathy, 2001) as the theoretical basis, we draw upon the problem-solving literature (e.g., Jonassen, 2000) and the behavioural aspects of decision making (Wierenga 2011, Basel & Brühl 2013). Thereby we contribute a novel perspective to this research area.

Method

We follow an abductive research approach and pursue our aim through a conceptual analysis of the extant literature in marketing decision-making and problem-solving. A preliminary framework is developed from this conceptual analysis. Empirical findings from a case study of four SME-companies operating in turbulent business contexts, illustrate and refine the conceptual model.

Theoretical framework

We divide our framework into two main dimensions; the decision process and the decision context.

The decision process

Marketing decisions processes can be characterised by a number of sub-dimensions. In this paper, we focus primarily on the decision pace (fast/slow) and nature (analytical/heuristic) of the process. *Decision pace* refers to the speed at which decisions are made, i.e. the time to decide about the solution of a problem. It has been acknowledged in the managerial decision making literature that fast strategic decisions are beneficial in dynamic or “high-velocity” environments (Eisenhardt 1989). In the dynamic environments of many industries today, decision speed would seem to be increasingly important. *Decision approach* refers to how decisions are made, or how the decision maker analyses the situation to reach a decision. While the literature suggests a range of decision-making types, they can essentially be divided into analytical and heuristic

approaches. The analytical approach implies rationality (Simon 1979) and decisions are made on the basis of a comprehensive analysis of all available and essential elements and a calculation of the optimum solution. The decision is thus made based on an objective analysis of relevant factors, and the role of creativity and personal judgments are downplayed. In contrast, the heuristic decision-making type contains both creativity and soft personal judgement, leaving parts of available information unconsidered (Gigerenzer & Gaissmaier 2011)

The decision context

The second dimension we include in the anatomy of decision-making is the decision context. It includes representational aspects of the marketing problem to be solved. Jonassen (2000) lists three dimensions according to which a problem can be categorized – structuredness, complexity, and domain specificity, all of which seem relevant for our purposes. For instance, the *structuredness* of a problem, evidently influences both what problem-solving skills are required and how the problem is handled. According to Jonassen (2000), well-structured *problems* have clear solutions, complete and unambiguous problem definitions, and all elements of the structured problems are known to the decision maker. Ill-structured problems, on the other hand, are more open-ended and do not have any unequivocal solutions. They are rather analysed with heuristic models and decisions are based on experience and personal judgments. The context of the marketing decision problem is another important aspect and in particular its *dynamism*. Decisions have to be taken more rapidly in dynamic markets such as consumer electronics and fashion, i.e. markets where technologies, customer need and different business actors change rapidly. Another perspective related to decision speed is provided by Wierenga and van Bruggen (1997), who distinguish between marketing dynamics and time constraints. While dynamics implies urgency it also implies complexity, since in dynamic

contexts it is comparatively difficult to understand and interpret what is happening on the market, time constraint is a more straightforward dimension and addresses the importance of rapid decision making because of a lack of time but not necessarily lack of clear knowledge of the decision task. Another relevant factor is whether the decision concerns a specific and limited situation or something more general and perhaps abstract. The fundamental idea is that all these dimensions influence how and why marketing decisions are made and they will be used as a framework for our empirical study.

Findings and contribution

The conceptual framework presented above will be used as a starting point for the analysis and presentation of concrete marketing decision problems from our case studies, including detailed descriptions of how decisions were made for these problems. Propositions concerning the effects of the interaction of decision process and decision context will also be derived from our study, explicating how and why different combinations of decision processes and decision contexts may lead to positive and negative outcomes. Overall, the intended contribution of this paper is that it will explain and illustrate how decisions are made in turbulent business contexts, drawing on the literature on problem-solving and the behavioural aspects of decision making. Moderators will also be taken into consideration, including size and importance of the decision.

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How can deservitization be avoided?

Luiz Reni Trento, Giancarlo Medeiros Pereira.

Introduction

Deservitization is the process of moving from a service-centric business model to a product-centric logic (Kowalkowski et al., 2017). The analysis of the difficulties faced by companies in the provision of services can contribute to broadening the understanding of the elements that can lead to deservitization (Valtakoski, 2017). Despite the importance of the theme, the literature available presents only a few studies on deservitization (Böhm et al., 2017; Valtakoski, 2017).

To fill this gap, the present case study investigates the deservitization of electro-electronic products sold in high volume. The investigated company operates in more than 30 countries and has sales of over US\$ 2 billion a year. At first, the service offering aimed at enabling the trade of an innovative product. It was then realized that the customer was only interested in acquiring the whole innovative product + service. This condition allowed the manufacturer to close a deal at prices ten times higher than the cost of the conventional product. Despite the good financial outlook, the service was terminated after some time. The analysis of these elements gave rise to the following research question: "How could deservitization have been avoided by a manufacturer of innovative products sold on a high scale?"

Theoretical background

The literature presents a series of problems that may negatively affect the delivery of these services: product focus (Kindström and Kowalkowski, 2014); distance between customer and supplier can difficult to mitigate risks (Kowalkowski et al., 2015); lack of competence and knowledge can affect vertical integration (JPeyrefitteoseph et al., 2002);

managerial ambivalence may lead use fewer resources or less creative response (Lenka et al., 2018). Other problems include disregard customer realities (Kindström and Kowalkowski, 2014); and difficulties to exploit the financial potential of the service (Gebauer et al., 2005).

Another current of the literature investigated alternatives to improve services. These alternatives include attention to tangible and intangible elements (Huikkola and Kohtamäki, 2017); the existence of resilient human resources (Baines et al., 2013) that are capable to connecting and facilitating service provision (Chakkol et al., 2018); and management through the network of partners (Huikkola and Kohtamäki, 2017). Efficient IT systems are also required (Reim et al., 2016).

Design/Methodology

In this case study, the research focused on identifying the problems of deservitization and recommendations to managers. The process of servitization and deservitization took place less than five years before the beginning of the research project, offering an opportunity to interview executives and decision makers involved in service implementation and posterior deservitization.

Findings and contributions

This detailed abstract provides to the literature by indicating five groups of inducers of deservitization, as well as actions that could avoid the discontinuation of services. The first group of contributions focuses on reducing the costs associated with providing services. Regarding mitigation alternatives, the findings add by indicating that these adversities can be reduced by a "realistic" forecast of the resources required to deliver services.

The second group of contributions suggests that product designers of a non-service provider are ignorant of the essentials of service providers. This investigation adds by pointing out that mitigating it involves narrowing the connections of their designers with two groups of professionals: the former customer service providers and the actual manufacturer's service providers.

The third group of contributions focuses on the problems encountered in the vertical integration contributed to the deservitization. Another problem is related to the challenge of evaluating critical partners to make changes (Böhm et al., 2017). The findings contribute by pointing out that such matters can be mitigated through the hiring of former customer service professionals, or manager with experience in similar services. According to the literature, experienced professionals can aggregate the required wisdom (Beltagui, 2018), and strengthen the vertical integration assess strategic benefits and cost accurately (JPeyrefitteoseph et al., 2002).

The fourth group of contributions focuses on the client's opportunistic stance. The findings contribute by indicating that such a posture may lead to deservitization. This stance was observed when the customer faced problems in their industry cut the volume of dealing and delayed payments. The literature shows that poorly designed agreements allow clients to exhibit opportunistic behaviors. An alternative to writing contracts that reduce such a position may be the consideration of the performance of the service provider (Glas and Kleemann, 2017) The findings also contribute by indicating that deservitization can be avoided if the manufacturer monitors the level of movement verified in the industry of his client. According to literature, it can be achieved by applying close personal ties and regular communications with partners of service (Kreye, 2017).

The fifth group of contributions focuses on the importance of valuing the business "services" by the manufacturer. The findings contribute by indicating that the non-valuation of services as generators of income and profits can lead to deservitization. This non-valuation may be associated with the product-favorable mindset (Kindström and Kowalkowski, 2014); and/or the managerial ambivalence during the servitization (Lenka et al., 2018). The results show that the non-valuation of services caused the manufacturer to expand the values of services offered to other customers to mitigate their losses from servitization. The increase of price as mentioned above avoid closing a new dealing a rendering of services. Among the difficulties arising from the closure of services are the loss of know-how, resources, professionals, and relational capital. The study also provides by indicating that the deservitization can be reduced by the supplement in the number of deals of the product + service pair to other customers.

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Integrative Model of Servitization and Corporate Entrepreneurship

Isabel Soriano Pinar, Cristina García-Magro, Sonia López-Sáiz, Luisa Reyes-Recio.

Corporate Entrepreneurship (CE) and Servitization are two of the most innovative topics to explain the development and growth of industrial companies. In this paper we develop a model of analysis that integrates the emergence of services and the different manifestations of CE. Specifically, it tries to answer the question of whether the different services (basic, support or advanced) involves the development of activities innovation, business creation or business renewal. In this way, the theoretical framework tries to establish which of the activities of CE are the most appropriate according to the type of service developed by the company. The present paper represents an initial attempt to investigate corporate entrepreneurship at servitization process by manufacturing firms. It identifies how basic services are more likely to be developed through innovation in services, while the development of support or advanced services tends to be developed through new companies or by the strategic renewal of the company.

Keywords: Servitization, Corporate entrepreneurship, innovation, renewal, venturing

Introduction

CE includes the creation of new businesses, the entrance into new markets or the development of new products or services by established companies. CE transforms the organization and exploits opportunities that create value (Antoncic & Hisrich, 2001; Covin & Slevin, 1991; Guth & Ginsberg, 1990; Lumpkin & Dess, 1996; Zahra, 1991, 1993). Innovation, new business development, and renewal represent the activities developed by firms with entrepreneurial orientation (Zahra, 1991, 1993).

Servitization has been recognized as a mean for manufacturers, facing significant challenges in their core product markets, to achieve competitive advantage and create improved customer value (Baines, Lightfoot, Benedettini & Kay, 2009; Vandermerwe & Rada, 1988). The services incorporation at industrial companies requires the adaptation of the service type to the business context so that the company can create value (Tukker, 2004).

From this point of view, servitization is considered a continuous process that goes from the supply of basic services to high-value service providers (Vandermerwe & Rada, 1988; Oliva & Kallenberg, 2003; Baines et al. 2007). Kinnunen and Turunen (2012) question the need of servitization in the organization as a whole and present a framework that allows examining different divisions in relation to the servitization. Changes can happen in units or divisions and these are in charge of the way they deal with customers, the supply and are in charge of the way the added value and the organizational structure are offered (Turunen & Toivonen, 2011).

The dominant trend has been to depict the development of solutions as a linear process: firms move from being product manufacturers to becoming service providers and, ultimately, solutions or systems providers (Davies et al., 2007; Galbraith, 2005; Gebauer et al., 2005; Kumar and Kumar, 2004; Oliva and Kallenberg, 2003; Quinn, 1992; Wise and Baumgartner, 1999). Each of the stages of this continuous process involves the incorporation of different types of services and therefore we consider that the type of services will affect the forms of CE that will be carried out by the company in the different phases of service. The objective of this work is to identify which of the forms of CE is the most appropriate for each type of service.

Relationship between CE y Servitization

Innovation refers to the new products development, processes or markets originated from new resource combinations. Innovation is characterized by companies introducing new products and services to exploit innovative entrepreneurial opportunities and competencies (Covin & Miles, 1999). For Gebauer, Fleisch, & Friedli (2005) the transition from product to service allows companies to develop new opportunities for the sale of more products or services. The incorporation of basic services requires the application of new knowledge and skills that imply innovation in services in order to increase sales or to improve the product operation (Oliva & Kallenberg, 2003). This type of services adds value to the product, improves its efficiency and extends its lifespan (Tukker, 2004). In addition, these services do not imply large investments or organizational changes, so the company tries to standardize and predefine the services (Gebauer, 2008; Tukker, 2004).

Corporate venturing includes the creation of new businesses, divisions or businesses that the company did not perform previously. In this sense the entry into a new business implies the expansion of its activity field (Antonic & Hisrich, 2001; Zahra, 1991; 1996).

The incorporation of support services and its consolidation increase the orientation towards the customer and costs and activities are transferred from the client to the supplier of the service offering customized service packages (Gebauer, 2008). This involves the development of a new business in terms of company strategies and in terms of customer support process (Parasuraman, 1999). The success of the implementation of the servitization strategy involves a deliberate, systematic and well-structured transformation effort in which the industrial company must carry out significant changes in the activity field (Oliva and Kallenberg, 2003).

Renewal refers to the process by which the company reorganizes its businesses (Covin and Miles, 1999), change its activity field or focus, or both (Guth and Ginsberg, 1990, 1994, Zahra, 1991). It involves the transformation in the value chain (Covin and Miles, 1999) as well as a change in the business concept and the mission of the company (Zahra, 1993, 1996).

With the introduction of advanced services the strategic orientation of the company is directed towards customer and market orientation so that the relationship goes from being transactional to being relational, that is, the service provider takes over the client's activities through long-term contracts (Gebauer, 2008, Oliva and Kallenberg, 2003, Tukker, 2004). Changes that must be introduced have a high impact on the company and should focus on the business culture that includes learning the value of services in the company and how to sell, deliver and collect the service within the company where the product perspective comes first (Oliva and Kallenberg, 2003). So, the company will tend to add a new vision and to transform its value chain in order to incorporate the customer into the service development.

Based on the previous arguments this paper will try to present a theoretical framework that will give answer to the following proposition:

Basic services are more associated with innovation, support services with corporate venturing and advanced services or only services with business renewal.

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Servitization concept and theoretical approaches: a co-word analysis

Maria José Pinillos, Eloísa Díaz-Garrido, Maria Luz Martín-Peña.

The aim of this paper is to analyze the concept of servitization and its related theories, based on two science sociology approaches: Sociology of Translation (based on cocitation of keywords) and Functional Scientometrics (based on cocitation of references). We have analyzed the definitions of servitization in publications in the WOS and Scopus during a broad period of time until the consolidation of the servitization concept (2011). We have found three groups of associated words, each of them related to a different theory on servitization (“Integrated Solutions Strategy”; “Marketing Approach” and “Product-Service Systems”).

Keywords: servitization concept, servicing, co-word analysis, servitization theories

Introduction

Mintzberg (1987) points out that human nature insists on a definition for every concept. So, to understand the essence of any concept, it first must have a clear definition (Ronda-Pupo & Guerras-Martín, 2012). Scholars in the servitization discipline recognize that its emergence as an academic field of research began in 1988 with the publication of Vandermerwe & Rada (1988). Since then, a numerous amount of definitions and/or approaches have emerged.

Servitization has grown rapidly since its origin as an academic field. The scope and abundance of the literature, together with the variability of the perspectives and vocabulary employed, make what seems to be a central problem in the case of servitization a secondary matter.

Our aim in this paper is to analyse the birth of the concept of servitization and the explicit recognition of multiple approaches and theories related to the term, what can help practitioners and researches alike to manoeuvre through this relevant field.

To reach this objective, we have made a quantitative analysis of a broad set of definitions of servitization. We have taken into account the different definitions that we have found in the articles published in WOS and Scopus during the periods previous to

its consolidation stage (incubation and development according to Díaz-Garrido, Pinillos, Soriano-Pinar, & García-Magro, 2018).

We analyze the definition in a way similar to what Nag et al. (2007) did for strategic management and Ronda-Pupo and Guerras-Martín (2012) did for strategic concept. To do this, we have deconstructed selected definitions in order to identify the nouns, verbs, and adjectives used. Using co-word analysis, we have tried to identify the key conceptual elements of the servitization concept. This has enabled us to extract the essential terms of the concept of servitization and we have studied the relationship among servitization concept and different approaches or theories that the literature review has found (Martín-Peña, Pinillos, & Reyes, 2017; Díaz-Garrido et al., 2018).

Two of the science sociology approaches form the basis of our analysis: Sociology of Translation (based on cocitation of keywords) and Funcionalist Scientometrics (based on cocitation of references) (see others approaches on Vélez Cuartas, 2013).

Methodology

In order to attain the objectives posed, we established the definition of the servitization concept as the unit of analysis and selected a set of definitions formulated until 2011, a broad temporary period until reaching the so-called consolidation stage (see Kowalkowski et al., 2017; y Díaz-Garrido et al., 2018).

The methodological process is described based on six essential stages: 1) identification of the unit of analysis; 1.1) study time frame; 1.2) Criteria for choosing the definitions used in the study; 2) deconstruction of the definitions; 3) creation of families of words or conceptual elements; 4) consensus analysis; 5) performance of a co-word and centrality analysis and 6) factorial analysis to determine the words that were grouped together.

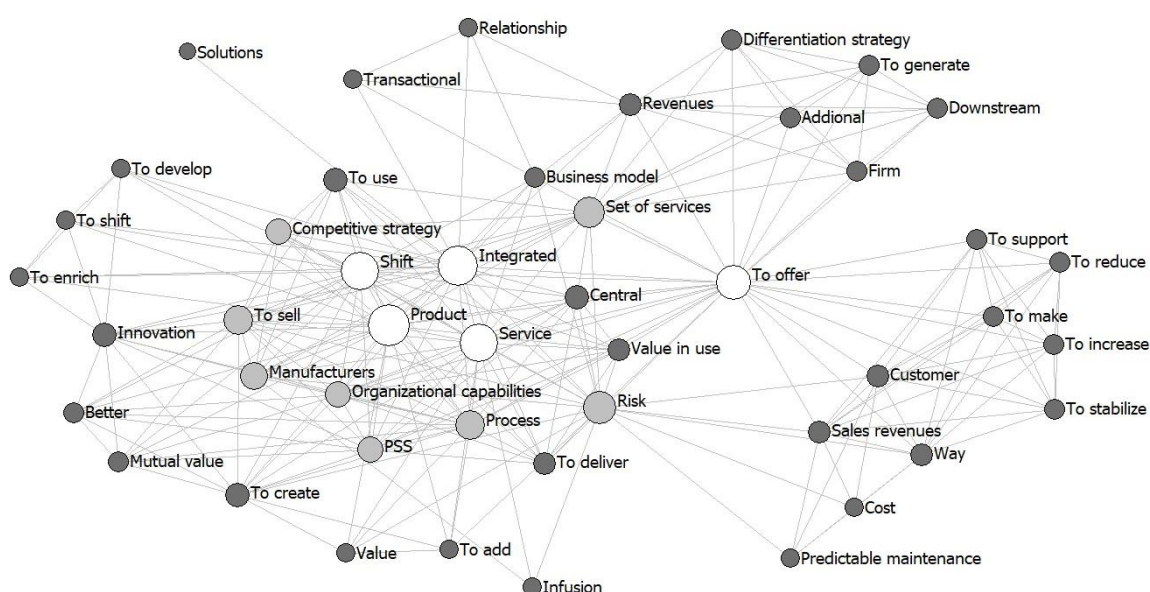
Results and conclusions

We identified a high number of terms based upon definitions analyzed and observed that the majority of the terms (more than 51%) only appear in one definition.

In the present study, we use co-word analysis to analyze the structure of the definition of a concept. To do so, we analyzed nouns, verbs, and adjectives separately and create word families for each lexical classification.

Networks analysis has allowed us to determine the degree of centrality of the terms. Figure 1 shows the network structure of the definition of the servitization concept and the position of key terms in the three zones of the network.

Figure 1. Image of structure of the definition of servitization concept



Note: The variation in vertex colour is related to the position in the network: white= core; grey= semi-periphery; dark grey= periphery. Node size representing the closeness of the term.

As can be seen, the terms “product”, “service”, “integrated”, “to offer” and “shift” are in the central position.

The factorial analysis performed with the co-word matrix has allowed us to identify a network of associated or joined words. Callon, Courtial, and Penan (1995) indicate that every associated word can be assimilated to a certain theme research of which the content is described by the words that constitute aforementioned association.

In our analysis we have found three main groups of associated words that can be related with the ‘Integrated Solutions Strategy’ (of which the theory states that

servitization is the provision of customers with integrated solutions rather than solely products); “the marketing approach” (of which the theory states that servitization is the incorporation of services from the customer’s point of view, focusing on perception and value creation) and ‘Product-Service Systems (PSS) (of which the theory states that servitization is focused on the development and selling of a system of products and services that satisfy customers’ stated needs)

The use of bibliometric studies together with social network tools has enabled us to understand and analyse the servitization concept at any given time. This methodology can be applied to different periods of time to analyse its evolution.

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Digitalization, Servitization in Manufacture and Performance.

An application in Spanish Industry.

María Luz Martín-Peña, José María Sánchez-López, Eloísa Díaz-Garrido.

Introduction. Digitalization & Servitization

The increase in global competition has led many manufacturing firms to search for customized solutions for their customers. Achieving maximum customer satisfaction, as well as bringing in income, has involved a shift towards integrated solutions based on the needs of customers (Tuli et al., 2007; Storbacka, 2011; Kohtamäki et al., 2013).

The specialized bibliography stresses the factors which facilitate this process. Technology, especially Information & Communication Technology (ICT), is one of the most important factors involved in promoting digitalization (Lightfoot et al., 2012). The digital revolution leads industry to new forms of competition, to ways to respond to the needs of increasingly demanding customers who demand customized solutions. For these reasons, many firms have evolved from producing and commercializing a single product, to offering customers need-based integrated solutions (Davies, 2004), so, they have servitized.

In this context, industry must face the challenge of digitalization and servitization in order to improve competitiveness, by generating sustainable competitive advantages. Digital technologies and servitization are a key opportunity for the industrial sector. To a large extent, digitalization has meant the introduction of services. It may be said that digitalization is an enabler/ driver of servitization, whereas servitization promotes further digitalization, with the design of new product-services. Thus, the aim of this paper is to

analyse the relationship between Servitization and Digitalization and its impact on business result.

This work presents a comprehensive framework which brings together the emerging trends of servitization and digitalization. It is linked digitalization and servitization in product-service systems. And it is analysed their contribution to sustainable advantage competitive.

Methodology

An analysis, through hypotheses, is proposed to show the relationship between servitization, digitalization and results.

H1: The greater the degree of digitalization, the greater the impact on business results.

H2: The greater the degree of servitization, the greater the impact on business results.

H3: Servitization and digitalization has a synergistic effect and are positively related to business results.

To carry out this research, we used a cross-sectional sample for 2014 of 358 Spanish manufacturing companies from the Business Strategy Survey (ESEE) carried out by the Fundación Empresa Pública (FUNEP).

Servitization variable is measured as a proportion of services on sales (Fang et al, 2008; Suarez et al., 2013, Crozet et al., 2017). Digitization is measured through a construct with indicative items and with a proxy variable. The items are the use of digital technologies, the investment in information technologies, the online purchases and sales as well as technologies for advanced manufacturing (Tallon et al 2000, Brynjolfsson 2003). Regarding the proxy variable, this gathers the technological effort of the company, and

business results through productivity per worker (Brynjolfsson 2003, Eggert et al, 2011) and sales volume (Crozet et al., 2017).

The proposed model and its associated hypotheses were tested using multiple linear regression analysis). We ran two models; Model 1 which included the direct and control relationships, and Model 2 which added the two-way interaction effects between servitization and digitalization.

Results and Conclusions

Results obtained are interesting and consistent with previous studies. Thus, hypotheses 1 is confirmed, so the greater degree of digitalization is related positively with improve on productivity (Brynjolfsson 2003) and volumen sales (Crozet et al., 2017). For the sample of companies analyzed, hypothesis 2 is not confirmed/contrasted regarding productivity (Fang et al., 2008, Neely, 2008), but it is confirmed with sales (Crozet et al., 2017). Moreover, hypothesis 3 is confirmed for both variables, giving an interaction with positive effect on results.

Therefore, servitization, as a single variable, does not need to have a positive impact on results (Fang et al., 2008; Neely, 2008), at least in the short term; However, it seems to favors the increase in sales, but need more time to transfer the increase to productivity.

Digitalization and servitization boost the emergence of synergies to improve competitiveness, to strengthen relationships with customers and expand the response capacity of the company. The management of the company should pay attention to the relationship between both variables, which in any case is complex. They should develop a specific business model to generate positive results that gather/reflect the synergies

between both variables (Belvedere et al., 2013, Frishammar et al., 2015, Parida et al., 2015).

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Gamification as a technique human centered design for the improvement of the design services

Cristina García-Magro, Isabel Soriano-Pinar, Cristina Cachón-García.

ABSTRACT

The present work proposes a model of analysis that relates the gamification with six methods of Human Centered Design (HCD) for the improvement of the design of services in companies that bet on servitization. In this way, it is intended to answer the following questions: is the HCD methodology suitable for the study of service design? Is gamification, as a technological tool, an adequate technique to improve the design process in services? To answer these questions, a literature review is carried out that leads to a conceptual model based on the HCD methods defined by Steen, Kuijtt-Evers & Klok (2007). Future research will intend to advance in this line and be able to empirically test the validity of the proposed model.

KEYWORDS: gamification, service design, human centered design, servitization

INTRODUCTION

The design of services has become an emerging discipline, especially for servitized companies, where the service offered by the manufacturing company has become a source of competitive advantage and co-creation of value.

The design of services, can encourage strong connections to improve the functioning of an entire system and optimize the value for all stakeholders. However, the suitability of existing service design tools remains unclear (Sangiorgi & Junginger, 2015). Additionally, some authors question the practical application of HCD methods justifying that the techniques are insufficient to uncover deeper customer needs (Van Pelt & Hey, 2011).

In view of these deficiencies, it is considered that the application of gamification techniques could improve the service design processes in industrial companies thanks to the information that the participants show through their behavior, needs and future trends.

HUMAN CENTERED DESIGN vs GAMIFICATION

Grönroos (2000) indicates that the greatest contribution of design to service innovation is that the whole process of Product Development (NSD) can be raised from the user's point of view. This statement is based on the application that the service design makes of the HCD methods (Iriarte et al., 2016).

The International Organization for Standardization, in their ISO 13407, states that HCD methods must: 1) involve users to improve and understand their practices, needs and preferences; 2) look for an appropriate assignment of functions between people and technology; 3) organize project iterations to conduct research, generation and evaluation of solutions and 4) create multidisciplinary design teams (Jokela et al, 2006).

To achieve these principles, it is necessary to apply techniques that make it possible to empathize with service users and quickly and reliably capture their needs (Iriarte et al., 2016). Colaborated design workshops, interviews, user tests and trials are some of the most common techniques in HCD methods (Hannington, 2003, Steen, Kuijit-Evers & Klok, 2007), which could be complemented with gamification practices, defined as «The application of characteristic elements of the game to contexts not related to the game» (Deterding, 2012). From a service perspective, Huotari & Hamari (2012) define gamification as "a process of enhancing a service with affordances for gameful experiences in order to support user's overall value creation".

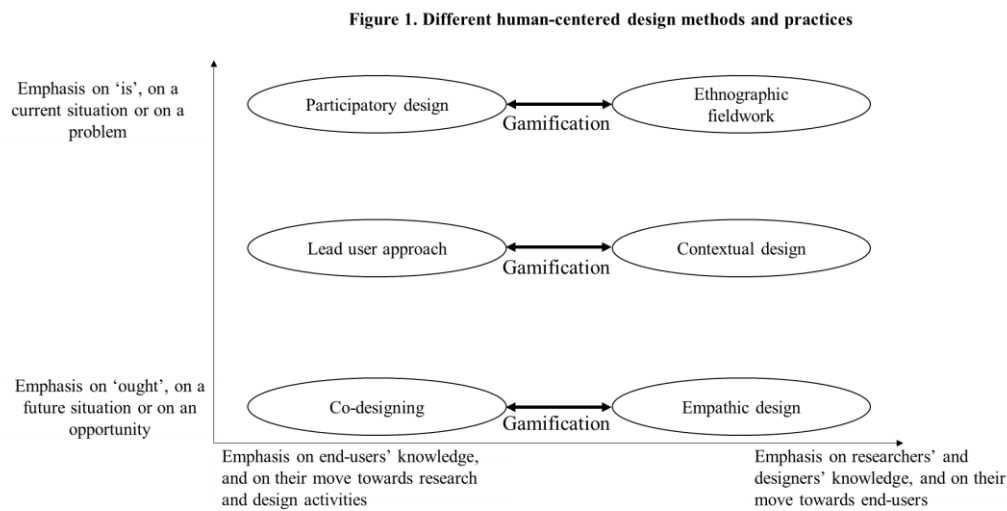
Gamification allows line up the interests of individuals with the objectives of the organization through motivation, competition, incentives and commitment (Petridis et al., 2014).

Given the unanimity in the academic literature on the benefits that gamification brings in the business environment, it is considered interesting to study it as a HCD technique to improve the design of services in companies that will servitize.

PROPOSAL OF THE ANALYSIS MODEL

Our proposal takes as a reference model the one established by Steen, Kuijit-Evers & Klok (2007), who categorized six HCD methods under the cooperation approach between designers and users to incorporate ideas, to have knowledge of users in the innovation process and thus articulate problems and develop solutions together (See Figure 1). In this way, it defines the following methods: i) *Participatory design*: the end users articulate a problem in their current situation and the designers try to solve them with them; ii) *Ethnographic work*, the designer moves towards the end users interviewing and observing

their current behavior; iii) *Lead user*, the end user initiates the process, develops an idea or a product and moves towards the designer to develop it; vi) *Design of context*, it is the designers who go to the end users through interviews and observation to subsequently apply their findings in the design process; v) *Co-design*, end users move towards designers to jointly explore future situations or future products; vi) *Empathic design*, the designer tries to approach the end user to know their experiences and empathize emotionally with them.



Source: Adapted from Steen , Kuijt-Evers & Klok, 2007

The principles of gamification have a demonstrable potential to reach a global community of volunteers willing to contribute their time to solving problems (Petridis, Baines, Lightfoot, & Shi, 2014). In addition, it is an effective tool as an intrinsic and extrinsic motivator to change behavior (Werbanch & Hunter, 2012; Blohm & Leimeister, 2013). Therefore, it is proposed:

P1: In the short term, gamification is an effective tool to encourage participatory design and guide ethnographic fieldwork towards an improvement in the design of services

Thanks to gamification practices, the organization obtains information in real time of the needs, tastes and preferences of the users, which allows the organization to orient the design of its services to the demands of the market. Thus, it is proposed:

P2: In the medium term, gamification is an effective tool for the development of ideas and improvement of the services offered.

Gamification is a powerful tool for motivation and commitment (Deterding, 2012). It offers a context of emotion that facilitates the interaction between users and organization, being the users themselves co-designers of the service. Therefore, we propose:

P3: In the long term, gamification promotes co-design and empathic design.

CONCLUSION

After the study carried out and under the consideration that the design is recognized as an activity intrinsically linked to human needs and concerns (Hanington, 2003), we can affirm that the HCD methodology is suitable for the study of the design of services in companies that bet on servitization.

On the other hand, it is considered that gamification can be an adequate technique to improve the design process in services since it is a tool, that correctly implemented, allows to achieve a change in user behavior aimed at increasing their level of motivation, involvement, autonomy and commitment (Searbon & Fels, 2015), provoking an adequate context for the exchange of information.

It should be noted that this is an incipient work that requires a more exhaustive and rigorous review of the literature that allows selecting the appropriate variables to empirically study the validity of the proposed model. It would also be interesting to adapt the proposed model to the reality of a servitized company.

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The role of network ties in reaching radical innovation through institutionalization

Rafael Ventura, María José Quero, Montserrat Díaz-Méndez.

Purpose – The purpose of this paper is to analyse how institutions can facilitate or inhibit radical innovation. The authors maintain that radical innovation is necessary to allow organisations to maintain a competitive advantage and evolve in the market place, and institutions are the basis of this innovation. From an innovation perspective, the authors propose network ties to be a determining factor for the achievement of innovation through institutionalization.

Design/Methodology/approach – The authors apply a conceptual approach to develop and propose a framework for deepening the understanding of radical innovation, institutions, and network ties. Data were gathered from 18 in-depth interviews with Spin-offs from the University of Málaga (Spain). Additional important second-order data analyses were also applied (sector analyses, statistics, company websites).

Findings – New business models based on new institutions are a means of achieving radical innovation, just as effective network ties can be used for the same purpose. Only some of the new business models can be used to develop structures that facilitate the integration of radical innovation through the development of network ties, however, and the use of appropriate methods makes it possible to maintain competitive advantage through institutionalization.

Research limitations/implications (if applicable) – A conceptual understanding is used in combination with an empirical approach, in which 18 successful case studies are considered in the Spin-off context at the University of Málaga. A range of different contexts from various countries would be useful to add new perspectives to the development of the theory.

Practical implications (if applicable) – Although radical innovation is occasionally seen in systems and arises naturally in markets, it is interesting to consider the possibility of designing strategies that facilitate the process from the beginning of the design of the business model. In this sense, the present findings could help us to devise strategies resulting in positive relationships that could facilitate the design of business model structures (triads) that facilitate the development of network ties based on value co-creation, which in turn give rise to radical innovation.

Originality/value – The present paper identifies categories related to the way new institutions are generated and structured into network ties, facilitating or inhibiting radical innovation. These concepts have not previously been put together to build on the theories of institutions and radical innovation in order to better understand and foster network ties. The theoretical contribution is framed in the Service Dominant Logic perspective and specifically in the 11th fundamental premise (FP 11/ 5th axiom) to better understand how innovation occurs.

Keywords (max 5): Radical innovation, Service Dominant Logic, Value co-creation, network ties, systems of value co-creation.

Introduction

Radical innovation

In order to generate new customer markets and devise sufficiently drastic changes for existing ones by enabling new designs and channels of distribution, radical innovations are required (Abernathy and Clark, 1985). Leminen et al (2016: 746) adopt the perspective of the end-user; in other words, they examine the overall value afforded by the innovation to the user and/or customer. Radical innovation has a significant impact and causes considerable changes in perceived value compared to existing solutions.

Incremental innovations are step-by-step improvements to a product, service and/or their process design to better meet customer and market needs (Dannels, 2002; Benner and Tushman, 2003). These are fundamentally different from radical innovation because technological and market-related uncertainties are much greater in the latter case (McDermott and O'Connor, 2002).

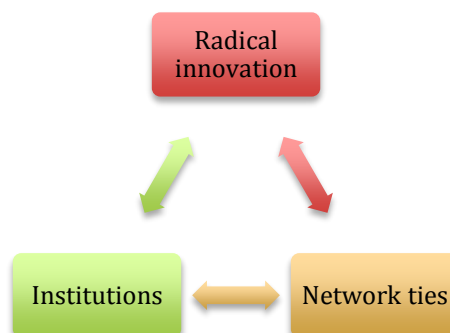
Service dominant logic: innovation through institutionalization

There are growing levels of interest in the ways in which innovation is generated. According to Kostela-Huotari et al. (2016), innovation is no longer the result of the work of an organization; its collaborative nature has been widely recognized, and it requires the joint action of a network of actors (Lusch and Nambisan, 2015; Kostela-Huotari et al., 2016).

Vargo et al. (2015, p. 71) state that “The link between business models, for example, and their embedded institutional prescriptions, and user subscriptions, needs a much deeper conceptual and empirical investigation”.

The theoretical approach builds on three relationships, as shown in Figure 1:

Figure 1. Interconnection between radical innovation, institutions and network ties



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Open innovation and business model evolution in b2b markets

Tindara Abbate, Anna Codini, Barbara Aquilani.

Aim of the study

The paper intends to shed light on how firms, operating in B2B, develop an Open Business Model, by searching and exploiting knowledge of a large variety of external entities to produce innovative technological solutions.

Research questions and objectives

The paper explores the following research questions: how do B2B firms develop an Open Business Model? In particular, how do B2B firms create and capture value by leveraging ideas, concepts and knowledge from external sources?

Theoretical background

Different interpretations have been developed about the concept of business model (BM) (Massa et al., 2014). The emergent literature underlines that the approach focused on activities can be useful and unifying (Zott and Amit, 2010). Therefore, the present study assumes the definition of business model proposed by Zott and Amit (2010), who describe a BM as a “set of activities, as well as the resources and capabilities to perform them - either within the firm, or beyond it through cooperation with partners, suppliers or customers” (p. 219). Then, the activity systems approach addresses the issues related to how firms conduct business, how they provide value to their different and numerous stakeholder and how they connect factors and product markets. The Open Innovation approach underlines the centrality of business model (Chesbrough, 2003) and firms have to actively seek people of genius from both outside and inside the organizational boundaries to provide necessary fuel for their business models (Chesbrough, 2006). Therefore, the choice of adopting an open innovation approach requires that firms define those ways to create, deliver and capture value in conjunction with external sources that

are consistent with open innovation perspective (Vanhaverbeke, 2006). However, little is known about how firms operating in B2B need to design and develop their open business models by interacting and collaborating with outside knowledge sources.

Design/methodology,

In the empirical part, the paper performs a case study. Using a longitudinal approach when describing the evolution of three different technologies developed by the selected company, the study investigates how open business model can be developed in the B2B market, using an explorative qualitative analysis based on a single case study (Mintzberg, 1979; Mintzberg and Waters, 1982; Eisenhardt, 1989).

The case study has been preferred to other qualitative methodology, firstly, because considered to be suitable for examining the “how” and “why” questions (Yin, 2013). Secondly, because longitudinal real-time studies are considered particularly useful to study processes of change and development in organizations (Barley, 1990; Van de Ven, 1993). Additionally, the study developed multiple project studies, even within the same case, enabling to face the limits related to a single case study method. This is the reason why the paper can be considered as a multiple case study.

Although the general fit of the case study with the research questions, gathering longitudinal data on business-to-business relationships implies serious challenges (Anderson, 1995). In order to overcome them, the study applies a triangulation method integrating multiple data sources in a multi-method design, as recommended by Jick (1979). Therefore, the study used multiple data sources: a) academic contributions, research studies; b) reports on firm business activities, company web sites, official dossiers, Internet documents, published interviews; and c) in-depth interviews with the main involved actors, elaborating questions derived from the literature review, especially

describing the innovation process driving the new technologies ideation and development as the key-elements of the business models.

Preliminary findings

The case study here selected is the case of COPAN, an Italian family business company founded in 1979 as a distributor and manufacturer of various laboratory products. The selection of this case study in order to investigate the open business model development in B2B was not a chance. For COPAN business model development, the adoption of an open approach to innovation was the main driver, considering that the company evolved along the years, developing different businesses beside the core business of laboratory products.

The projects/technologies the paper analyzed were developed thanks to an Open Innovation approach where the external contributions – mostly the key-customers' ones – enabled the company to get into new profitable businesses. This led the company to create new companies within Copan Group, each one responsible for a specific business and developing different business models.

The first project/technology is the COPAN Flock Technology. This solution was developed thanks to an open approach, exploiting the technology used for clothes hanger and developed by COPAN to create an innovative solution for sample collection, transport and preservation developed for diagnostic, biotechnology and life science companies.

The second project/technology was developed within COPAN Wasp, the company providing laboratory automation systems for sample processing in the Microbiology laboratory. The development of the technologies in this area – such as WASPLab® project/technology – was customer-driven, considering that it was born from the need of microbiology laboratories to move samples from front end processing. Specialists acting

in this business (consultants and surgeons in the hospitals) constantly supported the technology development.

The third project/technology was developed in COPAN NewLab Engineering, the recently established company in charge of the development of instruments for the DNA databasing industry. To meet the need of Forensic DNA Laboratories and Police Laboratory for consumables properly manufactured with minimal risk of contaminating human DNA, during sample collection and handling in crime scene forensic investigations, COPAN developed different customized solutions for rapid DNA testing. Even data collection is actually going on, the first analysis the paper performed showed how, in the case of COPAN, Open Innovation affected business model evolution. In this case exploiting internal medical, scientific and engineering expertise as opening up to new external contributions led the company to get into clinical, pharmaceutical, industrial and forensics field, developing new profitable businesses. Comparing the evolution of the three selected technologies using a longitudinal perspective the features of the related business models (in terms of set of activities, as well as resources and capabilities to perform them within the firm, or through cooperation with partners, suppliers or customers) emerged. This should shed a light on the main drivers of the business model evolution, including Open Innovation approach.

Key contributions

The paper integrates two different research streams, i.e. Open Innovation and Business Model, illustrating a case of firm operating in B2B. In particular, the study contributes to the debate on Business Model by investigating how firms in B2B design and implement an Open Business Model in order to acquire and transfer external knowledge flows to develop innovative technological solutions and, thus, improve firm performances. The paper offers some valuable managerial implications for firms in B2B. Specifically, the

case study analysis introduces an interesting example of a firm that is oriented to change its business model assuming an open perspective. In addition, the study underlines the importance for B2B firms to clearly identify their key resources, partners and activities both within and beyond their organizational boundaries.

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Study of the Innovation Ecosystem and Marketing of Zhongguancun Science Park

Chien Wen Yu.

Aim of the Study and Introduction:

The aim of the study is to analyze the innovation ecosystem and marketing case of Zhongguancun Science Park, and to offer recommendations. The period from December 1977 to December 2017 comprises the forty years of China's Opening and Economic Reform. During these forty years, China has rapidly developed from an agrarian economy to an industrial economy. The country has now become the second economic power in the world after the United States. In 1978, scientists and engineers from research institutes and universities in Zhongguancun followed the call of the China Science Congress initiated by Chinese leader Deng Xiaoping, by starting their privately owned businesses. This phenomenon was called "Going to Sea," during which Zhongguancun Electronic Products Street was created in the 1980s. At that time, Zhongguancun had no eye-catching sights except a cluster of university campuses and a lot of farmland. The name of Zhongguancun is translated as "Zhongguan Village." In 2009, Zhongguancun Science Park was officially approved by the China State Council and strategically positioned as China's 1st National Innovation Demonstration Zone. After almost twenty years of development supported by the Beijing Government and China Central Government, Zhongguancun National Innovation Demonstration Zone has expanded to 88 square kilometers and 16 science/technology parks in Greater Beijing. Following close behind Silicon Valley in the United States, it is currently ranked as the second biggest entrepreneurship and innovation hub in the world.

Zhongguancun's entrepreneurship and innovation ecosystem is characterized by the concentration of the top Chinese universities, research institutes and incubators in the

area. There are 41 top universities, such as Tsinghua University, Peking University, and Renmin University; 206 national academies and institutes, including China Academy of Science and China Academy of Engineering; 122 national-level labs and research institutes; and 60 science parks for universities and students returning from overseas. There are also 97 startup incubators and accelerators that have partnerships with such firms as Microsoft, ARM, Plug & Play, and Trendline.

Zhongguancun's innovation marketing model is to attract students and talents from overseas to Zhongguancun Science Park. According to the report and statistics compiled by Zhongguancun Development Group (ZDG), since January 2001 ZDG has organized numerous overseas talents delegations to Zhongguancun to draw professionals from overseas to China and to establish startup companies in the Science Park. Many high-tech companies have successfully found their homes in Zhongguancun, including 65 unicorn firms such as Lenovo, Baidu, Tencent, Xiaomi, 163.com, Meituan-Dianping, Didi-Kuaidi, Sina.net, and Netease. These 65 unicorn firms represent half of the total number of Chinese unicorn firms, and 3 of them exceed 10 billion USD in estimated value. There are currently more than 37,000 foreign citizens and Chinese with overseas experience working in Zhongguancun, including 1,188 top overseas Chinese scientists recruited by the "Thousand Elite" project. The number and size of the unicorn firms ranks only second to Silicon Valley. Zhongguancun's innovation marketing strategy is not only to be an operator but also an investor in different incubators and science/technology parks connected to the Science Park. Zhongguancun represents 40% of the Chinese angle and early equity investments and 75% of newly-listed firms funded by venture capital/private equity in China. Zhongguancun Development Group, a semi-government organization, has invested more than 4.2 billion USD in 1,553 projects. The output value of the firms in which ZDG has invested is over 28.5 billion USD. ZDG is involved in 97 funds

totaling 10 billion USD. Zhongguancun's innovation marketing is intended to localize and globalize the Science Park, by connecting with incubators and accelerators in Beijing, China and elsewhere in the world. The Science Park has a number of cooperation projects with 20 cities and regions in China. Internationally, the Science Park has established Zhongguancun-Germany Sci-Tec Innovation Center and Zhongguancun Silicon Valley Innovation Center. Soon enough, Zhongguancun Boston Innovation Hub will open too.

Methodology, Research Questions and Theoretical Background:

The unique innovation ecosystem and marketing model have made Zhongguancun Science Park successful and fast-growing. With the recent "Mass Entrepreneurship and Innovation" campaign launched by the Chinese government, Zhongguancun Science Park is growing even faster. Is Zhongguancun Science Park on the right track to build the innovation ecosystem? Should Zhongguancun Science Park keep on using the government-led top-down marketing approach for innovation and entrepreneurship or adopt a private business driven bottom-up approach? This paper attempts to study the Chinese innovation and entrepreneurship environment and Zhongguancun's case with SWOT analysis and Blue Ocean Strategy analysis and to offer constructive suggestions. Through a review of the literature and site visits to incubators and science parks, I compare different innovation ecosystems and marketing models and recommend the appropriate ones for Zhongguancun. The Triple Helix Theory and Model would apply to the analysis of the case.

Findings in Progress and Contributions:

The present Chinese government's support and investment in innovation and entrepreneurship look strong and effective in the short run. Zhongguancun Science Park

may become the #1 innovation and entrepreneurship hub in the world in terms of size and importance in the next 5-10 years, because of the mass population and economy of scale. However, it will be hard for Zhongguancun to surpass Silicon Valley in terms of generating the top entrepreneurial talents, products and companies in the world. The best innovation ecosystem and marketing models are private business driven and bottom-up in the long run and not government-led and top-down. This paper will contribute to the study of an innovation and entrepreneurship ecosystems and marketing models.

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Value and barriers from knowledge enabled technologies for firms. A study of spanish enterprises

Jon Charterina, Jon Barrutia, Jon Mikel Zabala.

Keywords:

Knowledge Enabled Technology, Patents, Barriers of Entry, Absorptive capacity

Purpose / Aim of this study:

The basic aim of this research is to gauge the difficulties and potential of intellectual property that is based on Key Enabled Technologies (KET hereafter), as elements of value that firms seek to use and exploit. Additionally, we seek to find out to what extent is firms' absorptive capacity, their size and age of these firms an influencing in the ownership of these advancements. Finally, the study seeks to find whether these antecedent and consequent factors vary within each type of KET.

Research problem:

According to the European Commission (2014), micro/nanoelectronics, photonics, advanced materials, industrial biotechnology, advanced manufacturing technologies and nanotechnology are considered the six KETs that “underpin the shift to a greener economy, are instrumental in modernising Europe’s industrial base, and drive the development of entirely new industries.”¹

Technology transfer and the role knowledge associated with it is a key element for the development of innovations. In the context of KETs the transfer of technology and its associated knowledge base has potentially a high impact on businesses and industries from countries, since KETs are cross-cutting technologies that can be transferred to a multitude of companies with different technological levels, belonging to different sectors. KETs are characterized to be knowledge intensive technologies, of a high R & D level, reliant of fast innovation cycles, and requiring high capital expenditure and highly qualified (i.e. a trained-towards-research) staff. By nature, KETs are multidisciplinary, cutting across other fields or technological solutions, with a tendency to converge and integrate. In short, these are technologies allowing a wide variety of applications in the form of innovative products or processes. They feed and create value in many industrial value chains and sectors in a heterogeneous way; from materials, equipment or devices, to products and services. They are key to the modernization of the industrial base and conductors for the creation of new companies.

According to Genrich Altshuller (2007), technologies tend to evolve in a series of stepwise improvements and changes, up to becoming mature and then entering obsolescence. Technologies that still are in their infancy tend to engender more radical innovations and innovative products, whereas those in a mature stage bring a lower number of innovations (Scalia et. al. 2017, p. 62). Nevertheless, radicalness of innovations does not necessary equate to innovation value. Innovations that are valuable for firms do not always origin from the adoption of nascent technologies. Assuming the contrary is known as *recency bias*, that is, an adverse vision of old knowledge and hence, an undervaluation of potential benefits from these mature technologies (Katila, 2002, as cited from Petruzzelli et.al. 2018). In fact, there is consensus on the existence of an inverted ‘U’-shaped form between maturity and innovation value (Petruzzelli et.al.2018). As KETs in essence are relatively nascent or new technologies, here is a need for finding out if newness of an owned technology gives way to success.

¹ https://ec.europa.eu/growth/industry/policy/key-enabling-technologies_en

Notwithstanding these ideas, an added difficulty from KITs is that transfer of knowledge based on these advancements is relatively difficult and uncertain. First, from a generic perspective and in the specific case of the particular technological advancement, the forefront scientific nature of KETs entail barriers of entry especially for small and medium-sized (SME) firms, and firms with low R&D capabilities. Secondly, companies need to have a focused, critical knowledge base and high learning capabilities within specific fields (Cohen and Levinthal 1989, 1990) in order to acquire, develop and exploit successfully KET-based advancements. Finally, it is plausible to assume that the ease to find resources and capabilities available in the region or place, if possible, at arm's-length (Dyer & Singh 1998), constitute a significant element.

In this context, we aim to distinguish success in the access and use of KETs for firms depending on the degree of development of infrastructural factors for the specific KET, the firm's own R&D capabilities, firm size and firm's age.

Empirical study:

For the purpose of this research, evidence of firm's success in the exploitation of KETs is to be seen in a set of basic features to be seen from assigned patents from the US Patent Trade Office (USPTO). The dependent variables are proxies of the value of patents: (1) the number of patents where a firm appears as assignee, and (2) the number of forward citations within each patent.

Independent variables are two sub-groups: Firstly, variables to be found in the patent, such as (1) the type of KET as acknowledged from the patent class, (2) the patent scope, measured as the number of three digit patent classes, and (3) the time elapsed since filing the patent to present time, as a measure of its newness. Secondly, there is a number of independent to be found in the environment of the located firm, especially its coincidence of nationality research centres figuring as assignees or from researchers figuring as inventors. Finally, a series of moderating effects are considered, such as company size in the number of employees, for those patent expedients that hold a firm (private, public-limited, or co-operative companies), or a research centre among those from a list of commissioned research centres known to act as providers of R&D services for known firms. The geographic context area the study comprises is firms and research centres headquartered in Spain. Finally, the time context area is ten years into past from present time (year 2018).

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The Assessment of a TBL Dominant Logic in Sustainable Business Practices

Nils M. Høgevoid, Göran Svensson, Rocio Rodríguez, David Eriksson.

INTRODUCTION

The research objective is to examine to what extent that a selection of economic, social and environmental factors are taken into corporate consideration in sustainable business practices and related efforts.

This study aims to characterize a triple-bottom-line (TBL) dominant logic (Svensson et al., 2016), based on a longitudinal case study. It also aims to assess the importance of each economic, social and environmental factor in connection with the case company's sustainable business practices and related efforts.

THEORETICAL FRAMEWORK

Sustainability could be considered a young concept. This idea comes from the proliferation of CSR and sustainability research in the last years of the current century (Aguiniz and Glavas, 2012; Fassin and Rossem, 2009). However, there are many seminal works about sustainability published in the 20th century, such as Elkington (1997) who introduced the TBL in the sustainability context.

Long time ago, sustainability focused on environmental problems. The paper by Evelyn (1662) has been considered the first text about environmental sustainability. Meanwhile, the social aspect had to wait until 1900s, when several authors turned their attention to the social element (e.g. Bowen, 1953; Carroll, 1974).

The TBL is predominant in sustainability research (Milne and Gray, 2014, Svensson et al., 2016). The elements of the TBL are frequently represented as intertwined (ICLEI, 1996; Barton, 2000), with the same importance or priority. However, different perspectives can give different specific weight to each element (social, economic or environmental).

Some studies have focused on the priority of TBL-elements in business (Høgevoll et al., 2014). Nevertheless, it is important to consider the organizational effort in each TBL-element and the sustainability initiatives that surround each one.

METHODOLOGY

This case study was based on a longitudinal approach of a Scandinavian manufacturer. The company is one of the most recognized companies in Scandinavia for their initiatives and achievements of sustainable business practices and related efforts.

An inductive approach has been applied in this case study. The aim of the case study was to learn to what extent economic, social and environmental factors are taken into corporate consideration in sustainable business practices and related efforts. A multi-dimensional framework of a TBL-dominant logic in connection with sustainable business practices, developed by Svensson *et al.* (2016), structure the emergent themes and was used in the interviews with the informants.

RESULTS

The empirical findings indicate that the framework of a TBL dominant logic (Svensson et al., 2016) is relevant in assessing to what extent economic, social and environmental

factors are taken into consideration in a company's sustainable business practices and related efforts.

This study shows that the most important economic factors considered nowadays, in connection with sustainable business practices in the studied company, turned out to be profitability, competitiveness, brand value, finances and reporting. Further, this study shows that the most important social factors considered in the studied company are the longevity of perspective, commitment, dedication and corporate reputation. Finally, the most important environmental factors are the corporate footprint, the natural environment, climate change and global warming.

IMPLICATIONS

An implication is that the framework of a TBL dominant logic for business sustainability by Svensson et al. (2016) applied here may guide the corporate assessment of their efforts to plan, implement and follow-up sustainable business practices.

The framework also offers a foundation and insights into a set of economic, social and environmental factors that are not claimed to be exhaustive, but factors that may be considered as more or less important to a company that engage in sustainable business practices.

CONCLUSIONS AND PROPOSALS

This study contributes to characterize a TBL-dominant logic through a longitudinal case study, the considerations from a role model company in connection with business sustainability. It also contributes to assess the importance of each economic, social and

environmental factor in connection with the case company's sustainable business practices and related efforts, all of which has been rarely done in previous studies.

A limitation of this study is that it is a single case study. However, the longitudinality of the study adds unique insights and is relatively rare. Another limitation is the focus on a predetermined selection of economic, social and environmental factors in connection with sustainable business practices.

Nevertheless, these limitations provide opportunities for further research. An evident one is to examine the relevance of the economic, social and environmental factors assessed in this study based on other similar (e.g. in the same industry) or different companies (e.g. in other industries such as service companies). Another suggestion for the future is to explore the relevance and importance of other economic, social and environmental factors.

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Customer engagement and value co-creation in Professional Service Firms: a Service Dominant Logic perspective

Montserrat Diaz-Mendez, María José Quero, Michael Saren.

Introduction – Customer engagement in service has been hailed as a key element to enable value co-creation since it is widely accepted that customers are active resource integrators to the service system (Vargo and Lusch, 2008, 2016). Customer engagement also refers to the extent to which customers get involved in a service (Brodie et al. 2013; Jaakkola and Alexander, 2014) in its different stages (previously, during and after the service encounter). It can be found in the literature under different labels such as customer involvement (e.g. Lagrosen, 2005; Ida, 2017) and customer participation (Dabholkar, 1990; Dong and Sivakumar, 2017). This fact can give rise to certain confusion and for that some authors have looked into it in an attempt to unify terminology (Brodie et al, 2011; Dong and Sivakumar, 2017). Regardless the lexicon disparity there is the reality that customer has an active role in the value co-creation process and to the effects of this work we will refer to this customer active participation as customer engagement.

Value co-creation was dealt in the literature prior to the seminal article of Vargo and Lusch (2004) which launched the Service Dominant Logic approach, SDL, (e.g. Normann and Ramírez, 1993; Hirvonen and Helander, 2001) but SDL redefined the value co-creation concept which in its new perspective affects not only the customer or the firm but also all participants in the service system (Gummesson, 2006; Barile and Polese, 2011; Jaakkola and Alexander, 2014; Vargo and Lusch, 2016). The value co-creation is a well-established concept in the literature (e.g. Gummesson, 2008; Grönroos and Ravald, 2011; Mele and Polese, 2011; Frow et al., 2014) which practitioners from different fields are increasingly embracing in their strategies in recent years. The concept of customer

engagement is intrinsically linked to the value co-creation approach but the relation between the two (drivers, resources and outcomes) is conditioned by factors such as the type of industry and cultural values (Atakan et al., 2014). This brings up the need to understand the principal traits and dynamics of this theoretical concepts relationship. For this reason, it is of great value to examine different service fields to contribute to theory generation in the domain of these to concepts. In this paper we deal with customer engagement role in the value co-creation process in the context of complex service systems of professional service firms (PSF) in the business to business (b2b) market.

The value co-creation approach has traditionally been the natural management strategy for this type of service due to its particular characteristics (Díaz-Méndez and Saren, 2018; Hughes and Vafeas, 2014): we understand professional service as “one that is predominantly intellectual consisting of analysis, advice, opinion and action performed by a professional or a team who hold appropriate qualifications” (Díaz-Méndez and Saren, 2018). These services feature a high degree of customization and perceived risk, asymmetrical information due to the intellectual component of the service, a strong relational component and the difficulty for the customer to assess the value of the service even in retrospect (Gummesson, 1981; Lapierre, 1997; Thankor and Kumar, 2000; Nätti and Ojasalo, 2008; Aarikka-Stenroos, et al., 2009; Díaz-Méndez and Saren, 2018). These characteristics describe a highly complex service and justify examining professional services as for gathering theoretical and managerial insights from the value co-creation best practices and main obstacles.

Purpose – The purpose of this work is to explore the role and characteristics of customer engagement in value co-creation process in the b2b professional service firms context so as to contribute to theory generation and enhance business performance.

Design/Methodology/approach – By drawing on previous research on customer engagement and value co-creation in professional service firms we carry out a profound and rigorous literature review for insights into (a) the role, resources and behaviours customers can contribute, and into (b) firms scope to manage these factors in a mutually beneficial way.

Findings – Through this work we propose that, in the dyad customer-PSF, the process of value co-creation is to a great extent influenced by the customer side according to the resources they afford and their attitude towards the PSF. Different types of clients and behaviours are identified. Perceptions and expectations management and negotiating styles arise as key management elements to promote customer engagement on the firm side.

Research limitations– As this paper is of a theoretical nature and states the basis for further research it would contribute to theory generation the empirical implementation of our findings to different professional service contexts.

Practical implications– A description of different types of clients and customers behaviours will help PSF managers to enhance their value co-creation strategies.

Originality– Hitherto there are no studies dealing with the relationship between these two theoretical perspectives approached globally from the view of SDL.

Key words: professional service firms, value co-creation, customer engagement, service dominant logic, b2b.

Paper type – Conceptual paper

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An exploration of value-in-use of big data technology: a B2B agricultural perspective

Priyanka Jayashankar, Wesley J. Johnston, Sree Nilakanta, Reed Burres, Qui Song.

Introduction

In recent times, farmers have begun finding ways to make more informed crop management decisions and meet specific consumer needs by leveraging big data technology (Estes, 2016).

Arguably, farmers are not only differentiating themselves based on operand resources, but also operant resources, whereby they leverage knowledge generated through big data technology to cope better with competition. This resonates with the service dominant logic, which posits that operand and operant resources do not have value unless customers use them to co-create value (Vargo & Lusch, 2004 and Sandstrom et al, 2006.) Hence, we consider big data technology in agriculture as a ripe context for discussing monetary and non-monetary dimensions of value-in-use and co-creation. The purpose of our qualitative study is to discuss farmers' value-in-use of B2B technology and also link value-in-use with relational processes, ownership and co-creation.

Literature review

The usage of smart, connected products, especially in digital agriculture, gives rise to a new set of strategic choices of how value is co-created with customers and how B2B relationships are defined (Prahalad and Ramaswamy, 2004 and Porter and Heppelman, 2014) and also how data ownership is defined (Tukker & Tischner, 2006). We discuss how farmers can evaluate value-in-use of big data technology based on economic considerations (Lemmink et al, 1998 and Lindgreen & Wynstra, 2005), which include higher yield and cost-savings. Value-in-use for farmers can be of an epistemic nature,

whereby technology products satisfy the need for knowledge (Sweeney & Soutar, 2001) and also of an environmental nature, through which big data technology tools help farmers to enhance their ecological stewardship (Harmon et al, 2010). We build on the work of relationship marketing scholars and Vargo and Lusch (2004) to explore the links between relational processes and value-in-use. As interactions with customers are integral to marketing (Vargo and Lusch, 2004), we discuss the relationship between sub-themes such as networks actors, trust in technology providers and ties with sales personnel and farmers' perceptions of value-in-use.

Research

methodology

To gain deeper insight into value-in-use and interactional processes, we conducted semi-structured interviews with ten farmers. We had a purposive sampling technique, whereby interview participants were selected based on salient criteria such as the primary focus on crops, their location in the Midwest as well as their access to big data technology (Spencer et al, 2003). Our sample size of 10 farmers was in line with requirements for an exploratory, qualitative studies in a B2B context (Kuzel, 2006 & Boujena et al, 2009.) We used a thematic content analysis methodology to fulfill our research objectives of identifying the key components of value-in-use of big data technology as well as the relational processes that impact value-in-use. We organized our qualitative data into thematic sub-themes pertaining to our research questions.

Discussion of results

The nvivo analysis indicated that farmers were extremely focused on the monetary value-in-use of the big data technology. At the same time, there was a reasonable emphasis on environmental and epistemic value-in-use. Our analysis brought to light the role of sales force in strengthening customer relationships. Trust in ATPs emerged as an important sub-theme in our analysis with farmers linking trust with specific technology providers.

One of our interviewees complained about giving away too much of data to the ATPs. Online communities and other network actors like families and neighbors to some extent played a role in impacting farmers' decisions. Farmers also alluded to the value of data ownership. Co-creation seemed relevant to farmers, with a woman farmer describing how she played a role in helping customize the seating in her tractor. We developed a cognitive map to determine the relationships between the sub-themes:

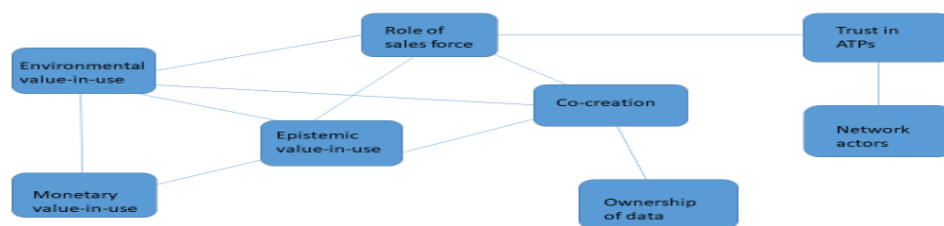


Figure 1: Cognitive map of concepts linked to value-in-use

The cognitive map pointed to linkages between diverse forms of value-in-use. This implied that farmers could derive monetary, environmental and epistemic value-in-use simultaneously through big data technology. Interestingly, customer relationship with sales force and the process of co-creation had a more direct relationship environmental and epistemic value-in-use. On the other hand, trust in agriculture technology providers was more indirectly linked to value-in-use due to the intervention of sales personnel. Co-creation was directly linked with environmental and epistemic value, the role of sales force in fostering customer relationships and data ownership.

Implications

Our study is novel in that it provides a holistic perspective of both monetary and non-monetary value-in-use. As farmers are drawn to epistemic value-in-use, we posit that farmers can differentiate themselves and gain a competitive advantage based on how well

they deploy operant resources. We build on the service dominant logic by highlighting how co-creation is entwined with value-in-use and customer relationships. Our results indicated that local sales representatives had a more pivotal role in enhancing value-in-use and co-creation. Thus, we suggest further research on how B2B sales relationships can help foster co-creation, enhance value-in-use and trust in ATPs, and also help mitigate clients' concerns about policy issues such as data privacy and ownership.

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Mapping Value in Business Markets: An Integrative Framework

Michael Kleinaltenkamp, Andreas Eggert, Vishal Kashyap.

Marketing scholars and practitioners agree that value is one of the most important, if not the central concept of the discipline as reflected in the American Marketing Association's definition of marketing as "the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have *value* for customers, clients, partners, and society at large" (AMA 2013, emphasis added). In a general sense, value is a "customer's perceived preference for, and evaluation of, those product attributes, attribute performances, and consequences that arise from use and that facilitate, or block, the customers in achieving their goals and purposes in use" (Woodruff 1997, p. 142).

Despite its fundamental importance, there is still a lack of clarity regarding the conceptualization of value in business-to-business markets (Eggert, Ulaga, Payne & Frow 2018). Over the last two decades, various conceptualizations and corresponding measurement approaches have been proposed that attempt to grasp value (or at least part of it) in business markets. While several literature reviews have summarized extant value research (Ellegaard, Medlin, & Geersbro, 2014; Lepak, Smith, & Taylor 2007; Lindgreen, Hingley, Grant, & Morgan 2012; Lindgreen and Wynstra, 2005; Priem, 2007; Sánchez-Fernández & Iniesta-Bonillo, 2007; Sánchez-Fernández, et al., 2009), there remains "a general feeling among academics and practitioners [that] suggests we have only just begun to understand what 'value' means" (Lindgreen 2012, p. 4).

To unravel some of the confusion regarding the value concept in the business-to-business marketing literature we propose an integrative framework that comprehensively captures the various conceptualizations of value in business markets and shows who they

relate to each other. The framework builds on the following basic assumptions. Throughout the history of economic thought, value has been conceptualized from many different angles. The most fundamental distinction that can be made is objective versus subjective conceptualizations of value. Within the marketing discipline, value is inherently regarded as actor- and context specific and therefore always of subjective nature. Adopting a subjective perspective of value, we can further distinguish different conceptualizations according to the value referent (i.e., customers' or suppliers' value perceptions), the value beneficiary (i.e., collective versus individual value perceptions) and the moment when value is perceived (i.e., expected, experienced, and relationship value). Table 1 combines the latter three criteria and proposes an integrative framework of value conceptualizations in business markets.

Insert Table 1 here

Besides clarifying the relation between the various value concepts, the integrative framework builds a foundation to identify gaps in the value literature that deserve future research attention. Moreover, for practitioners, the framework identifies key areas they need to focus on for creating superior value with their customers.

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Value creation with augmented reality in an industrial context

Gulnar Nussipova, Nishant Kumar, Fredrik Nordin.

Background

Augmented reality (AR) emerges as a paradigm shifting technology for information visualization and interaction - and potentially the next big computing platform (Goldman Sachs, 2016). AR has been deployed *inter alia* in law-enforcement, healthcare, logistics, navigation, and education. Studies showed benefits to firms and users in cultural heritage tourism (Han et al., 2014) enhancing visitor tourism experience; educational value, improving learning and student motivation (Liu and Chu, 2010). While the consumer benefits of AR are beginning to crystallize in literature and practice, AR is expected to allow companies to create value for themselves and their customers. Firms like Coca-Cola, Ikea, Sephora, and Ferrari incorporated AR into marketing and innovation strategies (Augment. 2018). The significance of AR in business contexts is less established but there are nevertheless some notable examples. Boeing demonstrated a 25% productivity gain using AR in its harness assembly operations. GE Healthcare reported 32% productivity and 46% order completion enhancements (Annunziata and Abraham, 2017). DHL reported 15% productivity improvement and higher accuracy rates by using AR glasses. Hao and Helo (2017) studied how AR users in a cloud manufacturing context improved productivity and engagement. AR business uses lead Microsoft to target its HoloLens headset at businesses and aim to establish the AR enterprise standard. Google Glass is being redeveloped for enterprises. Nakanishi et al. (2007) found other benefits - an AR manual for wiring lead to a 15% time reduction with fewer errors. Researchers found that AR for architectural design work improved spatial cognition, design communication and

design information sharing (Wang et al., 2008). Thomas and Sandor (2009) demonstrated improved working processes with wearable AR used by workers. Dini and Mura (2015) found that aviation, industrial plant and automotive are some major areas where AR has application in maintenance. The above examples suggest that modern technologies, like AR, are transforming business models, the way firms perform, interact with customers, and impact companies' value propositions. The potential of AR for value creation is likely to grow as companies explore more opportunities and move beyond pilot applications. Some 53% of companies reported AR/VR pilot projects or projects underway (Deloitte, 2018). There is an ever-increasing need for better understanding the way AR technologies could create value in the business process.

Research Problem

Researchers long emphasized the importance of technology on the ways value can be created effectively (e.g. Vargo et al., 2008). In marketing literature interest in AR's impact on value creation in contexts of tourism, museums, retailing, e-commerce and others is growing. AR could improve customer relationships by creating value for customers e.g., by enhancing usefulness, ease of use, service excellence, and playfulness (Huang and Liao, 2015). Firms employ AR to assist customers with a service that should create value. Lu and Smith (2007) reported that AR in online shopping provided informational value to customers. Likewise, researchers posit that co-creation via AR potentially reduces perceived risk and creates deeper customer engagement (Zhao and Dholakia, 2009). Studies suggest that AR will change the way companies "design and create products, serve customers, train employees, and manage their value chains". A key focus of AR is on human-computer interaction, where the goal is to combine machine capabilities and human strengths to improve productivity and value creation (Porter and

Heppelmann, 2017). Thus, AR could help humans enhance their own capabilities, with implications for product development where it can enhance employee performance, improve final outcomes, reduce modelling costs and cut time to market. Given its importance in value creation it is imperative to understand what kind of value can be developed and retrieved from AR technology in a business context and how. Azuma defined AR as combining real and virtual environments while being both properly aligned and interactive in real time. Therefore, a user's perceived value of AR can be studied through its basic characteristics, such as virtuality, interactivity and co-existence. As researcher suggests that "value does not exist before it is created in the usage process". Thus, it would be logical to study value of AR in practice. A thorough understanding of everyday practices has to be at the core for developing a customer-centric offering based on a service logic. Accordingly, the main research questions of the study are:

- How does the company use AR technology to create value?
- What kind of value can be created by using AR?
- Where is the value created? (in which sphere)

Research Method

The study's empirical setting is to study the use of smart glasses in the design of cars, accelerating car development process. This setting is relevant, as AR for the product design and development process is oft - overlooked (Regenbrecht et al., 2005) and requires greater accuracy for tracking and registration (Nee et al., 2012). A content analysis, observations, and interviews with users were the methods for collecting data.

Expected contributions

This study aims to contribute to our knowledge of the role of AR in value creation within a business context. This study will also impact practitioners and serve as grounds for

further research on value creation potential of AR technologies employed for design. The study will offer a framework for understanding value creation via AR in the design, with its potential implications for productivity and performance of the industrial users, such as affecting the process of design and collaboration, reducing time and R&D costs.

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Can Artificial Neural Network Models be Used to Improve the Analysis of B2B Marketing Research Data?

Dale Wilson, Harriette Bettis-Outland.

Introduction. The analysis of quantitative data stemming from B2B marketing research projects is often quite challenging. Each project has its unique features, and the marketing researcher's analytical skill set is required so that the data are analyzed in an optimal way and thus the maximum output can be gleaned from each project. The quality of the outcome of the research, the theoretical contributions, and the managerial interpretation and actions of B2B marketing research depend upon the researcher's ability to use the most appropriate data analysis techniques for each project undertaken. Unless the best possible data analysis techniques are utilized, the accuracy and implications of any research project may be in jeopardy.

In this paper, the authors present an argument for the potential use of *artificial neural networks (ANN) models*, sometimes referred to as simply *neural network (NN) models*, as a potential technique for the analysis of B2B marketing research data instead of other more popular linear modeling approaches. The rationale for this argument lies partly in the efficacy of the technique itself and partly in the unique characteristics of many quantitative B2B data samples. Recent advances in both ANN data analysis procedures and ANN software have made these models especially accessible and attractive since they were first investigated in a B2B marketing article over 20 years ago by Fish, Barnes, and Aiken (1995), who used hypothetical data from a textbook and non-B2B demographic data in their empirical test. The current study is designed to provide an updated empirical assessment of the ANN modeling approach by comparing it to more traditional predictive models that are typically used in B2B marketing research. The most

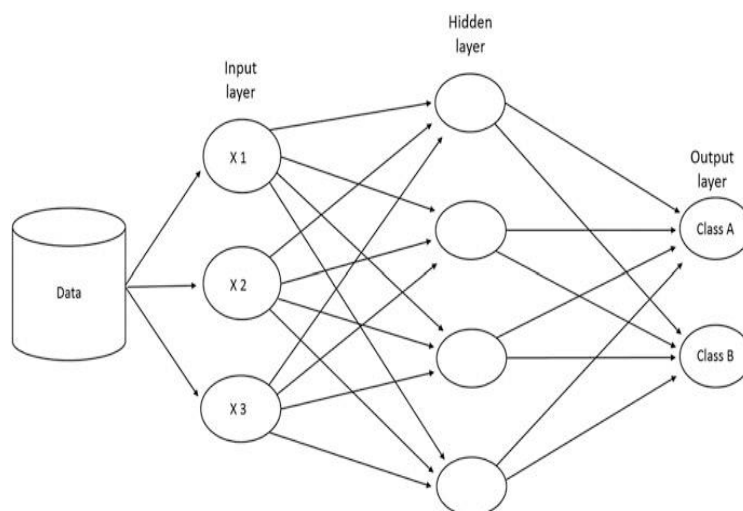
recent ANN modeling procedures and software are utilized, and three realistic B2B data sets are included in the empirical test.

The Business-to-Business Data Analysis Challenge. In B2B marketing research, quite a number of studies use traditional linear predictive models as a way to determine the statistical relationships between a dependent variable and a set of independent variables. In the case of metric dependent variables, multiple regression models are commonly used. See, for example, B2B marketing applications by Bettis-Outland, Johnston, and Wilson, (2012) and Yim, Forman, and Kwak (2013) among many others. Likewise, logistic regression models are often used when the dependent variable is non-metric (articles by Crispeels, Jurgen, and Brugman, 2015 and Freel, Robson, and Jack, 2014 serve as B2B marketing examples). But, because these traditional types of models have structured linear relationships and require large sample sizes to be used properly, the question is: Are there better methods that B2B marketing researchers could employ to enhance their results? The authors of this paper believe that other types of models, particularly ANN models, may be insightful in B2B marketing research as they have been in other academic areas, including other areas of marketing (see Paliwal and Kumar, 2009).

B2B marketing researchers understand that B2B research has some unique characteristics that often distinguish it from B2C marketing research. In many cases, B2B customer bases are small to begin with (Srinivasan, 2012) and response rates are sometime low (Rindfleisch and Antia, 2012). The combination of these two factors can have a major impact on B2B research and may result in smaller sample sizes than would be desired. For example, Wilson (1985) persuasively discussed the impact of the small sample size problem on theory building in academic B2B research. As a result of small sample sizes, data from B2B research may not meet the sample size requirements and

statistical assumptions associated with multiple regression-type modeling approaches. Furthermore, relationships among variables may be non-linear; and there may be interactions among the independent variables that go undetected because of the use of linear multiple regression-type models. Artificial neural network models may be useful in resolving these issues and may be appealing for B2B marketing applications as they have been in other areas of academia. Other applications that are closely related to B2B marketing where ANN models have been found to be superior are discussed as well, such as Thieme, Song, and Calantone (2000). Therefore, it seems logical to assume that ANN models may be quite applicable in B2B marketing research situations. But, an updated empirical test is needed for confirmation of this expectation.

Applying ANN models. This section focuses on a description of the ANN model and how the model components work together to find flexible, non-linear solutions to modeling situations. The following diagram of the typical ANN model is useful in explaining the various components of the ANN model and how model parameters are estimated (Wendler and Gröttrup, 2016, p. 845):



The Empirical Research. The methods used in the empirical research approach will be presented: (1) competing models are tested – results from the ANN model will be directly compared to results from multiple regression and logistic regression models; (2) the software used to generate the models and its specific features; (3) the three data sets used in the empirical test; and (4) the evaluation criteria used to assess the outcome of the results of the empirical test.

The empirical results of the model comparison will be presented. Discussion of the results will be emphasized, and the implications for future B2B marketing research will be offered.

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Digital Technology Impact on B2B Customer Engagement and Relationship Development

Lucille Pointer, Ralph Kauffman.

Keywords: Customer engagement, buyer-supplier relationship development, digital technology, strategy development

Purpose – One of the apparent effects of digital technology is the shortening of the time line of engagement and relationship development in B2B buyer-supplier interactions. This is occurring because digital technology has made more information available to both parties and has enabled extremely fast access to that information. The result is, at least to some extent, the collapsing or combining of elements of B2B customer engagement and buyer-seller relationship development into one overall process. The overriding purpose of this paper is to identify and highlight the strategic implications of these developments. Therefore, this paper has two related sub-purposes. The first is to propose a combined model of the B2B customer engagement and buyer-supplier relationship development processes. The second purpose is, using the combined model, develop propositions of expected impacts of digital technology on the combined process, and draw implications for buyer and seller management of the effects of digital technology on management strategies for customer engagement and buyer-seller relationship development.

Design/Methodology/Approach – From the literature, recent models of customer engagement and buyer-supplier relationship development processes are selected. Key variables in both processes are identified and their roles discussed. Interrelationships of the two processes are analyzed and a combined model of the processes is proposed. Digital technology as it applies or may apply to the B2B engagement/relationship

processes is reviewed. Using the proposed combined process model as a framework, existing and likely areas are identified where digital technology does/may impact these processes. Propositions are developed for where and in what manner digital technology is likely to impact the overall process. The propositions are compared to results of recent empirical research in academic literature and elsewhere pertaining to digital technology as it applies to B2B buyer-seller processes. Conclusions and recommendations are formed for marketing and procurement management strategy development in response to the existing/expected digital impacts.

Findings – There are/will be multiple impacts of digital technology on B2B customer engagement and buyer-supplier relationship development. The impacts affect the processes in multiple areas and time frames and there are/will be both positive and negative effects from these impacts. These effects will necessitate altered or new management strategies on the part of both seller and buyer managements.

Research Implications/Limitations – This paper is an initial attempt to develop a theoretical model of the combined B2B customer engagement/buyer-seller relationship development process. The proposed model is intended as a framework for additional research into B2B customer engagement and buyer-supplier relationship development. The proposed model can also be used as a starting point for additional conceptual research and empirical research of customer engagement and buyer-seller relationship development as these processes apply and develop over time throughout the life of a particular buyer-seller dyad.

Management Implications – As the application of digital technology to business in general and in particular to buyer-seller relationships, information is needed by managements on both sides of the buying-selling table. This paper outlines some of the

issues that are/will be faced in efficiently and effectively managing the impacts of digital technology on B2B buying and selling processes and relationships.

Contributions of the Paper – Development of a conceptual model of combined customer engagement/buyer-supplier relationship development processes. Identification of potential impacts and their effects on these processes. Proposals of strategic reactions by managements in response to the posited effects of digital technology on the processes.

The adoption of big data by managers of information technology companies in Spain

José Ramón Saura, Pedro Palos-Sánchez, Alicia Blanco.

As data permeates and drives the digital evolution, the role of Big Data becomes increasingly essential. Big Data is making its presence known in almost every industry, and has the potential to not only transform the business world, but society at large.

Following Ochieng (2015) research we could say that “Big Data refers to data sets whose size is beyond the ability of typical database software tools to capture, store, manage, and analyse”. The definition of Big data varies from sector to sector and the industry depending on the capabilities of the organization managing the data set and the applications being used to process and analyze the data set (Manyika et al., 2011). For example, hundreds of gigabytes of data may be considered to be Big data in one organization whereas in another organization Big data may be tens or hundreds of terabytes. In the marketing context, Big data refers to the ability to gather large volumes of data, often from multiple sources, and use it to produce new kinds of observations, measurements and predictions about individual customers (Council of Economic Advisors, USA, 2015).

Also, it is relevant to note that The IDC (2015) research forecasts that Big data market is growing over 23.01% per year during 2014-2019 period with annual spending reaching 48.6 billion in 2019. Moreover, Gartner (2015) research updates on Big data suggested that "more than three-quarters of companies are investing or planning to invest in Big data in the next two years".

Research such as Manyika et al. (2011), Gartner (2015), Ochieng (2015) and Brock and Khan (2017) show the interest of academics in this field.

The rise of Big data has led to a huge focus on exploring how companies can harness information to gain a competitive advantage. This study focusses on corporate executives and business managers who want to leverage their information assets to gain a comprehensive understanding of markets, customers, products, distribution locations, competitors or employees in IT Companies in Spain.

Additionally, we have reviewed studies such as those conducted by de Wixom, et al. (2014), Ochieng (2015) and Brock and Khan (2017) in which the acceptance of Big Data in the executive management of companies is analyzed. Consequently, the main objective of this research is to measure the influence of Big Data through the TAM (Technology Acceptant Model) Model by executives of IT companies in Spain.

Research questions and objectives

In this sense, we consider important to discover whether or not the executives of the IT companies in Spain accept the adoption of Big data as a technology that can help them improve the company's results.

Many studies have been undertaken on the adoption of new technology and the studies suggest that technology usually appears as a continuous and a slow process (Hall and Khan 2002). Technology adoption is considered to be the determinants of the success or failure of a product or technology. Technology Acceptance Model (TAM) theory has been developed by Fred D. Davis (1986) as part of his doctoral dissertation at MIT Sloan

School of Management. With the Technology Acceptance Model (TAM), Davis (1989) seeks to explain the relationship between the acceptance and adoption of technology and, subsequently, the intention to use it (Autry et al., 2010). TAM Model proposes and demonstrates empirically that Perception of Utility (PU) and Perception of Ease of Use (PFU) are the most critical factors in the process of adopting technology and using systems (Au and Zafar, 2008; Chen; and Tan, 2004). TAM can be considered as a special case of ART in which Perceived Utility and Perceived Ease of Use are considered "beliefs and evaluation" that lead to attitude, which in turn leads to the Intention to Use, and finally to real Behavior (Cheung and Vogel, 2013; Joo and Sang, 2013; Son et al., 2012). Consequently, TAM comprises two beliefs, the Perceived Utilities and the Perceived Ease of Application, which determine attitudes to adopt new technologies. The Attitude toward adoption will decide about the adopter's positive or negative behavior in the future concerning new technology. TAM suggests that when users are presented with a new technology, a number of factors determine their decision about how and when they will use it (Joo and Sang, 2013).

Methodology

The objective of this research is to identify and examine determinants in the adoption of Big data technology by executives of IT companies in Spain. The research starts addressing the research questions by carrying out a review of literature related to technology and innovation adoption. Based on the presented literature, a TAM (Technology Acceptant Model) Model was developed which allows the investigation of technological and organizational that affect the adoption of Big data technology by executives of IT companies in Spain.

A questionnaire was prepared to assess the proposed model aimed at IT companies in Spain. All these firms are characterized by using IT as a main factor or as the company strategy for selling their products and services. The items in the questionnaire were based on a review of previous studies on technology adoption. All constructs were measured using a 5-point Likert scale from 1 (“strongly disagree”) to 5 (“strongly agree”). The questionnaire was piloted in 150 IT companies in Spain thanks to their agreement with the Spanish Companies IT Association AMETIC (N=5000). This Association brings together a representative number of IT sector organizations in Spain. These companies are considered the most important in the country. A final number of 96 questionnaires were obtained from September 2017 to February 2018. The contrast of the hypotheses associated with the conceptual model of this research was carried out with the Partial Least Squares (PLS) technique. It is a method especially recommended when the objective is to predict and investigate relatively new phenomena (Chin & Newsted, 1999). The proposed hypotheses were the following:

H1. Perceived Ease of Use has a positive effect on Perceived Usefulness of Big Data.

H2. Perceived Ease of Use has a positive effect on attitudes to Big Data.

H3. Perceived Usefulness has a positive effect on attitudes to Big Data.

H4. Perceived Usefulness has a positive effect on the intention to use Big Data.

H5. Attitudes has a positive effect on the intention to use Big Data.

H6. Privacy has a positive effect on attitudes to Big Data.

H7. Organizational size has a positive effect on attitudes of Big Data.

Main findings

The results obtained seem to confirm the influence of the central variables of the TAM Model: perception of utility and ease of use. Both variables present a significant influence on the Attitude towards Big Data, which means that in order to get more organizations to adopt and use Big Data, Solution providers must offer a discount of products and services based on ease of use and utility. Another finding focuses on the importance of privacy and how it influences the perception of usefulness.

Key contributions

Companies in the IT sector perceive that it is necessary to make a greater effort to adapt Big Data Solutions to the company needs. In addition, they do not perceive its use so easily and do not find solutions or answers to their needs. The size of the organization and the concern for privacy seem to be key in the adoption of Big Data.

Winning the heart of the customer and others will follow

Danielle de Boer, Nelleke de Boer, Frederik Situmeang, Rob Loke

Introduction

With this study we continue the research on the effects of customer and experts reviews on the success of products. Thereby we focus on how these insights apply to different kinds of industries, in B2C, but also in B2B where 52% of buyers report that online reviews are must-haves on websites (Huff Industrial Marketing, KoMarketing, & BuyerZon, 2015). However, not many research has focused on the influence of reviews on the success of brand extensions. Therefore, we particularly investigate how expert and customer reviews of an original product influence expert and customer reviews and the performance of a product extension.

Theoretical Framework

Positive expert and customer reviews of past products extensions have a positive effect on the success of a new product extension (Situmeang, Leenders, & Wijnberg, 2014). This can be the result of a carry-over effect from the parent product to the extension (Sood & Drèze, 2006). Previous studies have not taken into account that reviews by experts and customers might contradict each other and they overlook the influence of this contradiction on the success of a product extension. In this research we hypothesize that as the lack of consensus rises between experts and customers, there will be more attention given to the product extension:

H1: *Lack of consensus between expert and customer reviews of past editions in a series have a positive effect on the success of a product extension.*

To better explain this phenomenon, we will investigate how a lack of consensus between experts and customers influence how customers perceive the product extension. Borrowing arguments from marketing literature, an individual would become more

defensive in their opinions and believes when their views are attacked by an external entity (Ahluwalia, Burnkrant, & Rao Unnava, 2000). Therefore, we hypothesize:

H2: *When there is a lack of consensus between expert reviewers and customer reviewers, customers become more positive, in a series of a product extension.*

It is questionable whether the response of experts to the lack of consensus and the growing attention is similar to the response of customers. Experts should be independent professionals, but also have problems with their intrinsic motives and have fear of losing importance to their audience (Bickart & Schindler, 2001; Situmeang, Leenders, & Wijnberg, 2014). Also, to some extent subjective norms can pressure the small group of experts to conform their opinions to that of the mass, the customers (Azjen, 1991). Therefore, for experts we expect:

H3: *When there is a lack of consensus between (negative) expert reviewers and (positive) customer reviewers, experts become more positive, in series of a product extension.*

Method

To test the relationships between reviews and the success of a product extension, expert reviews, customer reviews and review scores were acquired from Metacritic.com. Sales data was obtained from boxofficemojo.com and was amended with the natural logarithm. It was normalized by the inflation correction factor. Our database consists of 234 movie extension titles released from 2000 to 2017, including 6,713 expert reviews and 27,164 customer reviews.

Results

A path model analysis in AMOS (version 25) was used to test the hypotheses (see Table 1).

In model 1 we investigate how sales from the brand extension differ from the sales of the

original product and how they can be predicted from the lack of consensus between experts and customers evaluations of the original product. The fit of the first model is adequate ($\chi^2 = .462$, $p = .497$, RMSEA = .021 ; CFI = .972). The results of this model indicate that a lack of consensus has no direct effect on the difference in sales between the original product and the product extension ($\beta = .068$, $p = .300$). However, there is a positive effect of the lack of consensus between expert and customer original product evaluation scores on the customer evaluation score of the product extension ($\beta = .182$, $p < .005$), and in turn customer reviews have a positive effect on the success of the product extension ($\beta = .158$, $p < .05$). Therefore, we find confirmation for H1. In addition, we also observe a positive effect of the lack of consensus on the expert evaluation score of the product extension ($\beta = .117$, $p = .072$). Therefore, we confirm H3.

The second model explains the mechanism behind the relationship between the lack of consensus and the change in customer evaluation scores. Here we use the difference between the customer evaluation score of the original product and the customer evaluation score of the brand extension. This model also has a good fit ($\chi^2 = .044$, $p = .834$, RMSEA = .029; CFI = .997). The results of this model show that the lack of consensus between experts and customers has a significant and negative effect on the difference between customer evaluation scores of the original product and the customer evaluation scores of the extension ($\beta = -.363$, $p < .001$). This indicates that as the gap between experts and customers opinions becomes wider, customers are less likely to change their opinion. Combining these findings with the positive effect a lack of consensus has on the customer evaluation score, as found in model 1, we can fully confirm H2.

Table 1
Path model analysis report

	AMOS	
	β	Sig.
<i>Simple effects model 1</i>		
Lack of Consensus → Customer Evaluation Score	.182	.003
Lack of Consensus → Expert Evaluation Score	.117	.072
Customer Evaluation Score → Success of Product Extension	.158	.026
Lack of Consensus → Success of Product Extension	.068	.300
<i>Simple effect model 2</i>		
Lack of Consensus → Change Customer Evaluation Score	-.363	<.001

Sig. levels are two tailed.

Discussion

The findings of this study indicate that customer reviews might be more important than found in previous research. The current study attempts to broaden this field of work and opens the discussion on how businesses can effectively utilize reviews in their marketing strategies. These first findings indicate that the focus should rather be on creating loyal and committed customers, because they will defend your brand or product and are less likely to be persuaded to negativity, than on experts who are not as endogenous as they appear to be. Therefore we conclude, win the hearts of the audience and critics will follow.

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Impact of social power on trust, agent dependence, affective commitment and environmental munificence: An emerging country context

Sushant Kumar, Pradip Sadarangani.

Aim of the study

Human's thirst for power has always been the center point of study among researchers since many decades. The most obvious reason for extensive research in this field is to understand and control the behavior of different members. To align the channel members' goal with the objective of organizations a stronger power position is usually required. The aim of paper is to understand the impact of social power sources on the behavior of channel members. Trust, agent dependence, affective commitment and environmental munificence are examined with relation to sources of social power. These behavioral dimensions are less researched topic especially in emerging country context.

Research questions and Objectives

The study addresses the question of impact that social power sources have on channel member behavior. In emerging countries such as India, the power balance is in a dynamic and dyadic relationship which constantly seeks a re-evaluation of social power position (Rehme, et al., 2016). In a single distribution channel, dealer dependence is usually high to gain a competitive advantage. This paper explores the possible relationship between agent dependence and sources of social power. Environmental munificence, an important element for sustained growth (Goll and Rasheed, 2005), is never empirically examined with relation to social power. In this study, the paper examines the role of environmental munificence and five types of sources of social power. Another important element for sustained growth, affective commitment, is examined in this study. Finally, the present paper explores the possible relationship between trust and sources of social power in the Indian context.

Theoretical background

Five sources of social power namely reward, coercive, expert, referent, and legitimate power are classified by French and Raven (1959). It is very likely that firm and channel members have incompatible goals, and a different understanding of reality, which gives rise to conflict. In a single distribution channel, every member seeks to maximize the cooperation and coordination from another member. It will lead to the direct or indirect application of the power by members.

Definitions of trust means that a party has belief that it can rely on the other party to the exchange in case of any need. Although businesses based fairly on trust has been categorized as risky (Carson, Madhok, & Wu, 2006), trust-based relationship offers an opportunity for leveraging the resources necessary for achieving a competitive advantage (Bijlsma-Frankema and Costa, 2005). In the context of a distribution channel, the trust could be related to the expectation of judicious distribution of resources by channel leader along with the advice and guidance. This suggests that power and trust can act together to provide an opportunity to address some of the risks and uncertainties in a distribution channel.

Frazier (1983) indicates that level of dependence of channel members on channel leader determines their relationship and their overall performance. The greater the level of investment by channel leader to maintain the relationship the greater will be the dependence of other members on channel leader (El-Ansary and Stern, 1972). Extant literature suggests a contrasting result for dependence and firm agreement. However, Kale (1986) indicates that agent dependence is positively related to measuring of channel leader's attributed power.

The literature on affective commitment indicates a positive association with organizational and its member's performance along with improvement in organizational

effectiveness. High level of affective commitment leads to more loyal organizational members thereby, more attachment to the organization and fewer chances of leaving the organization (Brunetto, et al., 2012). Allen and Mayer (1990) indicate that the organization acknowledges the importance of members' contribution by trusting their decision-making ability in work related to organizational goals.

Environmental munificence refers to the scarcity or the abundance of critical resources required by firms which are operating in an environment (Castrogiovanni, 1991). When there is an abundance of resource, organizations can pursue their goals and look for building relationships for long-term growth. In contrast, when there is a scarcity of resources, organization intensifies the competition, adversely affecting the profitability and causing changes in organizational and member's characteristics. There are limited studied examining the empirical relationship between power and environmental munificence.

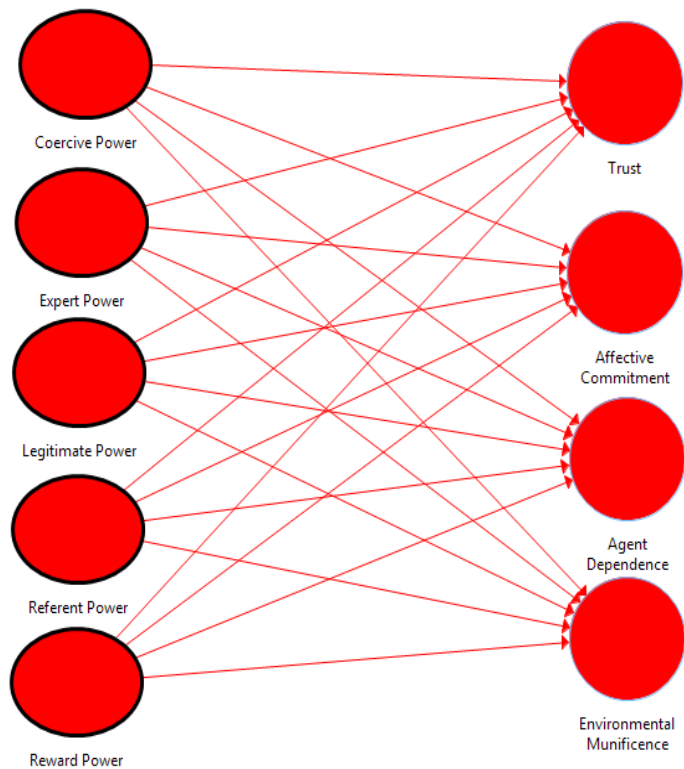


Figure 1 Researcher's Model

Methodology

Following the approach of previous studies, this study collects the filled responses from dealers of a single distribution channel. 110 responses were collected over a period of 12 months out of which 100 is valid which is sufficient for analysis using structural equation modeling

(Diamantopoulos, 1994). All the research instruments are derived from AMA's marketing scale handbook.

Main findings (or expected/preliminary findings for the cases of work in progress)

The study is yet to complete the full analysis. However, the preliminary findings indicate that the dichotomous nature of social power categorized as coercive and non-coercive power exists in context of emerging economy. The paper also establishes that the power sources are independent of each other. Except for trust, the coercive power sources are found to have no relation with the affective commitment, agent dependence, and environmental munificence. Whereas the non-coercive power sources can influence all four behavioral dimensions.

Key contributions

The study contributes to literature by studying the impact of social power on channel members with respect to trust, agent dependence, environmental munificence, and affective commitment. These behavioral dimensions are less examined in context of emerging country context. This study has several practical implications.

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Framing Past and Present Efforts and Priorities of Sustainability Initiatives

Rocío Rodríguez, Goran Svensson, Nils M. Høgevold, David Eriksson.

Høgevold and Svensson (2016) and Høgevold *et al.* (2014) identify multiple organizational directions to assess the organizational efforts and priorities of sustainability initiatives through time. This study combines and applies their developed frameworks in the service-oriented industry of health care organizations, focusing on both private and public hospitals.

The research objective is to assess past and present efforts and priorities of sustainability initiatives. It is also to compare the organizational direction through time between private and public health care organizations.

This study aims to offer a foundation to understand past and present organizational efforts and priorities of sustainability initiatives. In doing so, it seeks to provide an empirical foundation for the organizational direction of sustainability initiatives through time, as well as to reveal similarities and differences between private and public sectors.

THEORETICAL FRAMEWORK

Is not easy to find a consolidated definition of sustainability in previous research. For clarifying the concept, many authors use the Brundtland report that define sustainable development as “...*development which meets the needs of the present without compromising the ability of future generations to meet their own needs...*” (WCED, 1987, p. 3).

There are some previous studies which try to guide companies implementing sustainability with success, (Figge *et al.*, 2002; Kaplan and Norton, 1992). Some organizational directions about the priorities and efforts of sustainability over time have been identified by Høgevold et al. (2014). Some of them are: environmental actions tend to go from basic to complex actions, organizations go from internal sustainability actions to external ones, at the beginning sustainability actions are related with costs and follow oriented to values. In the past, the reasons for implementing sustainability were intuitive and turned to conscious reasons. Høgevold and Svensson (2016, p. 722) identify the trend of additional organizational directions as follows: “...appear to have been initiated with limited perspectives that developed progressively to become more extensive. In the same way, the initial intrinsic values have developed to become more extrinsic, as well as developing from an inside approach to an outside one. Furthermore, it also appears that the short-term orientations, general solutions and reactive actions have developed to become long-term, specific and proactive, as well as entailing changed organisational structures.”

METHOD

An inductive approach has been used to gather data in this study. This study has been conducted in one industry, overcoming contextual bias (Hartline and Jones, 1996), targeting both public and private hospitals in Spain. This research design allowed to control for potential interference of other industries.

A judgmental sampling was used in the hospital industry to select the organizations. (e.g. Fischhoff and Bar-Hillel, 1982). Informants were also identified and selected based on

their knowledge about their organizations' sustainability initiatives in the past and in the present.

Fifteen areas in the past and fifteen in the present were assessed in the interviews with each informant. The framework of assessment was based on the findings of organizational direction through time reported by Høgevold and Svensson (2016) and Høgevold *et al.* (2014).

FINDINGS

There is a positive evolution in general across the studied hospitals in terms of their awareness of sustainability, while the investment in initiatives and actions vary between them. Further, the sustainability concept is nowadays defined and seen as important to the hospitals.

The reasons to adopt sustainability initiatives and actions in the private hospitals have evolved from the past to become more related to a business strategy. However, it applies to some extent to the public ones too, although with different objectives. The concept of quality is closely related the concept of sustainability in the studied hospitals.

Finally, the hospitals nowadays involve more staff members in sustainability initiatives and actions. The hospitals believe that sustainability must be involved in daily and ongoing activities of the hospital, though they have not been able to fully implement it yet.

IMPLICATIONS

An implication based on this study is that the areas identified by Høgevold and Svensson (2016) and Høgevold *et al.* (2014) to assess the organizational direction of sustainability initiatives through time has enabled us to characterize past and present efforts and priorities of sustainability initiatives in Spanish health care organizations.

The assessment of past and present efforts and priorities of sustainability initiatives in this study indicates the existence of different organizational directions through time in the studied Spanish health care organizations.

CONCLUDING THOUGHTS

Subsequently, the organizational direction through time, in the studied private and public hospitals, turns out to increased, unchanged and decreased sustainability initiatives. The organizational direction through time from the past to the present into the future depends on several revealed determinants.

The positive and negative gaps between past and present efforts of sustainability initiatives and related actions stress the necessity to establish a continuous process of monitoring in combination with a top-down planning and implementation, and a bottom-up control and feedback.

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Method for designing sustainable business models for ceramic tiles manufacturers based on life cycle approach

*Fernando Enrique Garcia-Muiña, Davide Settembre-Blundo, Consuelo Mugoni, Cristina Siligardi Sonia
Medina-Salgado, Lucrezia Volpi, Anna Maria Ferrari.*

AIM OF THE STUDY

The aim of the study is to design a simple operational tool for embedding the sustainability into the business strategy developing a new business model. It is therefore necessary a unified vision that integrates social, environmental and economic aspects of corporate strategy using a unique framework and with this project we will try to propose a solution to bridge the sustainability divide between companies with high and low culture of sustainability that it is reflected in economic and financial performance. The solution to integrate the sustainability in the business strategy, is designed for the ceramic industry, but the same framework can also be applied to other industrial sectors.

RESEARCH QUESTIONS AND OBJECTIVES

How to practically integrate the principles of sustainability into management practice and thus adapt the business model to this new vision, is the theme developed in this research. The concept of Sustainable Business Models (SBMs) will be applied in this study, through the adoption of a model to assess the environmental impact (Life Cycle Assessment - LCA), economic impact (Life Cycle Costing - LCC) and social impact (Social Life Cycle Assessment – S-LCA), from the choice of raw materials to the design and manufacturing of the finished product which will be integrated into Enterprise Resource Planning (ERP) and associated with an Information Lifecycle Management System (ILM) process and an advanced software for the Multivariate Data Analysis (MVA).

THEORETICAL BACKGROUND

The implementation of sustainability policies requires the development of increasingly refined tools for quantitative and qualitative analysis of environmental, economic and social impacts associated with collective and individual choices, both with more limited and more complex medium and long-term effects (Fülöp et al., 2015). Life cycle approach can be a suitable tool for this purpose, because through a mathematical model, it describes the set of business solutions that integrate in decision-making processes (Evans et al., 2017). The goal is to support the company's decision-making processes with a greater awareness of the potential consequences, in terms of cost and impact, on the environment and human health related to alternative design and production methods, which take place at stages ranging from the extraction of raw materials to waste disposal (Testa et al., 2011). For the creation of benchmarking of sustainability performance measurement, literature is rich in approaches based on the study of aggregated sector data (Egilmez et al., 2014; Mohammadi et al., 2015), and industrial districts (Daddi et al., 2017). Industrial districts have characteristics of socioeconomic complexity, as they are networks of companies that mainly see the participation of small and medium-sized firms, as well as other social and economic agents, organized in communities that are geographically, historically and culturally well defined (Becattini, 1987). An industrial district is considered to be a geographical area in which a product of the local culture becomes an industrial product, and auxiliary and complementary enterprises that facilitate production and marketing grow spontaneously around its production (Santagata, 2002). Industrial districts play an important social and economic role in the Italian industrial organization (Sforzi et al., 2015). In the industrial district there is a localized main industry, and this has the characteristics of a non-hierarchical manufacturing production system: small and

medium-sized enterprises and their corresponding manufacturing specialization prevail (Bellandi, 2006).

DESIGN AND METHODOLOGY

The method to be followed is based both on exploratory conceptual research to clarify and define the nature of the problem, based on documentary sources of information gathered, and empirical data obtained from aggregate sectorial data and analysis of specific case studies (Italy's biggest ceramic manufacturers) in order to validate the sustainable operational tool. In this research, a Life Cycle Assessment (LCA), Life Cycle Costing (LCC) and Social Life Cycle Assessment (SLCA) was carried out considering historical series of environmental, production and sales data. The LCA/LCC/SLCA framework according to the ISO14040/14044, ISO 15686 and Unep/Setac guidelines was respectively used.

EXPECTED FINDINGS

The research aims at reaching the following tangible and quantifiable outcomes:

1. Stochastic programming model for sustainable decision support systems. With regard to the Italian ceramic sector, the methodologies for impact assessment based on the life cycle approach, are currently mainly applied to the entire productive district based on the aggregated data of energy consumption and atmospheric emissions. Our sustainable design model can allow the ceramics producer to integrate the variables of sustainability (environmental, economic and social) in their business model, with a potential reduction of the sustainability divide of at least 10%.
2. ERP sustainable module, integrated with strategic design tool (ILM+MVA) and impacts dynamic assessment tool (LCA+LCC+S-LCA). Thanks to economies of

learning due to the implementation of the dynamic model of the impact assessment, we expect an improvement of the environmental, economic, and social performance of 30-40% compared to the current production.

3. Simplified and dynamic tool for LCA+LCC+S-LCA assessment and ILM+MVA strategic design. This simple and innovative tool will allow to reduce by 90% the environmental impact assessment costs, allowing among other things to include social and economic variables in the business models that are normally difficult to determine quantitatively.

KEY CONTRIBUTIONS

The research is aimed at developing a simplified impact assessment system, which can be easily interfaced with the ERP system for business management. Thanks to this tool it will be possible to integrate the principles of sustainability into company practice and design a sustainable business plans. This research covers the lack of connection between the conceptualization and theoretical design of a business models and managerial practice that requires effective and easy-to-use operational tools.

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Keywords: Sustainability; Sustainable Business Models, Life Cycle Framework, Italian Industrial District; Ceramic Tiles Industry.

Topic: Sustainability

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The role of state programs in supporting entrepreneurship in industry transformation

Ignat Kulkov, Magnus Hellstrom, Kim Wikstrom.

Aims of the study

Our study is devoted to the analysis of state support programs for entrepreneurship in the field of life science. We chose five life science accelerators from European countries where the state pays attention to the development of this area of the economy (Denmark, Finland, Sweden, Germany, and Holland). The business models of life science accelerators are explored and opportunities for the development of entrepreneurship support programs are offered.

Research questions

1. What is the difference between life science accelerators and accelerators from other industries?
2. What is the contribution of the life science accelerator to the development of the industry?

Theoretical background

The main characteristics of the business model are value creation and capturing (Amit and Zott, 2001). Moreover, it is a broad component of business and management study (Amit and Zott, 2009; Zott et al., 2011), and it offers business models as the framework of interrelated actions that extend beyond the company (Hellström et al., 2015). The business model considers the methods of value creation and transition of this value into revenues (Teece, 2010). Value creation is a benefit that a client acquires from the supplier. Moreover, it is the will of a client to receive a product or service. Clients want to obtain results if their value exceeds the price. A company captures value or generates profit when its expenses are less than its income (Matzler et al., 2013). An innovative business model

suggests a permanent creation and value development for the client and an extra or alternative revenue model, which contributes to the development of companies and the whole ecosystem.

Methods

The research is based on five life science business accelerators in Denmark, Finland, Sweden, Germany, and Holland. These countries prioritize the life science industry in their economies (Sandström, 2014; Ernst&Young, 2013; Ernst&Young, 2014). We consider a case study as a method to investigate the real problem in the current environment (Yin, 2003). In addition, we used the qualitative analysis from Tracy (2010) to answer the research questions: interviews with start-ups that participated in life science accelerators, meetings with mentors and advisors, and analysis of other state programs for business development.

Main findings

1. State resources play a significant role for the business model of the life science accelerator. The hunting of batch participants is conducted using the same method as in other industries. However, the role of the business accelerator is shifted to development and transformation of the business ecosystem, but not the growth of a single start-up.
2. The method of collaboration with mentors and advisors in life science accelerators differs from other industrial accelerators. A business model innovation in life science accelerators is based on creating components of a closed advising system based on the alumni of these accelerators.
3. The role of life science incubators is much less important in the focal ecosystem. The common regional incubators assume the role of the launch pad for the nascent entrepreneurs. In combination with a well-prepared labor force, pharma, and big

bio business, it gives the opportunity for the creation and development of start-ups.

Key contributions

1. We studied characteristics of life science accelerators that unite and differentiate them from other forms of entrepreneurship support. By studying these parameters, we provided a theoretical basis for determining the factors that influence the transformation of the ecosystem.
2. By following different stages of life science accelerator development, we proposed new options for accelerators' evolution that could increase the value of the ecosystem and add attractiveness to existing and new participants.
3. A new methodology for selecting participants for the life science accelerators was developed and tested. The majority of nascent entrepreneurs are not able to evaluate various support programs. Participation in non-optimal programs reduces value and takes time for start-ups.

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Online platform business models for value co-creation within a digital entrepreneurial ecosystem in B2B settings

Julio Cuc, Mario Paredes, Rafael Ventura.

Purpose

The fast-paced business environment and the digital economy demand more innovative, and competitive business models, especially for start-ups that want to grow fast in the market, and achieve a strong competitive position compared to their competitors (Magretta, 2002). The digital economy has changed the way to create, deliver and capture value (Osterwalder & Pigneur, 2010) transforming the traditional business model to a new digital business model (Schwab, 2016). Nowadays, one of the most popular digital business models is the online platform, since the boom of the e-commerce most firms are adopting emerging technologies in order to remain competitive in the market, and adapt their business models to match demand and supply by providing e-commerce marketplace (OECD, 2017). IT serves as a mechanism between firms that enables interactions for value co-creation (Grover and Kohli, 2012) and for attracting investment.

Grounded in the Service-Dominant Logic of Marketing literature (e.g. Vargo and Lusch, 2004; 2008; 2016) and the nascent field of digital entrepreneurial ecosystem (e.g. Sussan and Acs, 2017) the purpose of this paper is to provide a conceptual framework for a digital ecosystem that allows the value co-creation process among investor holdings and start-ups, by identifying key characteristics, elements, and factors that make an online platform-based business model a successful marketplace for companies in B2B settings.

Design/methodology/approach

This study employs a content analysis of the Spanish startups and global investor's data and information contained in the website, blog and social media of the platform *Funderbeam.com*², analyzing the companies and investor profiles, their relationship, interactions and benefits within the value co-creation process.

A sample of start-ups and investors was selected according to the following criteria: First, it was selected the Spanish start-ups that operate within IT and e-commerce industry which according to the *Global Funding Report 2017* published by *Funderbeam*, are the industries that have increased their funding in Europe in the last two years, and it shows a growth trend for the next years. Then, it was selected only those companies that have been disclosed funded in the last three years at least for one investor. Then, homogenous groups were identified for its categorization and analysis (Krippendorff, 2004; Flick, 2002) into a co-creation framework.

Findings

The paper presents a conceptual framework to illustrate an online platform market for the process of value co-creation within a digital ecosystem, describing the role, resources and processes of each actor involved in a digital entrepreneurship ecosystem, stressing the importance of the resources provided by the network such as: the platform, the supply and demand-side and the financial information as an input for decision-making.

² An interactive site that promotes start-ups from all over the world, providing fundraising campaigns, and liquidity opportunities through trading, as well as data intelligence for the analysis of start-ups in terms of disclosed funding, funding probability, valuation estimate, business model, lifecycle stage, and demographic characteristics such as name, description, founded year, industry, locations, and number of employees.

The website *Funderbeam.com* serves as the engagement platform which enables co-creation interactions among actors to generate mutual value (Ramaswamy 2011). In online environments this type of business is acknowledged as “matchmakers”, which are companies that help other businesses to find each other and interact for mutual benefits (Sussan and Acs 2017).

Practical implications

This article provides strategies for entrepreneurs to identify the key factors that they should take into account for attracting more funding to their start-ups, and for the investors to evaluate the best investment possibilities according to the information available and business interests. The paper demonstrates how an online platform market enables and supports the co-creation of value reducing the transaction-cost between entrepreneurs and investors.

For the nature of the service provided (i.e. financial investments), this study highlights the importance of the e-service quality of the engagement-platform (i.e. information quality, efficiency, reliability, etc) which plays a key role in the process. For investors, this is one of the key features of the platform, as is stated by an investor “*Startup data is messy. Funderbeam cleans it up and plugs the gaps. Watch out, Bloomberg!*”.

Combining online and offline interactions among the actors may be effective. For instance, it is described *Funderbeam* participation in the #WebSummit2016 (the largest tech conference in the world), celebrated in Lisbon, Portugal, as part of their strategies to connect with more partners and bring resources to the digital ecosystem.

Originality/Value: This paper presents an innovative approach for the study of digital entrepreneurial ecosystem considering the startup-investor interactions for the co-creation of value through the use of engagement platforms. The paper contributes the literature of new digital business models for value co-creation and for another type of external funding resources.

Keywords: value co-creation, digital ecosystems, entrepreneurship, start-ups, business models, online platform markets

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Organizational capabilities and innovation in Industrial Marketing: How well are we prepared to face future challenges? Case applied to B2B sector in Chile

Leslier Valenzuela, Natacha Peñaloza Briones.

Introduction

The Economic Commission for Latin America and the Caribbean (ECLAC) foresees regional economies to have a more favorable international context during 2018, while also stressing the need for the diversification of productive structure to one with a larger added value that successfully incorporates technology and knowledge so as to be sustainable in the long term (ECLAC, 2017). In that sense, the role of Industrial Marketing (B2B) is to create solid innovation strategies and sustainable competitive advantages (Schmidt, Sarangee & Montoya, 2009). Even so, the most common innovation strategy in Chile remains to be the acquisition of equipment (58.9%), much more so than strategy development and innovation in management (Ministerio de Economía, Fomento y Turismo, 2017).

Therefore, the general objective of this investigation is to explore organizational capability variables more commonly associated with innovation in marketing. The main contributions are: 1) A proposal of a concept model with valid and reliable variables; 2) a measurable index of levels of innovation capability; and 3) empirical evidence regarding the B2B sector in Chile. Thus, this work will provide a diagnosis of innovation projects in order to guide future investigations and organizational developments.

1.1.1 Theoretical Framework

1.1.2 Innovation requires the combination of different types of knowledge, capabilities and resources (Fagerberg, 2004). In fact, organizational innovation capabilities have a direct influence in the development of sustainable strategies, generate competitive advantages and facilitate success in the market (Teece, 2007). In particular, an organization's capacity to innovate, is a proven and demonstrated skill to overcome any circumstance as a result of the interaction between its level of market orientation, collaborative networks, the way projects are developed and the environment in which the firm acts, as seen on Table 1.

Table 1. Variables and Model Hypothesis

Variable	Definition	Item	Hypothesis
Project Development	Ability to make decisions about the resources to allocate in order for the main actions to be developed, where the effectiveness will be influenced by such decisions and their objectives (Reid & De Brentani, 2004).	Project Management 5 sub-items Innovation Strategy 4 sub-items	HB1: Marketing innovation declared results greatly depend on project management capability
Collaboration	Ability to collaborate inter-organizationally, share risks, resources and competences, unify skills, joint solution, co-creation of value and others. (Vargo & Lusch, 2010).	Client Relations 3 sub-items Other Agent Relations 3 sub-items	HB2: Marketing innovation declared results greatly depend on greater collaboration
Market Orientation	Market detection capacity, better reception of ideas, use of information, and linkage that leads to superior performance (Im & Workman 2004).	4 sub-items	HB3: Marketing innovation declared results greatly depend on market orientation

Source: Own elaboration

1.1.3 Methodology

1.1.4 An exploratory factor analysis has been established as a systematic method to analyze literature; as well as a confirmatory analysis; and a measuring index. The analysis method has been proposed by Becheikh et al. (2006). The data collection method used was a self-administered online poll and Likert scale that took place between November 2016 and February 2017 in Chile. The sample was of 242 people, mostly in managerial positions (56.2%) in the Iron and Steel Industry (15.7%), Distribution (15.3%), Mining (14.9%), Financial (14%) and Agroindustry (12.8%). In order to measure organizational innovation capability the next index (1) was built.

$$(1) \text{ Innovation Capabilities} = \frac{\sum_{j=1}^3 \frac{p_j \cdot (\sum_{i=1}^m x_{ij})}{m}}{3}$$

1.1.5 Where x_{ij} is the score of the i item in the j dimension; m being the number of items; p the weighing of the item; n the number of sub-scales. Given this, the maximum average weighing is 9.3.

1.1.6 Results

1.1.7 A confirmatory and exploratory analysis using AMOS was done in order to have access to the properties of latent variables. The relation of variables can be observed with a 99% of confidence, KMO over 0.6, goodness of fit of data ($\chi^2=735,673$, $p<0,001$, IFI=0,83, CFI=0,823, NFI=0,8, TLI=0,8, PNFI=0,670), reliability (AVE=0,613; IVE=0,980) and discriminant validity with a 95% of reliability. Also, the AMOS structural equations model, proves the hypothesis ($\beta_1=0,92$; $\beta_2=0,843$; $\beta_3=0,869$; $p<0,01$). In addition, the index (Table 2) reveals an average evaluation of 5, meaning, a level of development of 57% of capabilities. Furthermore, Collaboration is measured as the least perfected capability and Project Development the most developed. Mining sector presents the best evaluation, while agroindustry the lowest, followed by the Finance sector.

1.1.8 Table 2. Organizational Innovation Capability Index.

Industry Sector	Project Development	Collaboration	Market Orientation	Weighted Average	Achievement % *
Mining	6,9	6,1	7	5,7	61%
Iron and Steel	6,5	5,8	6,9	5,5	59%
Distribution	6,5	5,5	6,5	5,3	57%
Finance	5,6	6,3	6,2	5,1	54%
Agroindustry	6,7	5	5,3	4,9	52%
Other	6,9	5,9	6,7	5,5	60%
Average	6,5	5,8	6,4	5,3	57%
Standard Deviation	0,48	0,46	0,63	0,31	0,03

1.1.9 Source: Own elaboration.

1.1.10 Conclusions

1.1.11 This study highlights the role that market orientation, collaboration and strategic project management have as characteristics of significant, positive impact in organizational capabilities to reconfigure its assets and compete in current business, whether in emergent or well established industries.

1.1.12 Mining sector has the best results in every variable. This is most glaring when we consider innovation in long term strategic planning. On the other hand, Agroindustry scored the lowest in organizational innovation capabilities, closely followed by the Financial Sector. Regarding variables, collaboration is the worst scored variable, as well as the least impactful. It is also interesting to observe how companies have better results in items relating client networks as compared to other agents, this shows a short term perspective. The small sample size should be considered a limitation to this study, also some industry sectors are not represented, it is focused on the central area of Chile and it's declarative of a supply perspective, where analyzed answers are marked by the opinions of polled executives. Given all the former, it should be a matter of investigation if these results are similar in other regions and industry sectors.

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Coopetition: A fundamental feature of entrepreneurial firms' collaborative dynamics

Helen McGrath, Thomas O'Toole, Louise Canning.

Introduction

While coopetitive relationships are central to numerous aspects of the entrepreneurial process (Jack, 2010), we know surprisingly little regarding coopetition in an entrepreneurial context (Bengtsson & Johansson, 2014; Tidström, 2014). Entrepreneurs cooperate to access external resource constellations (Ciabuschi et al., 2012; Perna & Snehota, 2012) yet desire to realise their business aspirations free from the influence of others (DeCarlo & Lyons, 1979; Birley & Westhead, 1994). Given these conflicting cooperative and competitive logics, we pose the following question: Is coopetition a fundamental feature of the collaborative dynamics in entrepreneurial ventures? To answer this question, we put forward and empirically examine a conceptualization of entrepreneurial coopetition adopting a business network and interaction approach (Håkansson, 1982; Håkansson & Snehota, 1995).

Conceptualisation of entrepreneurial coopetition

We define entrepreneurial coopetition as “entrepreneurial involvement in simultaneous cooperative and competitive interactions with business network actors within a relational environment”. In doing so we propose three central characteristics and related levels of analysis, which explicate the uniqueness of the entrepreneurial context: *entrepreneurial coopetitive mindset* and *entrepreneurial coopetitive interactions* within, or influenced by, the *wider network environment*. Entrepreneurial coopetitive mindset refers to the relational preferences and choices of the entrepreneurial actor in coopetition. Entrepreneurial coopetitive interactions entail the entrepreneurs’ actions within their

business relationships and networks. The network environment, central to studies within the industrial marketing tradition, highlights that every entrepreneurial firm is created within a wider network environment that can significantly contribute to coopetition logics within collaboration dynamics.

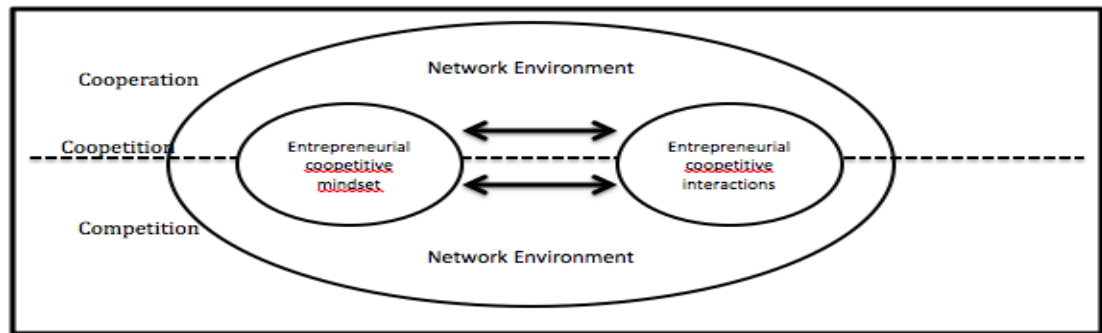


Figure 1: Conceptualising entrepreneurial coopetition

Methodological Outline

To develop understanding of the collaborative dynamics in entrepreneurial ventures, we position our investigation in the context of the micro-brewing industry in Georgia, USA. Not only does this allow us to examine coopetition in a non-European setting, but it also extends understanding by exploring the phenomena in a relatively low technology sector. This latter point is important given that thus far, understanding of coopetition is based on data drawn principally from high technology industries (see for example, Bengtsson & Johansson, 2014; Raza-Ullah et al., 2014). We use an abductive case study approach drawing from multiple data sources in order to understand coopetition in relation to seventeen micro-brewery businesses in Georgia. We use this data to analyse patterns of business-to-business interactions, including events and activities, to gauge the pervasiveness of coopetition in entrepreneurial business relationships and networks.

Findings and Discussion

In an overall sense, our findings show that coopetition is a fundamental feature of collaborative dynamics of entrepreneurial networks. At the entrepreneurial mindset level, a desire for growth, viewing their business from a craft or hobbyist perspective versus business perspective and a desire for independence as opposed to interdependence influenced the entrepreneurial coopetitive preferences in relation to competitors, investors and retail customers. What was also interesting is that while previous literature has suggested that firms need to explicitly consider coopetition as a part of their strategy tool set (Gnyawali and Park, 2009; 2011), we found that entrepreneurs habitually interact in a coopetitive manner through experiencing norms formed in interaction. Hence, we found that their coopetitive mindset were more intuitive than considered.

Entrepreneurial coopetitive interactions were coopetitive. Suppliers were viewed as a source of information and important for product consistency yet, at times, were considered mere transactions. With other micro-breweries, entrepreneurial coopetitive interactions provided a clear route way for information and knowledge sharing in addition to joint new product development and co-marketing (Gnyawali and Madhavan, 2001; Gnyawali and Park, 2009), interactions which continually developed and reinforced the coopetitive mindset. However, they kept an eye on each other's social media sites to get ideas, discover where they were selling their beers, in addition to when and where they are running promotions. While the entrepreneurs recognised the value of distributors as a logistics specialist, relations were poor due to their immense power as a result of the three-tier and franchise industry structure. Prior coopetition studies have favoured separation of roles whereby different actors act in accordance with one of the two logics of interaction (Bengtsson and Kock, 2000; Fernandez et al., 2014), a logic impossible where the entrepreneur, as agent of the firm, has to play both roles, and in our case, did so successfully.

The network environment shaped the cooperative landscape and greatly facilitated our understanding of coopetition as the legal system placed a natural divide between cooperation and competition activities. That is, although the distributors and producers shared an overarching common objective to sell more beer, different self-interests led to strong competitive tendencies due to constant conflict and power struggles set out by the industry rules imposed by the government. The distributors fought to ensure that the government continued to enforce their rule against self-distribution. In response, the entrepreneurs cooperated to lobby for changes in that structure, trying to change the rules of the game. This is an important finding as it highlights that coopetition studies, even at a focal firm level, need to recognise that a firm's interactions are guided by, and hence cannot be examined in isolation of the network environment in which they are embedded (Mariani, 2007; Rusko, 2011).

Conclusion

We open the black box of entrepreneurial coopetition by determining that coopetition is a fundamental feature of the collaborative dynamics in entrepreneurial ventures. In doing so, we contribute to the literature by putting forward and empirically examining a conceptual definition of entrepreneurial coopetition which accommodates the ingrained and unique characteristics of entrepreneurial ventures. Our work moves the coopetition discussion beyond the motives behind and consequences of coopetition, analysing interactions from a process perspective (Dahl, 2014; Pattinson et al., 2018). Additionally, we respond to recent calls for a deeper understanding of cooperative mindsets (Pattinson, 2018), and a multilevel approach to coopetition (Bengtsson and Kock; 2014 Pattinson, 2018). Business network research in an entrepreneurial context is reasoned to be in the embryonic stage, but an emerging field of research (La Rocca et al., 2013; McGrath and O'Toole, 2018). Taking a coopetition lens is a logical step in adding to this evolving

stream of research.

***Due to space constraints, references available on request**

Asymmetric Relationships and Sustainability of the Apparel Supply Chain

Cagri Talay, Michael Ehret.

A novel look at asymmetry in supply chains

Asymmetry is prevalent on business markets, where on balance (but not always) downstream firms play dominant roles in value chains and related relationships and networks. Traditionally, business marketing research has taken a skeptical look at the role of asymmetries, most prominently in institutional approaches that investigate the opportunism potential entailed in asymmetries. However, relationship marketing literature has revealed potential for beneficial uses where cocreative practices of powerful customers has been enhancing economic performance for all cocreating parties, regardless of the asymmetric power distribution. One of the most prominent examples are supplier initiatives by Toyota automotive, who invested in the development and support of a strong supplier base thereby enhancing performance for both, suppliers and customers. We extend these insights to the study of social and environmental sustainability in the apparel supply chain. We aim to understand if and how power distribution in the apparel supply chain affects sustainability.

General background

Meehan and Wright (2012) have reported that there is a consensus among authors, a dramatic swift in the balance in power, from suppliers to retailers. This could be disadvantaged in deals with large retailers (Hingley, 2005). The recent findings show that move into private label goods, produce exclusively for retailers. In such conditions, the retailers take control of branding over the supplier (Hingley, Angell and Lindgreen, 2015). However, increasing power of retailers in asymmetric relationships have also been found as beneficial for relationships because asymmetry offers development opportunities and benefits for apparel suppliers in the areas of capability development, production processes and innovation Meehan and Wright (2012), and developing collective interest with retailers (Corsaro & Snehota, 2011). In relation to this background, Boulding et al., (2005)'s work emphasised the importance of customer relationship management, there are many pitfalls and unknowns, which will have some bearing on relationships and this is an evolutionary process.

The concept of power is also apparent, either in the form of power differential emanating from the firm's strategic abilities (RBV) or understood as a form of dependence and control over the exchange process and/or the resources. All three notions of resources, performance and power are connected. This fits with the focus in practice on building the business case for sustainability (Toubolic and Walker, 2015b). Furthermore, collaboration presents benefits for sustainable supply chains through a number of relational mechanisms, in other words, the relationship between supply chain collaboration and enhanced sustainable supply chain performance is mediated. A number of authors have shown that improved trust as a result of collaboration enhances sustainable supply chain performance (Alvarez et al., 2010). In addition, relational theory

was identified in a recent literature review as a one of the less adopted theoretical approach to explore sustainability in supply chain relationships (Touboullic and Walker, 2015a).

Power and dependence have been investigated extensively by IMP researchers and it is an important dimension to be considered in strategic supply relationships (Johnsen et al. 2008) and in asymmetrical business relationships (Johnsen and Ford, 2008). On the other hand, business relationships are found vital in sustainability implementation in supply networks. Recent studies reported the use of power in supplier-buyer relationships, a large buyer can coercively enforce its suppliers to respond to its requirements (Vachon, 2007). Furthermore, Simpson and Power (2005) found that a relational approach is more powerful than coercion when considering environmental performance while other studies emphasise trust and cooperation are essential relational elements for sustainability implementation (Geffen and Rothenberg, 2000).

Sustainability in Fashion and Apparel Supply Chain

Sustainability goals in terms of ecological impact, social responsibility and geographical proximity of suppliers may well reduce the alternatives available to purchasers by excluding specific suppliers, or even entire countries, which are unable to meet the requirements entailed by the buyer's sustainability goals. A reduced supply base can then in turn impact other variables such as cost levels, therefore, the negotiation power of buyers would be reduced as it can no longer exploit the price competition among a large number of alternative suppliers (Gadde and Håkansson, 2001). Shi et al (2017) evaluated the economic and environmental performance in relation to the concept of power in the fashion supply chain and found that the follower with less supply chain power has more incentive to make a sustainable effort to achieve a higher profit. In most cases, the optimal amount of sustainable investment is greater in the apparel manufacturer case than in the retailer case. Therefore, key account management, as currently described in relationship marketing literature, will be more important approach in sustainability by implementing specific processes targeting most important customers. Wengler, Ehret and Saab (2005) found that the intensity of competition as well as the intensity of coordination are factors driving companies towards the adoption of key account management programs. It is therefore relevant to investigate concretely how these issues influence apparel retailers' overall sustainable purchase strategies and sustainable key accounts. Therefore, we investigate sustainability in asymmetric relationships between small apparel suppliers and large apparel retailers in the UK.

Research Design and Methods

The research project employs case study method and takes qualitative approach to overcome some of the methodological challenges associated with studying small apparel supplier firms. We have collected primary data through interviews from both sides suppliers and retailers. We also collected secondary data e.g. corporate websites will be accessed, policy documents and industry reports will be collected from supplier firms and retailers and the government bodies for building a data set of sustainability practices and policies of retailers and suppliers in their relationships.

Preliminary findings

An exploratory interpretation of our data reveals the following observations. Sustainability initiatives are driven by asymmetric power, driven by branded fashion retailers. We identify three modes of power use: Opportunistic, cocreative and efficiency driven. We find opportunistic practices in luxury fashion retailers. Typically, these firms are positioned at the high end of the market, maintain intransparency in the supply chain and exert cost pressure to their suppliers. In contrast, quality branded fashion retailers aim at value-based brand positioning, accentuating the sustainability of their value proposition and stimulate proactively sustainable practices across the supply chain, including supplier development. Not least, efficiency driven retailers focus on efficiency and do not engage

Conclusion

We find that asymmetry can enable and constrain sustainability along a supply chain. The positioning of retailer brands plays a decisive role. Value-oriented retailers take responsibility for sustainability in their supply chain. In these cases, customers and suppliers can build on practices established in relationship management and extend it to foster social and ecological sustainability. However, such strategies face also regulatory challenges, as they easily enter the domain of syndication and become subject of competitive regulation. One major research opportunity for business research is to identify how suppliers can use such asymmetries in a productive manner. Indeed we find cases where suppliers have found ways to benefit from their clients power and turn them into a strength.

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The mediating role of trust and commitment on economic and non-economic satisfaction in buyer – supplier relationships

Juan Carlos Sosa-Varela, Goran Svensson.

INTRODUCTION: Customer satisfaction is a fundamental construct in relationship marketing literature, closely associated with it are constructs of trust and commitment. Morgan and Hunt (1994) noted that the success of relationship marketing depends on a commitment to the relationship as well as trust. Athanasopoulou (2009), as well as Evanschitzky et al. (2008), identified satisfaction, trust, and commitment as the three primary constructs central to understanding relationship quality. Meanwhile, there is no consensus in the literature on how satisfaction, trust, and commitment influence each other (Svensson et al. 2010).

Recognizing the importance of high-quality buyer-seller relations in ensuring the success in business-to-business marketing, this study aims to validate a business relationship nomological network (Ferro et al., 2016). The study specifically focuses on explaining how satisfaction relates to trust and commitment in ongoing buyer-seller relationships.

BACKGROUND: Coughlan et al. (2001) pointed out that economic satisfaction as achievement of satisfactory profits is the primary reason why firms engage in exchange relationships with other firms. In arguing for economic satisfaction as the precursor variable, this study considers arguments advanced by Rodriguez et al. (2006) noting that business relationships are initially formed purely on the basis economics benefits. The satisfaction with these benefits positively impact on member's willingness to work together in constructively responding to problematics situations and that in doing so, they enhance the quality of their social relations and increase their satisfaction with the

relationship (Ferro et al., 2016). H₁: Economic satisfaction positively relates to non-economic satisfaction.

The importance of trust in business exchange relationships is critical due to uncertainties always related to business relationships (Selnes, 1998). Exchange relations are always riddled with risk that an exchange partner may not live up to expectations in terms of delivering the expected rewards or that they may act opportunistically. Trust helps exchange partners manage such uncertainties by lowering levels of perceived risk through heightening confidence in the partner. This study argues that economic satisfaction is a major contributor to confidence building in an exchange partner (Chen et al., 2011; Altinay et al., 2014). H₂: Economic satisfaction positively relates to trust.

Commitment is about the desire to maintain long lasting relations with an exchange partner. Findings by Sahadev (2008) support this by showing that economic satisfaction exerts a positive influence on levels of commitment to business exchange partners. Similarly, Ferro et al. (2016) found a positive relationship between economic satisfaction and commitment to business partners. H₃: Economic satisfaction positively relates to commitment.

The existence of trust in business relationships creates a conducive environment for business partners to invest in relationship building. Morgan and Hunt (1994) noted that business partners highly value relationships that are characterized by trust. Due to risk and vulnerability inherent in any business relationship, parties look for exchange partners who are trustworthy. H₄: Trust positively relates to commitment.

When trust prevails in a business relationship, parties are not skeptical but rather friendly towards one another and feel confident relating to each another (Chang and Wong, 2010).

This consequently can lead to the development of affective ties between partners resulting in partners experiencing non-economic satisfaction with each other (Rodríguez et al., 2006; Nyaga et al., 2010). H5: Trust positively relates with non-economic satisfaction.

Commitment by both parties to a relationship helps create an environment where each party feel that they can pursue and achieve their goals without having to worry about unfair practices on the part of their partners. Such an environment is key to ensuring satisfaction with exchange partner. Findings in studies by Rodríguez et al. (2006), as well as Ferro et al. (2016), confirm of the positive influence that commitment has on non-economic satisfaction. H₆: Commitment positively relates with non-economic satisfaction.

METHODOLOGY: The sampling frame used in this research consisted of a convenience sample of 400 small and medium-sized companies in Puerto Rico (25-250 employees). This research used a combination of data gathering methods. A total of 284 questionnaires were provided personally to respondents and 116 additional participants received via email a link to an online survey software (Questionpro). Ninety-eight usable questionnaires provided personally were filled and returned and from the ones uploaded to the online survey software 35 out of 116 were filled for a total of 133 usable questionnaires. The overall average response rate in this research was 33.25%.

EMPIRICAL FINDINGS: We performed a confirmatory factor analysis and structural equation modeling (Jöreskog and Sörbom, 1976) to test the measurement and structural properties of the research model. We performed a confirmatory factor analysis of the measurement model, which consisted of 12 indicator variables based upon four constructs. The research model generated satisfactory findings. The goodness-of-fit

measures were all acceptable (Hair et al., 2006, p. 745-749) for both the confirmatory factor analysis and subsequently for the structural model.

The variance extracted from all constructs exceeds 50% for each, ranging from 63% to 88%, which indicates convergent validity. The composite trait reliability levels of all included constructs are above 0.7 (Hair et al., 2006), ranging from 0.91 to 0.98, which indicates reliability. Furthermore, we compared the variance extracted with the squared inter-construct correlations to examine whether the research model measures distinct constructs (Hair et al., 2006). The variance extracted was larger for all constructs in relation to the corresponding squared inter-construct correlations, except for commitment and non-economic satisfaction that were higher. We can thus conclude that the model has satisfactory discriminant validity.

The empirical findings of the structural model suggest that the tested structural model is satisfactory. All five hypothesized relationships in the structural model shown were significant, which confirms nomological validity.

We tested a rival model including a hypothesized relationship between economic satisfaction and non-economic satisfaction, although we found only theoretical substantiation for it, in isolation from other constructs (Rodriguez et al., 2006) and not in the context of other constructs, such as trust and commitment. There was a significant relationship between economic satisfaction and non-economic satisfaction.

The regression weights for economic satisfaction and non-economic satisfaction changed and the parsimony-adjusted measures were also lower in the rival model, indicating a better fit for the tested research model without the direct relationship between economic and non-economic satisfaction. Subsequently, we conclude that the empirical findings

support the notion that trust and commitment are mediators between economic and non-economic satisfaction.

RESEARCH IMPLICATIONS: This study validates successfully the research model in which trust and commitment are mediators between economic and non-economic satisfaction. The empirical findings provide managerial support and guidance to assess satisfaction, trust, and commitment in business relationships.

REFERENCES: Available upon request.

Criteria for Supplier Evaluation: A Literature Review

Manojkumar Dalvi, Ravi Kant.

Keywords: Supplier selection, SE, vendor selection, vendor evaluation, performance criteria.

Objective

Now a day, Supplier performance is extremely crucial for the organizations to remain in the market and gain competitive advantage over their competitors. Supplier Evaluation (SE) is a multi-criterion decision making problem which comprise qualitative and quantitative criteria (Wang et al., 2010; Wang et al., 2010; Zhang et al., 2009). SE criteria plays important role in evaluation of supplier performance (Ekici, 2013; Yang et al., 2008). The purpose of this paper is to exhibit and summarize the crucial criteria of SE based on level of importance through occurrence listing for Indian Manufacturing Organizations (IMOs).

Design/methodology/approach

A range of online academic databases from 2001 to till date were searched containing the word “supplier evaluation” and “vendor evaluation” in their name and in the phrases to make available ample listing of journal articles on SE and vendor evaluation. Based on this a total of 74 articles were identified and the information on a criteria for SE was collected. All these selected articles were further reviewed for the criteria for SE. All these papers were classified for main criteria and sub criteria.

Findings

This paper exhibits and summarizes the important criteria for SE in a very systematic and organized way, published from 2000 to till date. In total, 74 papers published in reputed academic databases namely Science Direct, Emerald and Springer-Link Journals with

“supplier evaluation” and “vendor evaluation” as keywords was carefully selected and analyzed as per the objectives of this paper. In statistical analysis, the literatures were divided into four different durations namely 2000-2004, 2005-2009, 2010-2014, 2015 to till date.

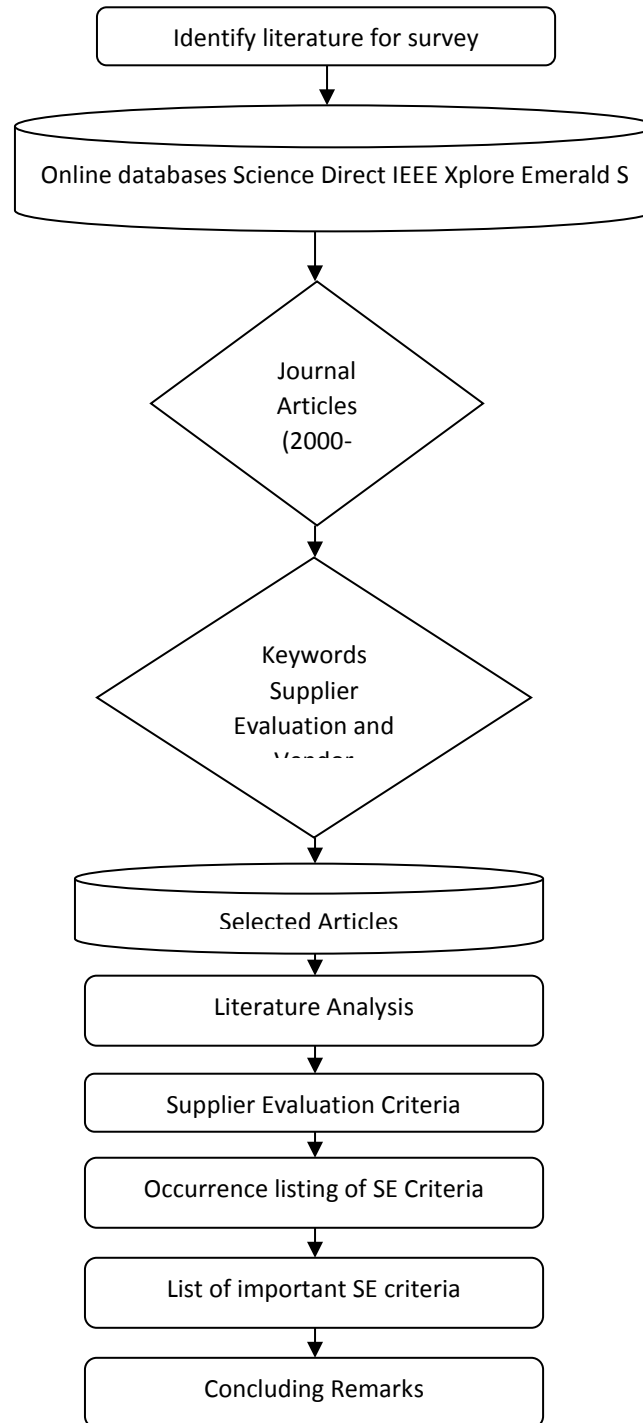


Figure 1.1 Research Methodology for Literature review

The distribution of number of article and percentage for above duration shows the need of SE for Supplier Selection in industries.

The significant findings of this literature review are as follows:

1. Cost, quality and performance (Li et al., 2012) are the important criteria of SE. The other important criteria those are becoming centre of attraction for researchers and industry practitioners are increased awareness for environmental and social performance etc (Li et al., 2007).
2. The evaluation of suppliers comprises two very important aspects i.e. SE criteria and level of importance of these criteria (Ordoobadi, 2010); this will help the industry practitioners to evaluate the suppliers in Indian Manufacturing Organizations.

Research limitations/implications

The literature on specific SE criteria for Indian Manufacturing organizations is seldom available.

Originality/value

This paper presents a literature review on SE criteria through identification of SE criteria according to their level of importance through occurrence listing for IMOs. The findings will be beneficial for the industry practitioners to assess the suppliers in their organization based on their level of importance.

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Reverse Logistics as a Sustainable Business Model: A Multi-Industry Qualitative Study

David Nickell, Cheryl Brown, Minna Rollins, Ashley Grimes.

Introduction

Due to an increasing number of environmental regulations throughout the world, companies are forced to develop ways to reduce their environmental impact. To abide by these mandates, companies must invest time and money to improve their supply chain's efficiency and effectiveness. One outcome of this work is that firms are beginning to investigate and invest in sustainable logistics. Logistics within a sustainable business model means that the firm produces goods in a sustainable way while minimizing the ecological impact of logistics activities. Reverse logistics has become an important part of the overall sustainable logistics model. The Reverse Logistics Executive Council declares that forward and reverse logistics differ in characteristics, distribution points, product quality and even product packaging (Kumar & Chatterjee, 2011). Thus, reverse logistics is the return of the used components of the original product from the consumer and, ultimately, back to the vendor. It allows businesses to reduce their operating costs by reusing and recycling products from the consumer (Álvarez-Gil, Berrone, Husillos, & Lado, 2007).

From the consumer, the reverse supply chain is composed of two players, the collector and the manufacturer. The collector gathers the used items from a used-product market and inspects each item collected. After inspection, the collector then labels the item as either "remanufacturable" or "nonremanufacturable" and then returns the asset to the manufacturer (Gu & Tagaras, 2014).

Purpose

The purpose of this study is to investigate how reverse logistics can be used within a sustainable business model and to identify specific industry or asset category characteristics where reverse logistics is viable.

Design/methodology/approach

We conducted nineteen depth interviews with executives from fifteen industries. The questioning was structured and performed by trained researchers. The interviews were primarily conducted by phone, although three interviews were face-to-face, and lasted between 30 and 45 minutes. We employed depth interviews to understand the specific industry's asset costs, current supply chain structure, and attitudes towards sustainable business practices. Depth interviews were used because they provide a deep understanding of a phenomenon from the user's perspective (Hudson & Ozanne, 1988).

Findings

We discovered five characteristics that identify an industry or asset category that can successfully employ reverse logistics: (1) the vendor currently ships a sufficient number of assets to justify a sufficient number of returns; (2) the asset class is reusable, either as originally intended or as a by-product; (3) a manageable shipping distance between the user and the vendor; (4) the cost for the vendor to construct a new product asset is relatively high; (5) product loss with the user, or shrinkage, is relatively low.

Research limitations

As this is a qualitative study with a sample size of nineteen, drawing any definitive conclusions is premature. The executives we chose to interview from the fifteen industries is not an exhaustive list, and important identifiers of potential reverse logistics opportunities may have been missed. Given that the companies we explored are all based in the United States, we may have discovered different characteristics within other business cultures.

Implications

Reverse supply chain management has become a topic of interest in industry due to the growing concern of environmental issues and the resulting regulations. For example, some governments are forcing firms to manage their end-of-life products more environmentally responsibly. While this can lead to extra expenses, Govindan, Soleimani, & Kannan (2015), suggest managing the product's end of life can be strategically advantageous and allow for economic benefit. Strategically, firms can position themselves as environmentally friendly – an important marketing communications message for certain segments. Economically, companies are now able to reuse parts, increasing cost reduction. As an example, Jindal & Sangwan (2013) praised Nike for encouraging their customers to return their used shoes which can then be used to make basketballs. Companies are also finding lower labor costs and reduced inventories leading to efficiencies throughout the supply chain (Álvarez-Gil et al., 2007).

Originality

Reverse logistics is just now being examined by academics. Some scholars use reverse logistics and reverse supply chain management interchangeably, while others argue that

reverse supply chain management is a broader topic and that reverse logistics is one component of reverse supply chain management (Álvarez-Gil et al., 2007). The initial research into the topic involved damaged or outdated items being reused or recycled. It was only later that scholars expanded the scope to refer to all activities acting in reverse of forward logistics and supply chain management.

Our research fills a gap in the literature by identifying the characteristics within an industry where reverse logistics is viable.

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The story behind reviews: using text-mining techniques to look beyond review stars

Nelleke de Boer, Danielle de Boer, Frederik Situmeang, Rob Loke.

Reviews are an effective information source for organizations and customers. Lee, Jung and Park (2017) stated that previous studies mostly focused on review volume and valence. They also mentioned that more recently, authors tried to broaden and deepen the understanding of how review texts can influence product performance. Previous research pointed out the importance of linguistic content of reviews. However, a consideration of text-mining techniques to examine reviews has been lacking in the literature (Lee, Jung, & Park, 2017). The aim of this research is to continue the conversation in the literature by explaining how customer review text can influence sales. Particularly, we are going to focus on how product attributes, sentiment and quality, quantified with text-mining techniques, can explain this relationship.

Theory of Planned Behavior (TPB) provides the theoretical basis for this study. According to TPB, attitude and subjective norms influence people's actions (Ajzen, 1991). Previous research found that the same holds for reviews. There is a connection between reviews and product sales (Chevalier & Mayzlin, 2006; Lee, Jung, & Park, 2017). In examining the impact of reviews on product sales, previous research focused on numeric ratings. Through text-mining technique, text in reviews can reveal a customer's product experience and can give insights into why products succeed or fail (Lee, Jung, & Park, 2017). Therefore, this study examines the textual elements of reviews in the form of product attributes. In reviews an attribute is more important, when the attribute is mentioned more frequently (Tirunillai & Tellis, 2014). We argue that when attributes are mentioned more explicitly the collective norm and attitude towards these attributes is stronger. This indicates that the community is acknowledging that certain

attributes are important. The more the community mention attributes, the more likely it is that they will like the product. *H1: There is a positive relationship between the number of attributes mentioned in reviews and sales.*

Previous research acknowledged the importance of examining sentiment expressed in reviews. Research indicates that sentiment is an important moderating factor influencing the relationship between product attributes and satisfaction (Salehan & Kim, 2016). Though, the relationship between sentiment, product attributes and sales has not been studied before. To improve the existing literature we propose that attributes must be linked with sentiment. It is not enough that people mention the attribute, they should also express a positive sentiment towards that attribute. *H2: Sentiment moderates the relation between the number of elements mentioned in customer reviews and sales, a more positive sentiment will lead to more sales.* Reviews can also differ in terms of quality. High-quality reviews are thought to be objective and persuasive. Previous studies have found that quality of reviews has a positive effect on purchase intention (Park, Lee, & Han, 2007). Again, how this relates to sales, is still not concrete. *H3: Review quality moderates the relation between the number of elements mentioned in customer reviews and sales, a higher review quality will lead to more sales.*

The study uses a large scale database obtained through web crawling of the review website, Metacritic.com. The database consists of 4225 titles released from 2000 to 2017. For these titles we obtained 185,368 expert reviews and 203,512 customer reviews (N=388,880). We process the review text using text-mining techniques with library ‘tm’ in R version 3.4.3. This library contains procedure to identify frequently mentioned terms from texts. For pre-processing, we clean the review texts from punctuations, numbers, multiple blank spaces, and stop words. Following this, we run the word stemming function to transform words in our text body into their root form (e.g. ‘acting’, ‘action’,

are transformed into ‘act’). After the cleaning of the text, we create a document text matrix to determine most frequently mentioned words. We apply the Latent Dirichlet Allocation (LDA) procedure to identify groups of these frequently mentioned words. The LDA analysis output suggests that there are 2 topic groups in our text. The first is about the visual elements. The second is about the human and story elements. There is a high overlap between the two groups ($r = .449$). Therefore, we merged the groups in further analysis.

Our dependent variable is sales. We normalized the sales by correcting it with the inflation rate. We also normalized the worldwide sales with the natural logarithm since the data is skewed to the right. An independent variable is product attribute. The mentioning of product attributes was operationalized by estimating the proportion of the review about the attribute. Sentiment was operationalized with sentiment score for each review using SentiSrength. Quality of the reviews was estimated by establishing the useful mentioning of attributes.

Four models are estimated to explain the effects of reviews on sales. Model 1 is the default model with the control variables. Model 2 incorporates the direct effect of attributes (*Avrmention*). Model 3 and 4 include the interaction effect of sentiment (*SentimentMention*) and quality (*UsefulMention*). Model 4 is the complete model. It predicts 38.9 percent of sales ($F(14,3012) = 137.226, p < .000$). The results show that the mention of product attributes has no significant effect on sales ($\beta = .18, p = \text{ns.}$). Hypothesis 1 is not confirmed. H2 and H3 are confirmed. Quality ($\beta = .105, p < .000$) and sentiment ($\beta = .106, p < .000$) moderate the relationship between attributes and sales. For the model details, see Table 1.

Table 1
Results report.

Variable	Model 1			Model 2			Model 3			Model 4		
	Coefficient	S.E.	VIF	Coefficient	S.E.	VIF	Coefficient	S.E.	VIF	Coefficient	S.E.	VIF

Constant	16.097	.340	***		16.490	.340	***		17.131	.383	***		17.752	.388	***
Avr. Review Score	.008	.003	**	1.137	.007	.003	**	1.139	.007	.003	*	1.223	-.007	.003	*
Var. C. Review Score	.000	.000		1.091	.000	.000		1.091	.000	.000		1.098	.000	.000	
Num. C. Reviews	.002	.004		1.052	.003	.004		1.052	.003	.004		1.055	.002	.004	
Count of Auhtor	.003	.000	***	1.406	.003	.000	***	1.413	.003	.000	***	1.755	.004	.000	***
Avr. Of Metascore	.124	.026	***	1.275	.153	.026	***	1.304	.154	.026	***	1.312	.151	.026	***
Var. Of Metascore	.009	.008		1.221	-.003	.008		1.272	-.002	.008		1.282	-.003	.008	
Production Budget	.00	.000	***	1.441	.000	.000	***	1.442	.000	.000	***	1.465	.000	.000	***
Runtime	.007	.002	**	1.177	.009	.002	***	1.202	.010	.002	***	1.205	.008	.002	***
Avr. Mention					.285	.037	***	1.077	.143	.053		2.240	.045	.062	
SentimentCustomer									.222	.056	**	2.161	.383	.059	***
SentimentExperts									.035	.068		1.121	.027	.068	
Useful									.028	.022		1.384	.101	.026	***
UsefulMention													.168	.030	***
SentimentMention													.341	.055	***

*is significant ant the .050 level (2-tailed).

** is significant at the .010 level (2-tailed).

*** is significant at the .001 level (2-tailed).

This study contributes to the literature by researching the moderating role of sentiment and quality in the relationship between attributes and sales. The study also has a methodological contribution by using advanced techniques for text-mining providing the opportunity to extract attributes from reviews. This study has contributions for management by showing that reviews can be used to find the attributes that influence sales. Management can use the attributes as a guide for product improvement. We belief that the results are applicable to the B2B context since 52% of buyers in B2B markets look at reviews (Marketing, KoMarketing, & BuyerZone, 2015).

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Optimization of cross-selling campaigns with artificial intelligence models

Raúl Gómez Martínez, Laura Pascual Nebreda, Jessica Paule Vianes.

Nowadays, due to the great competition in the markets, it is fundamental to study the efficiency of the commercial campaigns with the objective of increasing the performance of these.

In this work, the object of study is cross-selling campaigns being one of the main tools used by companies to forge stronger relationships with customers (Kamakura et al., 1991), presenting the advantage of carrying a minor cost associated with the acquisition of new customers than other instruments.

Various works exist that have evaluated the performance of the cross-selling campaigns. However, few studies have applied artificial intelligence tools to model sales in these commercial campaigns, among which those of Prinzie and Van den Poel (2009), and Durante et al. (2017).

In this study, we have advocated artificial intelligence methods, specifically, we have followed the CRISP-DM standard (Chapman et al., 2000), framed within the well-known methods of data mining, with Bayesian networks being the method used in the modeling phase due to the various advantages it presents, such as its great capacity to extract dependency relationships between the different variables (being able to report these in probabilistic terms) and its lack of need to comply with previous hypotheses. Thus, the use of this methodology for prediction is particularly useful both for the relational structure obtained, and for the probability distribution it provides, allowing the calculation of marginal probabilities and updating them based on the information provided to the network (Calle, 2014).

With this model we try in this study to evaluate the prediction capacity on the sales generated by a telecommunications company, as well as to study the most influential variables in the purchasing decision of the potential clients, thus allowing to conduct more efficient commercial campaigns.

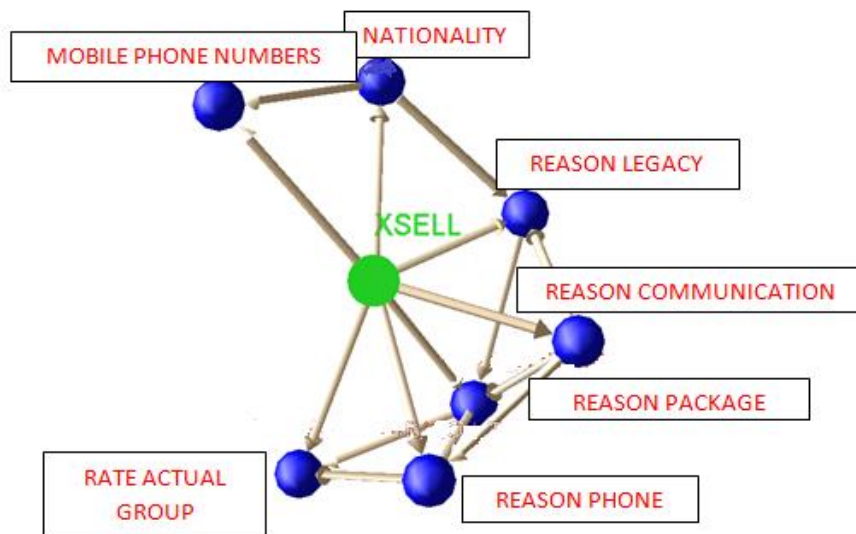
The data used has been 25,000 call records provided by the Marktel Group, from which we have extracted 23 possible predictor variables, the objective variable being the achievement of cross-selling or not.

For the application of Bayesian networks, we have used the Data Mining dVelox platform, owned by the company Apra.

Taking all the variables, we have obtained a network of dependency relations, in which several variables do not directly influence the objective variable, but directly affect another predictor variable. However, as our goal is to try to increase the efficiency of the "Call Center", that is, increase the success rate in the campaign with respect to the calls made, it is convenient to obtain a network with the variables that have the most influence in the sale and with which to obtain a greater probability of success. To this end, an optimization algorithm for the brute force model has been implemented that maximizes the success rate of the model by eliminating those predictors with lower predictive capacity.

In this way, the Bayesian network that allows us to predict with greater accuracy is the one we can see in Figure 1.

Figure 1: Optimal Bayesian Network



Source: Own elaboration with dVelox.

We observe how the variables that allow us a greater success rate in the prediction are: Nationality, Mobile_Phone_Numbers, Reason_Communication, Reason_Legacy, Reason_Package, Reason_Phone and Rate_Actual_Group. With these variables it is obtained that the prediction by the network for the case of "NO" sale is of 96.3% that is, when the model anticipates that a client will not cross-sell this is met with high probability, which allows the effort in the realization of these calls.

Following the predictions obtained with the network, if we analyze the confusion matrix, we have reached that the company, if it had not contacted customers with the probability of not doing cross-selling, would have avoided 917 calls (18.39% of the total). Failure to make these calls would cause a loss of 34 sales, 8.6% of sales achieved in the campaign, that is, achieve 91.40% of sales by reducing calls by 18.39%.

In addition, we analyzed its sensitivity and specificity with the ROC curves (Receiver Operating Characteristic) obtaining an area under the curve of 64.8%. This determines

that the ability of the network to distinguish between potential customers who will buy the company's products is not 64.8%.

If we make inference to arrive at the breakdown of the likelihood of cross-selling by the characteristics of the client, we observed that the campaign would be optimized by focusing efforts on the profile of a foreign client, with 3 or more contracted mobiles and with premium service.

With all this, we have demonstrated the predictive capacity of the Bayesian networks on the predisposition to cross-selling in a campaign of a "call center", facilitating this model the improvement of the efficiency in the commercial campaigns carried out, anticipating the potential customers that they are not predisposed to cross-selling (which allows the company to save costs), in addition to identifying customer profiles to focus on the product or service to be offered (which leads to greater success more quickly).

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A classificatory framework of social media network marketing strategies for entrepreneurial firms

Conor Drumond, Helen McGrath, Thomas O'Toole.

In the past decade, Social Media (SM) has had an irrefutable influence on marketing (Valos et al., 2014), particularly in a business-to-consumer (B2C) context, but with a growing application in industrial markets and the business-to-business (B2B) sector. Although the area of B2B research is still in its infancy (Bocconcelli et al., 2014; Quinton and Wilson, 2016; Swani et al., 2014), it is an emergent area of interest for practicing firms, especially for the entrepreneurial venture (Langlois, 2007; Durkin and McGowan, 2001; Kirchhoff, 1994). For these novice firms limited by their small size, newness (Baum, 1996; Stinchcombe, 1965) and coupled with a crippling lack of resources in many instances (Kotha and George, 2012), SM's low resource commitment and simplicity to use (Broekemier, Chau and Seshadri, 2015; Georgescu and Popescu, 2015; Siamagka et al., 2015) compared with traditional marketing communications, has distinctive appeal. Despite the largely communal concurrence that industrial marketing practice is profiting from SM use by marketers (Salo, 2017), we know surprisingly little about SM from a network marketing strategy perspective (Singaraju et al., 2015; Bocconcelli et al., 2014) or within an entrepreneurial B2B context (Wang et al., 2016).

Given this lack of empirical research and resultant literature in the B2B SM marketing area (LaPlaca, 2013; Rapp, Beitelspacher, Grewal, & Hughes, 2013; Salo, 2017), our paper develops a classificatory framework of SM network marketing for the entrepreneurial firm. This framework will go some way towards bridging this research gap, developed as an overarching marketing classification tool in addition to having specific SM network marketing strategies and tactics for entrepreneurial firms to replicate in the field. The framework places a boundary around the network SM marketing

strategies available to the entrepreneurial firm, deriving strategies and tactics under four proposed archetypes of B2B SM network marketing (Figure 1); Connect, Engage, Co-ordinate, and Collaborate.

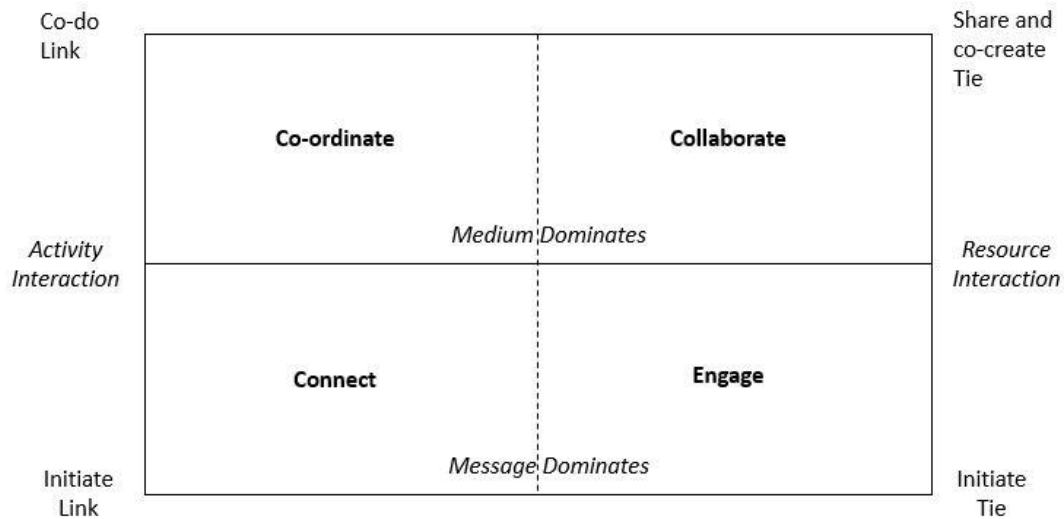


Figure 1: Classificatory framework of SM's B2B network marketing strategies

The study applies a qualitative case study methodology to develop the classificatory framework, using an ethnographic content analysis (Altheide, 1996; 1987) to classify 1,248 B2B Facebook posts and Twitter tweets from a single case of an Irish artisan food producer, alongside interview data to consolidate findings. The resulting conceptual framework can be utilised in practice by resource-poor entrepreneurial firms to effectively exploit SM platforms for more purposeful B2B marketing, adopting the strategies and tactics to effectively connect and develop relationships with a variety of key B2B network actors.

This paper makes significant contributions to the area of SM B2B marketing and strategic marketing for the entrepreneurial firm, introducing the unique perspective of SM being both a valuable resource and activity creator for the limited entrepreneurial firm.

As an activity or resource, we argue for the potential of SM beyond a communications medium to create value for network actors in interaction, and to be part of complex forms of interaction for the novice organisation. We define social media network marketing, as well as identifying SM as a means to; broaden the firm's network horizon (Holemen and Pedersen, 2003), synchronise activities among B2B partners, and co-create new resources with the firm's network actors. There are few classificatory frameworks of SM marketing strategies and tactics, hence we break new ground in showing the usage of SM to create novel value in interaction that can be appropriated by the entrepreneurial firm and its B2B partners.

This study responds to calls for more empirical research investigating B2B marketing and SM (LaPlaca, 2013; Salo, 2017) and, more specifically, in an entrepreneurial context (Wang et al., 2016), presenting new research findings that add to the dearth of literature in both B2B SM marketing and strategic entrepreneurial B2B marketing. Furthermore, this research is in keeping with numerous conference themes such as; investigations into new forms of communication with customers (social media), networks, marketing strategy, and social media marketing.

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The effect of social media communication on collaborative activities in cross-border B2B relationships

Mohammad Shadab Khalil.

Introduction

Social media is continually reshaping the communication practices of firms, including how messages are created, composed, disseminated, and consumed (Mehmat & Clarke, 2016). While the adoption of social media communication (SMC hereafter) has been thriving among B2C firms, B2B firms are slowly waking up to the idea of SMC. Firms are increasingly using social media apps, specifically social media instant messaging apps (SMIMA hereafter), such as WeChat, LINE, WhatsApp, and Facebook messenger to communicate with their exchange partners (Wang et al., 2016). SMC could be utilized to realize a variety of business purposes, such as communication with exchange partners, build relationships, and identifying trading partners (Wang et al., 2016).

Out of the many functions that SMIMA communication could play, its most critical function could be that of relational governance. In the absence of face-to-face communication, inter-firm communication is usually very limited in its richness, and thus has limited scope in negotiating conflicts (Mason & Leek, 2012) inherent to cross-border relational exchanges. SMIMA communication, owing to its richness, social content, and frequency, could alleviate many of the difficulties of cross-border inter-firm communication. The research on the consequences of SMIMA communication and its effectiveness as a relational governance tool is, however, difficult to identify, especially in the cross-border exchange relationships. The importance and paucity of research on SMIMA communication create an urgent necessity of research on the consequences of SMIMA communication in cross-border relational exchanges. This research is therefore an attempt to fill the gap in the extant literature by investigating how SMIMA

communication may be employed as a relational governance mechanism to influence behavior in international exchanges.

Research Framework and Related Hypotheses

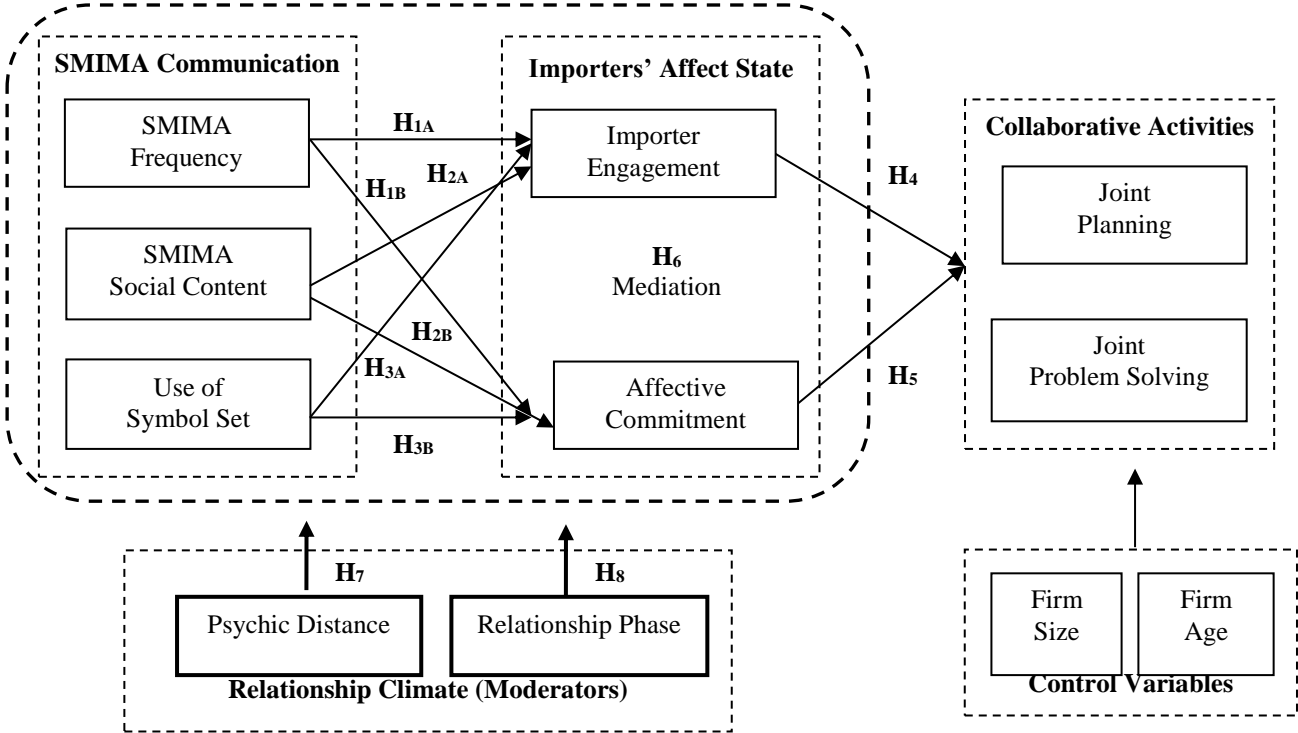


Figure 1

The Proposed Research Framework and Related Hypotheses

Research Measures, Questionnaire Design, and Data Collection

The research will employ existing measures modified to suit the current research environment to assess the studied constructs. As the research setting is Taiwan, the original English language measures will be translated into Mandarin Chinese using the double-back translation procedure. Data will be collected from importers based in Taiwan using the survey method.

Data Analysis and Results

The research will employ partial least squares (PLS) for the examination of scale accuracy, main effects, and the moderating effects. The reliability of all the multi-items

scale will be tested using Cronbach's alpha, Composite Reliability and Average Variance Extracted with the thresholds of 0.7, 0.7, and 0.5, respectively. Convergent validity will be assessed by examining the factor loadings of all scale items on their corresponding constructs, with a cut-off of 0.7. Discriminant validity will be tested using the Fornell and Larcker criteria and an examination of Heterotrait-Monotrait ratio (HTMT) (Henseler et al., 2015). Mediation will be tested using the bootstrapping procedure (Preacher & Hayes, 2004). Common method bias will be assessed using the Lindell and Whitney (2001) marker variable test.

Contributions of the Research

A review of the SMIMA communication and SMC literature identifies a few studies in the domestic context, the majority of which focus on the drivers of SMC adoption (e.g., Guesalaga, 2016; Siamagka et al., 2015) or are descriptive or qualitative in nature (Wang et al. 2016). With an exception of a few studies (e.g., Agnihotri et al., 2016; Wang et al., 2016), research on the consequences of SMC use is difficult to identify. The paucity is surprising given the posited importance of social media use and a call for research on the issue, especially its consequences in relational exchanges (see, among others, Guesalaga, 2016; Siamagka et al., 2015). The deficiency on empirical research on SMIMA is even rarer. Further, there is a dearth of research on collaborative activities in both domestic and international environments (Johnston et al., 2012). This comes despite the fact that several studies highlight the importance of collaborative activities in achieving several critical exchange outcomes and the immense importance of collaborative activities in international cross-border exchange relationships (see, among others, Heide & John, 1990; Johnston et al., 2012; Mukherji & Francis, 2008). In a broader context, international exchanges literature suffers from a scarcity of research on relational governance mechanisms (Burkert et al., 2012). In view of these, the current research is a novel attempt

to investigate how supplier's SMIMA communication affects importers' collaborative activities. The research will provide a comprehensive understanding, and conceptual overview of consequences of SMIMA communication in international exchanges.

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Value-Driven versus Business-Driven Sustainability Initiatives in Health Care Organizations

Rocío Rodríguez, Goran Svensson, Nils M. Høgevold, David Eriksson.

INTRODUCTION

This study is limited to examine the determinants of organizational sustainability initiatives. The research objective is to compare similarities and differences of sustainability initiatives between health care organizations. The aim is to provide a framework of determinants to enable profiling of organizational sustainability initiatives.

FRAME OF REFERENCE

A definition of sustainable development could be the best way for understanding what sustainability means: “...*development which meets the needs of the present without compromising the ability of future generations to meet their own needs...*” (WCED, 1987, p. 3).

Previous research agree that there are three different elements included in sustainability, these are called the Triple Bottom Line (TBL). These elements are: environment, social and economic (Carter and Rogers, 2008; Winter and Knemeyer, 2013).

Historically, sustainability has passed through different stages. At the beginning sustainability seemed synonymous of environmental care (Evelyn, 1662). After this stage, the authors focused more in social element (Bowen, 1953; Carroll, 1974). Winter and Knemeyer (2013) consider the economic element as the “hard” dimension, and the other two as the “soft”

Frequently, the combination of the three elements is what is considered true sustainability (Winter and Knemeyer, 2013), although continuous advancements are considered important in this research area (e.g. Eriksson and Svensson, 2016).

To the best of our knowledge there are not any previous studies that consider similarities and differences of sustainability initiatives between health care organizations

METHODOLOGY

The case study is based on an inductive approach (Thomas, 2006). An overview with all the information, gathered from the informants in the in-depth interviews was created after collected textual raw data. A summary of the main findings was constructed after each interview with the informants, making it possible to compare similarities and differences between organizational drivers of sustainability initiatives. The information provided by the informants was used to develop a framework of determinants of sustainability initiatives.

This case study has been carried out in the Spanish health care industry, and includes four private hospitals. The selection of only one industry reduced contextual bias between the studied organizations (Hartline and Jones, 1996), because the interference with other industries can be controlled in the study.

The research team approached the CEO at four private hospitals who put the team in contact with the person in charge of sustainability initiatives in the organizations. The responsible person turned out to be the communication director in the studied hospitals.

The selected informant was the employee who had the most extensive and in-depth knowledge about the sustainability initiatives carried out by the hospital.

RESULTS

The empirical findings indicate that the sustainability initiatives of the studied private hospitals may be divided into the following two principal categories: value-driven and business-driven.

An example of a value-driven hospital is PriHosp1, whose mission, vision and values relate to the quality and responsibility of sustainability initiatives. It aspires to be the 'The Great Hospital'. PriHosp3 is also value-driven, but is a religious hospital with main operative purpose to assist society.

PriHosp2 is business-driven where sustainability initiatives are regarded a marketing tool. The hospital benchmarks and imitates their main competitors. PriHosp4 is also business-driven. The hospital is a foundation and does what is required in the market independently of external factors, but taking into account the economical balance first.

The typology/ownership of the hospital does not define the category which the hospital belongs. For example, PriHosp4 is a foundation and at the same time is business-driven. There are other factors which influence the category, such as the CEO's opinion on sustainability, economic reasons, and the culture of the hospital.

IMPLICATIONS

A principal determinant to profile a health care organization is whether its sustainability initiatives are value- or business-driven. Though there are several distinguishing differences between value- and business-driven sustainability initiatives, there are also multiple similarities.

The profile of health care organizations' sustainability initiatives may guide managers to assess the actions of their organizations. A key question is whether the sustainability initiatives are value- or business-driven in the organizations.

CONCLUSIONS

We conclude that there are at least two principal determinants to profile organizational sustainability initiatives in private health care organizations, namely whether they are value-driven or business-driven. We also conclude that there are multiple differences and similarities between value- and business-driven sustainability initiatives providing a range of research and managerial implications.

This study contributes to establish a framework to characterize the profile of organizational sustainability initiatives. It also contributes to reveal whether organizational sustainability initiatives are value- or business-driven.

This study was limited to private health care organizations in Spain offering opportunities to further research in both public organizations in the same industry as well as other service oriented industries.

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Knowledge Sharing and Trust in Context: A Study of Buyer-Supplier Relationship in Thailand

Rapeeporn Rungsithong.

The aim of the study

Knowledge is one of the most important factors contributing to firms' ability to achieve competitive advantage because firms that know more about their customers, competitors, suppliers and themselves often develop competitive advantages, especially in complex competitive environments)Dyer and Singh, 1998(. Executives and academics have identified trust as a key success factor contributing to alliance performance)Zaheer et al., 1998; Krishnan et al. 2006(, yet the importance of trust varies with the characteristics of the relationship between the two organizations. Without understanding the context, one cannot inquire into the reasoning and the assumptions behind the particular piece of knowledge. Therefore, this study aims to fill this important gap in the literature by examining when to share knowledge in the context of buyer-supplier partnerships.

Research questions and objectives

This study examines under what circumstances the positive link between trust and performance will become stronger or weaker in the context of buyer-supplier partnerships in an emerging economy.

Theoretical background

A growing body of literature has shed much light on the challenges of facilitating knowledge sharing between organizations. Previous research focused on the positive link between trust and knowledge sharing)Becerra et al. 2008(but overlooked the potential interactions with other factors that may significantly influence knowledge sharing.

Therefore, scholars have called for more research into the contextual conditions under which trust enhances knowledge sharing)Becerra et al. 2008; Dyer and Chu, 2011(.

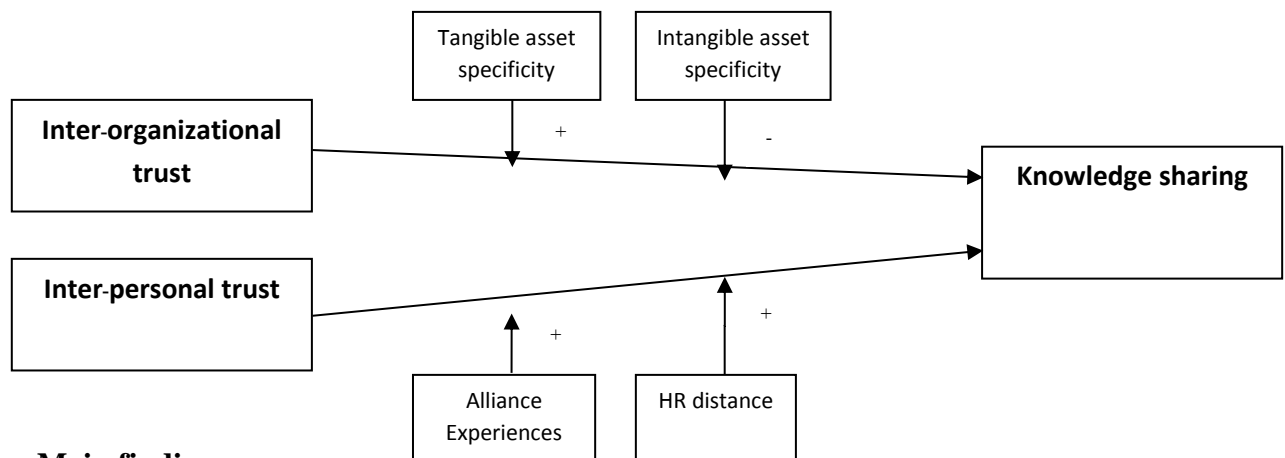
Earlier studies of trust and knowledge-sharing between alliance partners identified a number of factors that either enhance or impede this relationship. One key factor is transaction cost because a distinctive characteristic of strategic alliances is that partners have to take risks with regard to uncertainty arising from each other's behavior. Such risks arise in particular from two sources of transaction costs: asset specificity and organizational context. These two sources generate ambiguity on knowledge sharing between alliance partners)Simonin, 1999(. Consequently, structure of inter-organizational collaboration involves different degrees of equity investment and interaction by alliance partners, and represents rather different contexts in which knowledge sharing takes place. Moreover, the institutional environment is a critical factor influencing the development of inter-organizational trust in cross-country settings)e.g., Rao et al., 2005; Zaheer and Zaheer, 2006(. As a result, each firm must adapt to its own unique institutional environment. Thus, in some situations knowledge sharing is less desirable, for example because it is too costly, or it increases the risk of knowledge spillovers to an unacceptable level)Ireland et al., 2002(.

In sum, while trust is likely to increase organizational knowledge sharing in many settings, this research argues that in some situations trust may not enhance knowledge sharing between business partners. In this research settings, asset specificity and organizational context can encourage or hinder knowledge sharing process. It is hypothesized that the positive relationship between inter-organizational trust and knowledge sharing is moderated by the characteristics of transactions in the partnerships. On the other hand, the positive impact of inter-personal trust is moderated by the institutional context in which the relationship is embedded.

The design/methodology

Using data from an original survey of 156 partnership projects between MNEs buyer and local suppliers in the Thai manufacturing sector, the authors use a hierarchical regression analysis to test the moderating effects.

Figure 1: Conceptual framework



Main findings

In the contingency effect model, the positive relationship between trust and knowledge sharing is moderated by transaction cost to which an alliance is exposed, including tangible and intangible asset specificity, alliance experiences and HR distance between alliance partners. Inter-organizational trust and intangible asset specificity serve as substitutes for each other on knowledge sharing. This is because partner organizations make investments that are specific to the alliance, and this asset specificity shapes their perceptions of the partners' likely behavior.

Inter-personal trust, in contrast, functions as a complement for alliance experiences and high level of HR distance between alliance partners because the environment shapes how individuals perceive their business partners.

The key contributions

This research contributes to the literature by recognizing the key role of inter-personal and inter-organizational trust as contributors to the knowledge sharing between alliance

partners without rejecting the role of transactions costs. The study advances a trust view of knowledge sharing in buyer-supplier partnerships in which the positive impact of trust on knowledge sharing between organizations is moderated by the context of the relationship between the two organizations.

Managerial implications

The study suggests that managers should focus on how to foster inter-organizational trust with specific asset investment in a partnership in order to develop knowledge sharing since a higher degree of dependence requires that the relationship include greater safeguards. In addition, based on the findings in Thai manufacturing sector, the overriding recommendation is the advice to MNE managers to invest time and resources, which increase knowledge sharing activities between the alliance partners, in order to understand that the knowledge gap resulting from HR distance between cross-cultural knowledge holders can be significant.

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Facilitating Dynamism and Interaction with Global Markets in Clusters

Aihie Osarenkhoe, Daniella Fjellström.

The following research question is used to guide the exploratory nature of this study: What platform does cluster organisation create to enable its internationalisation process in order for its partner organisations (SMEs) to effectively manage the challenges brought about by the cataclysmic changes in business logic in the age of globalisation and digitalisation? This study aims to shed light on exogenous gaps that are critical to cluster dynamics (Morgulis-Yakushev and Sölvell, 2017). Thus responding to recent calls (Jankowska and Głowska, 2016; Valdaliso, Elola and Franco, 2016) for more research on gaps that are alien to the cluster, consisting of cross-cluster gap barring collaboration and interaction with firms in other clusters, and, most especially, the global market gap barring collaboration and interaction with global markets.

The gap in literature is attributed to the fact that the impact of clusters on the internationalisation of cluster firms (Caputo et al. 2016) and the degree to which cluster activities improve collaboration and interaction between Firm-to-Firm, Firm-to-Research, Firm-to-Education, Firm-to-Capital and Firm-to-Policy, has received tremendous coverage in extant literature (Sölvell, 2009; Lindqvist et al 2013; Pla-Barber and Puig, 2009; Lamotte, 2014; Jankowska and Głowska, 2016; Valdaliso et al, 2016). In other words, previous studies have mostly addressed internal gaps hindering effective mobility and collaboration inside clusters, to the detriment of external gaps vis-à-vis collaboration and interaction with global markets. This perspective has gained prominence because digitalisation combined with globalisation enables internationalisation by firms and clusters on a global scale (Goude och Öberg, 2015; Caputo et al, 2016). To Swedish firms, this means opportunities for sales to customers worldwide. Conversely, to foreign companies this facilitates sales in Sweden. Both international and domestic competition toughens, as Sweden becomes part of a global market.

It is recognised in this study that clusters act as real "springboards" for firms, especially small and medium enterprises (SMEs) to help them in increasing their competitiveness and thus supporting them in getting access to global value chains and new markets (Meier

and Zombori, 2011). Cluster participants can benefit from specialised business support services of cluster organisations stimulating and organising these actions. In particular, if firms have to increasingly integrate their activities into global value chains in order to become and remain competitive, being part of a cluster is supportive (Pavelkova, et al., 2015). Clusters in the emerging industries face the needs for internationalisation. Consequently, transformation processes within value chains, brought about by digitalization, urge clusters to think global and internationalise accordingly.

Theoretical lens draws on combination of the experiential learning-commitment interplay, which is the driving mechanism of Uppsala's internationalisation process model with a similar experiential learning-commitment mechanism focusing on business network relationships.

Although understanding innovation in the context of the current changing industrial landscape in the age of digitalization has become cumbersome, and necessitates serious challenges to traditional internationalisation models (Luostarinen, 1994; Cavusgil, 1980; Bilkey and Tesar, 1977; Leonidou and Katsikeas, 1996; Johanson and Vahlne, 1977, 1990, 2003) our theoretical lens draws on Uppsala internationalization model (Johanson and Wiedersheim-Paul, 1975). The central tenets of the model are how organizations learn and how their learning affects their investment behavior (Forsgren, 2002). Another important aspect of the Uppsala model is that it describes the internationalization of a firm as a gradual process.

Data collection Secondary data entailed a review of various evaluation reports. Primary data were collected through in-depth interviews with Process Manager – R&D, Cluster Market Manager, Communication and Information, Cluster coordinator, outward internationalized firms and inward internationalised firms at Future Position X – a cluster organisation within geographical information. through in-depth interviews with Process Manager – R&D, Cluster Market Manager, Communication and Information, Cluster coordinator took place in the Swedish cluster Future Position X (FPX) - a leading cluster organisation in Europe within geographical information.

Preliminary findings show that the prevailing reason for FPX to consider an international scope was to keep its lead in technological development, identify upcoming market needs, properly reacting to transformation processes and to strengthen its own position on

markets worldwide. From the beginning, FPX was building the international links with similar clusters in the same technology area in Nordic, Baltic and European countries. Nevertheless, later learned that for FPX to be in forefront of innovation, it needs to mix its own core competences with very different technology areas. FPX built relationships with a number of the biggest hotspots in the world in Geo Spatial technologies. Thereafter, it started to build new relationships with complementing knowledge and hot spot centers, like the mobile and new media industry in Malmö, the digital media and gaming industry in China, the health industry in Beijing and Australia, the sports industry in Åre and Barcelona and Melbourne. This is enabling FPX to work with cross cluster international innovation and importantly supports the strategy of ‘innovation within the gaps’.

Findings show that FPX has, since 2005 had an internationalization strategy and since 2012 a ‘Born Global’ vision for the spin-off companies coming out of its innovation system.

It can be concluded that a sustainable internationalisation platform created by cluster is of utmost importance these days because digitalisation is fundamentally disrupting traditional industries, labour markets and the global economy (Einsiedler, 2013; Lee & Kao, 2014), and transforming various facets of exchange (Hagberg et al 2016). To companies, this means opportunities for new or changed business models, spanning from marketing and sales channels to logistics (Ivang et al, 2009). Traditional business models and value chains are challenged as digitally performed activities allows for increased availability, shorter lead times, faster time-to-market and lower transaction costs (Holmlund et al. 2017). This translates into opportunities for lower overall costs, allowing smaller companies to compete with well-established companies and brands. This study contributes to the literature examining location can help firms to increase their competitiveness and thus supporting them in getting access to global value chains and new markets, by focusing solely on exogenous activities which serve to improve cooperation with global markets, that are critical to cluster dynamics.

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Sustainable marketing strategies in the food and drink industry: a comparative analysis of B2B and B2C SMEs operating in Europe³

Edyta Rudawska.

Theoretical background and research context

The contemporary business environment is undergoing dynamic social and ecological changes nowadays. These changes have to be faced not only by certain nations or countries, but by businesses as well. They must respond to them by providing customers, society and other stakeholders with new business models (Inigo, Albareda and Ritala 2017; Pedersen, Gwozdz and Hvass 2016). These authors agree that the sources of success for today's businesses should be sought in long-term, sustainable development, which takes into account economic, environmental and social dimensions. To do so companies need to reconfigure their operational strategies, especially their marketing strategies. Incorporating sustainable issues into marketing strategies becomes an absolute necessity for survival and building a competitive market advantage in the long term (Papadas, Avlonitis and Carrigan 2017). Kumar, Rahman and Kazmi (2016) asserted that with the introduction of the sustainability concept, marketing discipline, which was focused in the past on traditional economic analysis, has been broadened by environmental and social considerations. Marketing must involve strategic decisions made at the organizational level, i.e. defining sustainable values and marketing objectives as well as making decisions with regard to designing sustainable marketing activities.

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Sustainability should be established in the marketing agenda not only of big companies but also SMEs. Sustainability in big and multinational business organizations has already been a subject of wider discussion over the last three decades. However, the practice of sustainability, and specifically sustainable marketing, in SMEs is still not widespread. This despite SMEs playing a crucial role in the economy of the EU28 accounting for approximately 99.8% of businesses, 67% of the people employed and 57.5% of gross value added creation (Muller, Devnani, Julius, Gagliardi and Marzocchi 2016). The European Commission considers them as key to ensuring economic growth, innovation, job creation and social integration in the EU. However, sustainable marketing is not yet deeply entrenched in the majority of these businesses. This is due to the fact that, on the one hand, SMEs are not perceived as having a significant, negative impact on the environment. Nevertheless, taking into account their share in the total number of companies in Europe, it should be noted that while these are small companies when taken separately, they have a huge impact on the environment when taken all together. On the other hand, the limited financial resources they usually have at their disposal, as well as shortages of other resources (material or human), constitute a barrier hindering their access to new, greener technologies and limiting their involvement in social activities. Therefore it is often considered that pro-social or pro-ecological actions can only be implemented by big companies. Literature reviews also show that the issue of sustainable marketing, although in recent years increasingly analysed from a theoretical point of view, has not yet been subject to empirical exploration (Crittende, Crittenden, Ferrell, Ferrell and Pinney 2011; Hult 2011), and a comprehensive evaluation of sustainable marketing activities conducted by SMEs is a completely unexplored area. The concept of sustainable marketing is a relatively new subject area emerging in management literature in recent years, though with a paucity of research into the practices of SMEs. Therefore

it seems very important to adopt SMEs as a subject of research in the area of sustainable marketing.

The study presented in the proposed paper focuses on SMEs operating in the food and drink industry. The reason for choosing this sector is the fact that it is the world's largest manufacturing sector; and at the same time this sector, together with households goods and travel, is responsible for 70-80% of all environmental impacts, ranging from pollution and greenhouse gas emissions to land use and waste (FoodDrinkEurope 2016). It is therefore clear that it is worth researching the possibilities of implementing sustainability issues into the marketing strategies of companies operating in this sector.

All above mentioned facts indicate a very interesting and still under researched field for exploration. This study advances the extant literature and makes several contributions. First, based on the latest literature, it provides a theoretical background for the implementation of sustainability into the marketing concept. Second, for the first time it conceptualizes and operationalizes sustainable marketing tools in the food and drink industry (focusing on the 5Ps). Third, it is one of a very few research referring to SMEs, as most of the research on sustainability marketing refers to big companies (Finch, Geiger and Harkness 2017). Fourth, it is the first study that presents a comparative analysis of the scope and motives for the implementation of the sustainable marketing concept by B2B and B2C companies operating in European countries.

Purpose – The paper aims to make a contribution by providing a comprehensive understanding of the scope of the implementation of sustainable marketing tools in SMEs operating in the food and drink industry in Europe. The focus will be put on the identification of differences between companies operating in B2B and B2C context.

Design/methodology/approach – The empirical basis is a survey of 770 European SMEs. The respondents in the particular countries were stratified according to company size, measured by the number of employees. The questionnaire was completed by the managing directors of the enterprises (CEOs) or heads of the marketing departments (CMOs). The research was conducted between April 2016 and January 2017. An in-depth analysis of the findings helped to identify differences between the two groups of SMEs, i.e. operating in the B2B and B2C context, in terms of the extent of sustainable marketing implementation. The non-parametric U Mann-Whitney test was used to examine the significance of the differences between the two groups of companies.

Findings – The research results suggest that both groups of B2B and B2C companies implement sustainable marketing tools to some extent. However, in most cases B2B organizations do it to a significantly greater extent. Nevertheless, these activities relate mainly to those tools, which are directly visible to customers, both institutional and individual, like packaging, product ingredients or certificates. To a lesser extent they involve marketing activities of an internal nature, like production process and the level of energy, water or resources used.

Originality/value – To the best knowledge of the author this is the first empirical research study on the implementation of the sustainable marketing concept in SMEs operating in European countries. The study is a comparative analysis of the phenomenon between B2B and B2C companies, which has not been previously researched.

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The Hockey Stick Phenomenon in the Sales at Business B2B

Jose Roberto Concha, Benjamin Cabrera.

This study is aimed not only at acknowledging the existence of sales cycles among B2B (business-to-business) companies, but also at achieving a better understanding of trends among companies during their billing periods, regardless of the industry in which they operate. To accomplish these objectives, a proposal was made for a qualitative research with a descriptive design using semi-structured interviews as an information-gathering instrument as well as descriptive content analysis. The sample consisted of 58 companies that carry out B2B in the city of Cali, Colombia. The research findings show that the presence of the hockey stick phenomenon is rather remarkable in a set of various companies that exhibit certain sales-cycle related behaviors in reaction to market actions and decisions made by the sales, marketing, and finance departments at the companies.

Introduction

One of the problems faced by a large number of product manufacturing and trading companies is the phenomenon known as the "hockey stick phenomenon" (Singer, Donoso and Konstantinidis 2008),

This phenomenon involves an increase and accumulation of demand and sales at the end of each period or cycle, thus affecting product delivery (Ovalle et al. 2009) and causing a decline on the quality of service delivered to the client (Anderson, Morrice and Lundeen 2005).

This research work provides a contribution to new knowledge for organizations and companies addressing the problem from a qualitative perspective. Therefore, it makes it easy to understand the causes and consequences associated with the phenomenon and, at

the same time, to prove the causes that have a significant impact on the occurrence of this phenomenon.

Research Problem Statement

This study reviews the concentration of sales in a given period among B2B (business-to-business) companies based on the hockey stick phenomenon (see Figure 1) and presents the causes that have a significant impact on the occurrence of the phenomenon. It is carried out following a qualitative scientific research design using 58 surveys conducted among B2B companies.

Theoretical Framework

The hockey stick phenomenon, which is also known as the end-of-the-month syndrome, affects the synchronization of commercial operations in product manufacturing or trading companies, as there is an increase of sales in the last week of a given month or cycle (Lertpattarapong 2002).

When the trend in the transactions between suppliers and clients or trading companies and clients is to close a low number of orders within the first three weeks and, at the end of the month, there is a series of pressures, strategies, and conditions for the majority of these transactions to be conducted in the last week (Ovalle et al. 2009).

It is known that one of the causes that leads to this kind of behavior is the lack of a penalty to sales representatives for postponing their efforts to close sales (Gibbons 1998), inaccurate demand forecasts, discontinued products that have to be sold, end-of-period discounts to accomplish goals, or stock sales (Ovalle et al. 2009).

Accounting and economics literature also associates the hockey stick phenomenon with other effects such as, e.g. the end-of-the-tax-year effect, saturation of sales channels, manipulation, and conducting forward sales (retailers)(Cohen, Dey and Lys 2008).

Methodological Design and Analytical Tools

A probabilistic sampling methodology was designed based on the companies that had a positive response to the request to participate in the survey for this study. The population was selected based on the following criteria:

- Companies located in the city of Cali, Colombia;
- B2B (business-to-business) companies;
- Different industry sizes;
- Companies operating in their business category; and
- Companies with a current registry with the Chamber of Commerce.

Analysis of Results

Thanks to the participation of 58 companies engaged in different kinds of industries (i.e. food manufacturing, construction, textile manufacturing, mass consumer goods, technology, trading, and automobile manufacturing companies), it was possible to identify a common behavior among internal company departments to come up with feasible solutions that minimize impact. Nevertheless, there is persistent irregularity of the syndrome.

An analysis was carried out to determine whether the companies are aware of the problem of the hockey stick phenomenon within their companies and whether or not they have implemented actions to prevent it. First of all, an assessment was made to determine whether a company was aware of an irregular behavior at the end of the period and the

observance of the existence of the hockey stick phenomenon in order to establish the number of cases that validate a cross analysis.

The second analysis of the relationship between whether a company is aware of experiencing an irregular behavior at the end of the period and whether it has achieved positive results after implementing actions to linearize sales.

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Perceived usefulness of sales technology: Modeling the role of support service and competitor utilization

Ashwani Kumar Upadhyay, Komal Khandelwal.

Aim of the study, research questions and objectives

The aim of the study is to model the determinants of perceived usefulness of sales technology and link them with behavioral intention to adopt sales technology by sales professionals. The validation of a parsimonious model which takes into account competitor utilization (social factor) and support service (organizational factor) as important determinants of perceived usefulness of sales technology is discussed in the paper.

Sales technology helps improve the productivity of salesperson by enabling them to perform their day to day task quickly (Bush *et al.*, 2010). There is a need to revisit the existing technology acceptance theories that have limited relevance in case of new sales technology tools like mobile sales assistants (Spreer and Rauschnabel, 2016). The main objectives of this study includes modeling the relevant determinants like competitor utilization and support service as predictors of perceived usefulness, and in turn perceived usefulness as an important predictor of behavioral intention to use sales technology.

Theoretical background

Various theories and models already exist that explain the adoption of technology. Most of the research on technology adoption is mainly based on “Technology acceptance model” (TAM) proposed by Davis (1986) and its variants. Technology Acceptance Model 2 (TAM-2) by Venkatesh and Davis (2000) and Technology Acceptance Model 3 (TAM-3) by Venkatesh and Bala (2008) are important models explaining the adoption of technology.

Research methodology

The research design used is conclusive research, and the primary data collection method is survey. The contact method used is physical personal contact and via online link to questionnaire hosted online. The instrument used for data collection is questionnaires containing dichotomous, multiple-choice, close ended questions, with Likert scale and semantic differential scale for measurement.

The total number of salespeople who were contacted is 700, only 584 salespeople completed the survey. Response rate for the survey is 83.4%. Finally data from 556 respondents, which is usable and complete has been finally analyzed and used for testing the model.

Main findings

In order to validate and test the proposed model (figure 1) structural equation modeling has been used.

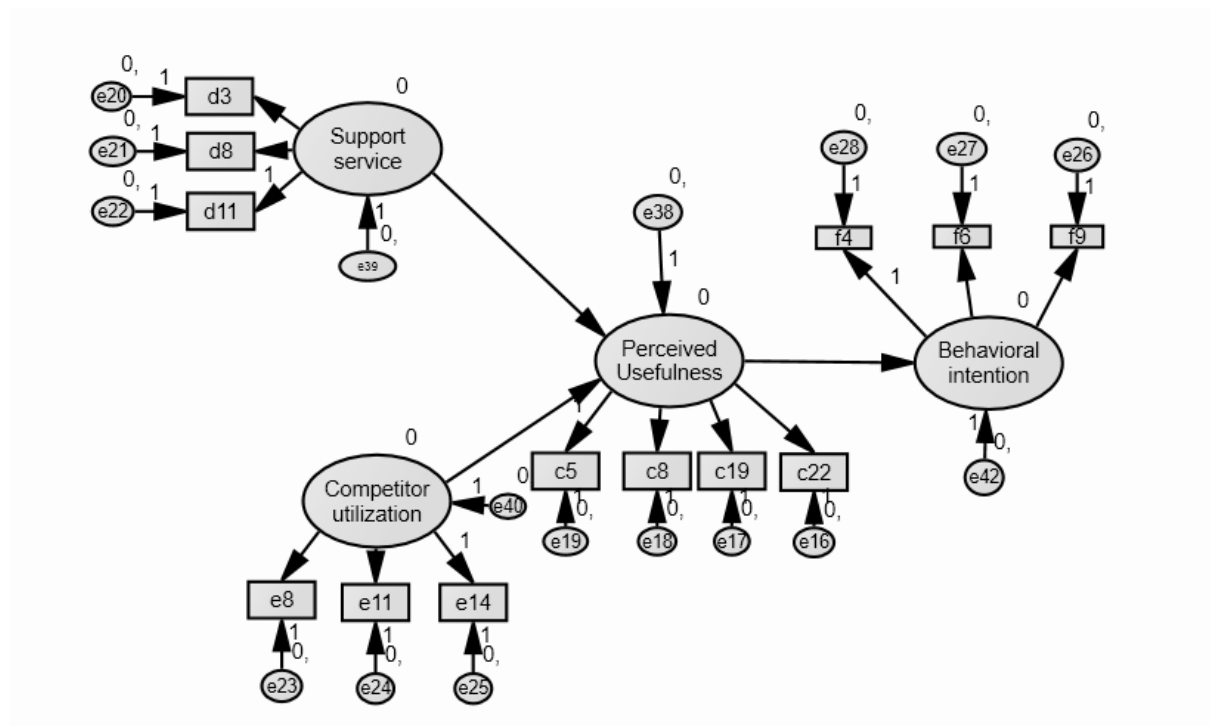


Figure 1: Proposed model

Confirmatory factor analysis

In order to establish the validity of the constructs confirmatory factor analysis has been carried out. The standardized factor loadings or standardized regression weights for the constructs - perceived usefulness, competitor utilization, support service and behavioral intention to use sales technology are all above 0.5. The average variance extracted (VE) values are all above 0.5 and have required convergent validity. For estimating reliability the construct reliability value (CR) is found to be above 0.7 for all the constructs thus indicating that all the constructs in the proposed model have required reliability.

Overall model fit

Values of various model indices are as follows: Incremental Fit Index (IFI) is 0.914, Comparative Fit Index (CFI) is 0.914, Root Mean Square Error Approximation (RMSEA) is 0.08, and CMIN/DF is 5.108. All these fit indices indicate a good fit for the proposed model (Hair *et al.*, 2006 and Byrne, 1998). The maximum likelihood estimates and model coefficients are presented and discussed below. From table I, it can be concluded that the proposed hypotheses are supported thus establishing the significance of relationships.

Table I. Maximum likelihood estimates

Independent Variable	Direction of relationship	Dependent variable	Estimate	S.E.	C.R.	P	Result
Support service	.....➡	Perceived usefulness	.342	.044	7.835	***	Supported
Competitor utilization	.....➡	Perceived usefulness	.519	.052	9.922	***	Supported
Perceived usefulness	.....➡	Behavioral intention	.776	.064	12.141	***	Supported

Conclusion

Thus, in summary, this study establishes that competitor utilization and support service have a significant effect on perceptions related to usefulness of sales technology. Support service and competitor utilization has an effect on perceived usefulness, which further translates into intention to use.

For managers, the results of this study have multiple implications. Perceived usefulness of the sales technology should be communicated to sales professionals in order to increase the behavioral intention to use the sales technology. Firms should take steps to further communicate how competitor sales professionals are using the sales technology. Since support services have a positive relationship with perceptions regarding usefulness of technology; firms should therefore support sales professionals, as this will further lead to increase in their intention to use technology leading to higher sales technology usage.

Key contributions

As theoretical contribution, first, this study conceptualizes and discusses the role of various predictors like competitor utilization and support service in determining the perceived usefulness. Secondly, it establishes the role of these predictors and their relationship with the behavioral intention to use via perceived usefulness. Thirdly, it helps to establish the generalisability, reliability and validity of the existing measurement scales in Indian context. The findings of this research are helpful in establishing the role of competitor utilization and support service as determinants of perceived usefulness.

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Web 2.0 and Social Media Impact on Hotel Choice Decisions in B2B: The Comparative Study of Russian B2B and Leisure Tourist Practices

Sergey Kazakov.

Abstract

The notions of Web 2.0 and 'Social Media' describe web-based and mobile technologies that are used to turn electronic communications into an interaction as they encourage online users to exchange user-generated content with each other. Many recent studies manifested that Web 2.0 and Social Media resources are widely used by travelers as effective means for hospitality products shopping. Russian tourists are not an exception in this respect. In this study, the impact of Web 2.0 and Social Media technologies on B2B traveler choice and booking decisions in the hospitality industry is examined in comparison with tourists traveling for leisure in the context of Internet 'RU-zone'. The results of the study possess managerial implications and represent an applied use for the hotel management in the endeavors to rethink and renovate online strategies targeted at their respective B2B audiences.

Keywords

Hospitality and Tourism, Hotel Marketing, Web 2.0, Social Media, B2B tourism, Online Behavior, Information and Communication Technologies, Russia.

Literature Review

The purpose of travel may be considered as a distinguishing factor as it has an effect on consumer behavior in general and online behavior is not an exception in this respect (Mok & Everson, 2000; Rossi, McCulloch & Allenby, 1996; Baloglu & McCleary, 1999; Beerli

& Martín, 2004a, 2004b). There are two prominent travel purposes that determine differences in consumer behavior in eTourism and they are leisure and business respectively. A number of papers found in the literature address the research question differences in the consumer behavior explained by a purpose of travel. Most studies in this respect concentrated on hotel choice factors importance as well as on information search specifics and overall purchase decision making process in leisure or business travel.

As literature demonstrates, business and leisure travelers have much in common with regard to the basic hotel choice factors including level of service quality, food and recreation property facilities availability and quality. However, these two groups often contrast one with another when it comes to room and reception staff service job quality which is more important for business travelers whereas leisure tourists are more inclined to put an emphasis on the hotel security attributes in the hotel booking decision making (Chu & Choi, 2000; Clow, Garretson, & Kurtz, 1994). Leisure tourists, in particular, are driven mainly by gained previous travel experiences in the hotel choice that guide them to evaluate hotel reputation, its service quality, security level and overall dependability (Clow et al., 1994; Lo, Cheung, & Law, 2002). Furthermore, they are also guided by the travel and hotel product value as are supposed to pay from personal accounts thus bestow more attention to hotel room cleanness and overall condition whilst business travelers use to peer more into the availability of the hotel public areas, services and staff overall job performance during the hotel choice process (Kashyap & Bojanic, 2000).

Passing through the information search phase of the consumer purchase journey both business and leisure travel segments demonstrate discrete preferences towards utilization of information sources. Leisure tourists rely more on recommendations received from their friends or relatives, previous personal experience, travel agent recommendations and

travel guide books; business travelers may also rely on their past experiences but in a contrast with the leisure segment they tend to prefer Internet resources including Online Travel Agencies (OTA), airline websites and travel coordinator agencies (Lo et al., 2002).

Based on the literature review dedicated to consideration in consumer discrete specifics in understanding the consumer behavioral patterns in a process of the hospitality product choice the following research question may be proposed for further resolution: there are definite differences in the decision-making process between business travelers and leisure tourists.

Research methodology

In order to accomplish the key research objective, we used an updated and localized questionnaire of the similar study courtesy of McCarthy, Stock, & Verma, 2010 that was conducted earlier by the Center of Hospitality Research at Cornell University. It comprised 29 questions organized into 5 data sections as follows: (1) demographic data; (2) travel details including hotel 'star' level, number of nights, domestic or outbound travel etc.; (3) hotel choice factors that influenced hotel choice and booking, offline and online sources of information and decision making, measurement of how online/offline reviews and recommendations assisted in purchase decision making; (4) electronic devices types used for online hotel shopping, level of satisfaction and willingness to recommend the hotel to others; (5) section containing questions to measure TRI values (Parasuraman, 2000; Parasuraman & Colbi, 2001; Victorino, Kourniuchina, & Verma, 2009; McCarthy et al., 2010). The survey per se was administered by a third-party polling company using the online panel in 15 cities of Russian Federation that account one million residents or more. As a result, the sample inclusive of n=536 observations was assembled.

Results of the study

According to Levene's independent sample t-test business and leisure tourists have much in common when it comes to the search for the relevant information and making their final decision to book a selected hotel. Still, there are some differences there though in hotel choice factors of importance for these two consumer groups as room rate ($p=.002$), perceived value for money ($.000$) and offline hotel recommendations difference ($p=.003$). Type of travel, business or leisure, also affects the specific Internet resources or sites where tourists insert the initial query for the information and make their final stop for hotel booking. Leisure tourists are inclined to consider hotel reviews and feedback sites accompanied by Social Media for the initial information search as more important than other Internet venues ($p=.000$). Business tourists more likely will browse through online meta-search or agencies ($p=0.000$), use the mobile app like Kayak or TripIt ($p=0.000$), or would rather call the hotel directly when planning their trip ($p=0.000$). Online hotel reviews and feedback provide the same level of influence on both leisure and business tourists in their final decision as Levene's test for this group of variables uncovered $p>0.05$, and Pearson's $\chi^2>0$ whilst $p>0.05$ also that demonstrates no multicollinearity between analyzed variables. Overall, according to the data analysis, leisure and business tourists show the similar consumer behavior patterns with some vivid specific signs of ambiguity.

Conclusion

The results of the study demonstrate the importance of Social Media and other Internet tools for business traveler choice in the Russian Federation. The research unveiled that similar yet different consumer behavioral patterns do exist depending on the purpose of the travel which can be leisure or business tourism.

As it is impossible to predict the trend of development of online resources and their impact on the hospitality industry development with a great level of certainty to date, it is necessary to point up the call for a series of similar research projects in the future.

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Assessing the commercial chances of machine tool builders to supply advanced services among their industrial clients: a Transaction Cost Economics perspective

Bart Kamp.

Introduction:

The concept of Industry 4.0 (referring to a family of activities and technologies that entail the use and coordination of information, automation, and computation, software, and (remote) sensing technologies (PCAST, 2011)) is gaining an increased interest among manufacturing communities.

The deployment of this concept unlocks new ways to manufacture existing products and to manufacture new products (PCAST, 2011). Similarly, it allows making products and manufacturing processes smarter (Davies et al., 2012). In parallel, it can act as a catalyzer for the design and delivery of knowledge-intensive or advanced services (Acatech, 2015). I.e., when making assets smart and connected by endowing them with sensors, suppliers of goods obtain an improved understanding of the use of their offering by their clients, and which attributes and functionalities they value. This kind of information can be used to come up with new (on-line) support services (Porter and Heppelmann, 2014). Similarly, digital data gathering provides a basis from which firms may move from providing base services that support goods to advanced services that assist clients in their own value-creating processes. The former can give way, among others, to the following types of smart services: predictive maintenance solutions, corrective intervention and repair mechanisms, life cycle management schemes, productivity/output performance management tools, energy/material consumption and idle time vigilance.

In comparison to traditional or base services (like repair and spare part delivery), smart services tend to have a stronger (positive) impact on the performance of their users (Porter and Heppelmann, 2014).

At the same time, they tend to have a more pervasive impact on the relationship between the provider and user of such services. I.e., fostering the bonds and inter-dependence between buyers and suppliers as the connectivity between assets and actors induces a stronger mutual orientation among them in regard to value creation processes that span the boundaries of individual firms (Kamp and Parry, 2017).

Whether the subsequent “embeddedness” is experienced as something positive and desirable, particularly on the user side, is debatable and arguably influences suppliers’ chances to market advanced services to industrial users of machine tools.

Literature review:

In function of the theoretical lens that is adopted, the appreciation of embedded governance arrangements between industrial counterparts will be +/- favourable.

On the positive side one finds the Network and Interaction (N&I) approach (see e.g. Jaakkola and Hakanen, 2013), which aligns fairly well with dominant thoughts among servitization scholars. See for instance Mathieu (2001), who portrays servitization as a distinct way to conceive inter-firm relationships; more in partnership style and more tending towards long term cooperation.

A more reserved viewpoint on bonding between business-to-business (B2B) partners comes from the school on Transaction Cost Economics (TCE). It exhales a more cautious, or held back, sound with regard to the attitudes of firms in buyer-supplier relationships and their commitment to counterparts (Williamson, 1985). Among others, this is attributed to fear for opportunism on behalf of the counterpart in case one enters into too tight relationships (Williamson, 1985).

Whereas the N&I approach views mutual orientation and partnership development between B2B actors as logical, TCE scholars view such commitment as less natural. When using TCE terminology, a buyer-supplier relationship built on mutual interests

would be equivalent to what is called a “network governance arrangement”. This arrangement has traditionally been portrayed as second best to the other governance modes that TCE distinguishes: market (purchasing without further involvement of the supplier) or hierarchy (full integration of an external vendor’s activities). In addition, hybrid governance structures like networks have often been presented as temporary organizational forms that will eventually be replaced by a hierarchy or market arrangements (Williamson, 1985, Powell, 1990).

Since the TCE framework has not yet (or if; highly rarely) been used to explain processes of servitization, and the uptake of advanced services clearly depends on the receptiveness of industrial buyers towards these services, the present proposal explores the suitability of TCE concepts for assessing whether and when industrial buyers are keen to adopt advanced services.

Research methods and framework for analysis:

To explore the applicability of TCE concepts for assessing whether goods suppliers can expect to successfully offer advanced services to industrial clients, we focus on a specific sector. The sector of choice is the machine tool industry. Various reasons can be invoked for that choice.

The empirical research context of the present paper is set in the machine tool industry.

This choice is invoked by the observation that this industry is witnessing:

A) an increasing demand after flexible and intelligent production lines in order to be fit for the Industry 4.0 era (Acatech, 2013).

B) an growing importance of providing services to clients (Acatech, 2013; Lay, 2014).

Consequently, we use insights from that sector to operationalize relevant constructs and to mount a corresponding conceptual framework for analysis around the following

building blocks (Williamson, 1985; Baker, Gibbons and Murphy, 2002; Brouthers and Nakos, 2004):

- Asset specificity
- Frequency of interactions
- Uncertainty
- Power asymmetry

Results:

The paper develops a conceptual framework for analysis and a series of hypotheses. Overall, the paper shows clear ways forward for application of TCE concepts and how it can be used as a toolbox for examining questions around the marketing of advanced services in industrial networks. It highlights that many of the factors that influence the implementation of advanced services can be captured and assessed by appraising the asset specificity, frequency, uncertainty and power asymmetry underpinning the B2B relations in which these services are embedded.

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The Most Influential Journals of the Last 25 Years. Bibliometric Analysis in B2B Marketing,

Leslier Valenzuela, Jose M. Merigó, Carolina Nicolás.

Introduction

Industrial Marketing focused academic investigation begins to be seen during the 1980's (Hadjikhani & LaPlaca, 2013), using Journals as the chosen channel for the diffusion of this new scientific knowledge. Given the rigorous process of review which the articles published have to go through, the relative importance of Journals is greater compared to other academic media (Thyer, 2008). Because of this, it is of academic interest to know the quality, impact and visibility of the different scientific journals (Baumgartner & Pieters, 2003). This work seeks to contribute to B2B Marketing exposing to authors, editors, educative institutions and the interested public in general the following information: 1) Most influential Journals regarding B2B Marketing according to their H Index. 2) The amount of citations and self-citations made by Journals.

Theoretical Framework

This work is a bibliometric analysis, quantitative methodology for the description of a group of publications. Its main concern is to rank publication based on their H Index, which is formed from the number of publications and the number of citations (Hirsch, 2005). There are bibliometric analyses with the objective of demonstrating the evolution of B2B Marketing, with a focus on the articles and authors with the most citations (Backhaus, Lügger, & Koch, 2011). Similarly, there are bibliometric analyses that focus on specific B2B Marketing Journals and their contribution to science (LaPlaca, 1997) (Merigó, Mas-Tur, Roig-Tierno, & Ribeiro-Soriano, 2015) (Valenzuela et al., 2017). But

until now, there is no study with the sole purpose of ranking Journals according to their B2B Marketing publications.

Methodology

This study uses Thomson Reuters' Web of Science (WoS) as its data base, considering its information accurate and neutral. The search made in the database considers 25 years of publications, between 1992 and 2016 and 5,912 documents classified as article, letter, note and review were considered. For each journal with publications in B2B Marketing, the total of published articles (TP) is extracted; the sum of citations in such works (TC); the average number of citations per article published (TC / TP); the H Index (H); historical Impact Factor (IF); Impact Factor of the last 5 years (IF5); and the number of articles in the journal that are present in the ranking of the 50 most influential (T50)

Results

In Table 1 we can observe the 30 Most Influential Journals between 1992 and 2016 as ranked by the H Index. It can be seen that publications on B2B Marketing are distributed among the different journals that focus on marketing in general, with 12 of the 30 magazines present in the ranking being marketing related. It is noted that only three publications are specialized in B2B Marketing, these publications are, Industrial Marketing Management (IMM), Journal of Business Industrial Marketing (JBIM) and Journal of Business to Business Marketing (JBBM). Table 2 shows the number of times a journal has cited another present in the 15 most influential as shown in Table 1. Within the most cited journals we find IMM, which without considering the self-citations, sums 2,422 citations by other journals and has been cited more than 100 times by 8 ranked magazines. Then there is JM, gathering 1,276 citations, being cited more than 100 times

by 5 ranked publications. Finally, with 652 citations by other journals, JBR has been cited more than 100 times by 3 journals.

Conclusions

Bibliometrics presented show a ranking of the 30 most influential journals in the area (Table 1) based on its H Index. Supported by the Who Cites Who analysis that show the journals that have the most citations between them (Table 2). Most ranked journals address marketing issues in general. As for the ranking leader, we found IMM, it has an H Index of 87 and its number of publications represents 34% of the manuscripts considered in this study. The information presented in this paper is relevant to academics, publishers, educational institutions or other interested in B2B marketing as it provides a global image of the area that can be used to make decisions about publication strategies, direct research, position journals, and focus of publication efforts or simply having a current picture of B2B marketing development.

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Table 1. Ranking of Journals by H Index

R	Name	TP	TC	TC/TP	H	>200	>100	>50	>25	IF	IF5	T50
1	Industrial Marketing Management	2031	48187	23,73	87	16	73	222	588	3,166	4,402	23
2	Journal of Marketing	52	4934	94,88	34	6	16	23	37	5,318	8,917	12
3	Journal of Business Research	115	3457	30,06	30	3	6	22	36	3,354	4,108	4
4	Journal of Business Industrial Marketing	582	4500	7,73	26	0	1	5	36	1,371	2,017	0
5	Journal of The Academy of Marketing Science	40	2434	60,85	21	3	9	14	20	5,888	9,505	3
6	European Journal of Marketing	50	1055	21,10	17	0	2	5	14	1,333	2,686	1
7	Journal of Product Innovation Management	25	1035	41,40	17	0	1	8	14	3,759	4,358	1
8	Information Management	21	825	39,29	15	0	0	8	14	3,317	4,283	0
9	International Journal of Research In Marketing	22	647	29,41	14	0	1	4	9	1,775	3,279	0
10	Supply Chain Management An International Journal	20	427	21,35	14	0	0	0	7	4,072	6,222	0
11	International Journal of Operations Production Management	18	522	29,00	13	0	0	4	9	3,339	4,211	0
12	Management Science	17	866	50,94	12	0	4	6	8	2,822	4,131	1
13	International Journal of Service Industry Management	13	624	48,00	12	1	1	2	8	1,800	2,402	1
14	Journal of Business To Business Marketing	103	533	5,17	11	0	0	0	3	1,312	1,243	0
15	Marketing Science	18	583	32,39	11	0	1	4	9	2,163	3,588	0
16	Journal of Marketing Research	17	573	33,71	11	0	1	4	10	3,654	5,31	0
17	Information Systems Research	16	878	54,88	11	0	4	7	10	2,763	4,791	0
18	European Journal of Operational Research	16	362	22,63	11	0	0	2	5	3,297	3,582	0
19	Journal of Management Information Systems	14	617	44,07	11	0	2	3	7	2,356	3,910	0
20	International Journal of Electronic Commerce	17	401	23,59	10	0	0	3	6	3,9	6,135	0
21	International Marketing Review	15	291	19,40	10	0	0	1	5	1,672	3,45	0
22	Journal of Service Research	14	424	30,29	10	0	1	3	5	6,847	7,267	0
23	Journal of International Marketing	13	418	32,15	10	0	1	3	5	3,725	4,910	0
24	California Management Review	14	425	30,36	9	1	1	3	4	2,943	3,412	1
25	Journal of Service Management	14	199	14,21	9	0	0	0	1	2,897	5,121	0
26	Internet Research Electronic Networking Applications and Policy	10	212	21,20	9	0	0	0	4	2,931	4,580	0
27	Journal of Business Ethics	14	306	21,86	8	0	1	2	3	2,354	3,526	0
28	Journal of Advertising Research	13	286	22,00	8	0	0	2	6	2,034	2,194	0
29	Journal of Supply Chain Management	11	215	19,55	8	0	0	1	3	5,789	6,795	0
30	Journal of Strategic Information Systems	10	470	47,00	8	0	2	2	5	3,486	4,612	1

Source: Own elaboration based on WoS data. Abbreviations: R = Ranking; TP = Total Publications; TC = Total Citation; H = H Index; IF = Impact Factor; IF5 = 5 Year Impact Factor; T50 = Number of Articles in the Top 50 Articles

Tabla 2. Who cites Who Journals 1992-2016

<div><div><div>Cited Journal</div><div>Cited By</div></div></div>	Industrial Marketing Manage-Ment	Journal Of Marke- Ting	Journal Of Business Research	Journal Of Business Industrial	Journal Of The Academy Of Marketing Science	European Journal Of Marketing	Journal Of Product Innovation	Informa-Tion Manage-Ment	Research In	Internatio-Nal Journal Of	Supply Chain Manage-Ment An Internatio-Nal	Internatio-Nal Journal Of Operations	Manage-Ment Science	Internatio-Nal Journal Of Service Industry Manage-	Journal Of Business To Business	Marke-Ting Science
Industrial Mktg. Management	1577	475	288	288	183	153	46	8	51	18	11	3	13	78	21	
J of Marketing	76	211	22	7	36	1	9	0	10	0	1	3	0	5	28	
J of Business Research	548	166	238	95	77	24	19	6	21	2	3	8	17	13	17	
J of Business Industrial Mktg.	487	164	126	333	66	54	16	6	24	10	3	2	12	35	20	
J of the Academy of MK Science	135	134	41	22	87	6	14	0	17	0	0	2	4	6	12	
European J of Marketing	205	98	49	33	45	42	5	0	22	0	0	2	11	6	7	
J of Product Innovation Management	231	25	27	13	32	1	126	0	8	0	2	2	0	3	7	
Information Management	66	14	10	4	14	0	4	41	0	0	0	11	6	0	1	
International J of Res. in Mktg.	44	54	9	6	9	2	5	0	35	0	0	3	0	2	17	
Supply Chain Management an International J	203	22	15	15	9	2	0	7	4	46	12	3	0	1	0	
International J of Operations Production Management	230	23	18	24	3	2	13	7	0	12	50	3	4	4	2	
Management Science	11	7	1	0	2	1	3	0	2	0	0	39	0	1	24	
International J of Service Industry Management	41	8	7	0	10	0	3	1	1	0	0	0	10	1	0	
J of Business to Business MK	130	55	37	34	25	18	3	0	2	0	1	1	5	59	2	
Marketing Science	15	31	2	0	4	1	0	0	2	0	0	8	0	1	39	

Source: Own elaboration based on WoS data.

Measurement Model of Technology Trust in Case of Online Tax Filing Solutions

Joanna Ejdyś.

Aim of the study

The paper aims to elaborate and verify the theoretical model of technology trust based on an example of online tax filing.

Research questions and objectives

The following research questions were proposed:

1. What constructs should be included in the technology trust model?
2. What variables determine technology trust in case of online tax filling?

Theoretical background

One of the key factors ensuring the transparency and effectiveness of activities carried out by public administration is the use of digital technologies (Śledziwska, Levai, Zięba, 2016). The adaptation of digital technologies by the administrative sector results in a so called e-government, e-administration services. According to the UN report, the e-government development index (EGDI) classifies Poland (the EGDI at level 0.7211) on the 36th position out of the 191 surveyed countries. The leader in the ranking is the United Kingdom with the EGDI at 0.9193 (the United Nations E-Government Survey, 2016). Also, according to Eurostat data, the level of digital interaction of Polish citizens with public institutions is very weak. The percentage of citizens with the digital interaction of public institutions is only 30%, while the Nordic countries are in the lead with – Denmark 88%, Norway – 85%, Finland – 82% (Digital Economy and Society Database, Eurostat 2016).

A different level of e-government adaptation by the societies is associated with the ability to overcome the most important development barriers, both at the design stage, dissemination, implementation as well as the use of offered technology.

In the process of implementation and development of e-government services, on the one hand, technological awareness plays an important role, as well as readiness to implement particular solutions at a national and individual level (Chen, Jubilado, Capistrano, Yen, 2015). The success of implementation of e-government solutions is conditioned by different groups of factors, of technological, organisational, human, economic, social and cultural nature (Kumar, Mukerji, Butt, 2007; Shareef, Kumar, Kumar, Dwivedi, 2011; Śledziwska, Zięba, 2016).

The issue of building trust in e-government projects has been noticed by many researchers as one of the key success factors, whereas a lack of trust – as a basic barrier in implementing e-government projects (Warkentin, Gefen, Pavlou, Rose, 2002; Carter, Weerakkody, 2008; Shareef, Kumar, Kumar, Dwivedi, 2011).

Authors of the E-Government Survey report (2016) indicated that the development of e-government services requires the creation of a trusted environment, also referring to public institutions and the government as well (United Nations E-Government Survey 2016).

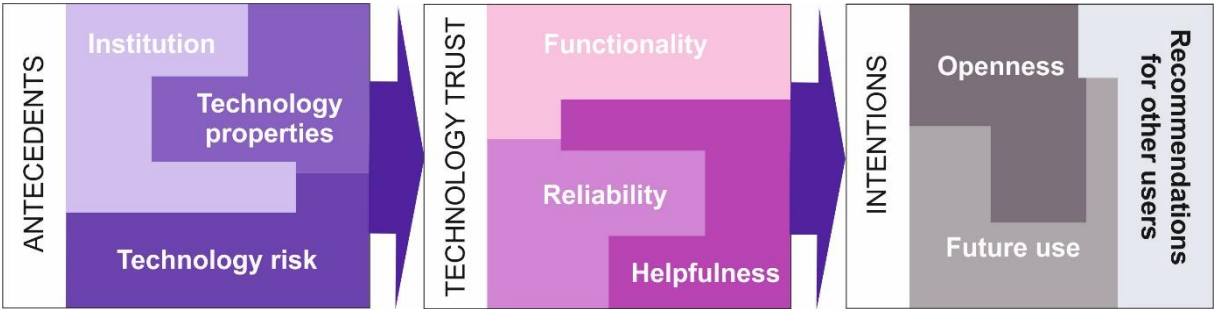
Research conducted by Belanche, Casaló and Flavián (2012) confirm that trust has a direct impact on shaping the attitudes of users and, consequently, on intentions for the future use of e-government solutions (Belanche, Casaló, Flavián, 2012).

Knowledge of the reasons behind the trust or distrust of users in services offered by e-government is crucial to build a stable trust-based environment (Hole, 2016). Taking into account the two-way flow of information between public administration and customers, trust in e-government reflects the tendency of users to acquire and transfer data and

information in relation to public authorities (Ranaweera, 2016). New knowledge regarding technology trust antecedents and relations between technology trust and the future intention of using e-government solutions, seems to be desirable from practical, as well as scientific point of view.

Design/methodology

Based on the literature review, the theoretical model of technology trust was built. The structure of the model is presented in Picture 1. The technology trust model describes relations between trust antecedents, the notion of trust and user future intentions of using technology.



Picture 1. Technology trust model

For the purpose of model verification, the survey method was used to collect data. The online survey engaged about 1000 polish citizens who filled in the online tax declaration in 2018 (the survey is still in progress).

The Generalized Least Squares (GLS) model with AMOS was set to test the hypothesised relationships in the model. In the structural equation modelling, a measurement model allows setting the relationships between observed variables (i.e. indicators) and their respective unobserved (latent) variables by defining a particular structural model.

Main findings (or expected/preliminary findings for the cases of work in progress)

The conducted literature studies confirmed the significant interest among researchers in technology trust. Based on particular technology, such us online tax filling, positive relationships were identified between risk and technology trust; institutional trust and

technology trust; technology properties and technology trust; and technology trust and openness and the future use of e-government technologies.

Key contributions

The scientific value of the study is an attempt to build measurement scales relating to trust in technology, and constructs determining that trust in the case of online tax filling technologies.

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The value and relevance of academic research for business practitioners in B2B marketing

Olga Dzju, Maria Ivanova-Gongne, Nikolina Koporčić.

Knowledge as a result of the academic research frequently is remaining in isolation from the real business environment in spite of the extensive research practice within the sphere of business-to-business (B2B) marketing. Strictly speaking, there is a gap of knowledge transfer from academic researchers to managerial practitioners (Van de Ven & Johnson, 2006) who, in spite of close cooperation, may find little value in the academic research. Although scholars aspire for their articles to possess value for managers, business people do not expose much interest in reading academic journals or current research (Brennan & Ankers 2004). Among the main constraints to the utilization of academic knowledge business practitioners highlight abstruse academic language, too much time needed for producing the findings or publishing them, and too broad understanding of a business reality (Farr & Timm, 1994; Brennan *et al*, 2014; Baer & Shaw, 2017). Therefore, academic articles seem to have little relevance for managers (Storbacka, 2014) despite being affordable to access. However, the question is being raised: if the academic knowledge is not relevant for the business world, can the academics find effective implications for business practitioners? This work-in-progress paper aims to fill this gap and investigate the main challenges of knowledge transfer from academic research community to business executives. Additionally, it aims to develop solutions on how to boost interest of business managers to academic journals and knowledge that they produce.

Industrial market research is significant in the current turbulent business environment for which business practitioners prefer to hire consulting business professionals rather than

engage in cooperation with academics (Farr & Timm, 1994, p. 6). Business research is also highly perishable in time so in response to fast-changing business environment there is a demand for a shorter “research life cycle” to be able to deal with business dynamics. In some cases, businesses engage academics to investigate their practices hoping for professional input and cost saving (ibid p. 15). In contrast to business consulting, academics aim towards understanding the phenomenon more broadly, and are not necessarily focused on solving a specific managerial issue. Academics tend to generalize the research results in order to apply them in other business contexts and frame the findings with theories which is, naturally, less interesting for managers.

The way of presenting the research results is also a crucial factor in academic articles readability, since the intended audience of readers is not limited to scholars but also involves research participants i.e. business practitioners (McGaughey, 2004, pp.529-550). The neutral manner of presenting the research in order to generalize or theorize findings frequently results in general disinterest of managers in the study and, consequently, the practical value of research findings can be lost. The presentation of research also includes a description of the research process including sometimes the philosophical underpinnings, which may be important for scholars but irrelevant for managers. Moreover, managers can be even not aware of the existence of academic journals related to their sphere of business (Perea & Brady, 2017). They could have a potential interest in such research if those would be represented in comprehensive language and be relevant for business practice. One of the barriers to understanding is the introduction by researchers of new terminology and application of terms used exclusively in academic areas (Baer & Shaw, 2017). In addition, replacement of old concepts with new ones can be confusing not only for MBA educated managers but other academic researchers as well. Abstruse academic language is frequently demanded by top-level

journals, the rules of which academic researchers have to follow in order to be published (Brennan & Ankers 2004).

Remarkably, academic journals that have been mostly referred to by popular business magazines or media publish press releases on their web sites and publish executive summary of the articles (Hamet & Maurer, 2017). Although press releases are more common for natural science journals, marketing issues could in that way make theory and applied knowledge valuable for managerial decision-making. It is important to provide clear managerial implications to achieve managerial relevance, otherwise the papers tend to be too generic for understanding and complicated in terms of language (Baraldi *et al*, 2014). Assumingly, the managerial implications part of the article bears the most value for managers from the whole scientific input. Interestingly, managerial practitioners are keener to read qualitative case studies due to higher relevance of these studies for their business and ease of understanding (Perea & Brady, 2017). Qualitative research provides a relative freedom for researching complex business phenomena. Nevertheless, it is still quite difficult to publish qualitative case study research in high-rank business journals (Birkinshaw, 2004).

In order to understand the challenges of making academic research more valuable for managers we conduct a systematic literature review of the research papers published in the high-quality business journals related to B2B marketing for the period of 2000-2018. The selected journals are: Industrial Marketing Management, Journal of Marketing, Scandinavian Journal of Marketing, and Journal of Business and Industrial Marketing. The main selection criteria for the articles are the availability of executive summary or managerial implications and case study framed research. A special attention in the analysis is dedicated to the linguistic specifics of the articles, in particular concerning the introduction of new terminology by researchers and application of terms applied

exclusively in academic areas. This study emphasizes that in order to achieve managerial relevance and increase the interest of business practitioners in B2B marketing research, it is crucial to provide managerial implications and practical cases in a clear, manager-friendly language, otherwise academic papers may be too generic and complicated to understand.

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A proposal for using the multidimensional statistical analysis and fuzzy set qualitative comparative analysis in the assessment of business models

Katarzyna Dębkowska.

Aim of the study

The aim of this article is to present an original method of analysis and assessment of company business models. The developed methodology uses such tools as the Multidimensional Statistical Analysis (MSA) and Fuzzy set Qualitative Comparative Analysis (fsQCA).

Research questions and objectives

The article is an attempt to answer the research question: which components of a business model and in what way influence the financial condition of companies?

Theoretical background

The analysis of business models can refer to both models already used in companies, as well as those whose implementation is only being considered by managers. Models usually undergo analysis for their durability and improvement possibilities. In order to assess a model a criterium of their ability to generate value for stakeholders is used. Analysis of the literature on the issues relating to business models clearly demonstrates that the business model shows how to generate value for customers and owners of the company (Chesbrough and Rosenbloom, 2002; Nenonen and Storbacka, 2010; Teece, 2010; Hall and Wagner, 2012; Casadesus-Masanell and Ricart, 2010).

In literature on the subject there are known methods of business model analysis. These include: Business Model Canvas, (Osterwalder, Pigneur, 2010), ‘magic triangle’ (Gassmann et al, 2013), Client Business Model (Bell et al, 1997) and Value Creation Maps (Nielsen, Montemari, 2012).

Of all the mentioned methods of business model analysis the most widely used is the Business Model Canvas. This analysis is based on the identification, description and in

some cases, quantification of individual elements of the business model. The triangle of business model is a business analysis method, during which four basic questions need to be answered: Who is the customer? What is the proposal of value? How to deliver the proposed value to the customer? Why is this business model durable from a financial point of view? According to the Client Business Model analysis concept, also known as the Strategic System Audit Framework structure, a business model is a structure, which in an integrated way describes the actions undertaken in a unit including external forces acting on it and the business relations with persons and organisations outside the unit. Ch. Nielsen, M. Montemari (2012) suggested analysing business models using the Value Creation Maps. This method allows to determine the path to a goal, which is the creation and interception of values.

The results of studies conducted in the 1990s confirmed that there is a dependency between various components of business models and financial results (Anderson et al. 1994; Ittner, Larcker, 1998; Rucci et al. 1998, Trueman et al. 2000, Hirschey et al. 2001, Pfeffer, Sutton, 2006; Banker, Mashruwala 2007; Huelsbeck et al. 2011; Bouncken, Fredrich 2016; Federico, Noto 2018). Studies by C. Ittner and D. Larcker (2003) show that companies which verified the dependencies in their business models had 2,95% higher return rate from their assets and a 5,14% higher return rate from their equity capital than companies not conducting such verification.

Literature on business models stresses the fact that quantitative studies and statistical analysis methods are rarely used in analysing business models (Wirtz, 2016). More popular papers refer to conceptual issues connected with business models, and empirical research is conducted using case studies.

Main findings (or expected/preliminary findings for the cases of work in progress)

While conducting scientific research on developing an original method of analysis and assessment of business models a holistic approach was chosen, treating the business model as a system comprised of interconnected components interacting with one another, such as customer segments, value proposal, information channels, sales and distribution, customer relations, streams of income, key resources, key actions, key alliances, cost structure. The article uses multidimensional statistical analysis and fuzzy set qualitative comparative analysis in order to analyse and assess individual components and the relations between them. The author conducted quantitative studies on companies, created a database, where the variables are the assessments of individual components of a business model and financial condition. The author demonstrated the existence and type as well as strength of dependencies between selected business model components and financial results. In order to analyse the results of the studies multidimensional statistic methods were used, such as cluster analysis, correspondence analysis, classification trees. The article also presents the possibilities for utilising fuzzy set Qualitative Comparative Analysis (fsQCA) (Ragin, 2008) in studies on business models of companies. The method is based on using Boole's algebra in order to analyse realistic and logical patterns. The use of fsQCA allowed to find answers to the question, which business model components and in what configuration influence the better financial condition of companies. Multidimensional statistic methods and fsQCA are presented in the article as mutually complementing methods in the designed method of analysis and assessment of business models.

Key contributions

The results of the conducted studies lead to the conclusion that both the MSA and fsQCA can be useful in the analysis and assessment of business models, which is significant from

the perspective of decision-making in companies regarding the used business model or its change.

Keywords: business models, Multidimensional Statistical Analysis (MSA), Fuzzy set Qualitative Comparative Analysis (fsQCA).

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Port Marketing: The Role of Market Externalities

Tibor Mandjak, Peter Naude, Dominic Medway, Laurent Fedi, Andrea Gelei, Julian Hofmann, Alexandre Lavissiere, Samy Belaid, Augusto Newell.

Abstract

Over the past two decades, seaports have faced significant changes and have been obliged to drastically evolve towards new models of governance (Olivier and Slack, 2006). Meanwhile, the evolution of clusters has modified both the port stakeholders' role (Notteboom and Rodrigue, 2005; Monios and Wilmsmeier, 2012) and Port Authorities (PAs) have turned into multi-actor places involving a new positioning and status. Port devolution policies implemented in most countries have transformed the PAs into hybrid organisations (Koppell, 2006) combining public and private functions. The existing literature demonstrates that PAs set up ambitious strategies (Verhoeven, 2010; 2015) where promotion and marketing play a strategic role.

This paper seeks to answer a managerial question: while a port like Le Havre is one of the biggest and busiest in the world, how can it grow even bigger? There are logically two possible answers to this question - it can reactively wait for world trade to pick up, and it will therefore hopefully get a share of this expanding trade. Or else, it can proactively attempt to take market share away from competitors such Rotterdam, Antwerp or Hamburg. We focus on the second assumption and try to develop our understanding of the process of how ports can better market themselves.

In this paper the authors seek to understand how the decision is made as to which route to take when making use of maritime freight services in the movement of goods internationally. Based on a series of qualitative interviews with a range of different stakeholders, we provide insights into this complex decision-making process. Initial

results indicate that it is not as simple as trying to understand how an individual decision maker, such as an exporter, an importer or the forwarding agent, thinks about how to get a shipment from an Australian vineyard to a retailer in Budapest. Instead, the decision as to whether to use Rotterdam, Le Havre, or Hamburg is complicated by significant market externalities.

Taking a broader systems or industrial network perspective (Håkansson et al., 2009), we find that the decision is heavily dependent on a range of diverse factors such as the quality of the local labour force, how strong the local trade unions are, and how much money is being invested to grow facilities. These externalities include the local transport network available (road, rail, inland waterway) and also the proximity of local industry. For example, we argue that the reason for Rotterdam's success is due largely to both its excellent distribution facilities and the number of potential suppliers/buyers within a relatively small radius. Similarly, firms such as Sony will tend to use Antwerp because of the close proximity of so many local customers, just as the German automotive industry is going to use Hamburg. These local industrial clusters are part of what makes a particular port an attractive entry point. Based on the evolutionary economic geography literature, we can argue that many ports are big because of the size of the local industries that they serve. From a geographical point of view, this links to the debate about the 'glocal' vs. the 'grobal' after Andrews and Ritzer (2007), and discussions about 'scalar politics'. From this latter perspective, the key marketing challenge for organisations in these situations is dealing with the scalar complexity and entanglements of the network in which they operate on daily basis (Brenner, 1998; MacKinnon, 2011).

We contemplate port marketing as the application of specific knowledge and the realization of different actions in different networks at both the internal and external level to make the port as attractive as possible. In other words, the basic role of port marketing

is to create, support, and maintain the port's 'attractiveness.' This is undertaken through the management of the port's various business relationships in overlapping networks, attempting to co-create value for a range of stakeholders with differing objectives (Frow and Payne, 2011). Managing the level of this attractiveness is the overall goal, and it implies that the active management of a diverse range of relationships in networks is the basic tool of port marketing. This attractiveness exists in the established relationships and is dynamic, dependent upon the outcomes of the on-going interactions between the various partners.

Overall, we show how a range of different theoretical lenses can be used to shed light on how port marketing can be most insightfully analysed. A range of managerial conclusions are presented with the aim to support port managers' decision-making for their marketing activities.

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How to integrate organisations following a merger or acquisition?

The importance of human resources.

Jose Luis Rodriguez Sanchez, Marta Ortiz de Urbina Criado, Eva Maria Mora Valentin.

Introduction

In the dynamic and globalised business environment, companies face a major challenge in responding to changes by restructuring in a timely and efficient manner. Mergers and acquisitions (hereafter M&As) have become one of the most important ways of succeeding in the process.

80% of M&As don't achieve the desired profitability (Charman, 1999). Some reasons for their failure are related to issues to do with human resources (hereafter, HR) during the integration phase, such as HR uncertainty, cultural incompatibility and the loss of valuable personnel (Drori, Wrzesniewski & Ellis, 2011).

In this paper we study how the integration phase in a merger or acquisition can be managed by paying attention to the role of HR. In order to do so, we carried out a case study of a multinational organization founded in the 19th century in the mechanical engineering sector, which has more than 50,000 employees and has expanded geographically through M&As. Four fundamental aspects in particular have been analysed: leadership, the process of change and restructuring, HR resistance, and the retention of valuable personnel.

The importance of HR in the M&As integration phase: a case study

The factors analysed in the case study are recorded in Table 1. Also displayed are the HR implications and the company functional areas involved during the M&As integration stage. Table 2 summarises the main evidence obtained in interviews with the directors.

Table 1. HR implications and functional areas involved in integration

Integration factors in M&A	Functional area involved	HR implications
<ul style="list-style-type: none"> • Leadership and integration team 	<ul style="list-style-type: none"> • HR manager • Operations manager • Training and development manager 	<ul style="list-style-type: none"> • Positive mentality • Proactivity • <i>Team-building</i> activities • Extra-salary benefits
<ul style="list-style-type: none"> • Change and restructuring process 	<ul style="list-style-type: none"> • Communication and marketing manager • Financial manager • Operations manager 	<ul style="list-style-type: none"> • Environment analysis • HR compatibility • Interaction and review • Challenge and reward
<ul style="list-style-type: none"> • HR resistance 	<ul style="list-style-type: none"> • Administration manager • Legal manager • Financial manager 	<ul style="list-style-type: none"> • Flexibility • Legal advice • Geographic relocation • Cultural difference
<ul style="list-style-type: none"> • Valuable HR retention 	<ul style="list-style-type: none"> • HR manager • Communication and marketing manager • Training and development manager 	<ul style="list-style-type: none"> • HR selection • Communication • Training and development • <i>Mentoring</i>

Table 2. Evidence obtained in interviews

Leadership and integration team
--

- *Joint activities outside the work place are essential for establishing good relations and breaking down barriers with those in authority. For example, Eurovision contest in pairs and “lost in the jungle” (how to survive based on clues).*
- *People’s needs now are very different to what they were in the past. Whilst previously everything could be solved with money, people now value training or flexibility so they can complement their working life with sport, music and dance.*

Change and restructuring process

- *The administrative and financial support of the target company was antiquated and rudimentary. These people were going to undergo a very drastic change, so we had to be very careful about the way they developed. In spite of going through a complex time of changes, the objective and the reward made it worthwhile.*
- *Trust was encouraged, which helped to reveal any problems detected in the communication plans. Despite the need to set a number of guidelines for workers, a certain limited flexibility was permitted*

HR resistance

- *We were facing possible reductions in productivity owing to the tension generated by the uncertainty. The role of leader was crucial when identifying people due to be made redundant.*
- *We were not unduly worried by redundancy agreements or claims against us for modification of work conditions. We have a legal department with considerable experience in previous M&As to help us resolve problems, but the most important thing is to find the right way to proceed so that the company reputation is harmed as little as possible.*
- *The administration and financial departments had to start again almost from scratch. They had to learn the new SAP operating system, new procedures, new rules and paperwork, all of which was a major shock. In addition, the centralization of services meant that many people had to be relocated.*

Valuable HR retention

- *Ambitious and non-conformist people are invaluable. Following a selection test to enter one of the groups of talented personnel, it was possible to join an international project with a mentor on the board of directors. They were six year projects, in which those selected were trained in different fields in order to train them to be the directors of the future.*

- *The statistic which proves that we got things right is that 85% of the people classified as qualified to remain in the integrated organization were retained. 10% of the staff were people who due to their age were valuable for their experience in the sector, but who decided to take early retirement. 5% were not enthused by the project or, due to their personal situation, were not prepared to relocate and decided to leave the company.*

Conclusions

The case study demonstrated that HR are crucial in influencing the business strategy or in obtaining a sustainable competitive advantage.

Two types of contribution emerge from our study. For the research community, our study provides a HR management model for the M&As integration stage which incorporates previous theoretical contributions by specialists in the subject and corroborates their research with primary data from a leading multinational company.

With regard to the practical implications, it should be possible to draw up a route map so that all directors are familiar with the most important HR factors and the actions necessary to contribute to the success of the M&As.

One valuable future line of research may be to carry out studies which allow one to obtain quantitative evidence. A second line would be to continue studying the third stage in the M&As process (implementation) in order to propose a complete HR management model in M&As processes.

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Evaluating the robustness of cluster estimation based on marketing practices

Daria Lagutaeva, Olga Tretyak.

The contemporary marketing practices methodology (CMP) attracts attention of a substantial number of researchers in the field of strategic marketing. In the past two decades there were more than fifty papers published in peer-reviewed outlets addressing the analytics of usage of contemporary marketing practices in a variety of countries and industries. In this note we discuss reliability of these studies with respect to the usage of specific analytic tools. First, we demonstrate that standard clustering analysis is relatively sensitive to small changes in the datasets with companies being assigned to different clusters at frequent rates. Second, the project national teams make use of different, often incompatible settings. Therefore, to make possible comparisons between the countries and across industries, the researchers must agree on a generic setup and procedures. We conclude the note sketching the basics of these common grounds.

The aim of the study is to develop a generic methodology for checking the robustness of cluster analysis such that future researchers can more confidently advocate their cluster-based findings.

Research questions

How can we quantitatively and visually evaluate the robustness of cluster analysis?

Are cluster estimates based on types of marketing practices robust to changes in the underlying dataset?

Objectives

1. Review the recent contributions of analysing marketing practices via cluster analysis;

2. Apply cluster analysis to investigate the marketing practices among companies active on the Russian market;
3. Develop tools to quantify and visualise the robustness of the preceding analysis;
4. Interpret cluster estimates and their robustness to 10% changes of the sample size.

Theoretical background

Examples of the use of cluster analysis in contemporary marketing research are ubiquitous, especially after the contributions by Coviello, Brodie, Danaher, & Johnston (2002), who promote cluster analysis as a mechanism to relate firms to the market in which they operate. A substantial stream of marketing literature that follows the lines of Coviello et al. combines the use of clustering with traditional statistical analysis, such as the analysis of descriptive statistics combined with an evaluation of internal survey consistency by Cronbach's alpha. Additionally, some formal analysis focusses on the use of ANOVA-type statistics (e.g. Coviello, Brodie, Danaher, & Johnston, 2002; Targino, Urdan, Chauvel, 2013), measures of co-movement (Hapenciuc et al., 2015; Das, 2009) or tests for differences on categorical data (Coviello, Brodie, Danaher, & Wesley J. Johnston, 2002; Wagner, 2005). However, little attention is given to an evaluation of the robustness of the cluster estimation procedure itself.

Design/methodology

Our data has been collected from Russian companies in the period ranging from December 2012 to December 2015. Using a double translation procedure (English-Russian-English) we translated the CMP survey to Russian. Respondents, who mostly consist of marketing or sales managers, managers from development department, top-managers or owners, completed the survey on-line after receiving the request by e-mail. After cleaning the data a total of 167 valid replies make up the final sample.

Following the CMP methodology cluster analysis is applied for classification of the companies based on five types of marketing practices.

To check the cluster analysis robustness to changes of the sample size, 1000 subsamples are generated where each company from the original dataset may appear with 90% probability. The K-means clustering is applied in each subsample.

Robustness of the cluster analysis is checked according to two parameters: robustness of the stability of the cluster centres across different subsamples (via Voronoi diagrams) and stability of the companies in comparable clusters in different subsamples.

Comparable clusters are identified by the following formula:

$$\begin{aligned}
 & \text{Min } \sum_{i=1}^n \sum_{j=1}^n X_{ij} * D_{ij} \\
 & s. t. \sum_{i=1}^n X_{ij} = 1, \forall j \\
 & \sum_{j=1}^n X_{ij} = 1, \forall i \\
 & X_{ij} \in \{1;0\},
 \end{aligned} \tag{1}$$

where D_{ij} is the Euclidean distance between clusters i and j ; X_{ij} is a binary variable that takes on the value 1 if clusters i and j are comparable, and the value 0 if clusters i and j are not comparable.

Main findings

Stable cluster centers would display almost identical Voronoi diagrams after a sample change of 10% as demonstrated in Figure 1. However, when analysing the Voronoi diagrams a typical case displays more variability in the boundaries of clusters (as an Figure 2), thereby indicating the possibility of unstable cluster estimation.

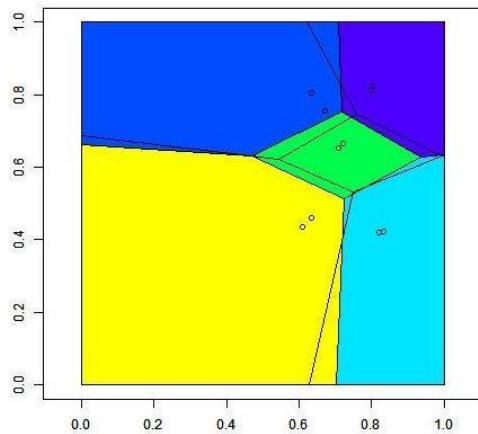


Figure 1 – Voronoi diagram with clear classification via clusters subsamples

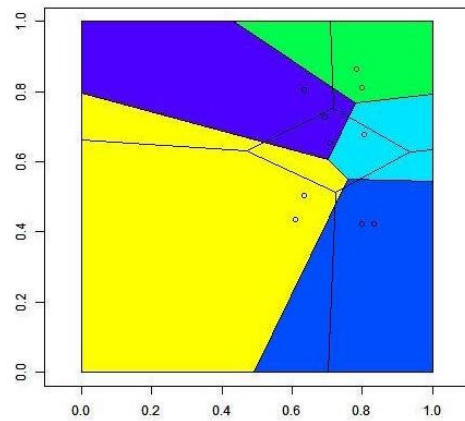


Figure 2 – Voronoi diagram with unclear classification via clusters subsamples

To quantify robustness, we calculate the percentage of companies that was assigned to a comparable cluster in different subsamples (Figure 3).

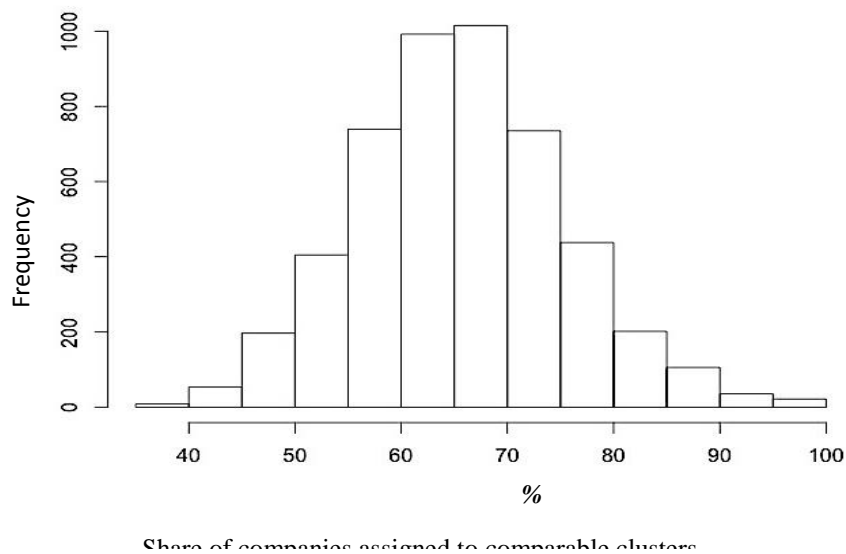


Figure 3 – Frequency distribution of percentage of companies assigned to comparable clusters

On average 76% of companies are in comparable clusters. This number can service as a benchmark for future research with higher numbers indicating more robust and thus more favourable results.

Key contributions

- Theoretical contribution: robustness of the cluster analysis aims to prevent faulty conclusions based on sampling randomness.
- Practical contribution: robust clusters allow practitioners to evaluate their positioning in the clusters for strategic purposes.

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Customer attractiveness across power configurations

David Fridner, Fredrik Nordin, Anders Parment.

Introduction

The traditional marketing approach to (B2B) buyer-seller relationships is focused on how suppliers compete to win customers, rather than the other way around. A reversed perspective has, however, gained momentum the last years by scholars showing various positive outcomes of being an attractive- and/or preferred customer, ranging from lower costs (Bew, 2007) to innovation (Scott, Henke & Kull, 2012), success in supplier development programs (Nagati & Rebolledo, 2013) and risk mitigation (Reichenbachs, Schiele & Hoffmann, 2017).

The research has in its focus on large buying firms and key-/strategic suppliers to a large extent assumed that the applicability of this approach is limited to relationships of high-mutual dependency. Thereby aligning with the traditional notion from the wider buyer-supplier literature: asymmetrical relationships are inherently fragile and adversarial as the dominant party will exploit its advantage over the weaker firm (Hingley, Angel & Lindgreen, 2015). However, this has been increasingly challenged in articles emphasizing that: 1, the usage of coercive powers might be especially ill-advised for firms with extensive non-mediated powers (Sangho, Chao & Hur, 2017), 2, both suppliers and buyers can be satisfied with a relationship despite being in extreme power shortage (Caniëls et al, 2017), 3, firms frequently abstain from using (coercive) powers at their disposal (Gadde & Wynstra, 2018).

The lack of incorporating a fuller understanding of dependency might arguable be a reason for the fragmented findings on how to become an attractive- and/or preferred customer. Apart from a general agreement that economic drivers (e.g. share of sales,

profitability) are necessary but not sufficient, the literature is dominated by scholars listing vast amounts of different singular factors (Hutinger, Schiele & Veldman, 2012). A plausible explanation for the lack of a coherent picture is that what a supplier finds attractive with a customer will vary based on the parties' relative dependency (as indicated by Hald, 2012; Pulles et al, 2014).

What is missing in the literature is an understanding of how the concept of customer attractiveness relates to different power configurations in a buyer-supplier relationship. Power, in this setting, is to be understood as a direct consequence of dependence – the amount of power x has over y corresponds to how dependent y is on x (Emerson, 1962). The aim of the research is to develop a power-dependency framework that captures the influence and constitution of customer attractiveness.

RQ1: How does customer attractiveness influence supplier behavior across dependencies?

RQ2: How is the perception of customer attractiveness shaped across dependencies?

Theoretical framework

Resource Dependency Theory (RDT) and Social Exchange Theory (SET) will help us reach a comprehensive understanding of the contextual and dynamic characteristics of the subject matter. The basic tenet of RDT that dependence on external parties is to be minimized (Davies & Cobb, 2010) will be critically examined through the notions of mutual dependence and customer attractiveness. Furthermore, RDT's close alignment of power holding and power usage will be contrasted with SET's argument that it can be to the advantage of the more dominant party to withhold power use (Reimann & Ketchen, 2017).

SET builds on the idea that organizational behavior is formed by the use of subjective cost-benefit analysis and comparisons of alternatives. It acknowledges that actors seek to maximize their own benefits but the theory opens up for potential gains of focusing on attractiveness based on reciprocal behavior (if x is attractive to y, it will be in y's best interest to prove itself valuable to x). The "comparisons of alternatives" highlights that SET incorporates a network-approach (but with the dyadic relationship as the focal setting) – customer attractiveness is not a constant variable residing within a firm but a concept that varies between relationships based on the supplier's perception of customer x versus available alternatives (Tanskanen & Aminoff, 2015).

Method

Interviews are being conducted from both the customer- (e.g. purchasing executives) and supply-side (e.g. V.P. Sales) from a variety of industrial firms. At a later stage, 1-2 customer firms will serve as the focal unit and from there we will reach out to their supply base. Dyadic interviews (matching buyer- and supplier pairs) will be performed along varying power constellations (low/high-, mutual/asymmetrical dependency). Finally, a survey to a broad sample of the focal firm's supply base will be tested against actual performance data.

Preliminary findings and expected contributions

The preliminary findings indicate several instances where the customer firm neglects to account for their attractiveness. For example, questions on perceived "over-dependence" result in spreading future business to other suppliers without analyzing how this might affect the motivation of the incumbent supplier (and indeed, without investigating if the

risk element could be mitigated by the opposite actions – giving even more business to that supplier in an attempt to secure preferred customer status). The expected contribution is that aspects of customer attractiveness are important to consider even in relationships with dependency-asymmetry. Furthermore, what constitutes an attractive customer can only be understood in the context of the power-configuration of the relationship, prompting customer firms to put more effort into analyzing the contextual environment of their suppliers.

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Neuromarketing research as method for brand associations perception

Theoretical background

Building associations of the brand is an important part of brand management. Brands, which have strong associations, are more competitive on the market. It is easier for the company to establish premium price, raise effectiveness and efficiency of marketing programs, increase marginality, implement brand extension, raise demand for the brand, get advantages at negotiations and reduce vulnerability to competitors (Aaker, 1992; Bendixen, et al., 2004).

The data used for measuring the effectiveness of campaigns on building brand associations (BA) is collected using traditional methods of marketing research. However, there are internal and external factors, which influence the accuracy of the data gathered. At the same time, neurobiological method, such as electroencephalography (EEG) (Plassmann et al., 2008; Erk et al., 2002; McClure, et al., 2004).

Research questions and objectives

The main aim of our research is to find out how EEG signal, namely N400 evoked potential can be used for testing semantic BA. In our study, we used the assumption that there are neural differences in perception of right and wrong brand associations. We hypothesize *that when an incongruent semantic brand association is presented, the N400 component appears*. If the hypothesis is confirmed, this methodology may help marketers to know if is the long-term memory related to brand association perception or not.

We assumed that in the case of our BA experiment, the incongruent content in informal communities with small number of subscribers have become one of the factors for their failure.

Methodology

In our study, we use experimental method for data collection, namely such neuromarketing method as electroencephalography. We try to find N400 evoked potential which is a component of EEG signal. We use N400 as a marker to find out wrong BA.

a. Participants selection

We chose participants according to their physiological features and brand awareness. We explained participants in detail the scheme of the experiment. The experiments were performed in accordance with the Declaration of Helsinki with approval of the University of St. Petersburg Ethics Committee.

b. Material selection

We conducted a survey where we found out 57 brands most often used in the following categories: sportswear, soft drinks, skin care, cafes, alcohol and technology. Out of 57 we chose 30 by the criteria of having 2 brand communities in Vkontakte and Facebook. One community should be official with at least 2000 followers, another should be unofficial with no more than 200 followers.

For every brand we conducted a content analysis of the brand communities and chose 5-6 most popular topics.

c. Experimental stimuli structure

To study the possibility of using the N400 component as an index of a stereotype accessibility we worked out visual stimuli of two types: short sentences (control probes) and brand statements (test probes). The experiment consisted of two different blocks of

congruent (strongly associated) word combinations randomly interspersed with incongruent (weakly associated) ones.

Main findings

Fig. 2.1 presents the global field power analysis data for the brand statements and short sentences averaged for all subjects. In this figure, the difference in the amplitude and dynamics of the activity recorded in the two conditions can be clearly seen. In the context of short sentences, the semantically incongruent word evoked the larger negative deflection between 300 and 500 ms after the stimulus onset (Fig. 2.1(A)). The permutation test ($p < 0.05$) showed that this difference was significant at this time interval. In the context of brand message, a difference between responses to the ‘related’ ending word in the context of weakly and strongly associated brand statements was observed later, e.g. between 550 and 650 ms (Fig. 2.1(B)). This difference was also significant as the permutation test revealed (Fig. 2.2(B)).

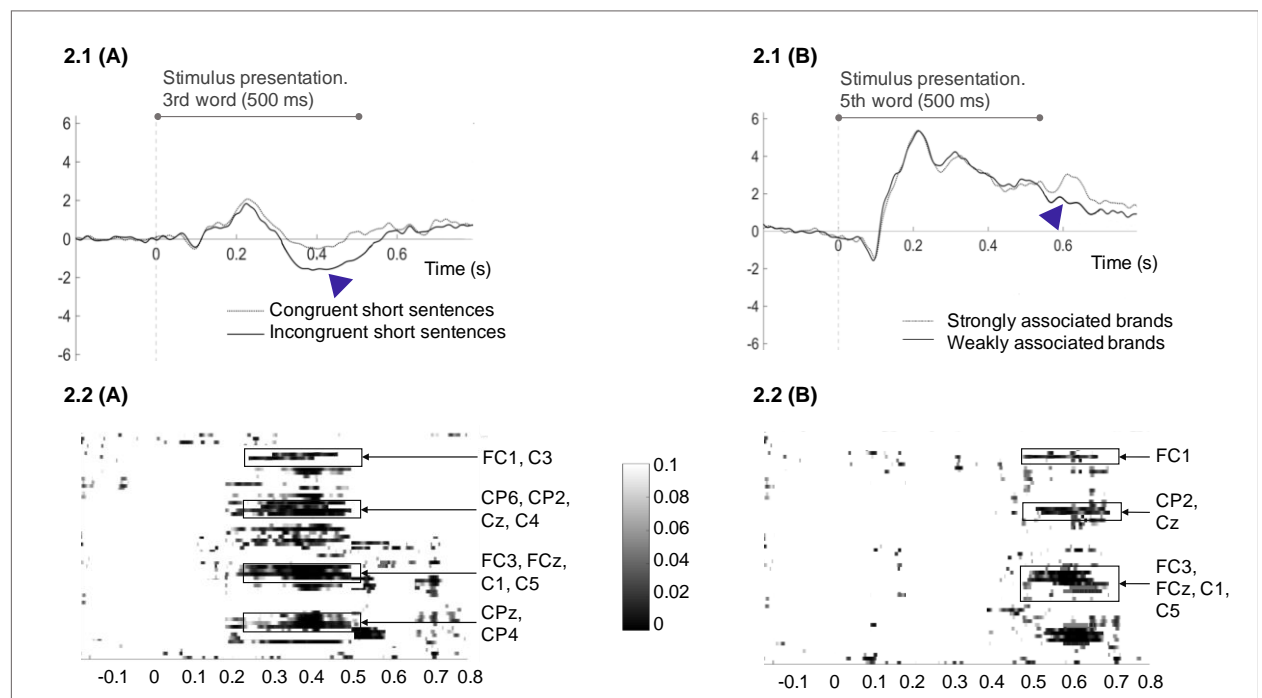


Figure 2. Brain response to short sentences (A) and brand statements (B)

2.1. The visualization of the brain response to short sentences (A) and the N400 responses in the brand association context (B). 2.2. The results of the spatially corrected permutation test

Key contributions

Transferring the results obtained to potential applications, we state that N400 may be used for defining right and wrong BA by companies in order to correct customer behavior. The method proposed by authors can help to test brand perception while companies rebrand an existing product or launch a new one. Furthermore, if a brand wants to change perception of a particular association in consumer mind, the brand should use this association in marketing communications on a regular base. Then a brand can test associations using N400 evoked potential.

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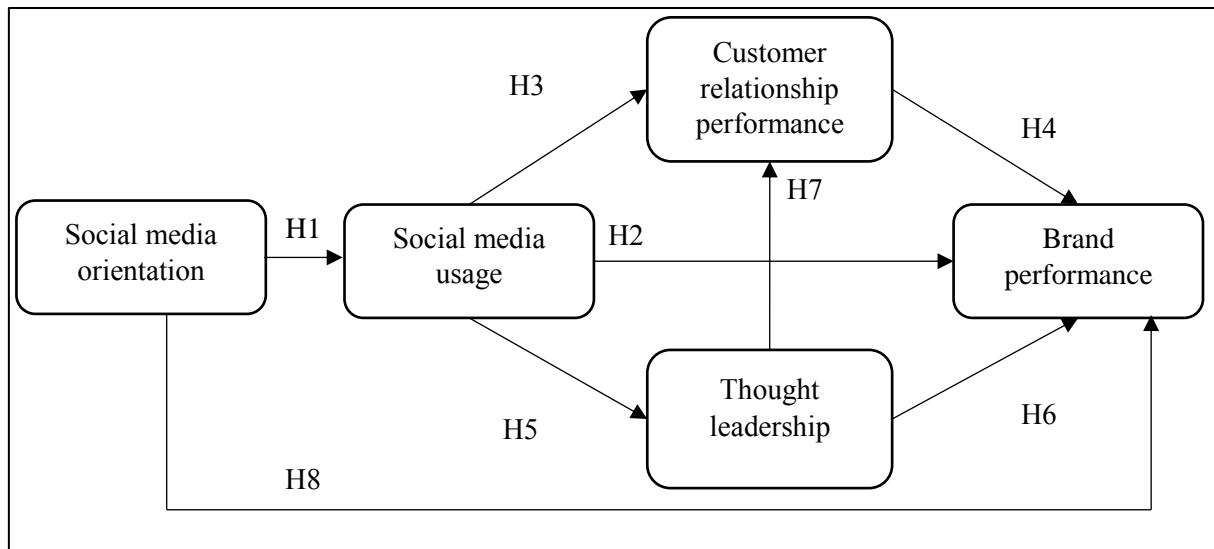
The impacts of social media usage on B2B brand performance

Francesca Magno, Fabio Cassia.

Aim of the study. A growing body of research has examined usage and impacts of social media in business-to-business (B2B) contexts (Salo, 2017). Available studies have suggested that communicating the brand and increasing brand awareness are among the most important reasons for B2B firms to use social media (Michaelidou, Siamagka, & Christodoulides, 2011). However, extant research has not explored the mechanisms through which a firm's usage of social media may positively affect its B2B brand performance. To fill this gap, we suggest and test a model which combines available knowledge from three interrelated B2B streams of studies: branding (Seyedghorban, Matanda, & LaPlaca, 2016), social media marketing (Salo, 2017), and thought leadership - content marketing (Barry & Girona, 2017).

The model (fig. 1) highlights that social media usage (defined as a company's level of use of social media technologies) positively affects brand performance both directly and indirectly through the improvement of customer relationship performance and through the enhancement of a company's thought leadership. In addition, the model shows that a company's social media orientation improves social media usage and brand performance.

Fig. 1 – The suggested model



Previous research has demonstrated that a social-oriented corporate culture increases social media usage (Keinänen & Kuivalainen, 2015). Hence, we state that (H1) a company's social media orientation is positively related to social media usage. The usage itself of social media can strengthen the credibility of a company (Wang, Pauleen, & Zhang, 2016). Therefore, we state that (H2) social media usage is positively related to brand performance. Social media can be used to support sales, improving customer service (Jussila, Kärkkäinen, & Aramo-Immonen, 2014) and responsiveness (Agnihotri, Dingus, Hu, & Krush, 2016), thus strengthening relationships (Siamagka, Christodoulides, Michaelidou, & Valvi, 2015). Therefore, we state that (H3) social media usage is positively related to customer relationship performance. Relationship quality influences brand performance by arousing customer attitudes toward the brand (Cassia, Cobelli, & Ugolini, 2017). Hence, we suggest that (H4) customer relationship performance is positively related to brand performance. In B2B markets, companies often use social media to transfer valuable and timely contents to communicate their industry thought leadership role (Salo, 2017). Therefore, we state that (H5) social media usage is positively related to thought leadership. Through thought leadership, companies stimulate favorable attitudes toward their brands (Holliman & Rowley, 2014), giving them a trusted

brand status (Barry & Gironda, 2017). Hence, we argue that (H6) thought leadership is positively related to brand performance. Thought leadership can arouse positive reaction not only among prospects but also among existing customers, thus strengthening existing relationships (Järvinen & Taiminen, 2016). Therefore, we state that (H7) thought leadership is positively related to customer relationship performance. Finally, drawing on studies showing that a market-oriented and branding-oriented corporate culture has a positive direct impact on customer and brand performance (Hirvonen, Laukkanen, & Salo, 2016; Lee, Park, Baek, & Lee, 2008), we hypothesize that (H8) social media orientation is positively related to brand performance.

Methods and results. A questionnaire-based survey was conducted. A list of 784 Italian companies with a presence on B2B social media was compiled by consulting three social media for a period of six months. Only companies that had published and/or shared contents at least once during this period were selected and sent a questionnaire. Multi-item measures taken from previous studies for all constructs were used (the items used in this study together with the sources are shown in table 1). Up to now 112 usable answers have been received⁴. A confirmatory factor analysis was used to evaluate the measurement model (CFA) ($\chi^2/df=1.52$; CFI = 0.96; RMSEA=0.06 and $p_{close} = 0.10$). Structural equation modeling was then used to estimate the measurement model. The results indicated good model fit (overall model fit: $\chi^2/df=1.55$; CFI = 0.95; RMSEA=0.07 and $p_{close} = 0.08$). The analysis shows that all suggested relationships are supported. Fig. 1 provides a brief summary of results.

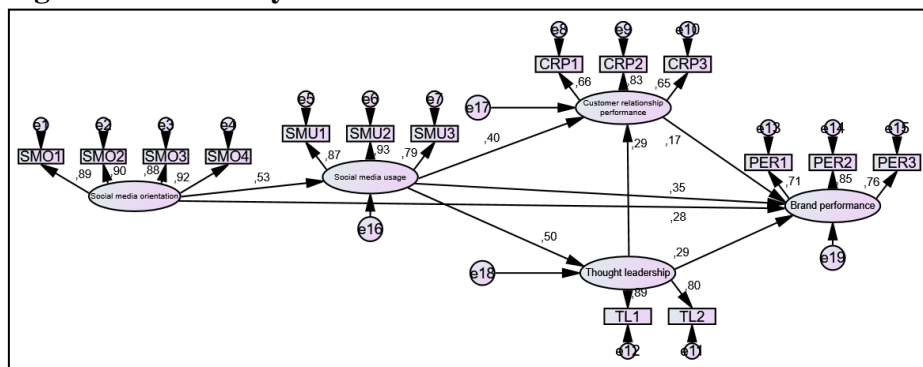
Table 1 – Constructs / Items

Construct	Item
Social media orientation (AVE: 0.80; C.R.: 0.94) Source: Keinänen and Kuivalainen (2015)	SMO1 - My company encourages taking part in public social media (e.g. comment, write a blog, share documents).
	SMO2 - My company encourages taking part in restricted social media networks (e.g. comment, write a blog, share documents).
	SMO3 - My company allocates time and resources for communicating via public social media and updating and monitoring public social media applications.
	SMO4 - My company allocates time and resources for communicating via restricted social media

⁴ More answers are expected as data collection is still going on.

	sites and updating and monitoring restricted social media applications.
Social media usage (AVE: 0.74; C.R.: 0.89) Source: adapted from Agnihotri, Rapp, and Trainor (2009)	SMU1 - My company is using social media to its fullest potential for supporting its business. SMU2 - My company's use of technology on the job has been integrated and incorporated at the highest potential. SMU3 - My company's use of technology is pretty much integrated as part of its normal business routine.
Customer relationship performance (AVE: 0.51; C.R.: 0.75) Source: adapted from Jayachandran, Sharma, Kaufman, and Raman (2005)	CRP1 - The use of social media has contributed to improve my company's performance with respect to achieving customer satisfaction CRP2 - The use of social media has contributed to improve my company's performance with respect to keeping current customers CRP3 - The use of social media has contributed to improve my company's performance with respect to promptly satisfying customer requests
Thought leadership (AVE: 0.71; C.R.: 0.83) Source: adapted from Barry and Girona (2017)	TL1 - Through our social media we share innovative contents about our industry TL2 - Our firm is recognized as a trusted authority for the contents it shares through social media
Brand performance (AVE: 0.60; C.R.: 0.81) Source: Hirvonen et al. (2016)	PER1 - We have reached desired image in market PER2 - Our firm has built a solid reputation PER3 - Our firm has built strong customer brand loyalty

Figure 1 – Summary of results



Implications. The paper provides marketers with evidence about the mechanisms through which social media usage positively affects brand performance and with insights about the interrelations among social media marketing, content marketing and branding strategies.

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